ABILENE CITY COMMISSION - REGULAR MEETING AGENDA
ABILENE PUBLIC LIBRARY, 209 NW FOURTH STREET
March 10, 2025 - 4:00 pm

VIEW THIS CITY COMMISSION MEETING VIRTUALLY AT
www.abilenecityhall.com/watchlive

1. Call to Order

2. Roll Call: _____ Rein _____Miller _____Witt _____Kollhoff _____Meysenburg

3. Pledge of Allegiance

4. Approval of the Agenda for the March 10, 2025, City Commission Meeting

5. Consent Agenda - Consent Agenda items are considered routine business items. The consent agenda can be acted upon by one motion unless a majority of the City Commission votes to remove an item for discussion and separate action.

a. Meeting Minutes for February 24, 2025, Regular Meeting

6. Public Comments and Communications

a. Public Forum: Persons who wish to address the City Commission regarding items outside the agenda may do so when called upon by the Mayor. Speakers will be allowed a three-minute time limit.

7. Business Items

a. Consider approval of Resolution No. 031025-1, A RESOLUTION OF THE CITY OF ABILENE, KANSAS CREATING THE TEMPORARY EMERGENCY SHELTER COMMITTEE, AN AD HOC COMMITTEE, AND ESTABLISHING ITS COMPOSITION, PURPOSE, AND RESPONSIBILITIES. – City Manager Marsh

b. Consider approval of a funding option for the Industrial Park Infrastructure, CCLIP 2026 Project, and the Recreation Improvements in the amount of $9,150,000. – Governing Body

c. Consider approval of an Engineering Agreement with BG Consultants for Process Building Pump Room Settlement and Crack Mitigation Repair in the amount of $65,250 plus expenses. – City Manager Marsh/Public Works Director Anderson

8. Items for discussion

a. State of the City – Finance Director Johnson

9. Reports

a. City Manager's Report

10. Recess of Regular Meeting

a. Consider a motion to recess the March 10, 2025, City Commission Meeting. The study session will begin no sooner than 4:30 pm.

Abilene City Commission Meeting Minutes
Abilene Public Library – 209 NW Fourth Street
February 24, 2025, 4:00 pm.
Abilene, Kansas

UNAPPROVED

1. **Call to Order**

2. **Roll Call** – City Commission Present: Mayor Rein Commissioners, Kollhoff, Witt, Miller (Zoom), and Meysenburg.

Staff Present: City Manager Marsh, City Clerk Mohr, City Attorney Martin, Parks and Recreation Director Timbrook, Fire Chief Strunk, Police Chief Hatter, Public Works Director Anderson, Street Maintenance Worker Sims, and Assistant Fire Chief Stuck.

3. **Pledge of Allegiance**

Agenda

4. Approval of the Agenda for the February 24, 2025, City Commission Meeting

Motion by Commissioner Witt, seconded by Commissioner Meysenburg, to approve the agenda, removing item 7d. Roll call vote: Miller YES, Witt YES, Kollhoff YES, Meysenburg YES, Rein YES. The motion carried 5-0.

Consent Agenda

5. Consent Agenda - Consent Agenda items are considered routine business items. The consent agenda can be acted upon by one motion unless a majority of the City Commission votes to remove an item for discussion and separate action.

a. Meeting Minutes for February 10, 2025, Regular Meeting

Motion by Commissioner Witt, seconded by Commissioner Kollhoff, to approve the consent agenda as presented. Roll call vote: Witt YES, Kollhoff YES, Meysenburg YES, Miller YES, Rein YES. The motion carried 5-0.

6. Public Comments and Communications

a. Public Forum: Persons who wish to address the City Commission regarding items outside the agenda may do so when called upon by the Mayor. Speakers will be allowed a three-minute time limit.

John Kollhoff spoke against City Manager Marsh.

James Price, NE 7th Street, spoke regarding Kollhoff's continued comments concerning City Manager Marsh and stated it is terrible that Mr. Kollhoff keeps bringing these things up. The City Commission is Mr. Marsh's manager and the issues should not be brought up in public.

7. Business Items

a. Consider approval of a bid from Blue Valley Public Safety for a Federal Signal Rotating Storm Siren in the amount of $31,259.65.

Motion by Commissioner Witt seconded by Commissioner Miller to approve the bid from Blue Valley Public Safety for a Federal Signal Rotating Storm Siren in the amount of $31,259.65. Roll call vote: Kollhoff YES, Meysenburg YES, Miller YES, Witt YES, Rein YES. The motion carried 5-0.

b. Consider approval of the Disadvantaged Business Enterprise (DBE) program for the City of Abilene's Municipal Airport K78 and authorize the City Manager to sign the Policy Statement.

Motion by Commissioner Witt, seconded by Commissioner Miller to approve the Disadvantaged Business Enterprise (DBE) Program for the City of Abilene's Municipal Airport K78 and authorized the City Manager to sign the Police Statement. Roll call vote: Meysenburg YES, Miller YES, Witt YES, Kollhoff YES, Rein YES. The motion carried 5-0.

c. Consider approval of Work Order No. 8 with Olsson Engineering for the Design and Bidding of a minimum 4-plane T-Hangar in the amount of $122,100.00.

Motion by Commissioner Witt, seconded by Commissioner Meysenburg to approve Work Order No. 8 with Olsson Engineering for the Design and Bidding of a minimum 4-plane T-Hangar in the amount of $122,100.00. Roll call vote: Miller YES, Witt YES, Kollhoff NO, Meysenburg YES, Rein YES. The motion carried 4-1.

d. Consider approval of the final design of the NE 15th Street Drainage Project with Olsson Engineering.

UNAPPROVED

This item was removed from the agenda.

8. Items for Discussion

a. Consider approval of Charter Ordinance No. 31, A CHARTER ORDINANCE EXEMPTING THE CITY OF ABILENE, KANSAS FROM THE PROVISIONS OF K.S.A. 12-1651 REGARDING THE NAMING OF AN OFFICIAL CITY NEWSPAPER AND PROVIDING SUBSTITUTE AND ADDITIONAL PROVISIONS ON THE SAME SUBJECT.

Motion by Commissioner Witt, seconded by Commissioner Miller, to approve Charter Ordinance No. 31, A CHARTER ORDINANCE EXEMPTING THE CITY OF ABILENE, KANSAS FROM THE PROVISIONS OF K.S.A. 12-1651 REGARDING THE NAMING OF AN OFFICIAL CITY NEWSPAPER AND PROVIDING SUBSTITUTE AND ADDITIONAL PROVISIONS ON THE SAME SUBJECT. Roll call vote: Witt YES, Kollhoff NO, Meysenburg YES, Miller YES, Rein YES. The motion carried 4-1.

b. Consider approval to terminate the Letter of Intent with Mammoth Construction.

Motion by Commissioner Miller, seconded by Commissioner Meysenburg, to approve the termination of the Letter of Intent with Mammoth Construction. Roll call vote: Kollhoff YES, Meysenburg YES, Miller YES, Witt YES, Rein YES. The motion carried 5-0.

c. Consider approval of the Second Amendment to the Contract for Water System Project Contribution and Water Supply with Rural Water District No. 2.

Motion by Mayor Rein, seconded by Commissioner Kollhoff to approve the Second Amendment to the Contract for Water System Project Contribution and Water Supply with Rural Water District No. 2. Roll call vote: Meysenburg YES, Miller YES, Witt YES, Kollhoff YES, Rein YES. The motion carried 5-0.

d. Executive Session: Motion by Commissioner Kollhoff, seconded by Commissioner Witt, for the City Commission to recess into executive session for 20 minutes to discuss with legal counsel certain issues and options related to the utilization of a tax increment financing district to fund improvements at the Abilene Industrial Park, based upon the need for consultation with an attorney for the public body which would be deemed privileged in the attorney-client relationship pursuant to K.S.A. 75-7319(b)(2). The open public meeting will resume in this room at 5:22 pm. Roll call vote: Miller YES, Witt YES, Kollhoff YES, Meysenburg YES, Rein YES. The motion carried 5-0.

The regular meeting resumed at 5:22 pm.

UNAPPROVED

There was no action taken in the executive session.

Motion by Mayor Rein, seconded by Witt to return to executive session for 10 minutes to discuss with legal counsel certain issues and options related to the utilization of a tax increment financing district to fund improvements at the Abilene Industrial Park, based upon the need for consultation with an attorney for the public body which would be deemed privileged in the attorney-client relationship pursuant to K.S.A. 75-7319(b)(2). The open public meeting will resume in this room at 5:34 pm. Roll call vote: Witt YES, Kollhoff YES, Meysenburg YES, Rein YES. The motion carried 4-0.

The regular meeting resumed at 5:39 pm.

There was no action taken in the executive session.

9. Reports

a. City Manager's Report

- We were notified today that the BNSF Railroad will be closing a crossing on Buckeye (K-15) to make an emergency repair to a defect within their crossing. The crossing will be closed tomorrow from 8 am to 5 pm and will open earlier if completed earlier.

  - The City has submitted its reimbursement request for the snow event from January 4-6 of this year. A big thanks to Shayla for heading that up and getting it submitted to the Kansas Department of Emergency Management. Thank you also to the Department Heads who assisted her in getting all the information gathered.

10. Adjournment of Regular Meeting

a. Consider a motion to adjourn the February 24, 2025, City Commission Regular Meeting.

Motion by Commissioner Kollhoff, seconded by Mayor Rein to adjourn the February 24, 2025, City Commission Meeting at 5:41 pm. Roll call vote: Witt YES, Kollhoff YES, Meysenburg YES, Miller YES, Rein YES. The motion carried 5-0.

1. Call to Order – February 24, 2025, City Commission Study Session

2. February 24, 2025, City Commission Study Session Agenda

a. Emergency Shelter/Housing Plan – Kat McKee, Quality of Life Coalition

UNAPPROVED

3. Consider a motion to adjourn the February 24, 2025, City Commission Meeting.

Motion by Commissioner Kollhoff, seconded by Commissioner Witt to adjourn the February 24, 2025, City Commissioner Study Session at 5:54 pm.

(Seal)

_____
Brandon Rein, Mayor

ATTEST:

_____
Shayla L. Mohr, CMC
City Clerk

UNAPPROVED

City Commission

Brandon Rein
Mayor

Wendy Miller
Vice-Mayor

John Kollhoff
Commissioner

Trevor Witt
Commissioner

Amy Meysenburg
Commissioner

CITY STAFF

Ron Marsh
City Manager

Leann Johnson
Finance Director

Shayla Mohr
City Clerk

Kari Zook
Community Development

Kellee Timbrook
Recreation Director

Julie Roller Weeks
CVB Director

Anna Hatter
Chief of Police

Kale Strunk
Fire Chief

Brad Anderson
Public Works Director

City Commission Meeting Date: Monday, March 10, 2025

Session: Regular Meeting

Topic: Resolution for Temporary Emergency Shelter Ad Hoc Committee

Department: Administration

Staff Contact: City Manager

Background:

Included in your packet is a draft resolution to form an ad hoc committee for the purpose of establishing a temporary warming shelter in the city limits of Abilene, as directed at the February 24, 2025 meeting.

Recommendation:

Approve the resolution

Fiscal Note:

TBD

Funding Source: TBD

RESOLUTION NO. 031025-1

A RESOLUTION OF THE CITY OF ABILENE, KANSAS CREATING THE TEMPORARY EMERGENCY SHELTER COMMITTEE, AN AD HOC COMMITTEE, AND ESTABLISHING ITS COMPOSITION, PURPOSE, AND RESPONSIBILITIES.

WHEREAS, the Governing Body is responsible for adopting, reviewing, and amending the building and property regulations for the City of Abilene; to include the use and purpose of city-owned property and buildings;

WHEREAS, the Abilene Community and Recreation Center and Abilene Senior Center are city-owned buildings;

WHEREAS, in conjunction with efforts by the Quality-of-Life Coalition and Hope Center, in accordance with their respective roles as civic organizations serving the less fortunate, the Governing Body wishes to establish an ad hoc advisory committee to review and provide input and recommendations for establishing a city-wide temporary emergency shelter; and

WHEREAS, Section 1-902(b) allows the Governing Body to establish ad hoc advisory committees to review City programs and provide input on City projects.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF ABILENE, KANSAS, AS FOLLOWS:

Section 1. Creation of Committee. There is hereby created the Temporary Emergency Shelter Committee, an ad hoc advisory committee to the Governing Body.

Section 2. Composition. The Committee shall be comprised of not less than seven (7) and not more than nine (9) members, who shall be appointed by the Governing Body and shall include the following:

(a) A representative of the City of Abilene;
(b) A representative of the schools;
(c) A representative of the faith-based community;
(d) A representative of the Quality-of-Life Coalition;
(e) A representative of the Senior Center;
(f) A representative of the Community Center; and
(g) A representative of the Hope Center.

Members shall elect a Chairperson, Vice-Chairperson and Secretary.

Section 3. Meetings. The Committee shall meet at such times as determined by the Governing Body and a majority of the members of the Committee.

Section 4. Purpose. The Committee, at the direction of the Governing Body, shall have the following responsibilities:

(a) Oversee the process for developing and sustaining a temporary emergency shelter for critical emergencies;

(b) Study information and data, assist in the collection and review of citizen input, and recommend a location;

(c) Provide input and recommendations to the Governing Body related to alterations, storage solutions, staffing needs, and costs;

(d) Report to the Governing Body, from time to time, regarding progress on matters related to the temporary emergency shelter, and all activities of the Committee; and

(e) Conduct such other duties as may be assigned by the Governing Body, from time to time.

Section 5. Advisory Nature. The Committee is advisory in nature, and shall not have spending authorization or other financial responsibilities, other than studying and making recommendations to the Governing Body as set forth in this Resolution.

Section 6. Duration. The Committee shall serve at the pleasure of the Governing Body until excused from duty.

Section 7. Effective Date. This Resolution shall be in full force and effect from and after its adoption.

Passed and approved by the Governing Body of the City of Abilene, Kansas, on this 10th day of March 2025.

_____
Brandon Rein, Mayor

ATTEST:

_____
Shayla Mohr, CMC, City Clerk

ABILENE KANSAS

City Commission

Brandon Rein
Mayor

Wendy Miller
Vice-Mayor

John Kollhoff
Commissioner

Trevor Witt
Commissioner

Amy Meysenburg
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Chief of Police

Kale Strunk
Fire Chief

Brad Anderson
Public Works Director

City Commission Meeting Date: Monday, March 10, 2025

Session: Regular Meeting

Topic: Department of Commerce/CCLIP/Ball Field Funding Options

Department: Click or tap here to enter text.

Staff Contact: City Manager/Community Development Director

Background:

Dominic Eck with Gilmore & Bell has met with the Governing Body at the February 10 & 24 meetings to discuss funding options for the Department of Commerce grant match. In addition, there are other projects the city needs to plan funding for. The projects include:

- Industrial Park Infrastructure: $2.5M grant from Kansas Department of Commerce with $750,000 match from the city.
- CCLIP project for 2026 (UPRR to NW 5th St and SE 6th St to south city limits): $800,000 reimbursable from KDOT with $1.1M from city.
- Sales Tax Passage for Recreation Improvements: estimated revenue over ten years is $4M. This will need to be financed with bonds to be paid by the sales tax revenue.

Using the economy of scale and cost savings of one bond sale/issuance, the total temporary financing would be $9,150,000. Of that, $3,300,000 would be reimbursed funds, and $4,000,000 would be revenue from sales tax over ten years. This would leave $5,850,000 for the city to potentially send to permanent financing, with $1,850,000 needing an identified funding source to service the debt and $4,000,000 (likely less) serviced from the dedicated sales tax. A recommendation to help service the $1,850,000 debt would be a combination of water/sewer/storm drainage/street sales tax/ad valorem (potentially $25K each from water, sewer, and storm for a total of $75K, plus $75K street sales tax and $50K ad valorem for a total of $200K). These amounts are approximate, assumes no additional service on the $1,850,000, and can be modified as necessary by the Governing Body.

Temporary financing is allowable for up to four years, with the ability to pay off some or all of the temp notes prior to final financing. This allows a municipality to budget for the cost of improvements over time minimizing the impact on the general fund. Temp financing also gives the city flexibility to pay down the non-reimbursable amount. For example, money generated from lot sales in the industrial park, and the federal fund exchange through KDOT can be used to pay on the temp notes. Additionally, during the temporary financing period, the city will be collecting sales tax for the recreation improvements and that will be used to reduce the amount of permanent financing for that project. Thus, the amount for permanent financing could be much less than the projected $5.85M.

Option 1: CIP (Capital Improvement Plan) Program. The city has a charter ordinance (No. 28) in place that allows the municipality to bond any projects listed in the CIP. This option will allow the city to fund the infrastructure via a GO (General Obligation) bond, not assessing specials to the future property owners, creating an enticement for future development. All three projects are in the currently approved CIP (2022).

Option 2: Create a benefit district where all property owners will have to be in agreeance and sign the petition. All property owners will be responsible for not less than 5% of the cost of the assessed improvements; creating special assessments on the properties.

ABILENE KANSAS

City Commission

Brandon Rein
Mayor

Wendy Miller
Vice-Mayor

John Kollhoff
Commissioner

Trevor Witt
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Amy Meysenburg
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Public Works Director

City Commission Meeting Date: Monday, March 10, 2025

Session: Regular Meeting

Topic: Agreement for WWTP Process Building Pump Room Settlement and Crack Mitigation Repair

Department: Public Works

Staff Contact: City Manager/PW Director

Background:

In 2024, city staff was informed that the wet well room of the wastewater treatment plant was developing significant cracking in the walls and concrete flooring around the wet well pit.

Plant staff contacted the plant architects, Buchner, Willis & Ratliff, who recommended we contact BG Consultants to take a look. We had an initial meeting with an engineer and subsequently entered into an agreement for structural assessment with BG Consultants in the amount of $6800.00 and an amended agreement for survey in the amount of $4000.00, for a total of $10,800.00.

This information was presented to the Governing Body at the October 14 & 28 meetings. The Governing Body approved $231,778 for engineering and repairs. At that time the associated engineering costs were estimated at $50,000 and the repairs estimated at $181,778. We have received the agreement from BG consultants and engineering costs are $65,250 plus reimbursable expenses as outlined in the agreement.

The contract has been reviewed by the City Attorney.

Recommendation:

Approve the engineering agreement with BG Consultants for Process Building Pump Room Settlement and Crack Mitigation Repair in the amount of $65,250 plus expenses.

Fiscal Note:

Revised approximate amount $247,028.

Funding Source: 029, Sewer Equipment Reserve

Structural Assessment Report for City of Abilene Wastewater Treatment Plant Process Building

Abilene, KS 67410

September 2024

BG Project No. 24-1232M

BG CONSULTANTS
ENGINEERS · ARCHITECTS · SURVEYORS

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INTRODUCTION

The City of Abilene engaged BG Consultants, Inc. regarding wall settlement issues at the Wastewater Treatment Plant Process Building. Intermittent cracks throughout the interior masonry walls were thought to be part of a settlement issue.

The Process Building is a pre-engineered metal building (PEMB) with reinforced 8 in. concrete masonry unit (CMU) partition walls around the interior and exterior of the building. The pump room has a requirement to be contained in an explosion-proof environment, therefore the masonry walls are reinforced and openings fortified to meet that requirement. The building roof extends south to provide cover over the blowers.

Figure 1: Process Building east elevation.

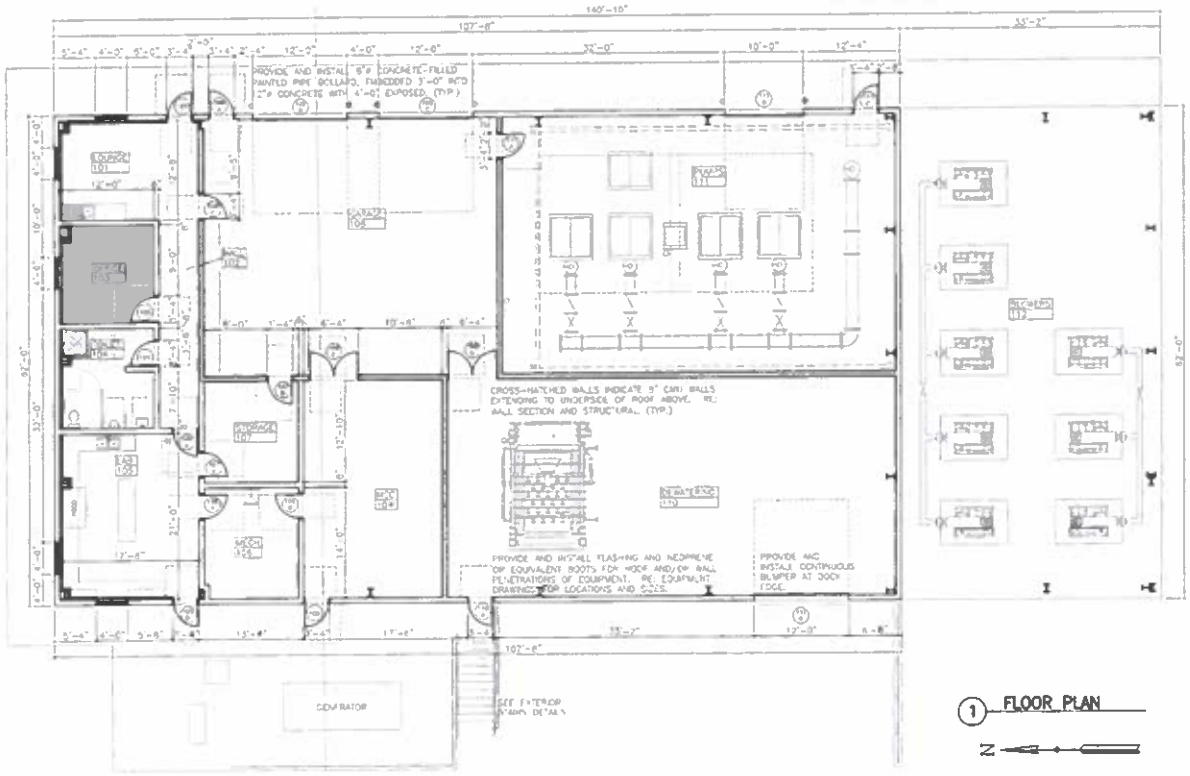


Figure 2: Process Building Floor Plan.

OBSERVATIONS

BG Consultants made a site visit to the City of Abilene Wastewater Treatment Plant Process Building on July 12, 2024, to observe the existing building, to document and photograph deficiencies, and perform a relative elevation survey (RES) of the structure. Following the initial site visit, we reviewed the Record Plans for the City of Abilene Wastewater Treatment Facility Improvements. An additional survey of the building was recommended and subsequently completed by BG Consultants on July 31, 2024.

EXTERIOR OBSERVATIONS

Visual observations began on the exterior of the building. There were no obvious indications of differential settlement around the building exterior.

Figure 3: South end of east elevation.

Figure 4: North end of east elevation.

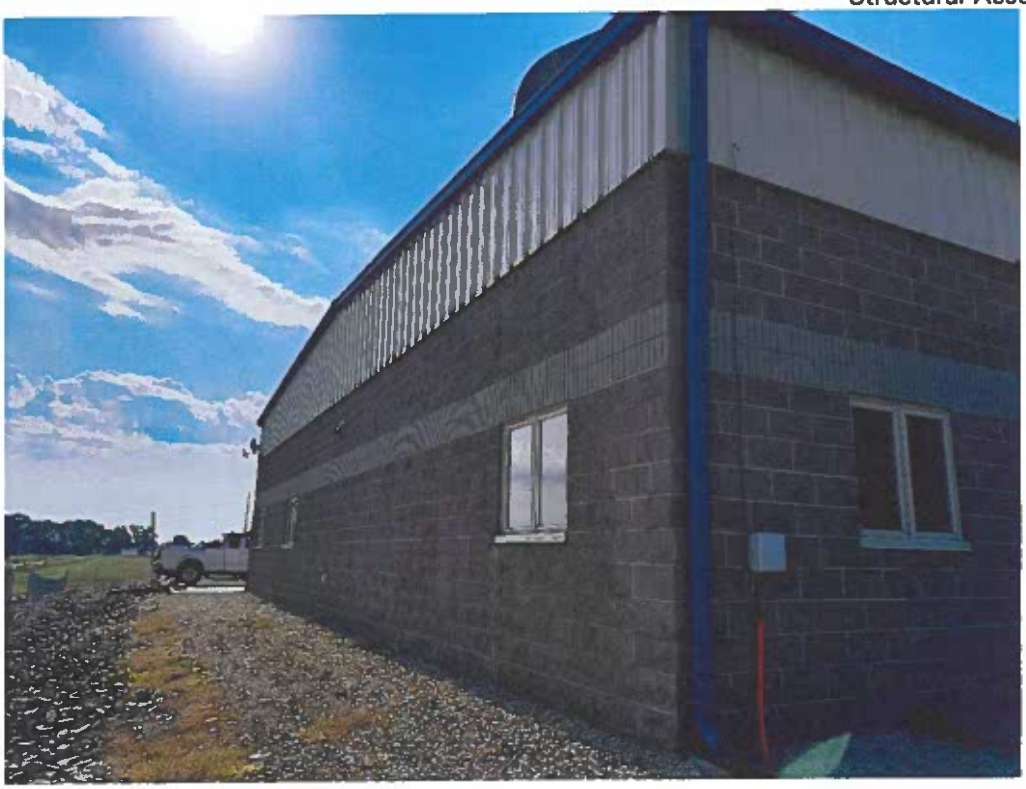


Figure 5: North elevation.

Figure 6: North end of west elevation.

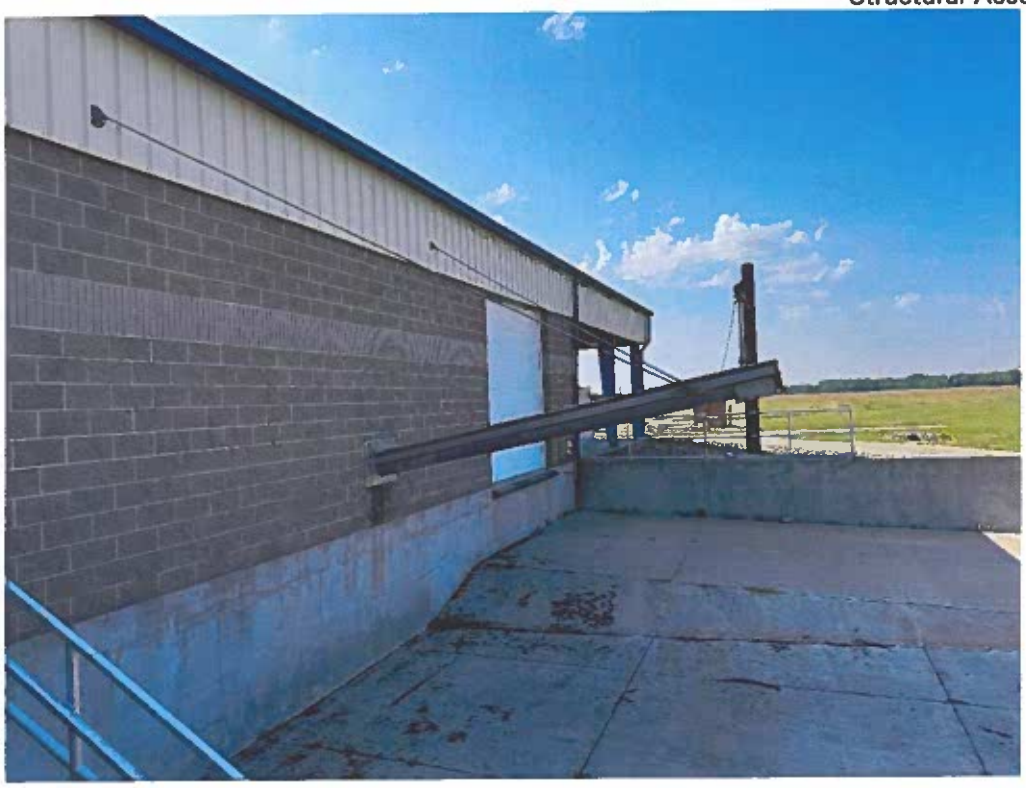


Figure 7: South end of west elevation.

Figure 8: South elevation.

INTERIOR OBSERVATIONS

Visual observations continued with the interior of the building, focusing primarily on the Garage and Pump room. There are cracks throughout the interior masonry walls of the Garage and Pump room. The masonry walls have many connections to structural building components. The building is constructed with the masonry walls cast firmly around the PEMB rigid frames. The PEMB girts (sidewall framing) are anchored to the top bond beam of the masonry walls around the perimeter of the building. Roof purlins are secured at the tops of the masonry walls with metal angles and purlin braces are run through masonry walls to support purlins on either side of the ridge. In the Pump room, the bridge crane columns are attached to the masonry walls, and throughout the interior of the building the masonry walls have various pipes attached to them.

The exterior masonry wall on the east elevation, perpendicular to the intersecting wall between the pump room and garage, appears to be leaning away from the intersecting interior masonry walls.

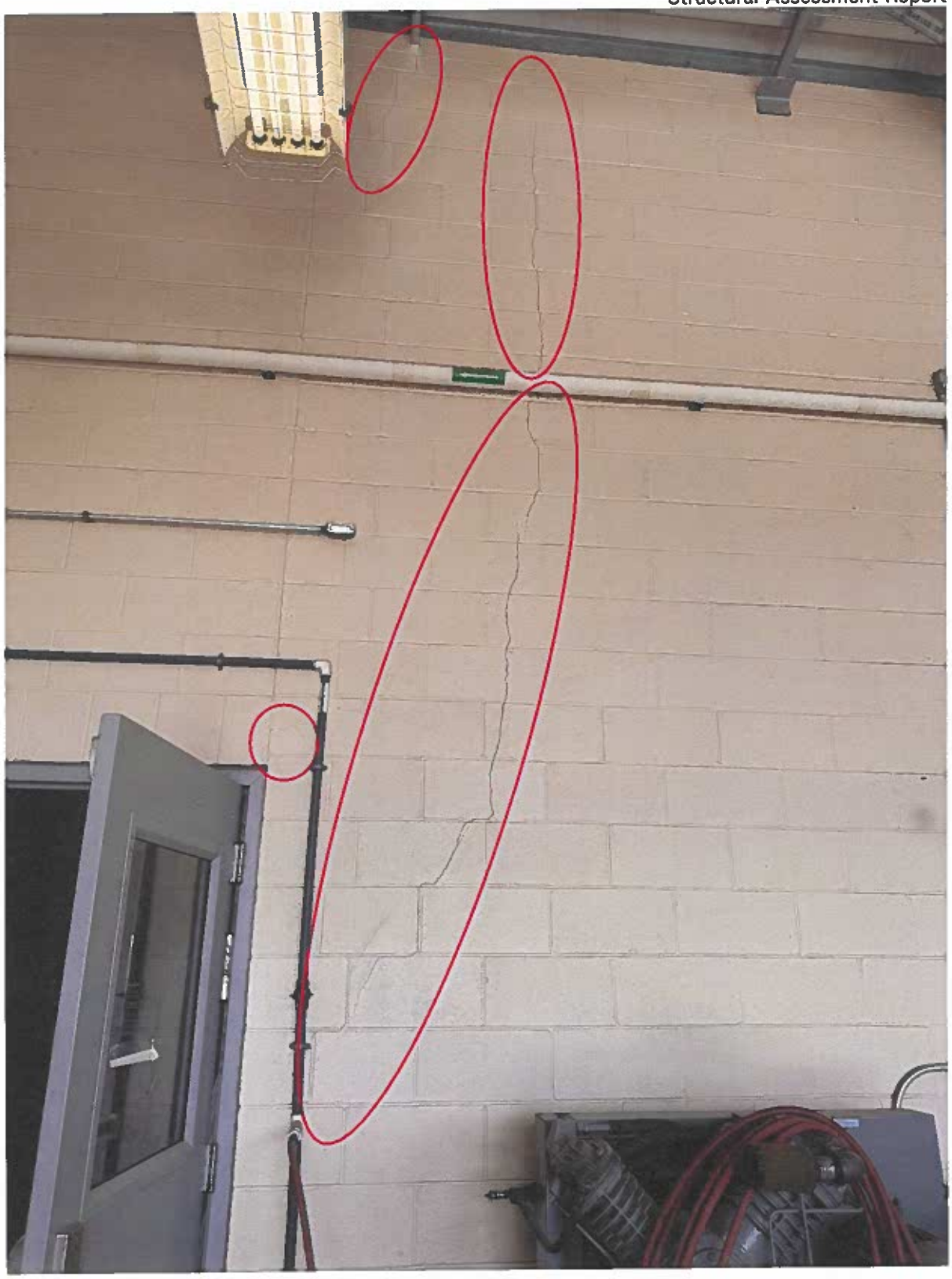


Figure 9: Cracks in interior masonry wall.

Figure 10: Cracks in masonry wall.

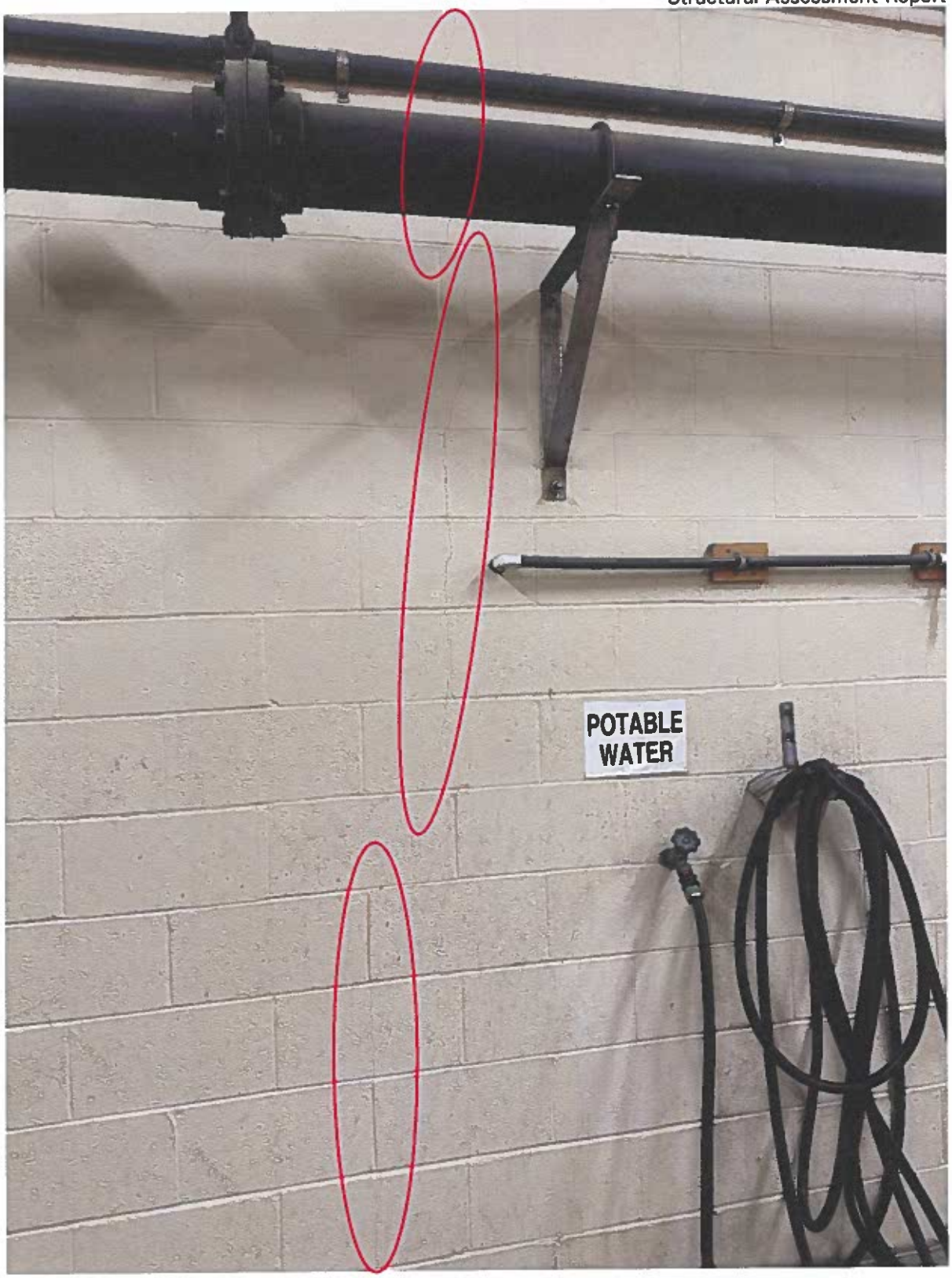


Figure 11: Cracks in masonry wall.

Figure 12: Cracks in masonry wall.

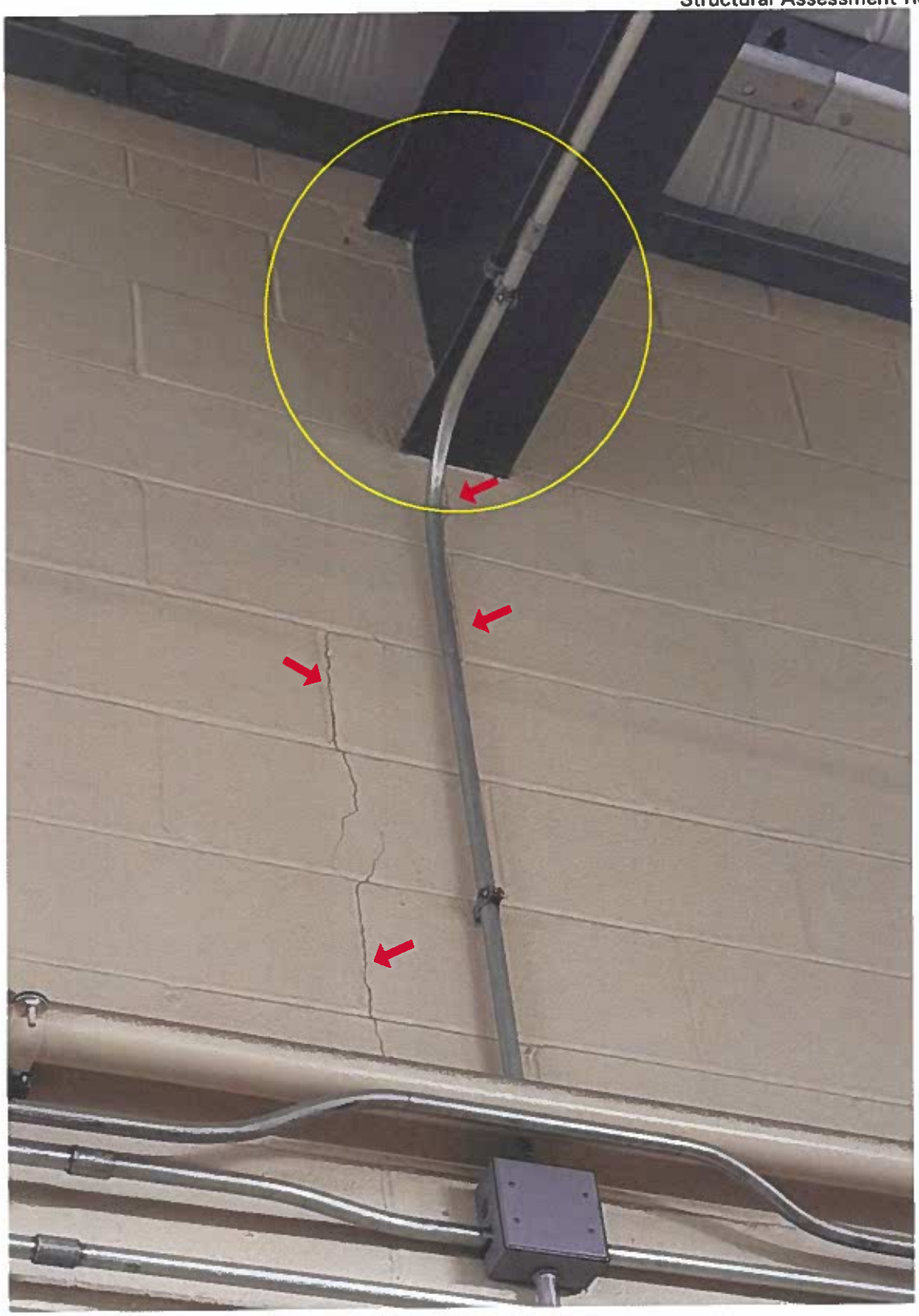


Figure 13: Close up

Figure 12. Note rigid frame cast tightly in masonry wall.

Figure 14: Separation at intersecting walls.

Figure 15: Separation at intersecting walls narrows and closes toward bottom.

Figure 16: Separation at intersecting walls and crack in masonry blocks on taller wall.

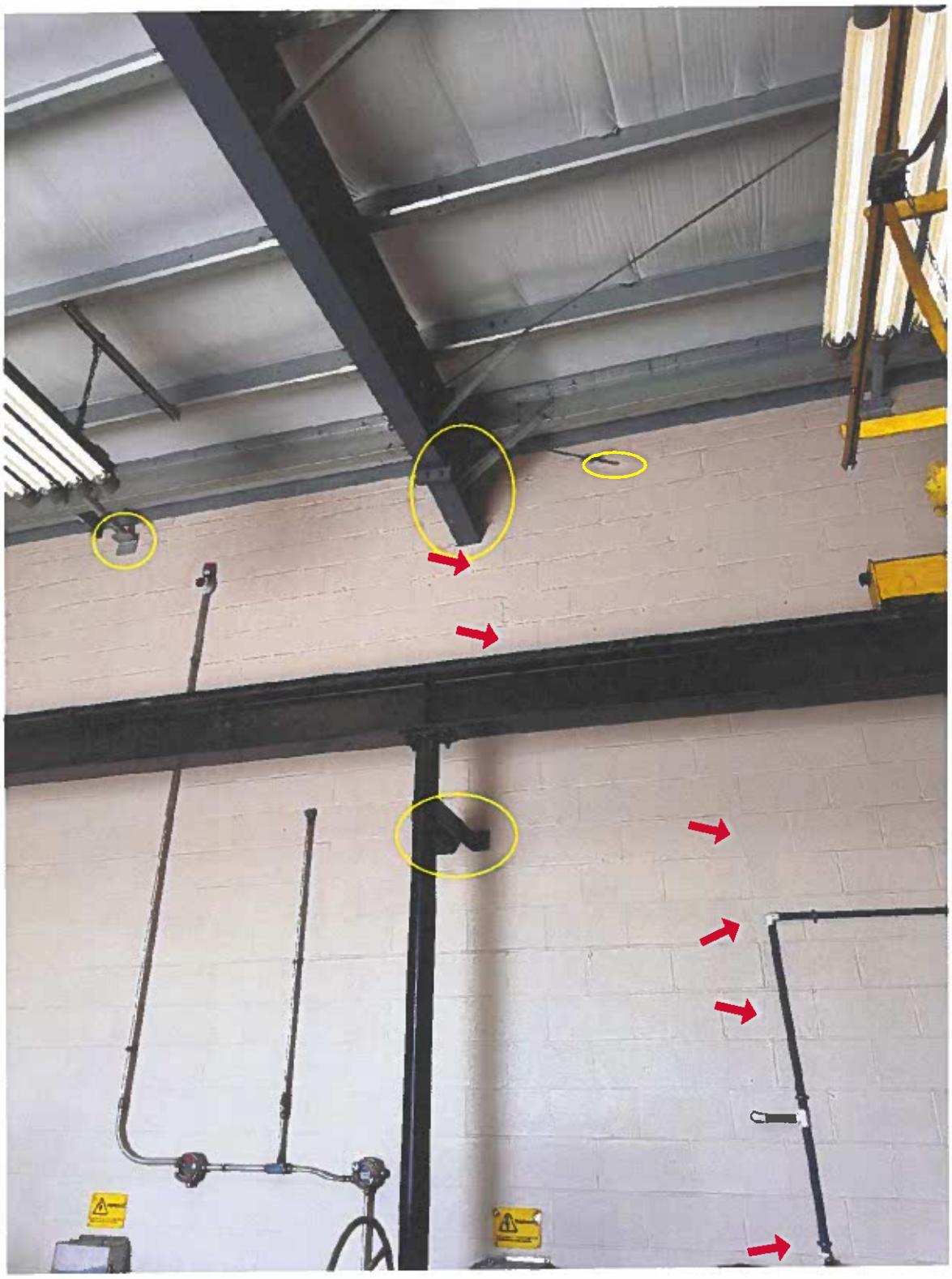


Figure 17: Cracks in masonry wall. Note purlin brace attached to CMU, frame penetration set in CMU, x-bracing penetrates CMU without space to move, and bridge crane attached to CMU.

Figure 18: Cracks in CMU at door between Pump room and Garage. Note concrete has previously been ground down.

Figure 19: Cracks in concrete floor.

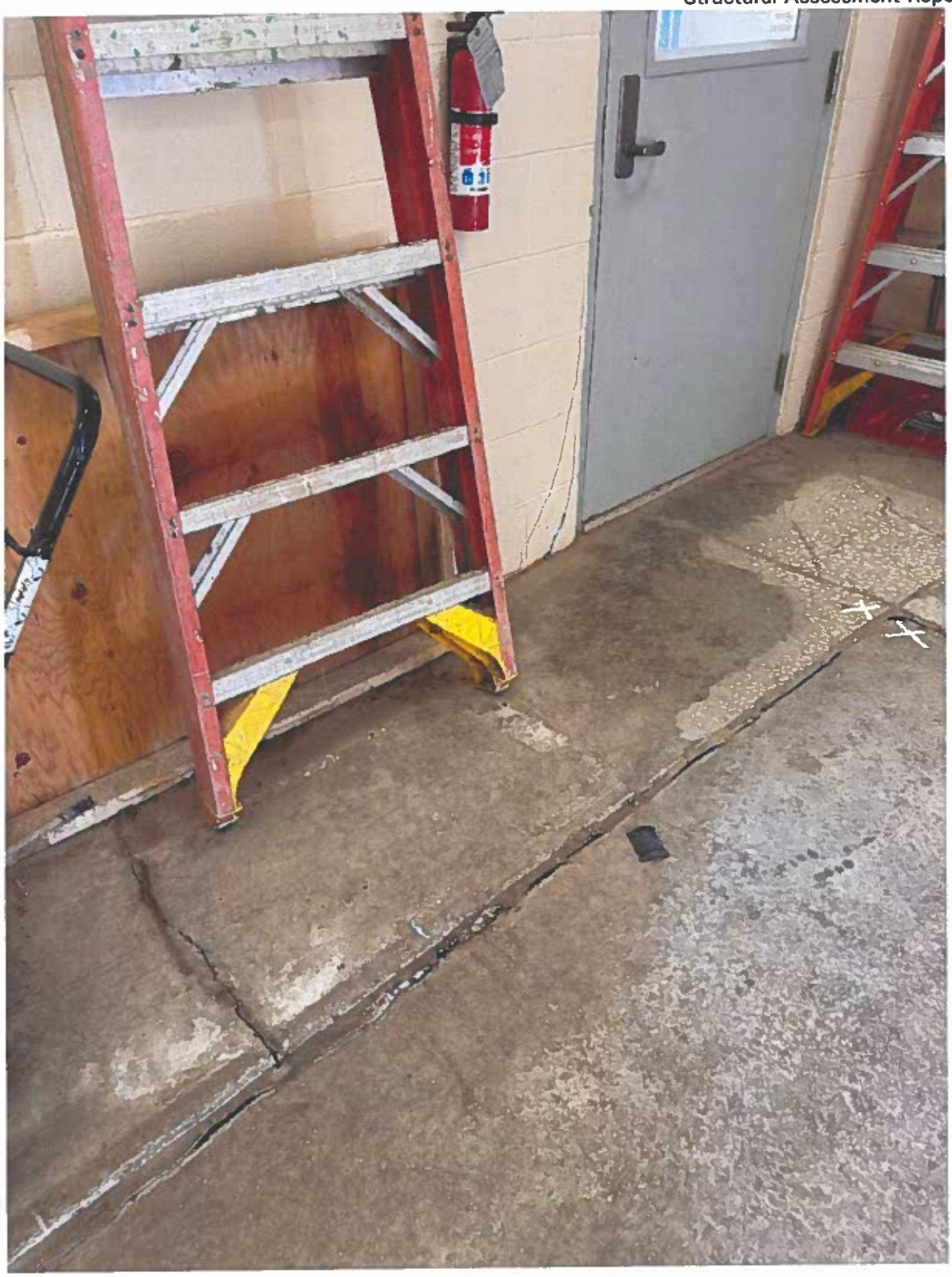


Figure 20: Cracks in concrete floor. Separation of sealant between Pump room concrete floor and deep well foundation.

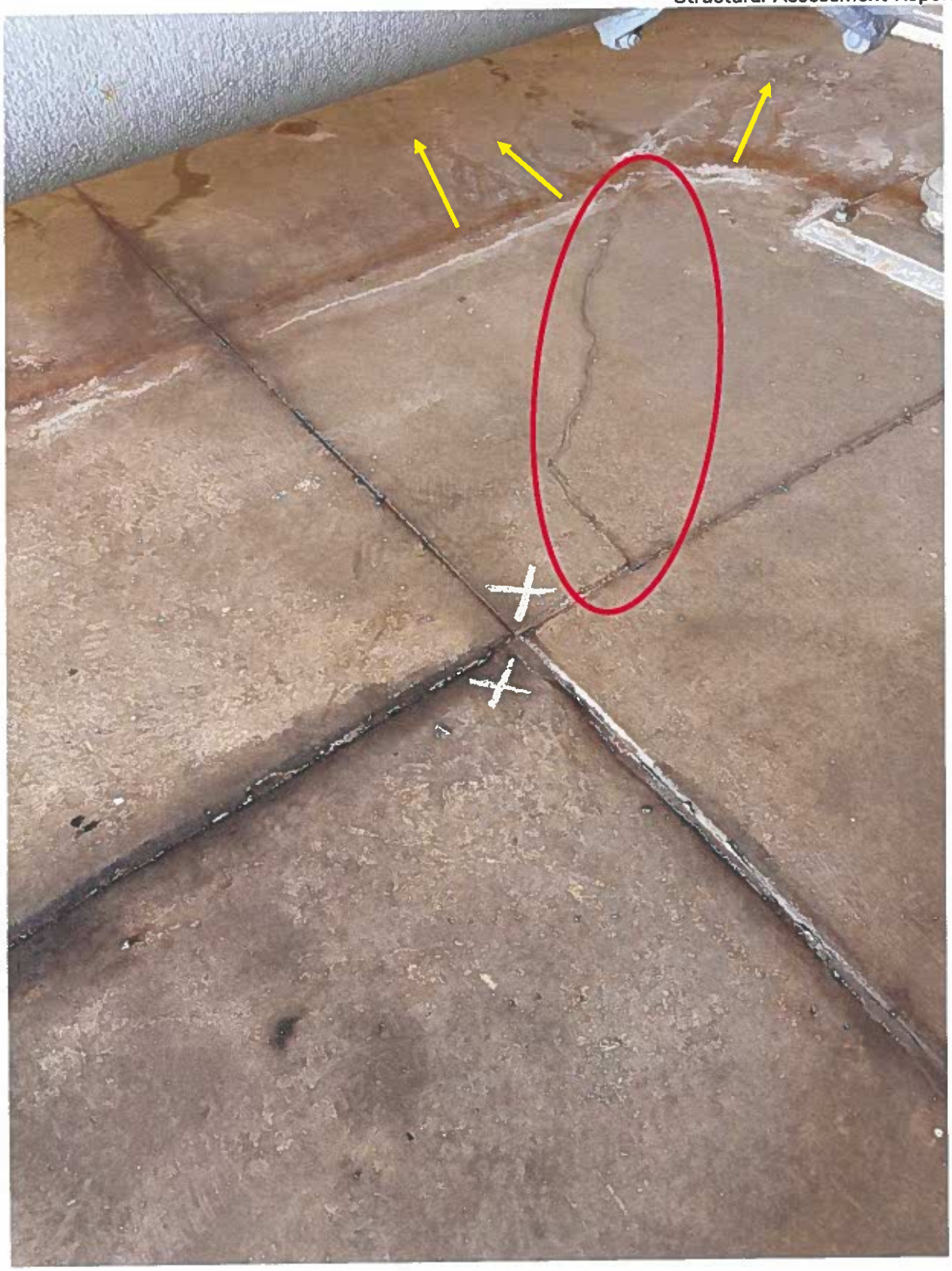


Figure 21: Cracks in concrete floor (appear to have previous repair). Note direction of water staining.

Figure 22: Note direction of staining on concrete floor.

Figure 23: Cracks in grout around pipe penetration (typ.).

PLAN REVIEW

As part of our analysis, BG Consultants reviewed the Record Drawings, issued by Buchner, Willis & Ratliff Corporation. The plan set does not include information about the pre-engineered metal building rigid frames or metal framing members.

The plans specify the Process Building finished floor elevation to be 1150 ft. To achieve this elevation the natural grade of the site had to be raised approximately 9 ft with fill material. The rigid frames are supported on 12 in. thickened slab edges over 24 in. deep concrete spread footings. Exterior walls are supported on 12 in. thickened slab edges over 18 in. wide by 24 in. deep grade beams. Interior CMU walls are supported by a 6 in. discontinuous slab over 12 in. wide 16 in. deep, continuous concrete grade beams.

The Deep Well is 21 ft 6 in. wide by 39 ft long and contains submersible pumps. The floor elevation was specified to be at 1113.5 ft with a 2.5 ft thick concrete floor slab, reinforced with #6 bars at 12 in. on center, each way, on the bottom. The top reinforcing was called out as #6 bars at 11 in. on center in the short direction, and #9 bars at 5 in. on center in the long direction. The walls were designed to be 2 ft thick, reinforced with #6 bars at each face. The deep well was designed with two collars around the perimeter, each is 2 ft thick and extends 2 ft beyond the outside face of the Deep Well walls. Both collars were specified to be reinforced with a total of (12) #9 bars and (2) #4 stirrups at 12 in. on center. The top of the first collar is located at 11 ft 6 in. below the top of slab, the second collar is located 23 ft 6 in. below the top of slab. A section view of the Deep Well can be seen in Figure 24.

The influent line was connected to Manhole A when the wastewater treatment plant was upgraded around 2008. From Manhole A to the Process building, the influent line is a 24 in., PVC, gravity line at a 0.08% slope. The line comes in from the north side of the wastewater treatment plant, connects to Manhole B to the northeast of the Process Building and turns a 94° angle to flow south to Manhole C. At Manhole C, there is a 90° turn to the Process Building. The connection of the influent line to the Deep Well has a grinder pump at the inside face of the well. On the opposite side, the submersible raw influent pumps are connected to the Deep Well walls with stainless steel braces spaced at 10 ft on center vertically.

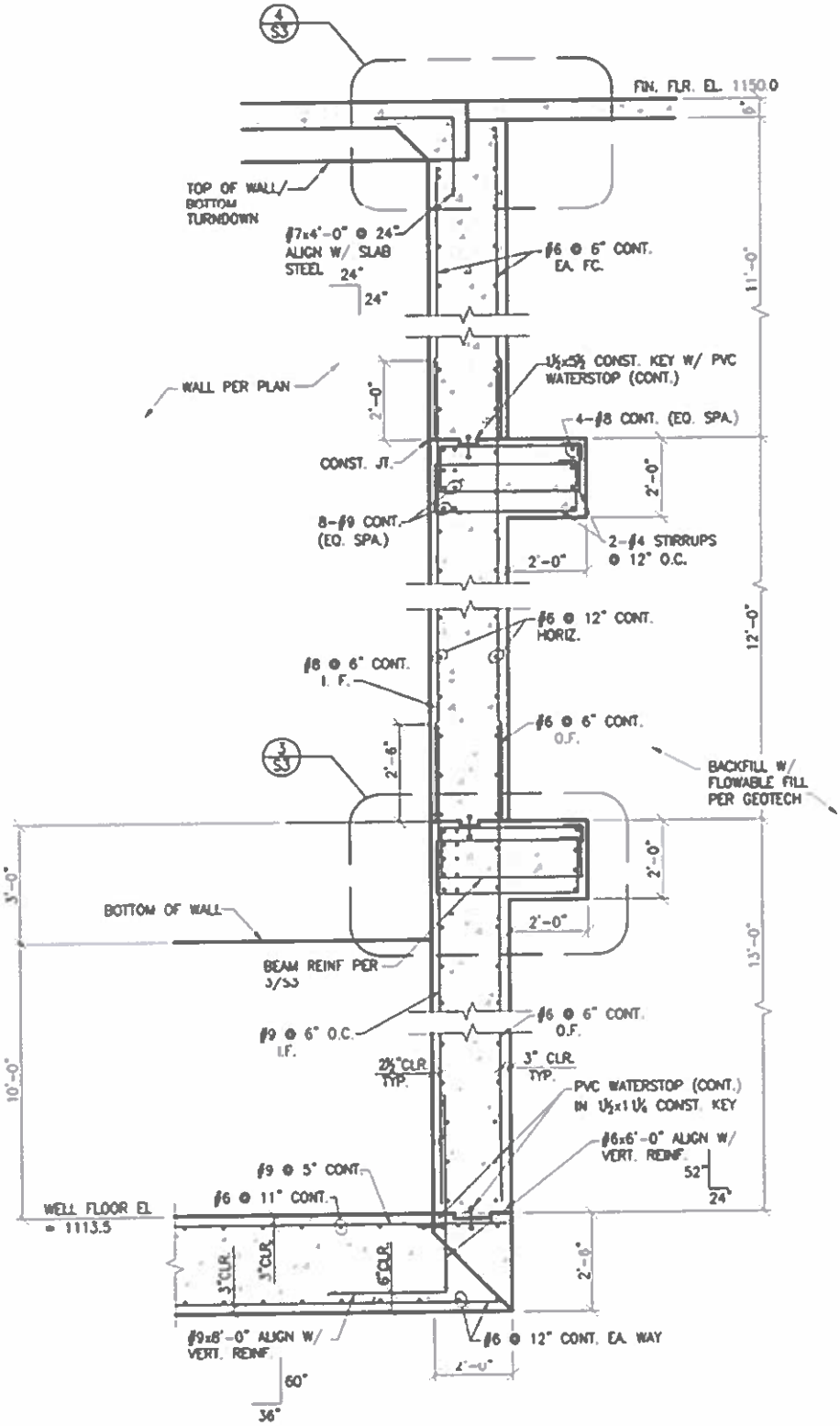


Figure 24: Deep Well Section.

ELEVATION SURVEY DISCUSSION

BG Consultants completed surveys of the Process Building and Deep Well on July 12, 2024, and July 31, 2024, to establish and verify elevations. The relative elevation information was combined with the survey information that is based on a known elevation datum for analysis of the structures. The combined survey information is presented as abbreviated actual elevations, e.g. an elevation of 49.840 represents 1149.840 ft. In addition to the elevations taken in the structures, elevations of the influent line were taken at Manhole B, Manhole C, and at the top of the pipe penetration into the Deep Well.

The finished floor elevation and top of the Deep Well elevation were set at 1150 ft per plan. The highest elevation of the Process Building finished floor, located at the edge of the Deep Well slab, was 50.163 ft which is approximately 2 in. above the specified finished floor elevation. The lowest finished floor elevation of the Process building was 49.746 ft., located in the Dewatering room, which is about 3 in. lower than the specified finished floor elevation. The finished floor elevations taken adjacent to the edge of the Deep Well were close to the elevations of the Deep Well lid and typically varied by fractions of an inch. From the edge of the Deep Well to the walls of the Pump room, the elevations varied more significantly by as much as 2.63 in. sloping downward from the top of the pit to the walls. In general, the Deep Well foundation and lid were higher than the concrete floor of the Process Building.

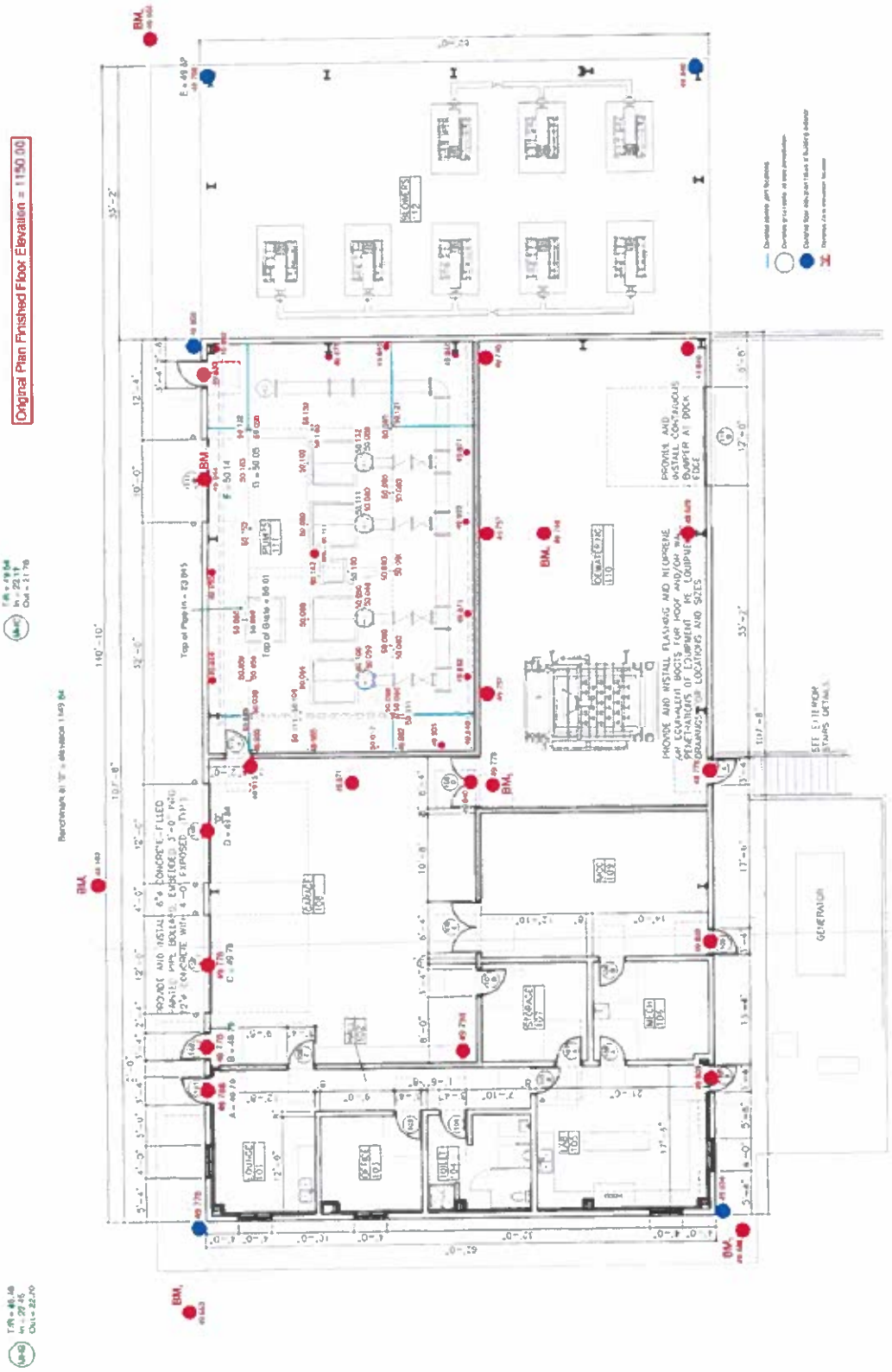


Figure 25: Elevation Survey Data.

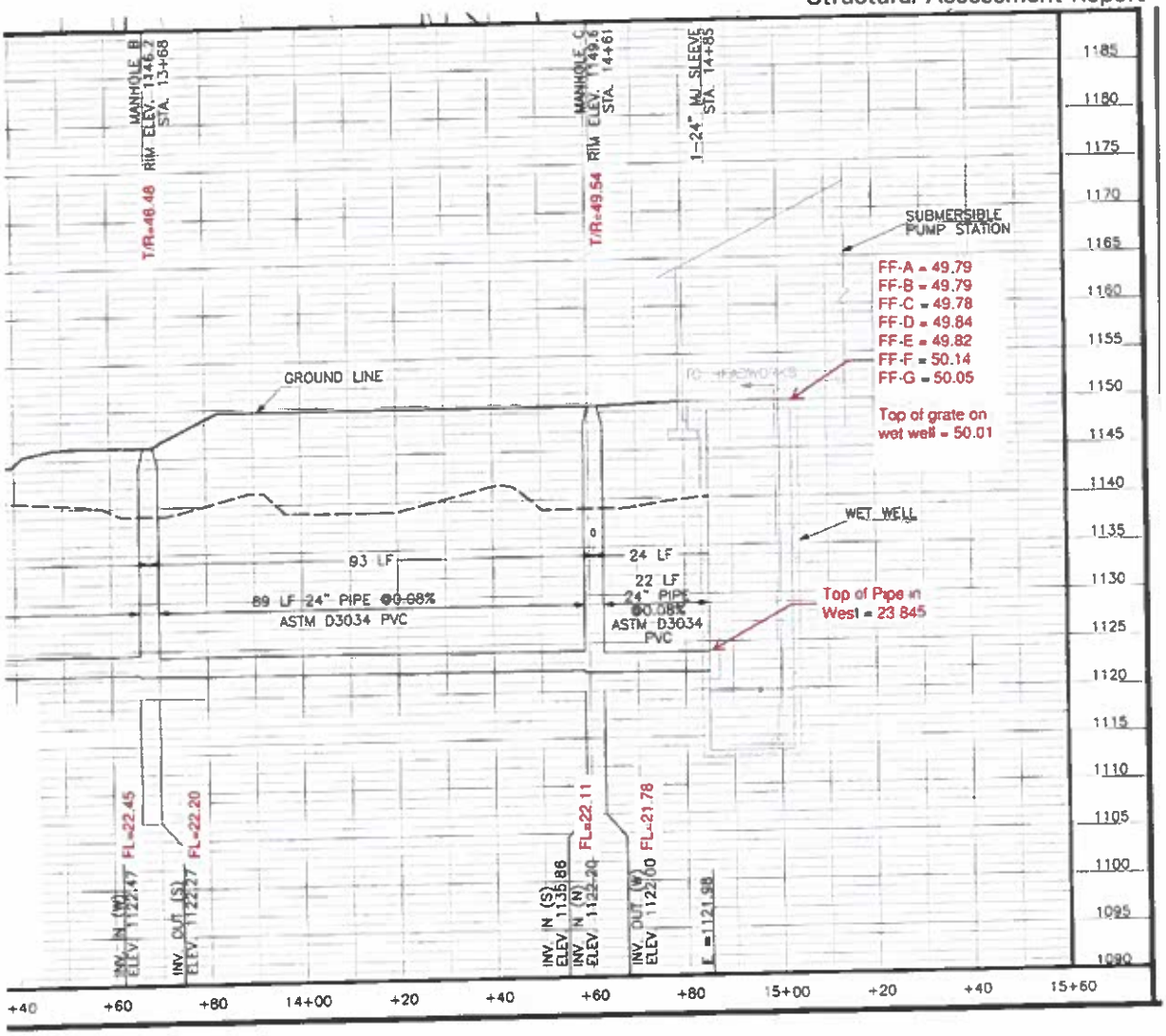


Figure 26: Plotted survey elevations.

CONCLUSIONS AND RECOMMENDATIONS

Based on visual observations during our site visit, the cracks in the masonry walls most likely occurred because of the rigid connections between the masonry walls and the metal building rigid frames, as well as the other rigid connections to the masonry walls like the bridge crane, purlin braces, and PEMB girt connections to the tops of the masonry walls. External forces, such as wind, push on the metal building frames and result in movement of the frame. Since there is a rigid connection between the steel frames and the CMUs, there is not an allowance for slight movement of the frame resulting in the cracks throughout the CMU walls. As well, when the bridge crane moves, it induces impact forces into the CMU walls and has

likely contributed to the cracks observed in the Pump room. Throughout the masonry walls, hairline cracks can be painted over, wider cracks should be filled with a paintable epoxy sealant before painting. All repaired cracks should be monitored for reopening. These rigid frame, purlin, and purlin brace connections through the CMU walls should be cut-out and sealed with a flexible sealant that meets fire-proofing specifications. The girts will need to have slotted holes cut in to each connection to allow movement.

Per our review of the plans, the building footings are founded in fill soils while the Deep Well is founded much deeper in undisturbed, native soils. Elevations taken near the walls of the Process Building are consistently down by an average of about 2 in. Conversely, the Deep Well lid is generally about 1 in. higher than plan specifications.

Our initial suspicion was that the Deep Well did not have enough weight to resist the buoyancy effect and was coming out of the ground. This led us to perform a buoyancy analysis of the Deep Well. We found that the factor of safety for the Deep Well, weight of the wet well structure relative to buoyancy uplift forces, is around 3.5. Therefore, buoyancy is not the issue.

The elevation data combined with the plan review and buoyancy analysis indicates that the elevation differences throughout the building are most likely the result of wall settlement and that the well has remained at the elevation it was constructed at. Some elevation variation from the specified 1150 ft finished floor elevation could have occurred during the construction process, for example, the deep well being generally an inch higher than the plan elevation.

The options for addressing the wall settlement are: 1) to repair the cracks and eliminate the rigid connections between the masonry and the PEMB, and simply monitor building settlement, 2) install helical piles around the Pump room to arrest the settlement and possibly regain lost elevation at the perimeter of the pump room only, or 3) install helical piles throughout the whole building. If it is desired to install helical piles, a geotechnical investigation will be required around the perimeter of the building and in rooms adjacent to the Pump Room to aid in the design of the helical piles. If the foundations are lifted and lost elevation is regained, there will be voids under the slabs that will need to be filled with structural polyurethane foam.

Regarding the elevations of the influent pipe, wastewater treatment plant personnel reported that they have not noticed any operational issues at the plant. The influent line penetration to the Deep Well was measured to be slightly lower, approximately 1-5/8 in., than specified on the plans. Likewise, the measurements taken of the influent line at Manhole C and Manhole B were slightly lower than specified, but still

within tolerances. The bottom elevation of the influent line was slightly higher at the Deep Well penetration than at Manhole C. We recommend that the Influent line be scoped with a CCTV cart system to get a 360-degree view of the line. The pipe should be inspected for any signs of distress such as cracks in the pipe walls or conditions resulting in backflow of the line.

The elevation measurements taken in July 2024 can serve as a benchmark for future use. We recommend the Deep Well and Process Building be monitored for movement. The Process Building and Deep Well should have another survey in about five years to determine if additional movement has occurred.

ENGINEER'S OPINION OF PROBABLE COST

The estimated cost to cut out rigid connections and fill the new openings with flexible fire-rated foam sealant, epoxy-repair cracks, create slip connections between the CMU walls and the girts, and scope the lines is $58,320.

The estimated cost to perform the above repairs, get a geotechnical investigation, and to stabilize the pump room walls only with the addition of helical piles around the pump room and structural polyurethane foam to fill voids under the slab is $181,778.

The estimated cost to perform repairs to the masonry walls, get a geotechnical investigation, and to stabilize the entire building with the addition of helical piles and structural polyurethane foam to fill voids is $523,130.

AGREEMENT

CONSULTANT-CLIENT

THIS AGREEMENT made and entered into by and between BG CONSULTANTS, INC., party of the first part, (hereinafter called the CONSULTANT), and City of Abilene, party of the second part, (hereinafter called the CLIENT).

WITNESSETH:

WHEREAS, the CLIENT is authorized and empowered to contract with the CONSULTANT for the purpose of obtaining Services for the following improvement:

Abilene Wastewater Treatment Facility
Process Building Pump Room Settlement and Crack Mitigation and Repair
Located at 1014 2100 Avenue, Abilene, KS 67410

WHEREAS, the CONSULTANT is licensed in accordance with the laws of the State of Kansas and is qualified to perform the Professional Services desired by the CLIENT now therefore:

IT IS AGREED by and between the two parties aforesaid as follows:

SECTION 1 – DEFINITIONS

As used in this Agreement, the following terms shall have the meanings ascribed herein unless otherwise stated or reasonably required by this contract, and other forms of any defined words shall have a meaning parallel thereto.

1.1 "Additional Services" means any Services requested by the CLIENT which are not covered by Exhibit 1 of this Agreement.

1.2 "Agreement" means this contract and includes change orders issued in writing.

1.3 "CLIENT" or "Client" means the agency, business or person identified on page 1 as "CLIENT" and is responsible for ordering and payment for work on this project.

1.4 "CONSULTANT" or "Consultant" means the company identified on page 1. CONSULTANT shall employ for the Services rendered, engineers, architects and surveyors licensed, as applicable, by the Kansas State Board of Technical Professions.

1.5 "Contract Documents" means those documents so identified in the Agreement for this Project, including Engineering, Architectural and/or Survey documents under this Agreement. Terms defined in General Conditions shall have the same meaning when used in this Agreement unless otherwise specifically stated or in the case of a conflict in which case the definition used in this Agreement shall prevail in the interpretation of this Agreement.

1.6 "Engineering Documents" or "Architectural Documents" or "Survey Documents" means plans, specifications, reports, drawings, tracings, designs, calculations, computer models, sketches, notes, memorandums or correspondence related to the work described in Exhibit 1 attached hereto.

1.7 "Consulting Services" or "Engineering Services" or "Architectural Services" or "Survey Services" means the professional services, labor, materials, supplies, testing and other acts or duties required of the CONSULTANT under this Agreement, together with Additional Services as CLIENT may request and evidenced by a supplemental agreement pursuant to the terms of this Agreement.

1.8 "Services" is a description of the required work as shown in **Exhibit 1**.

1.9 "Subsurface Borings and Testing" means borings, probings and subsurface explorations, laboratory tests and inspection of samples, materials and equipment; and appropriate professional interpretations of all the foregoing.

SECTION 2 – RESPONSIBILITIES OF CONSULTANT

2.1 SCOPE OF SERVICES: The CONSULTANT shall furnish and perform the various Professional Services of the Project to which this Agreement applies, as specifically provided in **Exhibit 1** for the completion of the Project.

2.2 GENERAL DUTIES AND RESPONSIBILITIES

2.2.1. **Personnel**: The CONSULTANT shall assign qualified personnel to perform professional Services concerning the Project. At the time of execution of this Agreement, the parties anticipate that the following individual will perform as the principal point of contact on this Project.

Name:	Johnny Eclavea
Address:	4806 Vue Du Lac Place
	Manhattan, Kansas 66503
Phone:	E johnny.eclavea@bgcons.com P 785.537.7448

2.2.2. **Standard of Care**: In the performance of professional Services, CONSULTANT will use that level of care and skill ordinarily exercised by reputable members of CONSULTANT's profession currently practicing in the same locality under similar conditions. No other representation, guarantee or warranty, express or implied, is included or intended in this agreement or in any communication (oral or written) report, opinion, document or instrument of service.

2.2.3. **Independent Contractor**: The CONSULTANT is an independent contractor and as such is not an employee of the Client.

2.2.4. **Insurance**: CONSULTANT will maintain insurance for this Agreement in the following types: (i) worker's compensation insurance as required by applicable law, (ii) comprehensive general liability insurance (CGL), (iii) automobile liability insurance and (iv) Professional liability insurance.

2.2.5. **Subsurface Borings and Material Testing**: If tests additional to those provided in Exhibit 1 are necessary for design, the CONSULTANT shall prepare a request for the necessary additional borings and procure at least two proposals, including cost, from Geotechnical firms who engage in providing Subsurface Borings and Testing Services. The CONSULTANT will provide this information to the Client and the Client will contract directly with the Geotechnical firm. The CONSULTANT will not charge an add-on percentage for the Geotechnical firm's work. The Client will pay the Geotechnical firm separately from this Agreement.

2.2.6. **Service by and Payment to Others**: Any work authorized in writing by the Client and performed by a third party, other than the CONSULTANT or their subconsultants in connection with the proposed Project, shall be contracted for and paid for by the Client directly to the third party or parties. Fees for extra work shall be subject to negotiation between the CLIENT and the third party. Fees shall be approved by the CLIENT prior to the execution of any extra work. Although the CONSULTANT may assist the CLIENT in procuring such Services of third parties. Where any design services are provided by persons or entities not under CONSULTANT's direct control, CONSULTANT's role shall be limited to its evaluation of the general conformance with the design intent and the interface with CONSULTANT's design and portion of the project. Except to the extent it is actually aware of a deficiency, error, or omission in such design by others, CONSULTANT shall have no responsibility for such design and may rely upon its adequacy, accuracy, and completeness in all respects.

2.2.7. **Subcontracting of Service**: The CONSULTANT shall not subcontract or assign any of the architectural, engineering, surveying or consulting Services to be performed under this Agreement without first obtaining the approval of the Client regarding the Services to be subcontracted or assigned and the firm or person proposed to perform the Services. Neither the CLIENT nor the CONSULTANT shall assign any rights or duties under this Agreement without the prior consent of the other party.

2.2.8. **Endorsement**: The CONSULTANT shall sign and seal final plans, specifications, estimates and data furnished by the CONSULTANT according to Kansas Statutes and Rules and Regulations.

2.2.9. **Force Majeure**: Should performance of Services by CONSULTANT be affected by causes beyond its reasonable control, Force Majeure results. Force Majeure includes, but is not restricted to, acts of God; acts of a legislative, administrative or judicial entity; acts of contractors other than contractors engaged directly by CONSULTANT; fires; floods; labor disturbances; epidemics; and unusually severe weather. CONSULTANT will be granted a time extension and the parties will negotiate an equitable adjustment to the price of any affected Work Order, where appropriate, based upon the effect of the Force Majeure on performance by CONSULTANT.

2.2.10. **Inspection of Documents**: The CONSULTANT shall maintain Project records for inspection by the CLIENT during the contract period and for three (3) years from the date of final payment.

2.2.11. **No Fiduciary Duty**: The CONSULTANT shall perform its services consistent with the professional skill and care ordinarily provided by consultants practicing in the same or similar locality under the same or similar circumstances ("Standard of Care"). The CONSULTANT shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project. CONSULTANT makes no warranties or guarantees, express or implied, under this Agreement or otherwise in connection with CONSULTANT's services. Notwithstanding any other representations made elsewhere in this Agreement or in the execution of the Project, this Standard of Care shall not be modified. The CONSULTANT shall act as an independent contractor at all times during the performance of its services, and no term of this Agreement, either expressed or implied, shall create an agency or fiduciary relationship.

SECTION 3 – CLIENT RESPONSIBILITIES

3.1 GENERAL DUTIES AND RESPONSIBILITIES

3.1.1. **Communication**: The CLIENT shall provide to the Consultant information and criteria regarding the CLIENT's requirement for the Project; examine and respond in a timely manner to the Consultant's submissions and give notice to the Consultant whenever the CLIENT observes or otherwise becomes aware of any defect in the Services. The CLIENT represents that all information they provide is accurate. Our review and use of the information will be to the standard of care and any delays or additional costs due to inaccurate information will be the responsibility of the CLIENT.

3.1.2. **Access**: The CLIENT will provide access agreements for the Consultant to enter public and private property when necessary.

3.1.3. **Duties**: The CLIENT shall furnish and perform the various duties and Services in all phases of the Project which are outlined and designated in Exhibit 1 as the CLIENT's responsibility.

3.1.4. **Program and Budget**: The CLIENT shall provide full information stating the CLIENT's objectives, schedule, budget with reasonable contingencies and necessary design criteria so that Consultant is able to fully understand the project requirements.

3.1.5. **Testing**: Any additional tests required to supplement the Scope of Services or tests required by law shall be furnished by the CLIENT.

3.1.6. **Legal, Insurance, Audit**: The CLIENT shall furnish all legal, accounting and insurance counseling Services as may be necessary at any time for the Project. The CLIENT shall furnish all bond forms required for the Project.

3.1.7. **Project Representative**: The CLIENT will assign the person indicated below to represent the CLIENT in coordinating this Project with the CONSULTANT, with authority to transmit instructions and define policies and decisions of the CLIENT.

Name:	Brenden Alvarez
Address:	419 N. Broadway, PO Box 519
	Abilene, Kansas 67410
Phone:	E brenden@abilenecityhall.com P 785.263.2355

3.1.8. **Billing Contact**: In this section, the CLIENT will identify the billing contact and address. The CONSULTANT will submit invoices according to this contract to the CLIENT's billing contact at the address shown:

Name:	Kevin Clark
Address:	1014 2100 Avenue
	Abilene, Kansas 67410
Phone:	E kevin@abilenecityhall.com P 785.263.3279

SECTION 4 – PAYMENT

4.1 COMPENSATION

4.1.1. **Fee and Expense**: The CLIENT agrees to pay the CONSULTANT a Lump Sum Fee according to **Exhibit 2** of this Agreement. The Lump Sum Fee for this project is a total of $65,250.00 Dollars plus reimbursable expenses as outlined in **Exhibit 2** and for the Scope of Services as shown in **Exhibit 1** of this Agreement. Payment of the Lump

Sum Fee and reimbursables shall be made by the CLIENT according to the schedule and upon completion of work as shown in **Exhibit 2**. Other methods of compensation are allowed only after written approval by both parties to this Agreement. Payment is due within thirty (30) days of billing by the CONSULTANT and any late payment will incur an interest charge of one and one-half (1½) percent per month.

4.1.2. **Hourly Rate**: Any Additional Services which are not set forth in this Agreement will be charged on the basis of BG Consultants, Inc. standard hourly rate schedule in effect at the time of services, unless stated otherwise in a properly executed addendum to this contract for Additional Services. No Additional Services or costs shall be incurred without proper written authorization of the CLIENT.

4.1.3. **Annual Rate Adjustment**: The payment amounts listed in this Agreement are based on the work being performed within one year of the contract date. Because of natural time delays that may be encountered in the administration and work to be performed for the project, each value will be increased at the rate of 3%, compounded annually, beginning after one year from the date of the contract and ending when that item is approved for billing.

4.1.4. **Reimbursable Expenses**: An estimate of reimbursable expenses plus ten (10) percent shall be included in the total estimate of cost for this project and as shown in **Exhibit 2**. Total estimated cost is calculated as Lump Sum plus reimbursable expenses plus ten (10) percent. Reimbursable expenses include, but are not limited to, expenses of transportation in connection with the Project; expenses in connection with authorized out-of-town travel; expenses of printing and reproductions; postage; expenses of renderings and models requested by the CLIENT and other costs as authorized by the CLIENT. Reimbursable expenses will not include overhead costs or additional insurance premiums.

4.1.5. **Sales Tax**: Compensation as provided for herein is exclusive of any sales, use or similar tax imposed by taxing jurisdictions on any amount of compensation, fees or Services. Should such taxes be imposed, the CLIENT shall reimburse the CONSULTANT in addition to the contractual amounts provided. The CLIENT shall provide tax exempt number, if required, and if requested by the CONSULTANT.

4.1.6. **Billing**: CONSULTANT shall bill the CLIENT monthly for services and reimbursable expenses according to **Exhibit 2**. The bill submitted by CONSULTANT shall state the services and reimbursable expenses for which payment is requested, notwithstanding any claim for interest or penalty claimed in a CONSULTANT's invoice. The CLIENT agrees to pay within thirty (30) days of billing by the CONSULTANT and any late payment will incur an interest charge of one and one-half (1½) percent per month.

4.1.7. **Timing of Services**: CONSULTANT will perform the Services according to Exhibit 2. However, if during their performance, for reasons beyond the control of the CONSULTANT, delays occur, the parties agree that they will negotiate in writing an equitable adjustment of time and compensation, taking in to consideration the impact of such delays. CONSULTANT will endeavor to start its services on the anticipated start date and continue to endeavor to complete its services according to the schedule indicated in Exhibit 2. The start date, completion date and any milestone for project delivery are approximate only and CONSULTANT reserves the right to adjust its schedule and all of those dates at its sole discretion for delays caused by the CLIENT, Owner or third parties.

4.1.8. **Change in Scope**: For modifications in authorized scope of services or project scope and/or modifications of drawings and/or specifications previously accepted by the CLIENT, when requested by the CLIENT and through no fault of the CONSULTANT, the CONSULTANT shall be compensated for time and expense required to incorporate such modifications at

CONSULTANT's standard hourly rates. Provided, however, that any increase in contract price or contract time must be requested by the CONSULTANT and must be approved through a written supplemental agreement prior to performing such services. CONSULTANT shall correct or revise errors or deficiencies in its designs, drawings or specifications without additional compensation when due to CONSULTANT's negligence, error or omission.

4.1.9. **Additional Services**: The CONSULTANT shall provide, with the CLIENT's concurrence, Services in addition to those listed in Exhibit 1 when such Services are requested in writing by the CLIENT. Prior to providing Additional Services, the CONSULTANT will submit a proposal outlining the Additional Services to be provided, and an hourly or lump sum fee adjustment. Payment to the CONSULTANT, as compensation for these Additional Services, shall be in accordance with the mutually agreed adjustment to the CONSULTANT's fee. Reimbursable expenses incurred in conjunction with Additional Services shall be paid separately and those reimbursable expenses shall be paid at cost plus ten (10) percent. Records of reimbursable expenses and expenses pertaining to Additional Services and Services performed on an hourly basis shall be made available to the CLIENT if so requested in writing.

4.1.10. **Supplemental Agreement**: This Agreement may be amended to provide for additions, deletions and revisions in the Services or to modify the terms and conditions thereof by written amendment signed by both parties. The contract price and contract time may only be changed by a written supplemental agreement approved by the CLIENT, unless it is the result of an emergency situation, in which case the CLIENT may give verbal, e-mail or facsimile approval which shall be the same as written and approved supplemental agreement.

SECTION 5 – MUTUAL PROVISIONS

5.1 TERMINATION

5.1.1. **Notice**: The CLIENT reserves the right to terminate this Agreement for either cause or for its convenience and without cause or default on the part of the CONSULTANT, by providing written notice of such termination to the CONSULTANT. Such notice will be with Twenty Four (24) hours' notice.

The CONSULTANT reserves the right to terminate this Agreement based on failure of CLIENT to make payments or any material breach by the CLIENT.

If the CLIENT fails to make payments to the CONSULTANT in accordance with this Agreement or fails to meet its other material responsibilities under this Agreement, such failure shall be considered substantial nonperformance and cause for termination or, at the CONSULTANT's option, cause for suspension of performance of services under this Agreement. If the CONSULTANT elects to suspend services, the CONSULTANT shall give seven (7) days' written notice to the CLIENT before suspending services. In the event of a suspension of services, the CONSULTANT shall have no liability to the CLIENT for delay or damage caused the CLIENT because of such suspension of services. Before resuming services, the CONSULTANT shall be paid all sums due prior to suspension and any expenses incurred in the interruption and resumption of the CONSULTANT's services. The CONSULTANT's fees for the remaining services and the time schedules shall be equitably adjusted.

5.1.2. **Compensation for Convenience Termination**: If CLIENT shall terminate for its convenience, as herein provided, CLIENT shall compensate CONSULTANT for all Services completed to date prior to receipt of the termination notice.

5.1.3. **Compensation for Default Termination**: If the CLIENT shall terminate for cause or default on the part of the CONSULTANT, the CLIENT shall compensate the CONSULTANT for the reasonable cost of Services completed to date of its receipt of the termination notice. Compensation shall not include anticipatory profit or consequential damages, neither of which will be allowed.

5.1.4. **Incomplete Documents**: Neither the CONSULTANT, nor its subconsultant, shall be responsible for errors or omissions in documents which are incomplete as a result of an early termination under this section, the CONSULTANT having been deprived of the opportunity to complete such documents and certify them as ready for construction and/or complete.

5.2 DISPUTE RESOLUTION

5.2.1. If a claim, dispute or controversy arises out of or relates to the interpretation, application, enforcement or performance of Services under this Agreement, CONSULTANT and CLIENT agree first to try in good faith to settle the dispute by negotiations between senior management of CONSULTANT and CLIENT. If such negotiations are unsuccessful, CONSULTANT and CLIENT agree to attempt to settle the dispute by good faith mediation. If the dispute cannot be settled through mediation, and unless otherwise mutually agreed, the dispute shall be settled by litigation in an appropriate court in Kansas. Except as otherwise provided herein, each party shall be responsible for its own legal costs and attorneys' fees.

5.3 OWNERSHIP OF INSTRUMENTS OF SERVICE

5.3.1. All documents prepared or furnished by CONSULTANT pursuant to this Agreement are instruments of CONSULTANT's professional service, and CONSULTANT shall retain ownership and property interest therein, including all copyrights. Upon payment for services rendered, CONSULTANT grants CLIENT a license to use instruments of CONSULTANT's professional service for the purpose of constructing, occupying, or maintaining the project. Reuse or modification of any such documents by CLIENT, without CONSULTANT's written permission, shall be at CLIENT's sole risk, and CLIENT agrees to indemnify, defend, and hold CONSULTANT harmless from all claims, damages, and expenses, including attorneys' fees, arising out of such reuse by CLIENT or by others acting through CLIENT.

5.4 INDEMNIFY AND HOLD HARMLESS

5.4.1. In addition, where the Services include preparation of plans and specifications and/or construction observation activities for CLIENT, CLIENT agrees to have its construction contractors agree in writing to indemnify and hold harmless CONSULTANT from and against loss, damage, or injury attributable to personal injury or property damage to the extent caused by such contractors' performance or nonperformance of their work. The CLIENT will cause the contractor to name BG Consultants, Inc. (CONSULTANT) as additional insured on the contractor's General Liability Policy.

5.5 ENTIRE AGREEMENT

5.5.1. This Agreement constitutes the entire agreement between the parties and supersedes all prior agreements, whether oral or written, covering the same subject matter. This Agreement may not be modified or amended except in writing mutually agreed to and accepted by both parties to this Agreement.

5.6 APPLICABLE LAW

5.6.1. This Agreement is entered into under and pursuant to, and is to be construed and enforceable in accordance with laws of the State of Kansas.

5.7 ASSIGNMENT OF AGREEMENT

5.7.1. This Agreement shall not be assigned or transferred by either the CONSULTANT or the CLIENT without the written consent of the other.

5.8 NO THIRD PARTY BENEFICIARIES

5.8.1. Nothing contained herein shall create a contractual relationship with, or any rights in favor of, any third party.

5.9 LIMITATION OF LIABILITY

5.9.1. CLIENT's exclusive remedy for any breach of standard of care hereunder shall be to either (1) require CONSULTANT to re-perform any defective Services; or (2) pursue recovery for breach of contract. Notwithstanding any other provision of this Agreement, if CLIENT elects to pursue recovery for breach of contract, the total liability of CONSULTANT, its officers, directors and employees for liabilities, claims, judgments, demands and causes of action arising under or related to this Agreement, whether based in contract or tort, shall be limited to an amount equal to 200% of the total compensation actually paid to CONSULTANT for the Services and any Additional Services under this Agreement. All claims by CLIENT shall be deemed relinquished unless filed within one (1) year after completion of the Services.

Notwithstanding the foregoing, the limitation of liability contained in this section shall not apply to injuries, claims, losses, expenses, or damages to the extent caused by CONSULTANT's fraud or willful misconduct. This limitation shall apply to claims based on negligence, breach of contract, strict liability, or any other theory.

5.9.2. It is agreed to by the parties to this Agreement that the CONSULTANT's services in connection with the Project shall not subject CONSULTANT's employees, officers, or directors to any personal liability or legal exposure for risks associated with the Project. Therefore, the CLIENT agrees that the CLIENT's sole and exclusive remedy for any claim, demand or suit shall be directed and/or asserted only against the CONSULTANT, a Kansas corporation, and not against any of the CONSULTANT's individual employees, officers or directors.

5.9.3. CONSULTANT and CLIENT shall not be responsible to each other for any special, incidental, indirect or consequential damages (including lost profits) incurred by either CONSULTANT or CLIENT or for which either party may be liable to any third party, which damages have been or are occasioned by Services performed or reports prepared or other work performed hereunder.

5.10 COMPLIANCE WITH LAWS

5.10.1 CONSULTANT shall abide by known applicable federal, state and local laws, ordinances and regulations applicable to this Project until the Consulting Services required by this Agreement are completed consistent with the Professional Standard of Care. CONSULTANT shall secure occupational and professional licenses, permits, etc., from public and private sources necessary for the fulfillment of its obligations under this Agreement.

5.11 TITLES, SUBHEADS AND CAPITALIZATION

5.11.1 Titles and subheadings as used herein are provided only as a matter of convenience and shall have no legal bearing on the interpretation of any provision of the Agreement. Some terms are capitalized throughout the Agreement but the use of or failure to use capitals shall have no legal bearing on the interpretation of such terms.

5.12 SEVERABILITY CLAUSE

5.12.1. Should any provision of this Agreement be determined to be void, invalid or unenforceable or illegal for whatever reason, such provisions shall be null and void; provided, however that the remaining provisions of this Agreement shall be unaffected hereby and shall continue to be valid and enforceable.

5.13 FIELD REPRESENTATION

5.13.1. Unless otherwise expressly agreed to in writing, CONSULTANT shall not be responsible for the safety or direction of the means and methods at the contractor's project site or their employees or agents, and the presence of CONSULTANT at the project site will not relieve the contractor of its responsibilities for performing the work in accordance with applicable regulations, or in accordance with project plans and specifications. If necessary, CLIENT will advise any contractors that Consultant's Services are so limited. CONSULTANT will not assume the role of "prime contractor", "constructor", "controlling employer", "supervisor" or their equivalents, unless the scope of such Services are expressly agreed to in writing.

5.14 HAZARDOUS MATERIALS

5.14.1. The CONSULTANT and the CONSULTANT's subconsultants shall have no responsibility for the discovery, presence, handling, removal or disposal or exposure of persons to hazardous materials in any form at the Project site.

5.15 AFFIRMATIVE ACTION

5.15.1. The CONSULTANT agrees to comply with the provisions of K.S.A. 44-1030 in the Kansas Acts Against Discrimination.

5.16 SPECIAL PROVISIONS

5.16.1. Special Provisions may be attached and become a part of this agreement as **Exhibit 3.**

IN WITNESS WHEREOF, the parties have executed this Agreement in duplicate this _____ day of _____, 2025.

CONSULTANT:		**CLIENT:**	
BG Consultants, Inc.			
By:	Johnny Eclavea	By:	
Printed Name:	Johnny Eclavea	Printed Name:	Ron Marsh
Title:	Principal	Title:	City Manager

END OF CONSULTANT-CLIENT AGREEMENT

EXHIBIT 1

SCOPE OF SERVICES

Description:
Investigate and address settlement and structure cracking of the Abilene Wastewater Treatment Plant Process Building.

Scope of Services:

- Request geotechnical investigation at areas indicated. Geotechnical consultant will contract directly with the CLIENT.
    - Provide a site visit to verify clearances around areas to receive helical piles and verify PEMB Component dimensions.
- Model Process Building to generate design documents.
- Prepare details for improvements to address Crack mitigation and repair.
- Prepare a Structural Layout for Helical Piers to arrest settlement and possibly elevate back to original position around wet well room. Helical Piers shall be a delegated design to the manufacturer's engineer.
- Prepare a summary of locations and statement for crack repair.
- Provide Construction Documents in PDF format sealed by an Engineer licensed in the State of Kansas. Construction Documents include drawings and technical specifications.
    - Sheets required
        - Title Sheet / Index of Sheets
        - General Information
        - Floor Plan – Architectural Repairs
        - Structural General Notes
        - Demolition / Excavation Plan
        - Foundation Plan Overall
        - Foundation Plan Enlarged Pit Room with Helical Pier Layout
        - Structural Floor Plan – Crack Mitigation and Repair
        - Structural Details
- Prepare Estimate of Probable Construction Cost (EOPC) for Structural Repairs
- Architectural Design Services for Finishes after repair completed.
- Bidding Services
- Construction Administration Services
    - During the Construction Phase, the CONSULTANT shall act as the CLIENT's representative and provide administration of the Contract for the CLIENT. Generally, the CONSULTANT's services during construction include interpreting the Permit Documents, reviewing the CLIENT's submittals, visiting the site, reviewing contractor progress payments, and rejecting nonconforming Work. Review of Contractor's

submittals such as Shop Drawings, Product Data and Samples shall only be for the limited purpose of checking for conformance with information given and the design concept expressed in the Permit Documents.

- The CONSULTANT will visit the site at intervals during construction, as CONSULTANT deems necessary, to become generally familiar with the progress and quality of the Work.
- The CONSULTANT will not have control over or charge of, and will not be responsible for, construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the CLIENT's responsibility. The CONSULTANT will not be responsible for the CLIENT's failure to carry out the Work in accordance with the Permit Documents.
- The CONSULTANT has authority to reject Work that does not conform to the Contract Documents.

Services Not Included:

- Design of any other systems or services including Architectural Code Footprint MEP Designs, or Geotechnical Services.

End of Exhibit 1

EXHIBIT 2

COST AND SCHEDULE

CLIENT shall pay for Architectural/Engineering Services as set forth in Exhibit 1 in the LUMP SUM FEE OF $65,250.00. Billings will be made on a monthly basis for the prior month's work based on percent complete of scope of services. Payment for each billing shall be due and payable within 30 days of billing by the CONSULTANT. The out-of-pocket expenses, materials and mileage shall be included in the Lump Sum Fee.

Fee Itemization:

Architectural/Engineering Design Services	$45,650.00
Bidding Services	$ 5,200.00
Construction Administration Services	$14,400.00
Total Design Fee	$65,250.00

Work shall begin upon receipt of signed agreement and site visit scheduled. The Construction Bid Documents will be submitted within 90 days after actual site observations are made.

Total LUMP SUM FEE = $65,250.00

End of Exhibit 2

EXHIBIT 3
SPECIAL PROVISIONS

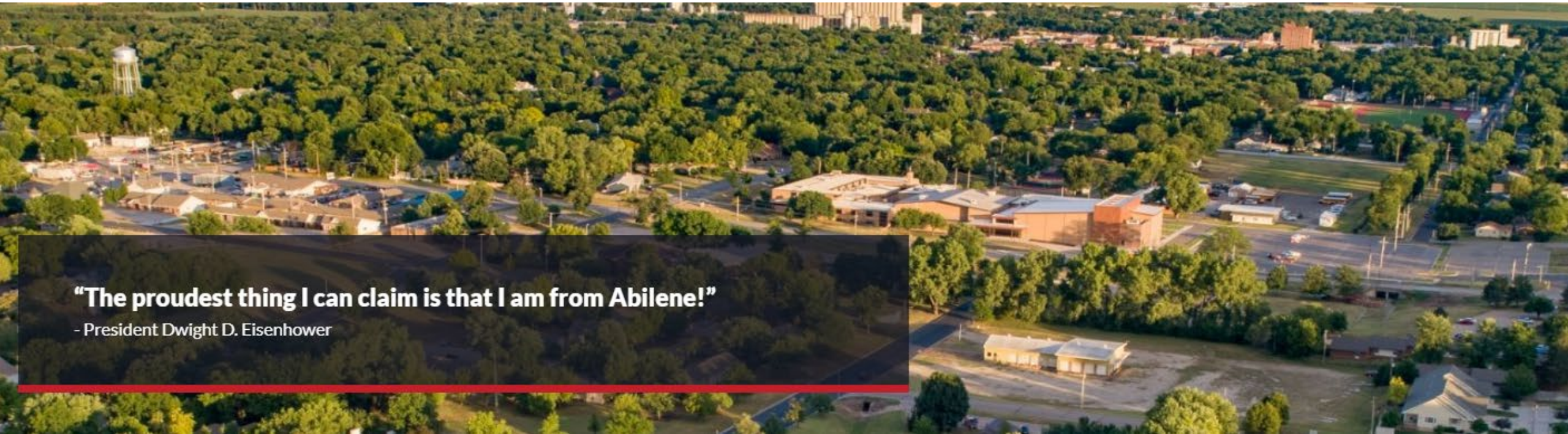
By Executing this AGREEMENT, CLIENT understands, acknowledges, and agrees to the following:

- CONSULTANT did not previously design the site, structures on the site, or have any prior interest and/or involvement with this site.
- CONSULTANT is not performing any testing (destructive and/or non-destructive) of the site, structures on the site, and/or any materials on the site.
- CONSULTANT is providing a general opinion based on site observations and is not performing structural analysis.
- CONSULTANT is only tasked with observing features of the building that are surface in nature and agree that the site and/or building(s) on the site may have structural flaws that cannot be observed. The CONSULTANT will rely on experience and try to point out observed structural deficiencies that might pose problems.
- CLIENT, as the owner of the site and the agency having jurisdiction over code enforcement for the site, is ultimately responsible for code enforcement and safety of the site.

State of the City

March 10, 2025

Finance Director, Leann Johnson



Highlights of 2024

- Street Sales Tax
- KDOT Funding for Street Projects
- 14th Street Project Complete
- 40th Anniversary of Sister City
- KDOT & FAA Funding for Airport Projects
- CVB Remodel Complete
- Comprehensive Plan and Master Parks Plan
- Staffing is full in all departments
- ERP Software Implementation
- Sports Complex Task Force
- Lead Service Line Inventory Submitted
- New Housing Developments
- Department of Commerce Grant

ABILENE KANSAS

Financial Review

Revenue

Expenditures

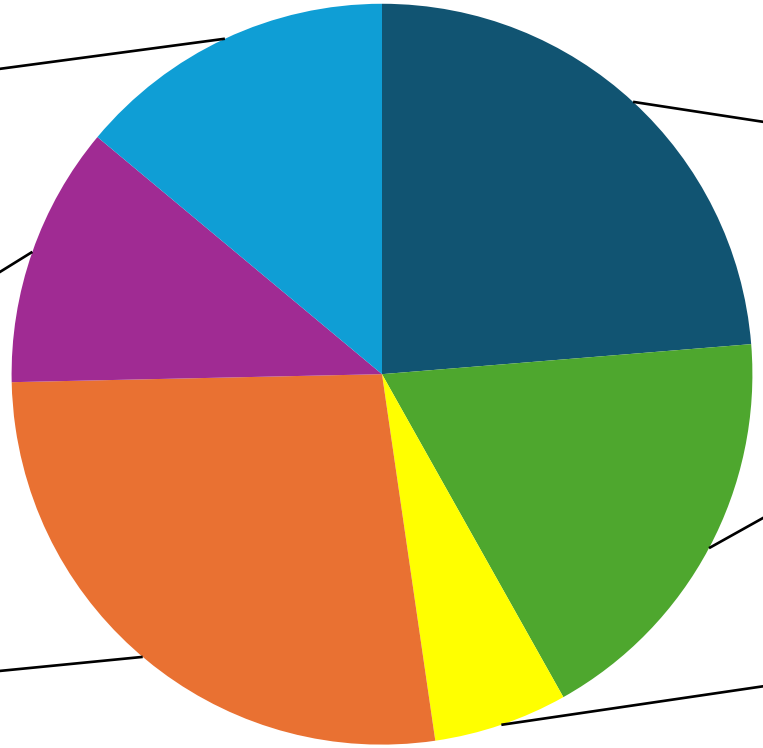
Cash Balance

Revenue Sources

- Taxes
- Licenses & Fees
- Intergovernmental
- Miscellaneous

Revenue

$15,352,305



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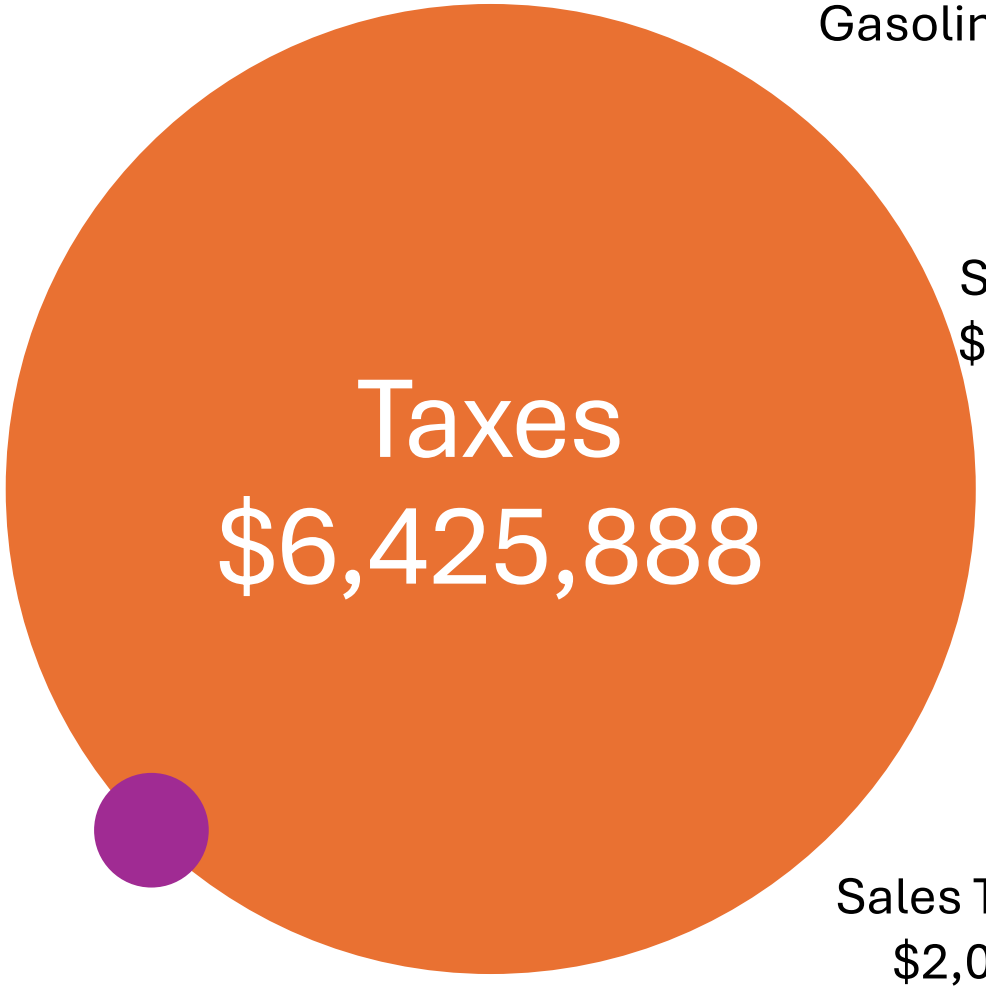

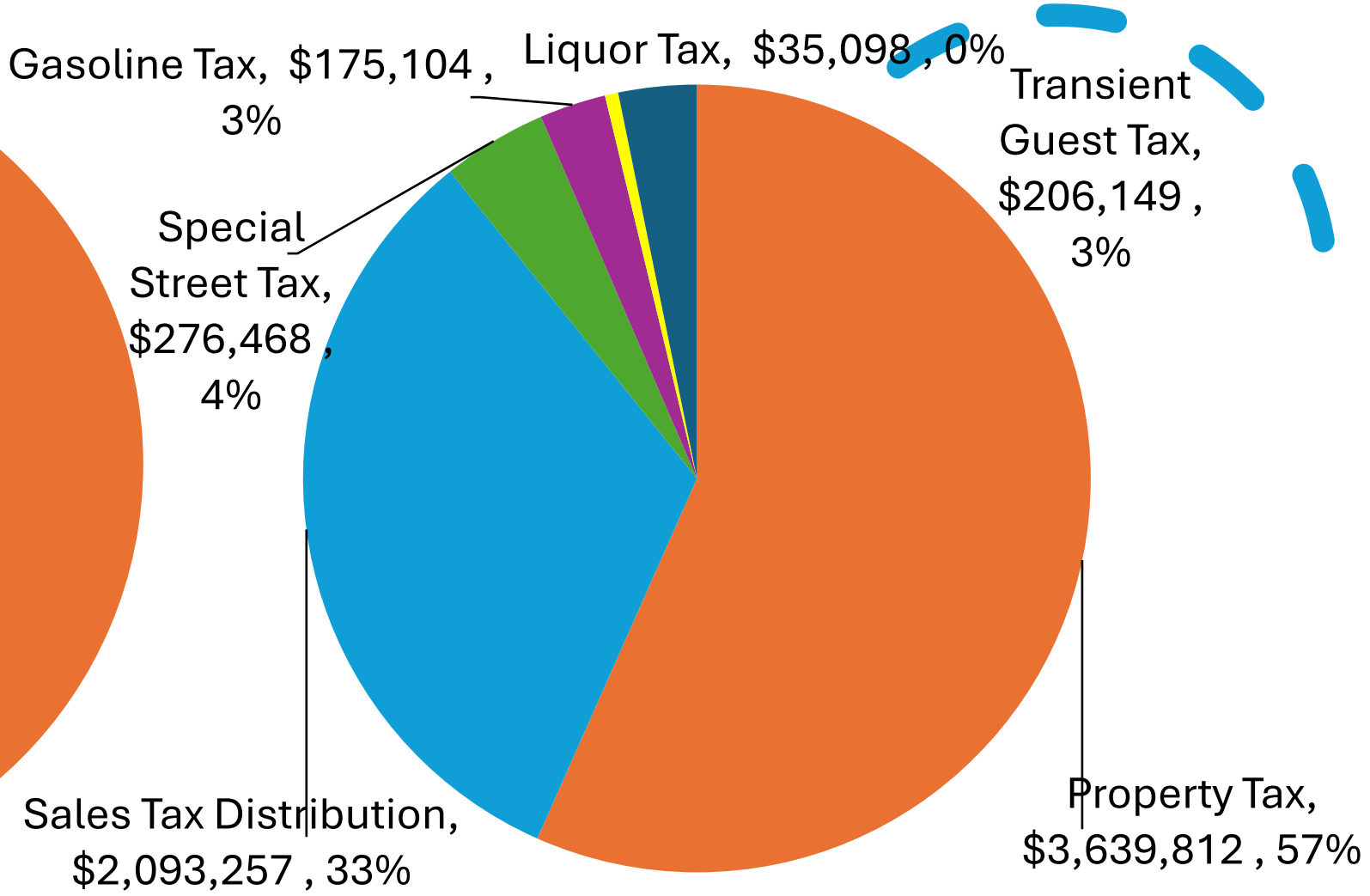

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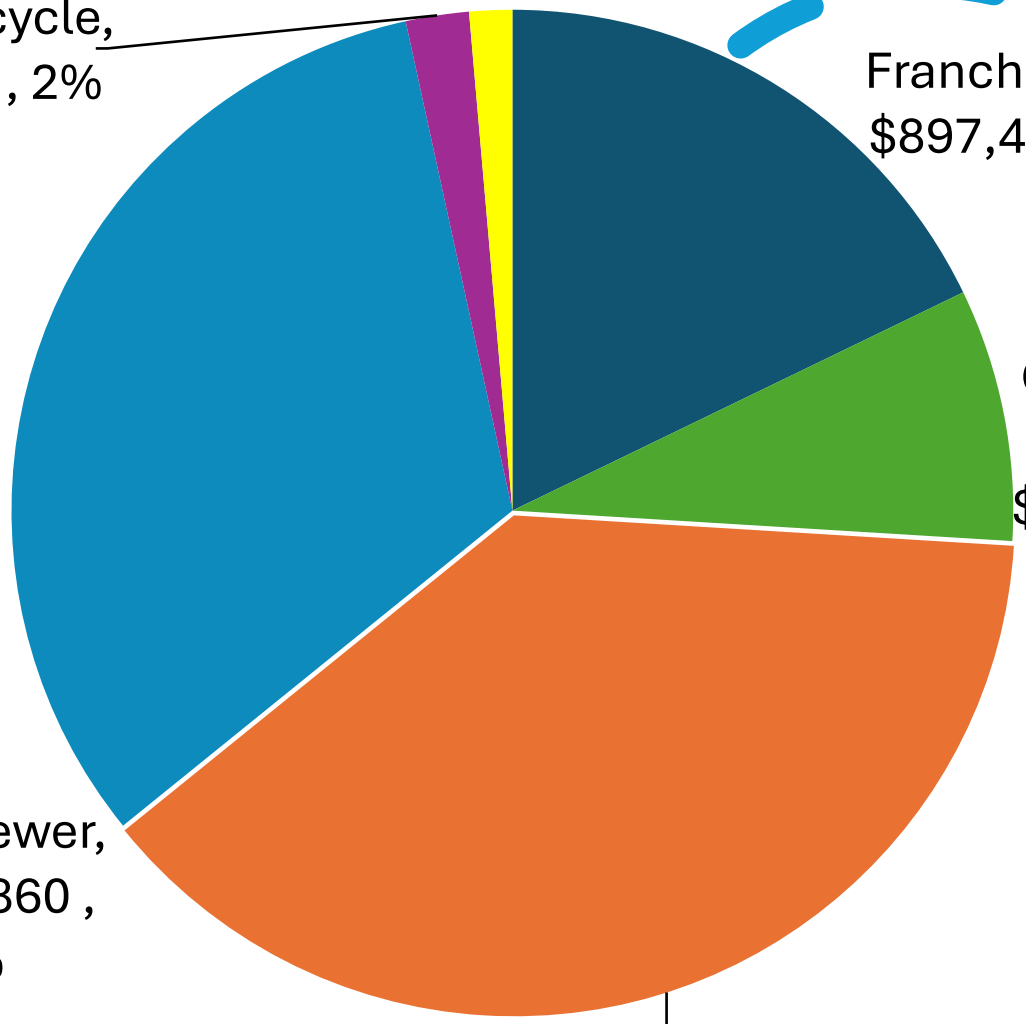
Licenses & Fees $5,035,424



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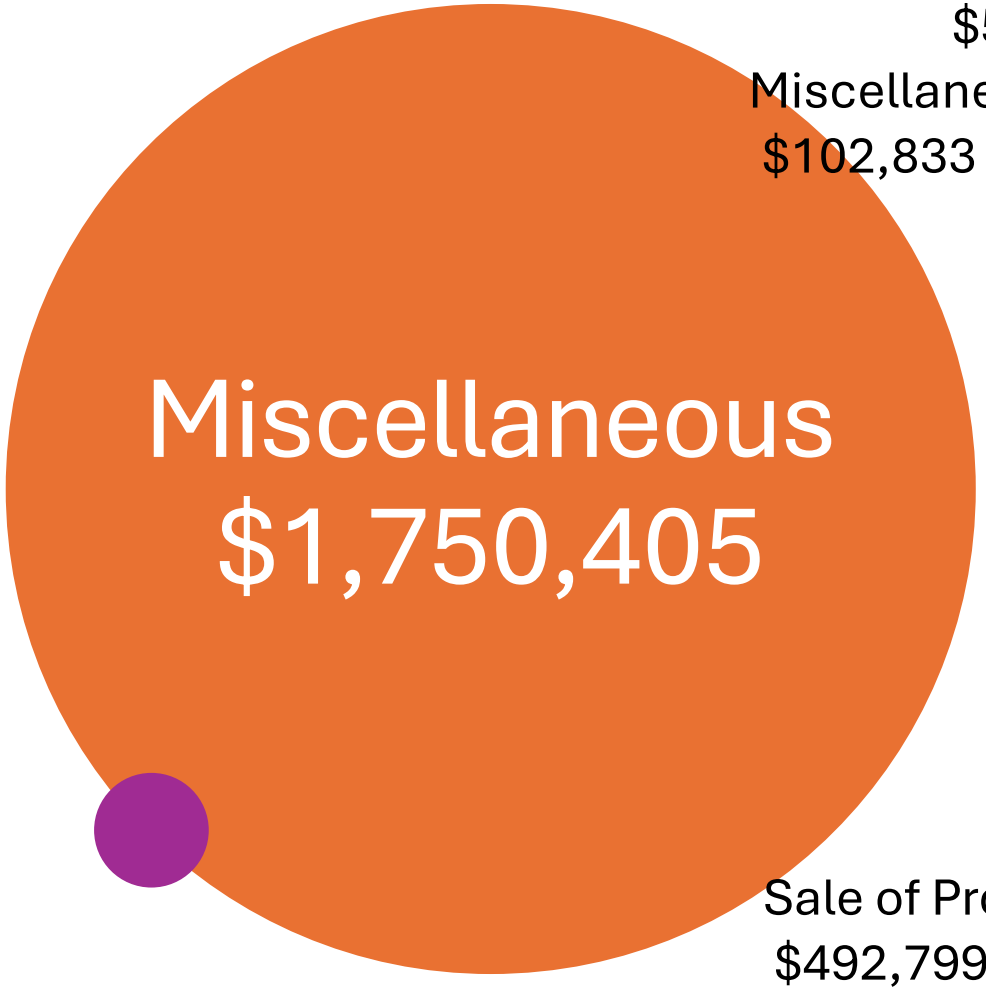

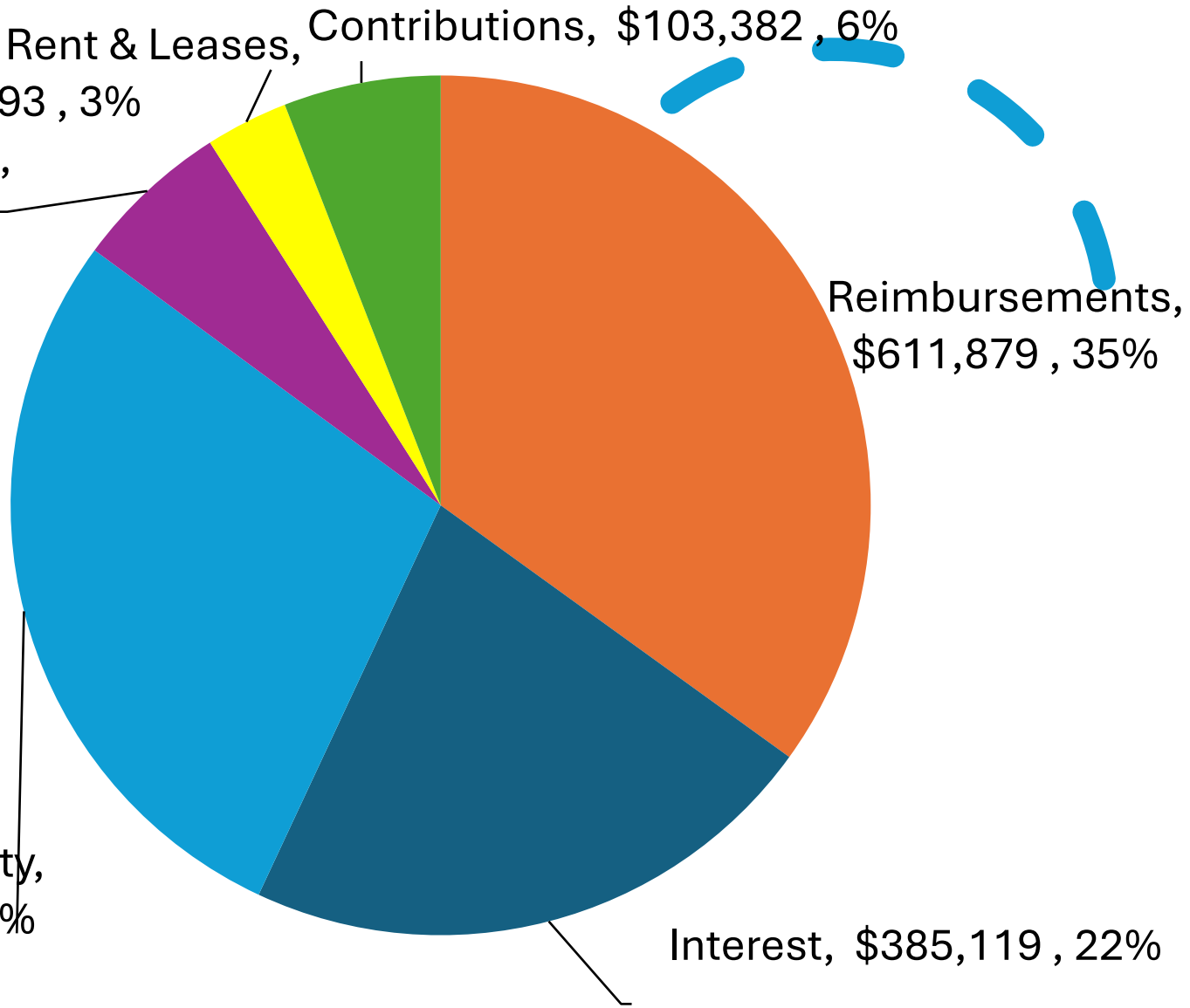

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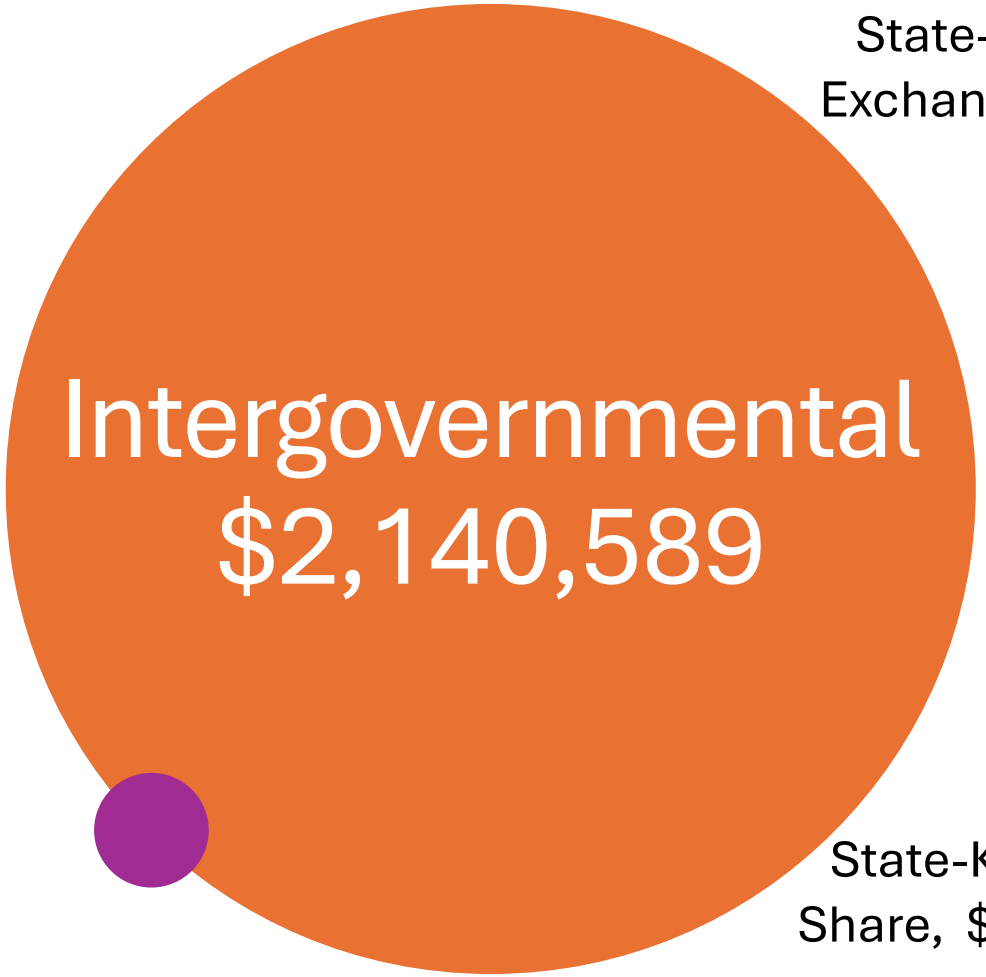
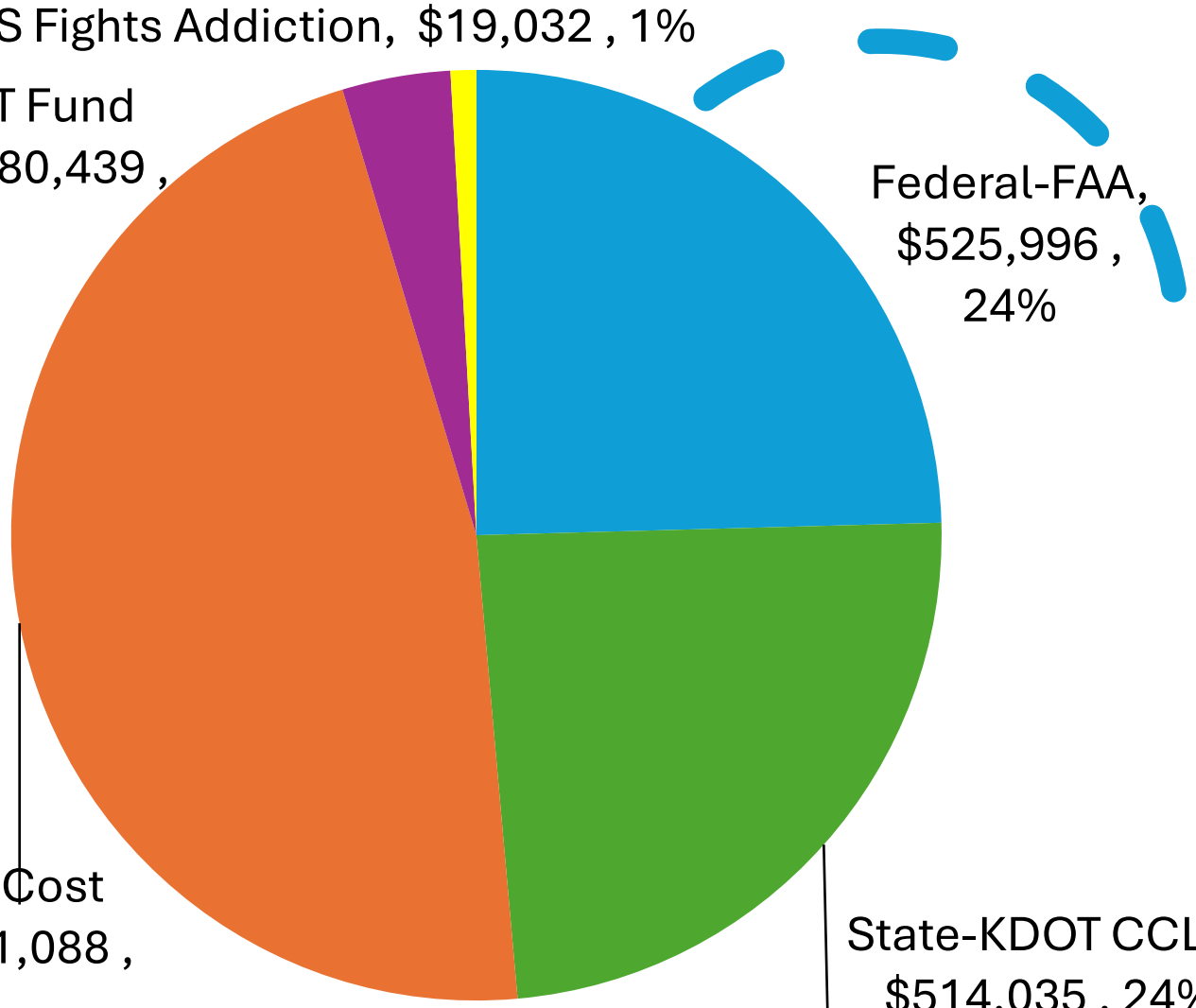


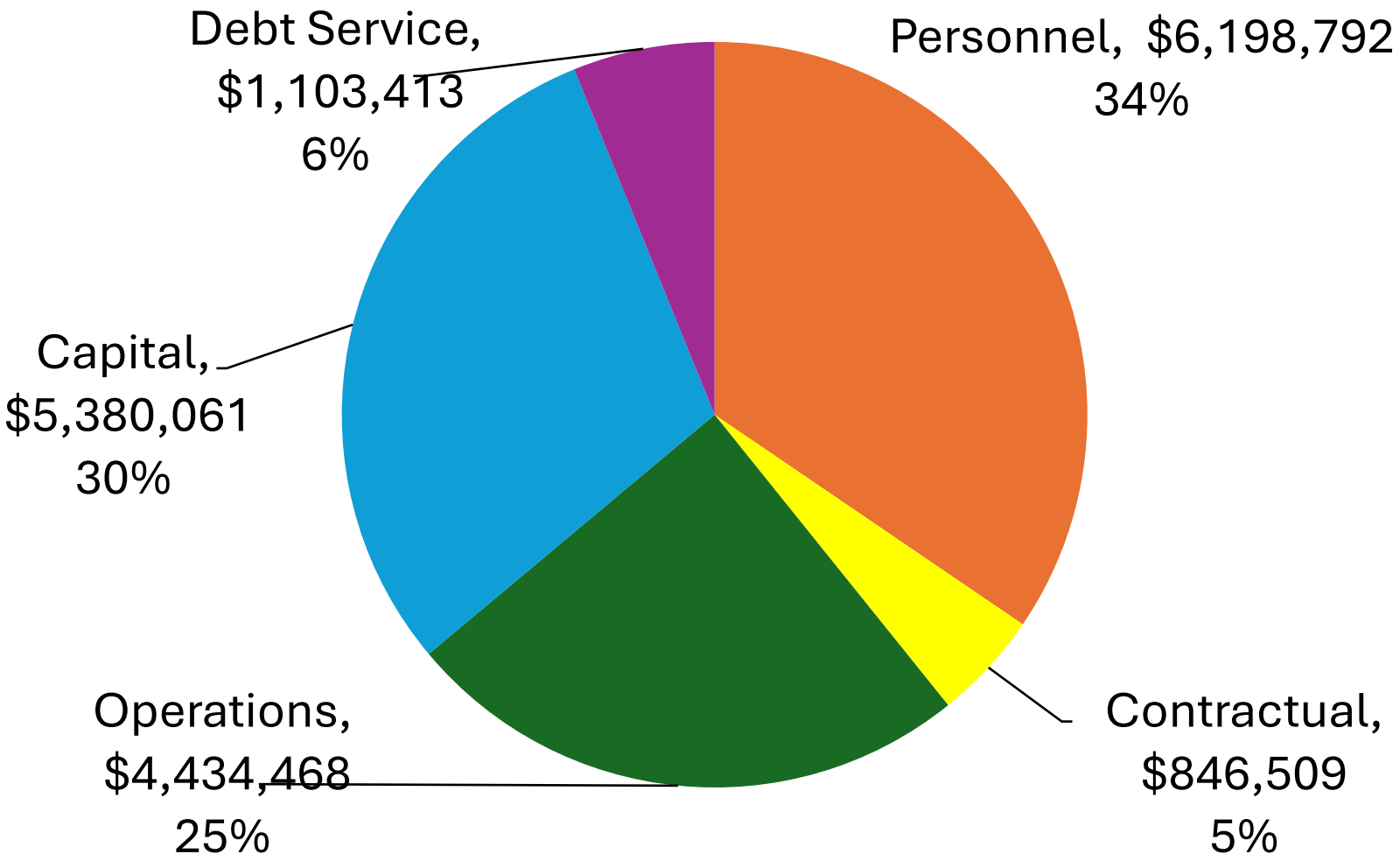


Expenses

- Personnel
- Contractual
- Operations
- Capital
- Debt Service

Expenses

$17,963,243



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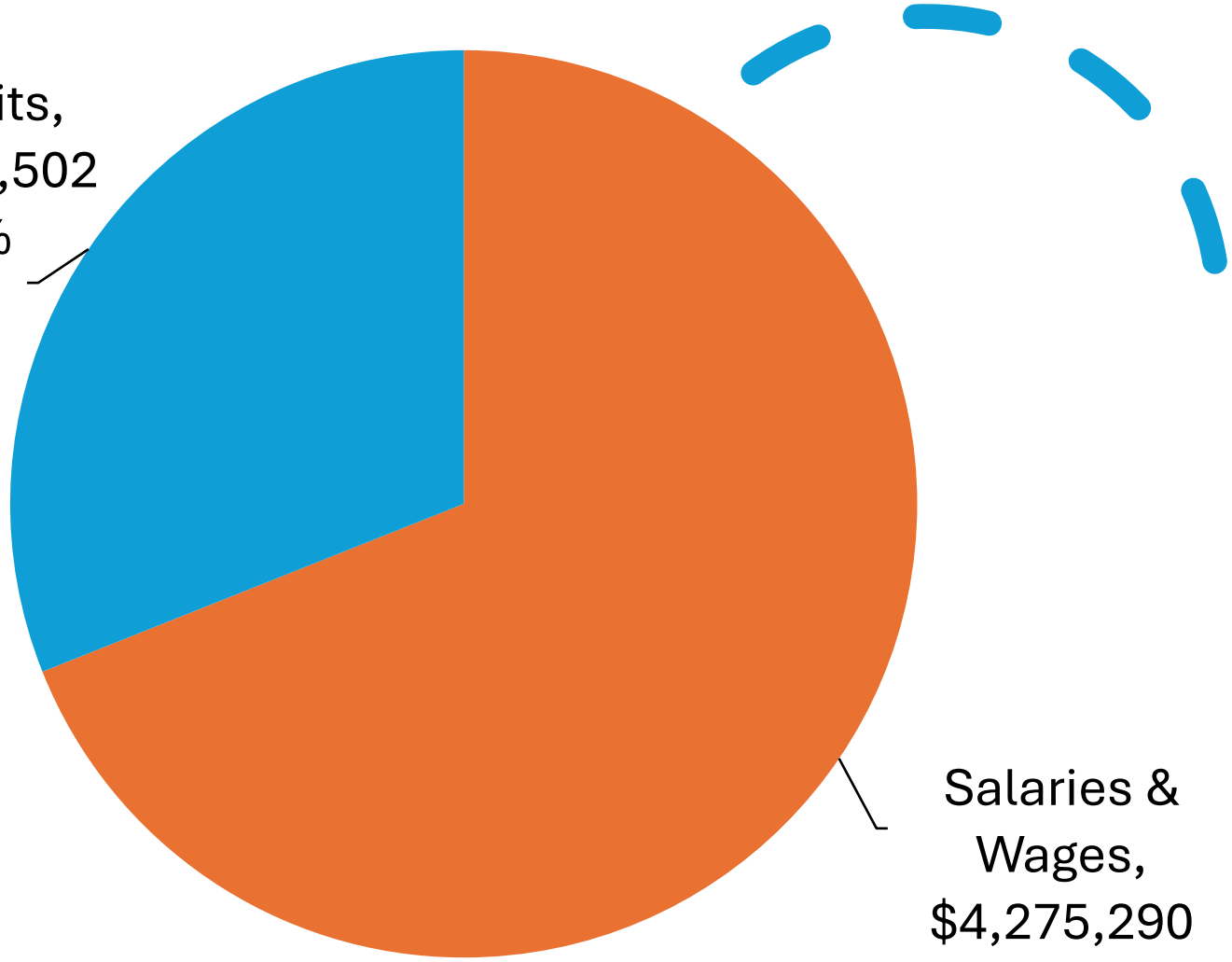
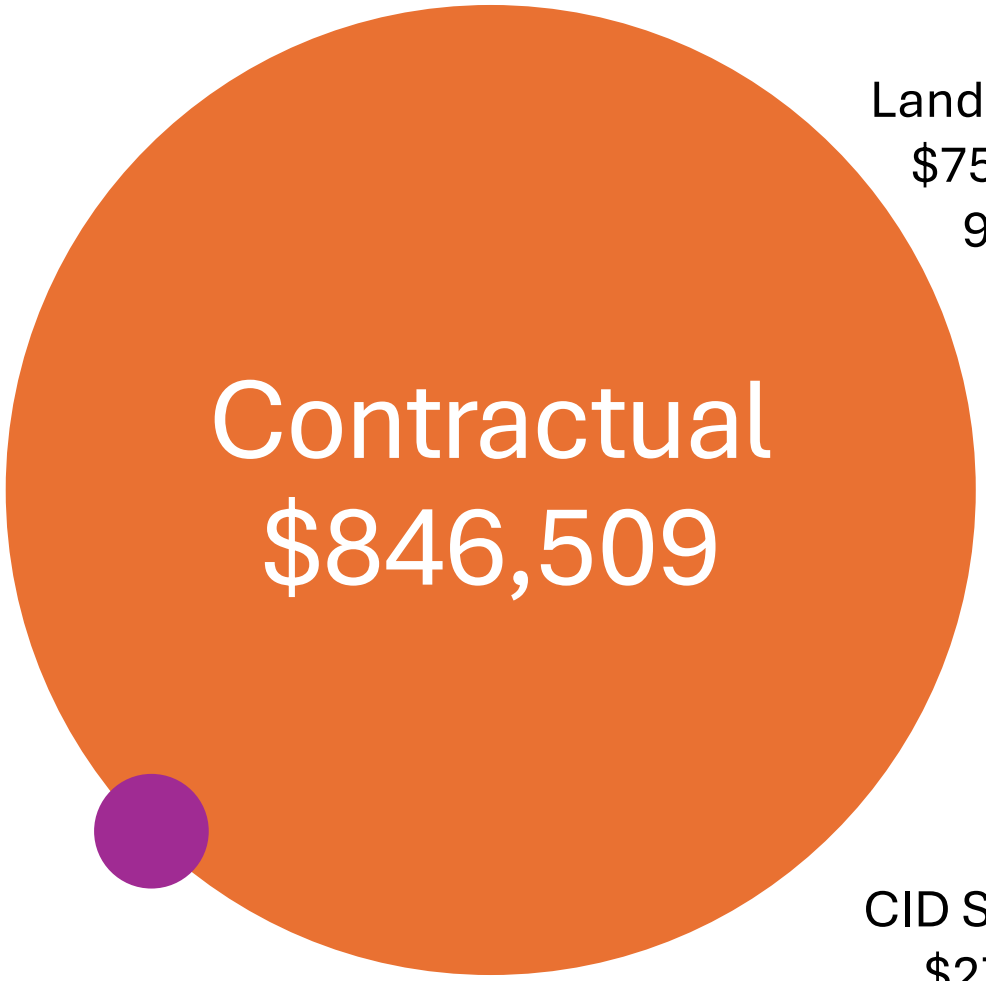
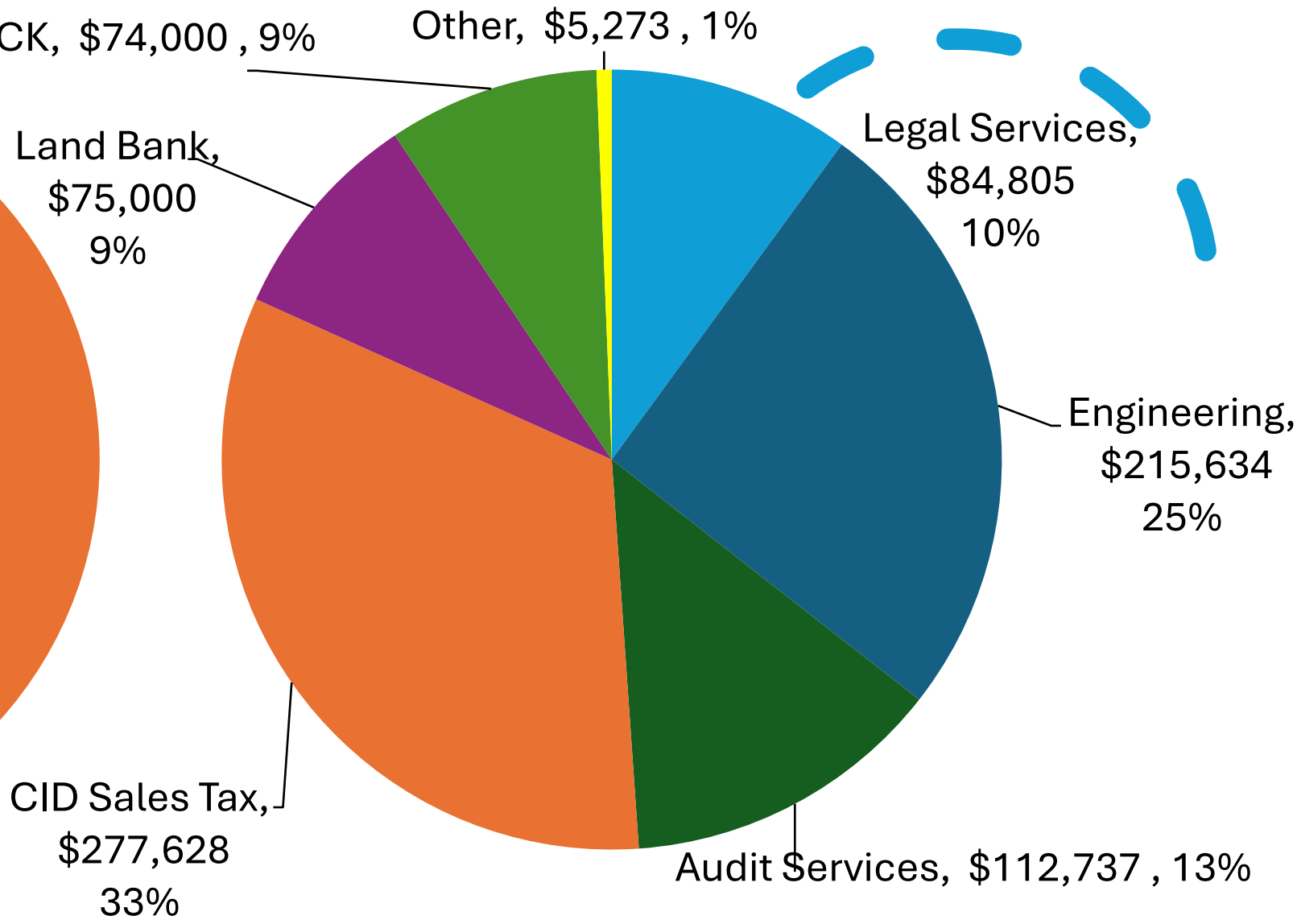
Personnel
$6,198,792




Contractual
$846,509


OCCK, $74,000 , 9%
Other, $5,273 , 1%
Legal Services, $84,805 10%
Land Bank, $75,000 9%
Engineering, $215,634 25%
CID Sales Tax, $277,628 33%
Audit Services, $112,737 , 13%

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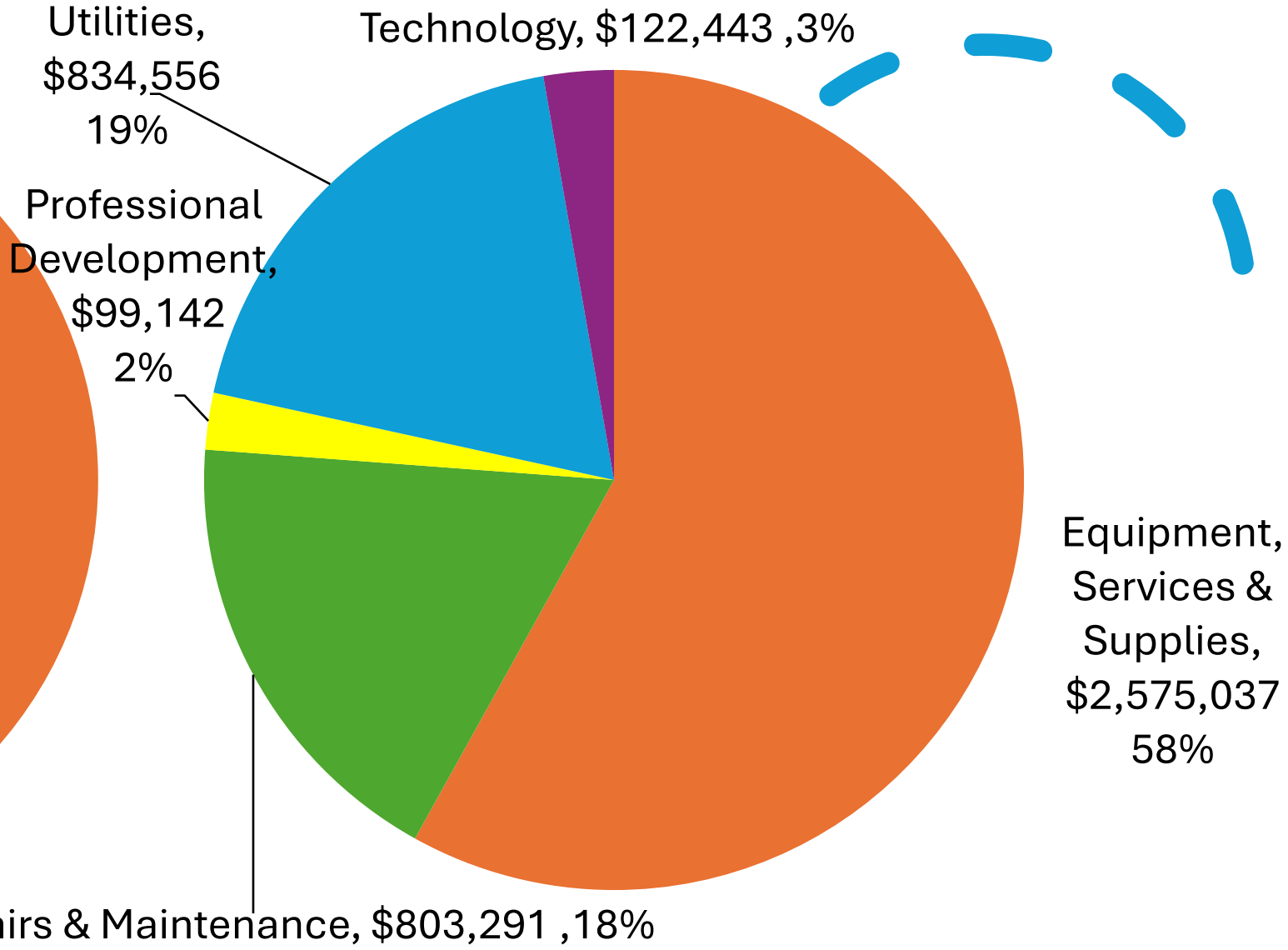

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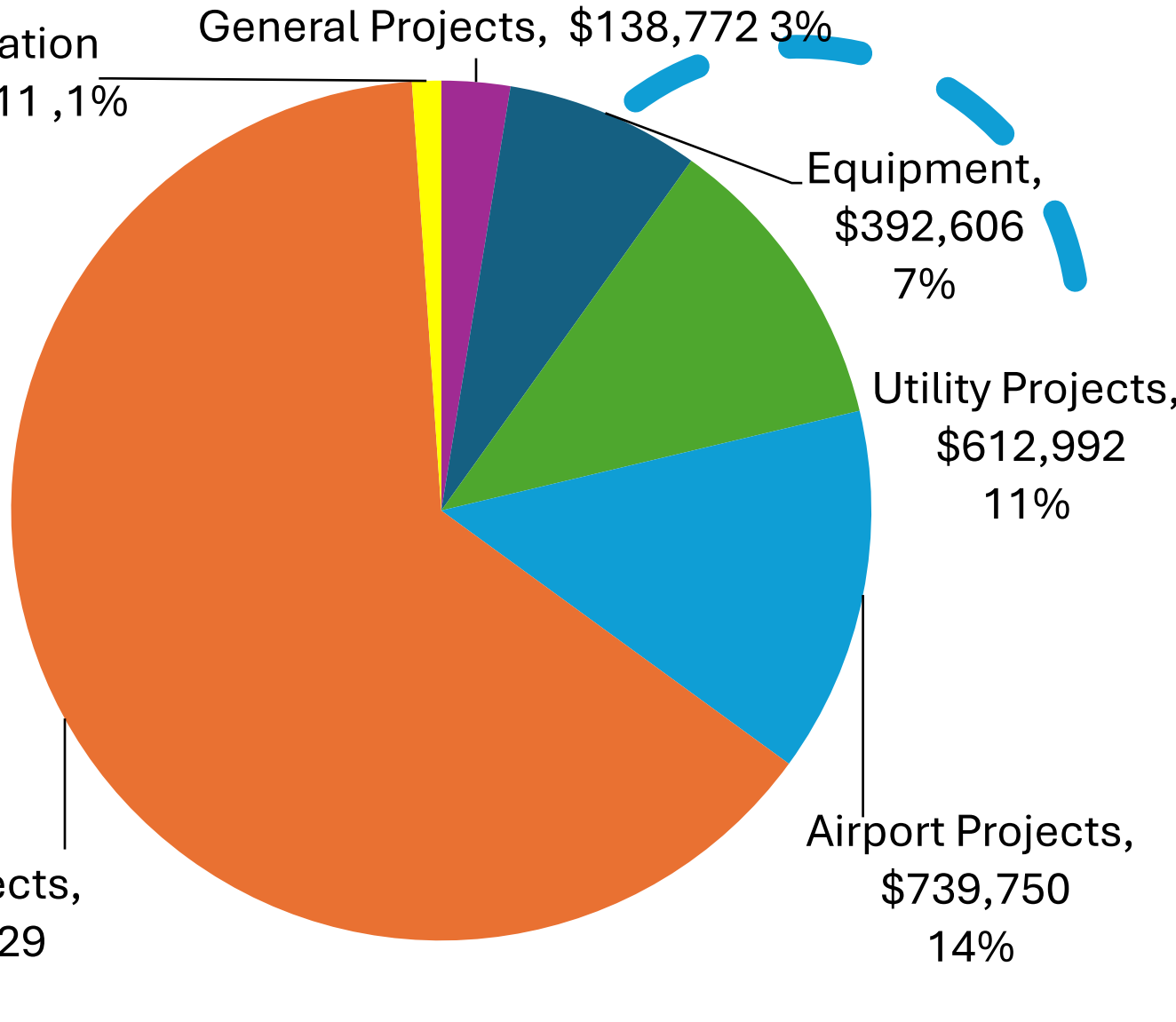
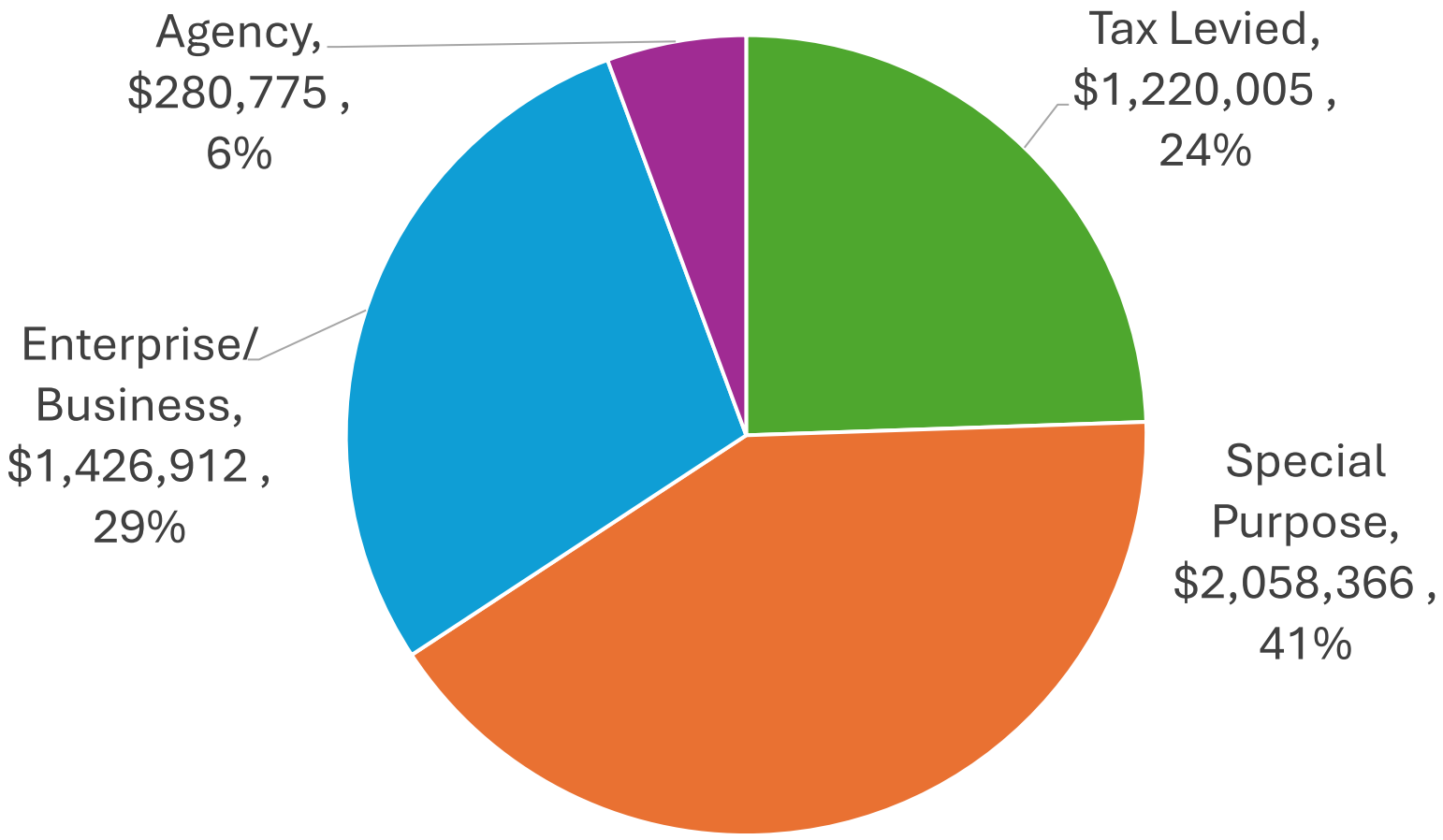


Funds

- Tax Levied (5)
- Special Purpose (18)
- Enterprise/Business (4)
- Agency (3)

Fund Balances

Cash Balance $4,986,057

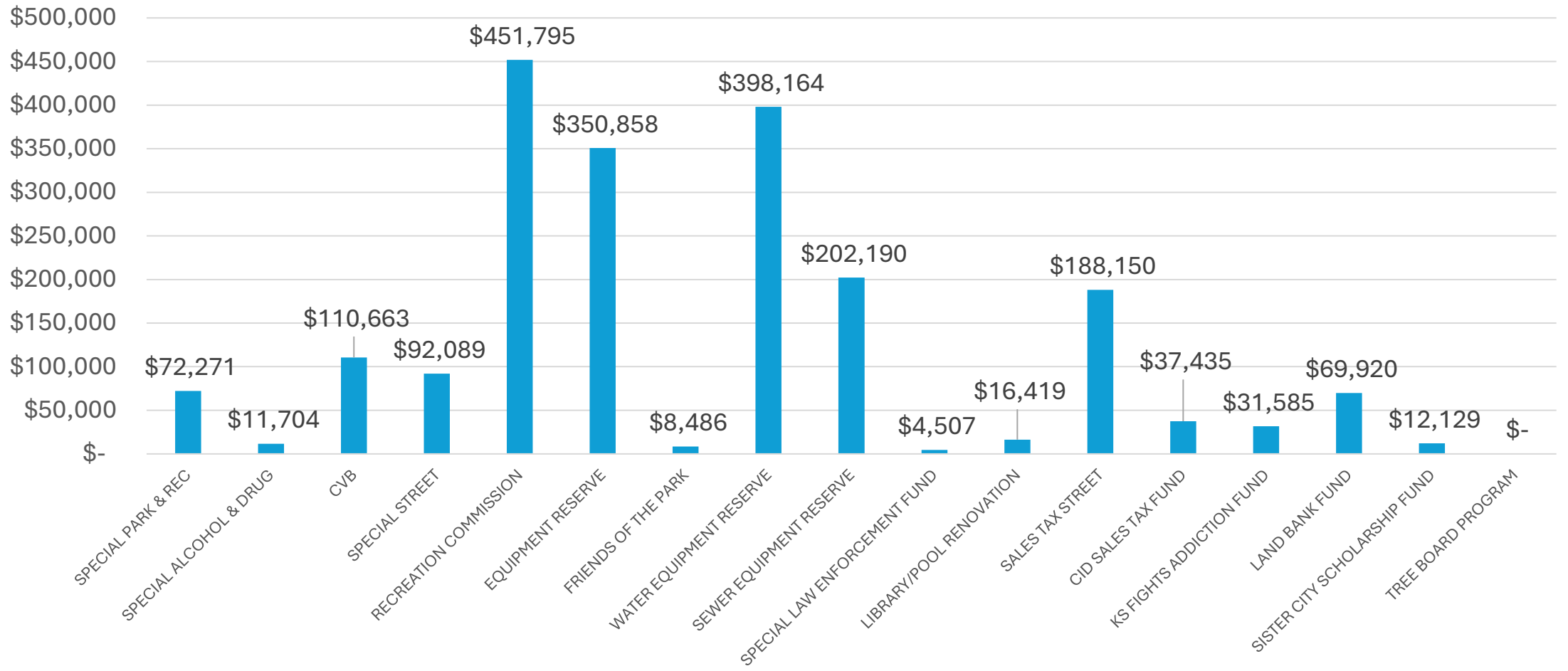


Tax Fund Cash Balances

$1,220,005

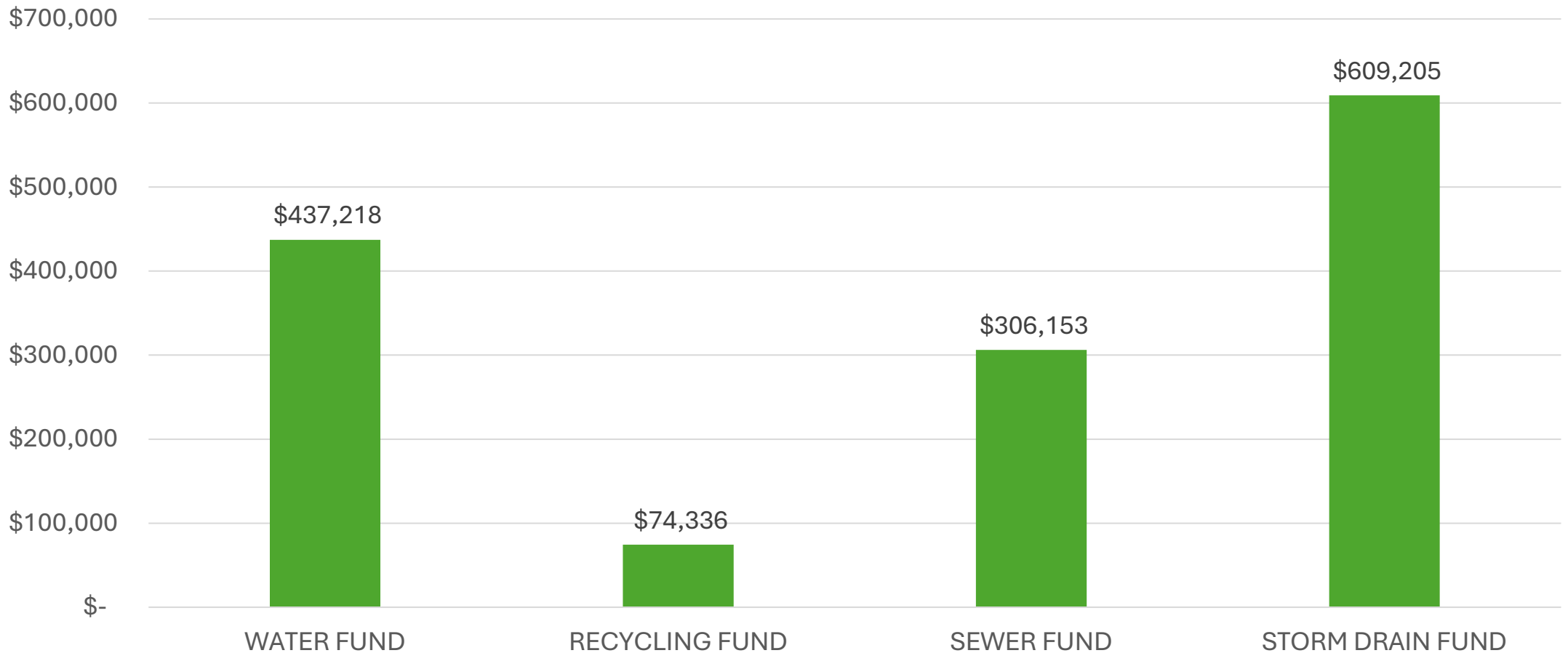
Special Purpose Funds

$2,058,366



Business Funds

$1,426,912



2024 Property Tax

Mill Levy

- 47.356

Valuation

- $64,838,823

Tax Dollars

- $3,070,468

2025 Property Tax

Mill Levy

- 45.648

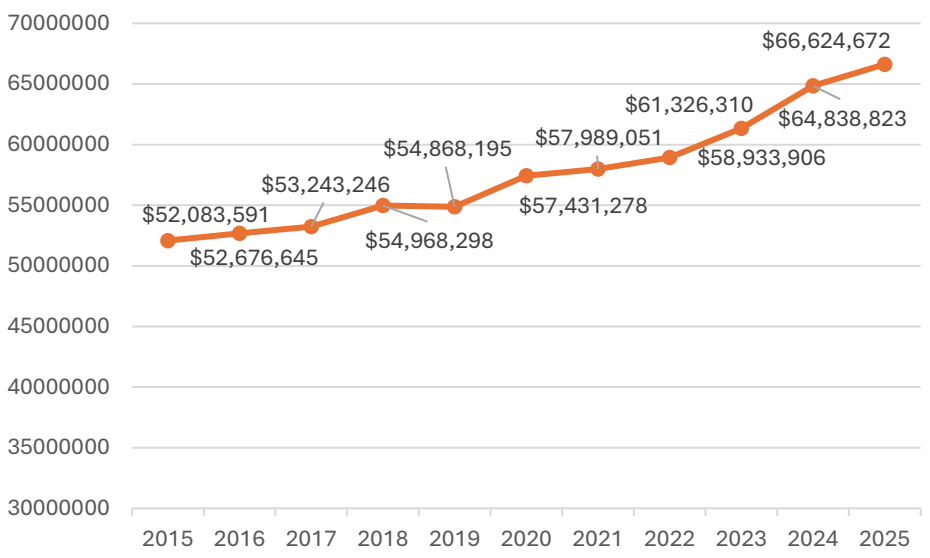
Valuation

- $66,624,672

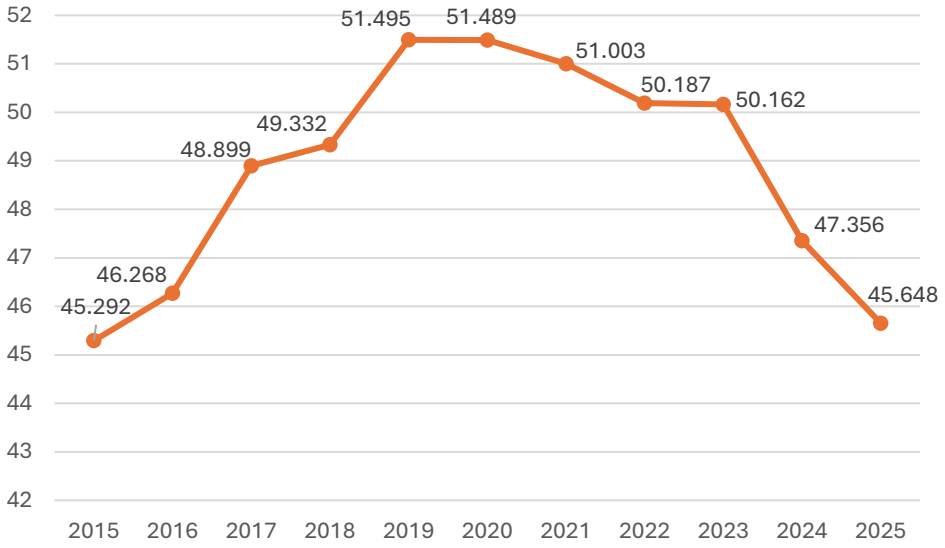
Tax Dollars

- $3,057,478

Historical Property Tax



Valuation



Mill Levy

ABILENE KANSAS

Closing

Audit scheduled April 2-3

Begin Budget Process

Software, move into Phase 2

ABILENE CITY COMMISSION – STUDY SESSION AGENDA

ABILENE PUBLIC LIBRARY, 209 NW FOURTH STREET

March 10, 2025 – following the adjournment of the regular meeting

VIEW THIS CITY COMMISSION MEETING VIRTUALLY AT
www.abilenecityhall.com/watchlive

1. Call to Order – March 10, 2025, City Commission Study Session

2. March 10, 2025, City Commission Study Session Agenda

a. Capital Improvement Plan (CIP) update and approval for upcoming projects discussion – City Manager Marsh/Finance Director Johnson

b. Energy Conservation and Capital Reinvestment Program RFQ discussion – RFQ Review Committee

3. Consider a motion to adjourn the March 10, 2025, City Commission Meeting.

Future Meeting Reminders

*City Commission Regular Meeting, March 24, 2025, at 4 pm.
*City Commission Study Session, March 24, 2025 - following the adjournment of the regular meeting, will not start before 4:30 pm.
*City Commission Regular Meeting, April 14, 2025, at 4 pm.
*City Commission Study Session, April 14, 2025 – following the adjournment of the regular meeting, will not start before 4:30 pm.

ABILENE KANSAS

City Commission

Brandon Rein
Mayor

Wendy Miller
Vice-Mayor

John Kollhoff
Commissioner

Trevor Witt
Commissioner

Amy Meysenburg
Commissioner

CITY STAFF

Ron Marsh
City Manager

Leann Johnson
Finance Director

Shayla Mohr
City Clerk

Kari Zook
Community Development

Kellee Timbrook
Recreation Director

Julie Roller Weeks
CVB Director

Anna Hatter
Chief of Police

Kale Strunk
Fire Chief

Brad Anderson
Public Works Director

City Commission Meeting Date: Monday, March 10, 2025

Session: Study Session

Topic: CIP Update

Department: City Manager/Finance

Staff Contact: Ron Marsh/Leann Johnson

Background:

Department Directors met to review and update the next 5-10 year Capital Improvement Plan (CIP). The following items were added:

Streets:
- 2025 & 2026 KDOT CCLIP Combined
- 14th Street from Buckeye to Brady
- Intersection at 7th & Buckeye
- Intersection at 7th & Cedar

Storm Water
- Northeast Drainage
- Ball Park Drainage

Saintary Sewer
- WWTP Repairs
- Replace Programmable Logic input/output cards in Master Control Cabinets

Water System
- Replace Waterline to WWTP
- Water Tower Replacements (currently located on 4th and 13th Streets)

Parks & Recreation
- Walkability and Connectivity Study

Public Buildings & Facilities
- Energy Conservation and Capital Reinvestment Program
- Community Center HVAC Replacement
- City Hall Roof
- Public Works Roof
- Park Shop Expansion
- Eisenhower Park Restrooms
- Downtown Public Restroom

Airport
- T-Hangars

Recommendation:

Approve the 10-Year Capital Improvement Plan (CIP).

Fiscal Note:

Each project will still need to be approved individually and specific funding sources identified for each one at that time.

Funding Source:

Capital Improvement Plan
City of Abilene

Project Description	Estimated Cost	Funding City	Funding Non-City	City Fund Accounts	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Streets														
KDOT City Connecting Link Improvement Program (CCLIP)	$ 1,900,000	$ 1,100,000	$ 800,000	Special Street (Gas tax)		$ 1,900,000								
Local Rehabilitation Projects & Pavement Preservation	$ 4,350,000	$ 4,350,000		Street Sales Tax (.25)	$ 390,000	$ 400,000	$ 410,000	$ 420,000	$ 430,000	$ 440,000	$ 450,000	$ 460,000	$ 470,000	$ 480,000
14th Street Industrial Park (Street, Sewer, Water, Storm Drain)	$ 3,250,000	$ 750,000	$ 2,500,000	CIP	$ 1,625,000	$ 1,625,000								
Rogers St Reconstruction w/drainage & sidewalks: Rogers from NW 4th to NW 8th	$ 1,500,000	$ 1,500,000		Special Street (Gas tax)			$ 150,000	$ 1,350,000						
14th Street Project: From Buckeye to Brady	$ -			CIP										
NE 13th St Reconstruction: Buckeye to Brady w/curb, gutter, driveway entrance & radius corners	$ 1,750,000	$ 1,750,000		CIP					$ 1,750,000					
7th & Buckeye Intersection	$ 2,170,000	$ 670,000	$ 1,500,000	Special Street (Gas tax)					$ 1,085,000	$ 1,085,000				
7th & Cedar Intersection	$ -			CIP										
Streets Sub-Totals	**$ 14,920,000**	**$ 10,120,000**	**$ 4,800,000**		**$ 2,015,000**	**$ 3,925,000**	**$ 560,000**	**$ 1,770,000**	**$ 3,265,000**	**$ 1,525,000**	**$ 450,000**	**$ 460,000**	**$ 470,000**	**$ 480,000**
Storm Water														
Northeast Drainage Project	$ 300,000	$ 300,000		Storm Drain	$ 300,000									
Ball Park Drainage	$ -			Storm Drain										
Southeast Drainage Project	$ 25,000,000					$ 25,000,000								
Storm Water Sub-Totals	**$ 25,300,000**	**$ 300,000**	**$ -**		**$ 300,000**	**$ 25,000,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Sanitary Sewer														
WWTP Repairs	$ 250,000	$ 250,000		Sewer Reserve	$ 250,000									
Replace Programmable Logic input/output cards in Master Control Cabinets	$ 1,200,000	$ 1,200,000		Sewer Reserve & SRF			$ 1,200,000							
	$ -													
Sanitary Sewer Sub-Totals	**$ 1,450,000**	**$ 1,450,000**	**$ -**		**$ 250,000**	**$ -**	**$ 1,200,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Water System														
Replace Programmable Logic input/output cards in Master Control Cabinets	$ 1,200,000	$ 1,200,000		Water Reserve & SRF			$ 1,200,000							
Water Distribution - Water Main replacement projects	$ 500,000	$ 500,000		Water Fund	$ 500,000									
Waterline to WWTP (KDHE)	$ -			Water Fund										
Water Tower Replacements (2 towers)	$ 30,000,000			Water Fund			$ 15,000,000	$ 15,000,000						
Recharge all 8 Pressure Filters Media	$ 486,000			Water/Water Reserve		$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 6,000
Replace Reverse Osmosis Membranes in one skid and rebuild one high pressure pump	$ 405,000			Water Fund		$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000
Water Treatment Plant De-humidifier	$ -			Water Fund										
Water System Sub-Totals	**$ 32,591,000**	**$ 1,700,000**	**$ -**		**$ 500,000**	**$ 105,000**	**$ 16,305,000**	**$ 15,105,000**	**$ 105,000**	**$ 105,000**	**$ 105,000**	**$ 105,000**	**$ 105,000**	**$ 51,000**
Parks and Public Grounds														
Recreation Improvements Sales Tax (Ball Fields)	$ 4,000,000	$ 4,000,000		Recreation Sales Tax (.35)	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000
Walkability and Connectivity Study	$ 40,000	$ 40,000		CIP	$ 40,000									
Eisenhower Park Playground Reconstruction & Surfacing	$ 350,000	$ 350,000		Special Parks		$ 350,000								
Bicentennial Park Playground & Surfacing	$ 200,000	$ 250,000		Special Parks		$ -	$ 200,000							
Four New Pickle Ball Courts	$ 250,000		$ 250,000	Rec Commission		$ 250,000								
Pool Slide	$ 200,000	$ 200,000		CIP		$ 200,000								
Splash Pad	$ 200,000		$ 200,000	Rec Commission			$ 200,000							
Little Ike Park/Public Parking Lot Improvements	$ 250,000	$ 250,000		CIP		$ 150,000	$ 100,000							
Parks and Public Grounds Sub-Totals	**$ 5,490,000**	**$ 5,090,000**	**$ 450,000**		**$ 440,000**	**$ 1,350,000**	**$ 900,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**
Public Buildings and Facilities														
Energy Conservation and Capital Reinvestment Program	$ -													
Community Center HVAC Replacement	$ 200,000	$ 200,000		CIP		$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000				
Fire Department Relocation	$ 4,000,000	$ 4,000,000		CIP		$ 75,000	$ 150,000	$ 1,258,000	$ 1,258,000	$ 1,259,000				
City Hall Roof Replacement	$ 500,000	$ 500,000		CIP				$ 500,000						
Public Works Roof Replacement	$ 50,000	$ 50,000		CIP				$ 50,000						
Park Shop Expansion	$ 75,000	$ 75,000		CIP/Rec Sales Tax		$ 75,000								
Senior Center Kitchen Expansion	$ 70,000	$ 70,000		CIP/Rec Sales Tax				$ 70,000						
Eisenhower Bathrooms	$ 75,000	$ 75,000		CIP						$ 75,000				
Downtown Public Restrooms	$ 50,000	$ 50,000		CIP					$ 50,000					
Buildings/Facilities Sub-Totals	**$ 5,020,000**	**$ 5,020,000**	**$ -**		**$ -**	**$ -**	**$ -**	**$ 70,000**	**$ 50,000**	**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**
Airport														
T-Hangars	$ 2,300,000	$ 416,850	$ 1,883,650	Airport	$ 466,500	$ 916,750	$ 916,750							
	$ -													
Airport Sub-Totals	**$ 2,300,000**	**$ 416,850**	**$ 1,883,650**		**$ 466,500**	**$ 916,750**	**$ 916,750**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Capital Improvement Projects Grand Total	**$ 87,071,000**	**$ 24,096,850**	**$ 7,133,650**		**$ 3,505,000**	**$ 31,296,750**	**$ 19,881,750**	**$ 17,345,000**	**$ 3,820,000**	**$ 2,105,000**	**$ 955,000**	**$ 965,000**	**$ 975,000**	**$ 931,000**

Reviewed March 10, 2025

ABILENE KANSAS

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Vice-Mayor

John Kollhoff
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Trevor Witt
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Amy Meysenburg
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Recreation Director

Julie Roller Weeks
CVB Director

Anna Hatter
Chief of Police

Kale Strunk
Fire Chief

Brad Anderson
Public Works Director

City Commission Meeting Date: Monday, March 10, 2025

Session: Study Session

Topic: Energy Conservation and Capital Reinvestment Program RFQ

Department: Click or tap here to enter text.

Staff Contact: RFQ Review Committee

Background:

In October of 2024, the City sent out a Request for Qualification for an Energy Conservation and Capital Reinvestment Program. The purpose of the program is to identify, design , install, maintain, monitor and arrange financing for a comprehensive utility conservation program.

Responses were received from five Energy Service Companies:

Ameresco
Millig DB
Wegman GP
Schneider Electric
Energy Solutions Professionals (ESP)

Each respondent was brought in to present and be interviewed by a committee consisting of a City Commissioner, City Manager, Fire Chief, Facilities Maintenance and City Inspector. Highlights of the interviews Include:

- The Investment Grade Audit (IGA) is only chargeable if the recommended plan is not implemented.
- Commissioning – the process of integrating and testing the system in all conditions before finalizing the project.
- Initial comprehensive assessment to determine where the best value would be for an IGA. Company bears the cost of the initial assement if the city does not move forward.
- Using local contractors/businesses as much as possible and making sure the local can service what is installed.
- Provide designs to contractors.
- Willing to work in a phased approach i.e. long-term relationship.
- Brand neutral i.e. no corporate ties.

The committee was more comfortable recommending two companies to move forward with:

- ESP for the Water Treatment Plant and Wastewater Treatment Plant
- Millig DB for other city properties

Both are Kansas companies, operated by their owners.

Recommendation:

Discuss and decide if the Governing Body would like to move forward with both companies and direct staff to begin negotiating an agreement and timeline for their services.

If the Governing Body does not want to move forward, direct staff on a timeline for revisiting.

Fiscal Note:

No funds have been budgeted in 2025 for this project.

City of Abilene, Kansas

REQUEST FOR QUALIFICATIONS FOR
Energy Conservation and Capital Reinvestment Program

QUALIFICATIONS MUST BE RECEIVED BEFORE:
2:00 P.M. Central Time on November 1, 2024

MAIL, HAND DELIVER, AND /OR EXPRESS MAIL QUALIFICATIONS TO:

City of Abilene
419 N. Broadway
Abilene, KS 67410
Attn: Ron Marsh, City Manager

Show Project name, Opening Date and time on the Response envelope

NOTE: SUBMITTAL must be time stamped at address above before the hour and date specified for receipt of submittal.

Pursuant to Kansas Statute 75-37, 125, sealed proposals will be received until the date and time established for receipt. After receipt, only the names of Respondents will be made public. Prices and other proposal details will only be divulged after the award, if one is made.

REFER INQUIRIES TO:

Brenden Alvarez
Facilities Maintenance
Phone: (785) 263-2550
Email: brenden@abilenecityhall.com

All submissions shall become the property of the City upon receipt. Submissions may be subject to public review after contracts have been executed. VENDORS responding to this request are cautioned not to include any proprietary information as part of their proposal unless such proprietary information is carefully identified as such in writing, and the City accepts, in writing, the information as proprietary. Notwithstanding the foregoing, City is subject to the Kansas Open Records Act and Kansas Sunshine Laws.

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CITY OF ABILENE

REQUEST FOR QUALIFICATIONS (RFQ)

ENERGY EFFICIENCY AND CAPITAL REINVESTMENT PROGRAM

A. CITY SUPPLIED INFORMATION

1. Purpose of Solicitation

This solicitation is a Request for Qualifications (RFQ). The purpose is to solicit qualifications from Energy Service Companies (ESCOs) that describe their capabilities to identify, design, install, maintain, monitor, and arrange financing of a comprehensive utility conservation program. This program includes the services listed in this request pursuant to the provisions of Kansas law. For the purpose of this RFQ, "ESCO" refers to any entity that is qualified to provide a turnkey utility conservation program that includes the services listed in this request. The City intends to select an ESCO and to award a single or multiple contract(s) to perform cost-effective utility conservation retrofits of all city infrastructure.

2. Schedule

The following schedule is intended to be followed during the procurement process. The City will provide interested firms with any changes to due dates or milestones in writing.

October 1, 2024	Release of RFQ
November 1, 2024	Proposals due by 2 pm CST
November 19-20, 2024	Oral Interviews (if necessary)
January 3, 2025	Firm Selected and Negotiation of IGA begins

The response must be sealed and delivered to the address on the cover page of this document. A total of three (3) paper copies and one (1) electronic copy of the response is required for submittal.

The City of Abilene reserves the right to reject, as non-responsive, any proposal that does not contain the information as requested within this RFQ. Additionally, the City of Abilene reserves the right to reject as non-responsive any proposals that are not organized and formatted as described in Section 7 – Format.

3. City Background

The City of Abilene, with a population of approximately 6,500 residents, is seeking the professional services of the most qualified ESCO to support its continued effort to improve city infrastructure in the most efficient manner. The City has identified a number of potential opportunities to investigate with the selected firm as a part of the Investment Grade Audit (IGA) process. The selected firm will be focused on providing turnkey, design/build improvements with a guarantee of both performance and savings that meet or exceed current state statutes.

The City intends to fund these improvements based on the savings that can be found through their replacement. The intent is to create a more financially sustainable approach to infrastructure improvement while improving the overall efficiency of the City's processes, operations, and infrastructure.

4. Services Requested

For this conservation program, the city proposes to address all utility and water consumption across city facilities and infrastructure. Additionally, the City intends to upgrade outdated and obsolete equipment and perform utility-related facility improvements through the program.

The City anticipates a major reduction in annual utility consumption, lost revenues, and associated

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operational costs through the implementation of this utility conservation program. As part of the process, a contract must include provision for monitoring and verification of utility savings and any operational savings. If requested, the ESCO shall arrange financing or assist City in procuring the most cost-effective funding for the project. The term is not-to-exceed fifteen (15) years from the final date of installation per state statute.

The City intends to structure the program's implementation schedule in a manner to minimize its financed capital needs. Multiple project phases will be considered with the selected ESCO.

Respondents to this RFQ shall identify their experience and qualifications to perform analysis, design engineering, preparation of engineering plans and specifications, installation, commissioning, monitoring and verification of savings, and management of a major utility conservation project that has involved Energy Conservation Measures (ECM) which address facility components and utility infrastructure applications. Such components and applications shall include, but are not limited to: interior and exterior lighting, space heating, ventilation, air-conditioning, building envelope, heat recovery, energy and water management systems, environmental system controls, motors, domestic water heating, fuel switching, air distribution systems, utility distribution systems, metering, water and wastewater treatment, street lighting, or other energy and water conservation related improvements or equipment including improvements or equipment related to renewable energy. The City also requires a description of the ESCO's qualifications and experience related to training facility occupants and maintenance workers in energy and water conservation awareness.

5. Buildings/Project Description

The City is interested in understanding the ESCOs process of identifying potential opportunities and areas their firm excels with regards to specific infrastructure. The RFQ is intended to provide the City with an overview of the proposing firms qualifications and no specific scope of work has been identified across any facility or infrastructure owned by the City. The end goal is to identify potential improvements, develop an appropriate funding mechanism, implement improvements, and have the ESCO guarantee their performance.

6. Procurement Process

a. City Publishes RFQ

The Request for Qualifications (RFQ) is the first step in a multi-step process aimed at identifying one or more qualified ESCOs. The RFQ or notice of availability of the RFQ must be published in accordance with state law. The RFQ details the requirements for response, deadlines, and directions for submittal in subsequent sections. This process conforms to provisions of K.S.A. 75-37-125.

b. Selection of Qualified Provider or Short-list of Providers

A committee consisting of the City Manager, Finance Director, Fire Chief and Facilities Maintenance Specialist will review the responses submitted. Based on the selection criteria described in this document, the committee may select a short-list of the most qualified respondents. (Note: City retains the right to select only one respondent at this stage and skip the next stage to negotiate a contract. City may also determine that no qualified submittals have been received and reject all submittals.)

c. (Optional) Oral Presentation

Oral presentations may be required of each of the interested short-listed respondents, covering their general qualifications in the field of performance contracting for utility efficiency improvements. These presentations focus on understanding the ESCO's background and its ability to provide the services requested within this RFQ.

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d. Approval

The selection committee will make a recommendation to the City Commission. Upon the Commission's approval of the recommendation, the City Manager, with the assistance of the City Attorney, will negotiate the Investment Grade Audit (IGA) agreement. This agreement will provide an IGA across City infrastructure and what facilities, plants, utility systems, and other areas must be included in the audit process.

e. Prepare Investment Grade Audit for Final Project Proposal

Upon acceptance of the IGA agreement, the selected respondent will perform an energy, operational, and utility grade analysis of current infrastructure, conceptual and design level engineering, construction plan, and development of final scopes to be included in implementing a construction contract for the City.

The City expects the ESCO to perform the IGA on a contingent basis (i.e., not bill for the audit until the IGA is completed and the project is developed) and roll the agreed-upon cost of the IGA into the final project cost. The city reserves the right to pay for the IGA or finance it with the rest of the project.

f. Submittal of Final Proposal

The selected respondent will provide a final proposal for the City's energy conservation and capital reinvestment program. The proposal will include the completed IGA, documentation of potential utility and operational savings, and all associated implementation costs. It must also include a Measurement and Verification Plan and a sample periodic savings report.

g. Review and Recommendation of Final Proposal

The city review committee will review the final proposal and recommend to the City Commission to accept the proposal, accept the proposal with exceptions or modifications, or reject the proposal.

h. Negotiate Master Performance Contract

After the City Commission approves the Final Proposal, the selected respondent and the City will negotiate a master implementation contract. The Contract will include the authority to proceed with the final design and installation/construction and detail the payment schedule to the ESCO.

i. Perform Project

Once the Contract is approved and executed, and funding has been secured, the ESCO may proceed with the detailed project engineering design and construction/installation.

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CITY OF ABILENE

REQUEST FOR QUALIFICATIONS (RFQ)

ENERGY EFFICIENCY AND CAPITAL REINVESTMENT PROGRAM

B. <u>RESPONDENT'S SUBMITTAL</u>

1. Business Qualifications

a. Please provide a brief history of your firm and number of years in the ESCO business.

   i. The ESCO should have at least ten (10) years of experience in Kansas in the analysis, design, implementation, and guarantee of energy efficiency and conservation measures. Please provide the date of your first ESPC project implemented in the state by the responding firm.

b. Describe your firm's in-house resources and expertise in the areas described above, as this will be considered a strong point for leveraging best practices and for ensuring a single point of accountability.

c. Provide National Association of Energy Service Companies (NAESCO) accreditation and proof of current Kansas Professionals Engineering Corporation Certification for the responding ESCO.

d. Provide a list of pertinent certifications, awards and credentials (including safety and EPA or DOE affiliations).

e. Provide a description of the ESCO business unit dedicated to implementing Energy Savings Performance Contracting projects.

f. Provide the location(s) where this project will be managed and ESCO's division headquarters.

g. Describe your willingness to include other manufacturers' products.

   i. Identify and describe any business associations with equipment manufacturers or suppliers that might be specified for this project.

   ii. Provide five (5) project examples where you have installed or integrated other manufacturers' products.

h. List the complete range of energy/utility services and capabilities the ESCO offers: such as building/facility energy analysis, engineering, design, installation, water/wastewater treatment equipment analysis, utility metering, commissioning, monitoring and performance verification, and related training.

i. Has your firm, or any of its parents or subsidiaries, ever been involved in litigation/lawsuits resulting from the design and/or implementation of a guaranteed energy cost savings project pursuant to K.S.A. 75-37,125 or within a contiguous state? If yes, explain in detail the circumstances, dates associated with the litigation and the resolution of the case (or current status, if still ongoing). Failure to disclose this information will lead to immediate disqualification.

j. Provide examples of customers (municipalities) who have completed a performance contract to the end of the term performance guarantee and give results on actual dollar savings achieved.

2. Financial Information

Describe the financial soundness and stability of the ESCO (ability to support the performance guarantee).

a. Provide Financial Statements for the two (2) most recently completed fiscal years. City may, during the course of the evaluation process, request additional financial information to supplement and

clarify the information provided (this information may be included in electronic format or within the appendix without impacting the page maximum).

b. Provide information documenting sources of financing and financing methods available to the City.

c. Provide a letter from its surety company demonstrating the ESCO's capability to provide payment and performance bond associated with construction projects. The letter should also state the bonding capacity of the ESCO.

d. Provide a letter of recommendation from a financial institution.

3. Participants/Personnel

Identify known participants in the project and provide information regarding capabilities and experience of personnel directly assigned to this project that include the following:

a. Organizational chart that clearly describes your ESCO's project organization with supervisory reporting.

b. A list of key personnel and their responsibilities for the duration of the project contract terms should be listed. Resumes should be provided in the Appendix. In the resumes, indicate the education and professional licensing of each person as it relates to this project. Also, include a list of previous projects in which each team member has played a significant role.

4. Project Management Plan

Describe your firm's methodology of developing and implementing comprehensive energy efficiency and conservation programs and projects for the City. Address in detail the following key components, if provided by your firm or team, and how you would approach each one:

a. Facility and infrastructure surveys

b. Energy modeling and analysis

c. Project development

d. Non-construction related energy conservation strategies

e. Engineering and design

f. Construction and project management

g. Commissioning

h. Training

i. Safety and quality program

j. Measurement and verification of results

k. Guarantee of savings

The City fully intends on partnering with one firm on the development and implementation of this project and as part of this partnership there is an understanding of a cost associated with the Investment Grade Audit. Please describe you firms approach to pricing an Investment Grade Audit for the City and how it is handled if the City decides it is not in the best interest to move forward once the audit is complete.

5. Project Experience Summary

Provide a project experience summary for five (5) energy savings performance contracts implemented with municipalities.

Each project experience summary must contain:

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a. Project cost

b. Annual savings guaranteed

c. Project term of the contract in years

d. List of improvements

e. Client contact information

In addition to the references above, please provide an example of a project where a savings guarantee was not met and the steps taken by the ESCO. If no shortfall has taken place within the history of the ESCO, please provide a written statement signed by an officer of the company stating that no shortfall has taken place.

All project experience summaries must be for the "responding ESCO" operating under its existing name or subsidiary and must be for the "responding ESCO" as a firm. Project experience summaries will be for the firm as a whole, not for an individual.

Failure to provide project experience summaries that meet the minimum requirements noted above will result in the responding firm being deemed nonresponsive to this request for qualifications and that firm will not be considered for this project award.

6. Best Value

a. Briefly describe how the ESCO provides the greatest value for the investment made by the City.

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PROPOSAL FOR

City of Abilene

REQUEST FOR QUALIFICATIONS (RFQ)

ENERGY EFFICIENCY AND CAPITAL REINVESTMENT PROGRAM

Due Date: November 1, 2024

Energy Solutions Professionals

9218 Metcalf, Suite 274
Overland Park, Kansas 66212
www.energyesp.com

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- **Bank Reference Letter**
- **Behavioral Training & Education Program**
- **Financial Statements (Proprietary & Confidential)**

1. Business Qualifications

a) Please provide a brief history of your firm and number of years in the ESCO business.

Energy Solutions Professionals (ESP) was founded in 2006 by a group of career veterans in the energy-efficiency industry who saw a glaring need for a company that could provide cost-effective and comprehensive energy services for clients in the Midwest whom were either ignored by large energy services companies (ESCOs) or having to pay exorbitant costs to receive services. ESP's owners believe that energy-saving and facility-improvement expertise can be provided in a streamlined and personalized fashion, where clients receive all the services of large energy service companies, in a much more personalized and unbiased manner, without paying the bloated overhead and profits inherent in those firms. ESP is an ESCO focused on providing optimal value, holistic solutions, and effective energy performance contracting. Services we offer include preliminary assessments, investment grade energy audits, engineering design and specifications development, assistance securing financing, project and construction management, installation and commissioning, metering, energy behavioral training, and measurement and verification. Our main objective is to identify opportunities to reduce client's operating cost, and guarantee that savings will be sufficient to pay for energy-saving, facility-improvement measures over time. This allows facility upgrades to be acquired without the client needing to spend capital dollars, or ask the community for a tax-increase.

- Our mission is to provide exceptional energy services in a professional, people-oriented, and cost-effective manner, with an emphasis on integrity and excellence.

As totally independent ESCO, our sole focus is to provide energy services for our clients, typically through an energy performance contracting approach, in an unbiased and client-focused manner. Our objective is to develop projects that provide optimal value for our clients, while enhancing the overall working conditions within buildings and having a positive impact on the global environment. Our entire team relishes the fact that we are able to help clients be better stewards of the resources by enabling them to redirect money that was earmarked to pay for utilities and/or maintenance costs to be invested in their facilities and people.

ESP is a Kansas Limited Liability Company, and a Small Business Enterprise (SBE). We have a corporate structure and size that enables us to offer comprehensive services and tangible guarantees, without the large overhead costs associated with other ESCOs. We have no parent company to answer to, and no ties or agreements with product vendors, engineering firms, construction company, venture-capital firm, commodity provider, or other service providers. Our vendor-independent, flat-tier construction model and distinctive approach minimizes cost, gives you more control over equipment and services selection, while shifting the risks associated with project implementation and performance onto ESP and our team of experienced and highly skilled engineers. Our creative, unbiased technical expertise enhances savings potential, while superior project and construction management reduces costs. We offer comprehensive and unique performance management services that maximize savings and diminish difficulties during the guarantee phase of the project. Our approach puts control firmly in your hands, while we complete a guaranteed program geared toward your specific needs.

While our corporate structure has remained unchanged, we are constantly evolving and enhancing the quality, value, and benefits of the services we offer. One area that we have evolved as a company is in understanding the significant impact people's behavior can have upon overall energy usage and savings. This evolution in thinking lead to us developing an approach for energy savings that we refer to as the Energy Efficiency Triad™. In essence, we recognize that utility and operating costs can only be truly optimized if equipment and systems are at peak energy efficiency, utility supply is evaluated from a cost and sustainability perspective ***and*** people are trained and motivated to be as energy-efficient / cost-conscious as possible within the realm of their daily activities. We have a dedicated group of energy conservation training personnel that has practical experience implementing behavior-based energy saving programs designed to help individuals understand how their actions impact energy usage and cost within the realm of their daily activities, and promotes behavior that dramatically reduces energy use and costs within facilities.

We initially established ESP to focus on providing comprehensive and cost-effective solutions for small to medium sized clients. We discovered that having a streamlined but highly skilled team committed to offering quality and value-oriented services enables us to provide services for both traditional and non-traditional energy performance contracting clientele of all sizes. Everyone on our team has technical experience and contributes to fulfilling energy services for our clients. Hence, we have very low overhead expense and are able to offer comprehensive energy services at much lower cost than other ESCOs. This gives us the ability to lend assistance to much smaller (and non-traditional) clientele than ESCOs with higher overhead costs, while having the expertise and cost structure to yield exceptional value for large clients. Our team has completed guaranteed energy saving performance contracting projects for retirement-home housing, high-rise condominium living, major universities (academic, student housing and support facilities), K-12 schools, community colleges, municipal and county governments, state agencies (office buildings, correctional facilities, state/mental-health hospitals (SRS), schools for the blind and deaf, etc.), hospitals, faith-based organizations, and private industry settings. Our projects have ranged from as small as $56,000 to as large as $26M.

There are many advantages associated with using ESP and our unique process. The result is a truly holistic project that is co-authored by your personnel and our staff of experienced professionals. Energy conservation measures and ongoing services are selected based on maximizing dollar savings and facility improvements. Our approach minimizes cost, risk, and time to you, while enhancing the facility environment. Itemized costs and savings are identified up front and presented in a workshop setting, so decisions are based on thorough evaluation of the technical, financial, people and business implications of each measure. We are a truly unique ESCO that has members with the talent and experience to offer exceptional service, while being streamlined enough to offer unequaled value and pricing that other ESCOs simply cannot match.

The people that make up the ESP team have spent the majority of their careers providing energy services to public sector clients. Historically, 93% of our projects have been with public sector clients (based on the number of projects our team members have completed), while 98% of our revenue has come from public sector projects. This further demonstrates that our focus and expertise is in working with public sector clients to find and implement energy-saving solutions for their facilities.

i. The ESCO should have at least ten (10) years of experience in Kansas in the analysis, design, implementation, and guarantee of energy efficiency and conservation measures. Please provide the date of your first ESPC project implemented in the state by the responding firm.

ESP's first project in the state of Kansas was for Reno County in Hutchinson, Kansas commencing June 25, 2008.

The following list depicts some of the Kansas projects ESP has developed over the last ten years:

Project	State	Year	Total Project Cost
Uniontown USD 235	KS	2024	$ 340,000
Lincoln USD 298 (Phase 2)	KS	2024	$ 370,000
Peabody-Burns USD 398	KS	2024	$ 130,200
Newton USD 373 (Phase 3)	KS	2023	$ 3,734,000
Doniphan West USD 111	KS	2023	$ 315,000
Woodson County USD 366	KS	2023	$ 300,000
Dexter USD 471	KS	2023	$ 49,800
Jefferson West USD 340	KS	2023	$ 546,000
Hoisington USD 431	KS	2023	$ 663,000
Wabaunsee USD 329	KS	2022	$ 452,000
Valley Falls USD 338 (Phase 2)	KS	2022	$ 450,000
Cushman Wakefield - Foxhill Medical Center	KS	2022	$ 174,000
Lincoln USD 298	KS	2022	$ 137,000
Newton USD 373 (Phase 2)	KS	2022	$ 7,700,000
Zimmer -6700 Antioch	KS	2022	$ 240,000
Comanche County USD 300	KS	2022	$ 1,285,000
Newton USD 373 (Phase 1)	KS	2021	$ 1,265,000
Southwestern College	KS	2021	$ 1,187,000
Wabaunsee USD 329	KS	2021	$ 430,000
Stafford USD 349	KS	2021	$ 1,111,000
Valley Falls USD 3389 (Phase 2)	KS	2021	$ 450,000
McLouth USD 342	KS	2020	$ 59,000
Perry-LeCompton USD 343 (Phase2)	KS	2020	$ 725,000
Valley Falls USD 338 (Phase 1)	KS	2020	$ 802,000
Woodson County USD 366	KS	2020	$ 1,180,000
Brown County Jail	KS	2020	$ 299,000
Zimmer - 4400 College	KS	2020	$ 98,000
Centre USD 397	KS	2019	$ 98,000
Liberal USD 480	KS	2019	$ 5,743,000
North Ottawa County USD 239	KS	2019	$ 118,000
Oberlin USD 294	KS	2019	$ 91,000
Perry LeCompton USD 343 (Phase 1)	KS	2019	$ 787,000
Troy USD 429	KS	2019	$ 70,000
Kansas Wesleyan University	KS	2019	$ 2,412,000
Bonner Springs USD 204	KS	2018	$ 4,500,000
Solomon USD 393	KS	2018	$ 109,000
Northwest Kansas Education Service Center	KS	2018	$ 189,000
Kansas State Polytechnic	KS	2017	$ 2,805,000
Neosho County Community College	KS	2017	$ 3,338,000
Argonia USD 359	KS	2017	$ 682,000
Prairie View, Inc.	KS	2016	$ 408,000
Russell Regional Hospital	KS	2015	$ 2,040,000
Chisholm Creek Utility Authority	KS	2015	$ 2,400,000
Bethany College	KS	2014	$ 1,925,000
Belle Plaine School District	KS	2014	$ 584,000

b) Describe your firm's in-house resources and expertise in the areas described above, as this will be considered a strong point for leveraging best practices and for ensuring a single point of accountability.

We offer a broad range of services directly related with developing, financing and installing energy and facility improvements via energy performance contracting, as well behavioral training/education services, and supply-side energy services. Each of our team members is a highly experienced energy solution professional. We are committed to providing exceptional services; in a holistic manner, with a focus on integrity and value.

The table below describes the types of services (both professional and construction services) that our company offers in-house and the services typically offered through subcontractors:

Service	In-house	Subcontract	Notes
Preliminary Assessment	x		
Investment Grade Audit	x		
Design and Specifications Development	x		ESP performs conceptual design in-house. We-work collaboratively with our design build subcontractors to finalize the design and provide project drawings and documentation.
Project and Construction Management	x		
Assistance in Arranging Financing	x		
Installation of Measures and Commissioning	x	x	ESP has commissioning and retro-commissioning capability in-house. Based on the size and scope of the project this is an area where a dedicated commissioning subcontractor may be used. We do not use installing subcontractors to commission our projects.
Technical Training of Site Personnel	x	x	ESP provides hands-on training for clients; however, subcontractors and vendors provide additional training on their specific products and systems.
Behavioral Training/Education Program	x		Available to entire city staff. See Appendix.
M&V Management and Reporting	x		Sample M&V report is included in the Appendix.

c) Provide National Association of Energy Service Companies (NAESCO) accreditation and proof of current Kansas Professionals Engineering Corporation Certification for the responding ESCO.

NAESCO Accredited

ESP is accredited by the National Association of Energy Services Companies (NAESCO), the industry organization for energy service companies like ours. NAESCO accreditation requires a rigorous review process by an independent selection Committee that reviews past project results, client references, business practices, company financials, and includes a commitment to uphold ethical guidelines. Our participation keeps us abreast of industry trends and allows us to network with key business and technology companies that can help us deliver high value projects to our clients. ESP's accreditation status is available on the NAESCO website http://www.naesco.org/accredited-companies.

Licensed Professional Engineer in the State of Kansas

ESP's Senior Energy Engineer, Brett Ravenscroft is a licensed Professional Engineer in the State of Kansas (PE License: 18174). Brett will be intimately involved in all phases of your project; development, design, and implementation. Brett will prepare the final scope of work, and review stamped final design documents prior to project implementation.

d) Provide a list of pertinent certifications, awards and credentials (including safety and EPA or DOE affiliations).

State Programs where Firm is a Prequalified Vendor

In Kansas, the Facility Conservation Improvement Program (FCIP) promotes and facilitates energy-saving projects in public buildings, such as municipals. The FCIP helps Municipalities implement energy-efficiency projects. This program uses Energy Savings Performance Contracting as a budget-neutral way to finance energy efficiency projects. To encourage access to the benefits of performance contracting the Energy Division has identified ESCOs to provide services to participating public entities. ESP has been on this Energy Division of Kansas Corporation Commission's approved FCIP vendor list since its inception.

2015 Capstone Award – Green Design

ESP was presented with a 2015 Capstone Award for Green Design by the Kansas City Business Journal. Capstone awards honor the metropolitan area's outstanding real estate and development projects.

#1 Hospital in the Nation for Energy Savings – American Society of Healthcare Engineers – 2016

ESP's energy efficiency improvements to Russell Regional Hospital in Russell, Kansas resulted in the hospital being identified as the number one hospital in the nation for energy savings in 2016 by the American Society of Healthcare Engineers. Russell Regional Hospital received a perfect ENERGY STAR® Score of 100!

DOE Qualified

ESP was the only SBE awarded to be on the Department of Energy's (DOE) Qualified List of Energy Service Companies (ESCOs) in accordance with the Energy Policy Act of 1992 (EP Act 1992) and 10 CFR 436. The DOE Qualified List consists of private industry firms that have submitted an

application and been qualified by a Qualification Review Board composed of Federal Interagency Energy Management Task Force representatives and DOE staff.

Utility Rebate/Incentive Experience

ESP is a trade ally of Evergy, which allows us to identify and obtain utility rebates for our clients that are in the Evergy service area. We have also worked with Ameren to obtain incentives from their program and are familiar with their process and how to maximize the incentives you can receive.

Industry Organizations

ESP is a Kansas School Superintendents' Association (KSSA) business partner, supporting the educational efforts of district school superintendents. We have assisted the organization in providing information to school leaders about the process and benefits of Energy Performance Contracting. Several on our team are members of The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) which is an American professional association seeking to advance HVAC and refrigeration systems design and construction. In addition, we have members affiliated with the Association of Energy Engineers (AEE) which is a network that connects with worldwide community, offering access to globally recognized certifications, training and events. ESP is a business affiliate with Kansas Independent College Association (KICA) and holds a membership with Kansas Healthcare Engineers Association.

Small Business of the Year Nominee

ESP has been nominated for the KC Chamber of Commerce's Small Business of the Year award on numerous occasions.

Safety

OSHA 30-Hr Card: All Project Managers carry an Occupational Safety and Health Administration (OSHA) DOL 30-Hour Construction Card. This provides a comprehensive and advanced level of safety education for those involved in the construction industry. It equips participants with the knowledge and skills to manage risks, ensure compliance, and foster a culture of safety in the work environment.

OSHA 10-Hr Card: All Site Construction Managers/Superintendents carry an Occupational Safety and Health Administration (OSHA) DOL 10-Hour Construction Card. This card equips construction industry professionals with the knowledge and skills to work safely, reduce hazards, and promote a culture of safety in the workplace.

First Aid/CPR/AED: All Projects Managers and Construction Managers/Superintendents carry a First Aid/CPR/AED certification.

Asbestos Recognition – Specialized staff carry this certification. This covers exposure, diseases, identification, safe work practices, PPE, and more. Ensures education in handling asbestos-containing products and structures to understand risks and protect themselves.

All of these accreditations and pre-qualifications should be very important to the City of Abilene. While they're not endorsements of ESP or any other ESCO, they serve to demonstrate the scrutiny and review that others have conducted regarding our approach to business, references from past projects, financial soundness, technical aptitude, and our overall ability to effectively and successfully provide energy-saving, facility-improvement performance contracting solutions for our clients.

e. Provide a description of the ESCO business unit dedicated to implementing Energy Savings

Performance Contracting projects.

Energy Solutions Professionals was founded in 2006, so we have been providing comprehensive turn-key energy services as a company for almost 18 years. However, this doesn't tell the whole story with respect to the "age" of our company. Energy Solutions Professionals' Team members have a combined experience in the energy services field of over 300-years, and multiple team members have worked together since the early 1990's. We have purposely formed our Team with highly skilled individuals that have long track records of success within the Energy Services field. While there are companies that may boast about a longer corporate history in the industry, there are very few (if any) project teams that can match the experience of the people ESP assigns to each and every task for completing Energy Audits and energy-efficiency, facility-improvement projects. Effective energy services comes down to the quality of the PEOPLE providing the service, and ESP's team offers unparalleled experience, commitment and service within a corporate structure that yields truly cost-effective and value-oriented solutions for our clients

f) Provide the location(s) where this project will be managed and ESCO's division headquarters

As part of the founding of our company, we opted for an approach that is very different from the traditional models and structures of performance contracting organizations.

We've intentionally adopted a streamlined structure where we have centralized our resources in one location – Overland Park, KS. When implementing projects, we put a construction manager on-site and prefer to use local labor and vendors to install the energy saving measures you have selected. Service after the project is often handled by your preferred local contractors, which often yields overall better service and response times.

Although we are based out of Overland Park, Kansas, our team has successfully completed projects across the United States. We regularly travel to perform projects and use local labor, vendors and subcontractors as required by the type of work we are doing. The benefit to you is that we maintain an extremely streamlined structure that minimizes overhead and office expenses, so that you are paying for the services you request, and not a bloated corporate structure. In the end, you end up paying only for the services you need, rather than for overhead and services that you never required and that are spread across the U.S.

g) Describe your willingness to include other manufacturers' products.

i. Identify and describe any business associations with equipment manufacturers or suppliers that might be specified for this project.

ESP has no business associations with equipment manufacturers or suppliers that will be specified for this project. ESP is completely vendor, manufacturer, subcontractor, and commodity independent.

This ***total*** independence provides the neutral and unbiased base from which value-driven equipment and subcontractor selection and procurement take place. We have no ties to specific products or vendors, and no preconceived ideas about what equipment vendor, service provider or contractor should "get the work." We solicit multiple bids for the holistic scopes of work developed during the IGA. Our team will evaluate; in an unbiased and client focused manner, which products, services, or contractors offer the best long-term value, and make our recommendation to you. We often purchase equipment and services from our ESCO competitors; such as Trane, Johnson Controls/York, Honeywell, and others, when their equipment offers the best value for a given client.

ESP will provide the City with copies of all bids received. You will not be required to select any product, service, or contractor as part of our project. Your staff and administration will have ultimate control over what goes into the project.

ii. Provide five (5) project examples where you have installed or integrated other manufacturers' products.

ESP has been in business about 18 years and has been totally independent since our inception. We have successfully implemented projects for dozens of organizations totaling well over $100M of critical energy-saving, facility-upgrade, and/or renewable-energy improvement measures. All of these projects installed or integrated products from manufacturers that have no financial ties with ESP. The phrase "other manufacturer's products" does not really apply to ESP since we do not represent or produce any products that are used in our projects.

h) List the complete range of energy/utility services and capabilities the ESCO offers: such as building/facility energy analysis, engineering, design, installation, water/wastewater treatment equipment analysis, utility metering, commissioning, monitoring and performance verification, and related training.

ESP is an Energy Service Company focused on providing optimal value, unbiased solutions and effective energy-efficiency, facility-improvement services. Energy Solutions Professional's highly skilled team and streamlined corporate structure enable us to offer exceptional services at unparalleled value for our clients. ESP's team offers complete turnkey solutions for our clients that include holistic project development, implementation and Performance Management (including Measurement & Verification) services that span energy & facility audits, supply-side analysis of delivery, rates and renewable-energy options, energy & design engineering, energy behavioral training, assistance securing financing and implementation services such as project / construction / performance management expertise.

One of our main objectives when engaging a client is to identify opportunities to reduce their operating cost, and guarantee that savings will be sufficient to pay for energy and other facility improvements over time. This allows facility upgrades to be acquired without the client needing to spend capital dollars. The volatility and increasing cost for electricity, water and gas has heightened awareness regarding energy efficiency and has enhanced both the interest in and need for implementing energy-saving projects.

ESP's entire Team is committed to providing holistic solutions, which is embodied within our Energy Efficiency Triad™ approach. Utility and operating costs can only be optimized if equipment and systems are at peak efficiency, people are trained how to utilize systems in a cost-conscious manner, and utility supply is evaluated from both cost and sustainability perspective. Taking this holistic approach ensures optimal savings over time.

Primary Services Offered

Our sole focus is to provide cost-effective and value-oriented professional services designed to help our clients improve energy-efficiency, enhance facility environment, resolve critical infrastructure needs, and assist in future planning.

Project Development

- Utility Bill Analysis: evaluation of historic utility usage and costs, rate structure and billing history. This analysis identifies consumption/cost trends, billing anomalies and provides a macro-look at facility energy efficiency.

- Facility Needs Analysis: determines what systems need repair, replacement and/or retrofitting for energy or functional reasons. This may include taking field-measurements of power-consumption, air-flow, water-flow, temperature readings, etc. in order to establish the functionality level of existing systems.
- Energy Utilization Indexing: provides a comparative analysis of a given facility's energy usage to similar facilities in like regions in order to help understand the viability of implementing energy efficiency measures to reduce costs. In addition, may provide a breakdown of consumption by end-use device in order to help a client understand where they should focus their energy efficiency efforts.
- Energy Efficiency Design Review: planned and existing system designs may be reviewed by our experienced Professional Engineer(s) to determine if the design falls within current "best-practice" design for energy efficiency and life-cycle cost.
- Preliminary Energy Analysis: includes (in part or in whole) the above three items, and further provides an economic viability analysis regarding implementation of an energy performance contract. Typically, will include projected savings magnitude and the potential magnitude of improvements these savings could fund.
- Investment Grade Audits: includes all of the above items. In addition, project costs will be acquired from pre-qualified contractors, savings will be calculated and guaranteed, financing options will be developed and presented. This results in a "laundry-list" of potential energy efficiency and/or facility improvement measures that could be provided, typically includes individual cost, savings, and payback for the client's review. Also, a formal construction plan and schedule will be developed.

- Water/wastewater Treatment Equipment Analysis: ESP has conducted (60+|-) energy audits for Kansas Rural Water Association (KRWA) entities which gave us experience with a wide array of processes for the treatment and delivery of potable and waste water. We have seen "best practices" and "inefficient operations" in a wide array of settings, so our team is highly skilled at identifying savings opportunities for WT/WWT and distribution of both potable and waste water.

  Please refer to Section 6 Best Value for a more robust description of our abilities in this area.

Project Implementation

- Design and Specification of Equipment: ESP engineers evaluate all aspects of your facilities, equipment, utilities, and operations; and then recommend, design, and specify solutions that we believe provide the best value.
- Procurement and Installation of New Equipment: Our engineers detail the scope of work for each energy conservation measure or facility improvement, and then we obtain multiple bids from vendors and subcontractors to ensure you get high quality products at the best cost and value.
- Project Management: this involves all functions associated with securing bids, writing, and overseeing all subcontracts, establishing an implementation schedule, managing construction process (i.e. establishing communication channels between ESP, clients, and subcontractors, and verifying site-condition construction parameters). We will provide a full-service turn-key approach to project management, using management techniques that we have honed over many years in the business. Our clients will have the comfort of single-point responsibility for all work implemented on their behalf.
- Construction Management: this is the on-site management that is critical to ensuring the project flows smoothly and has the smallest amount of impact on the client's day-to-day operation as

possible. We will hold regular on-site meetings in which activities are planned using a three-week look-ahead approach, and all job-site issues are discussed and addressed.

- System Commissioning: Each energy-saving measure is commissioned to ensure that it operates as intended so that you have a fully functioning system. This is a comprehensive and dynamic process to ensure mechanical, electrical, controls, plumbing and lighting systems are functioning properly and responding to loads and facility conditions effectively.
- Training: An important ingredient to sustaining the value of an energy saving project is to ensure that the client's staff is able to perform and/or monitor equipment for proper maintenance practices. We view the training process as a vital component of every Energy Performance Contract we implement. We help ensure that every member of your staff receives the training they need in order to feel empowered to provide appropriate service, and instill them with a sense of ownership in the equipment. This will lead to better maintenance and considerably more efficient operation over time.

Performance Management

The Performance Management period encompasses the time-frame from the day of Final Completion of implementation to the Final Payment on the lease, and typically ranges anywhere from 7 to 20 years (15-year max for this project). During the first year after completion of construction, we provide assistance with warranty management and standard operational questions. We also have the ability to offer on-going Measurement & Verification (M&V) services, maintenance training, Energy Management System monitoring and/or (re)commissioning and management of preventative maintenance services. We discuss these services at length with your staff, and help your personnel determine whether there is enough tangible value to consider using any of these services. Our personal history has been to help clients know how to do these things internally, and dissuade them from including on-going costs and services as part of the contractual commitment of the Energy Performance Contract. That is primarily because we want our clients to secure the maximum infrastructure improvements possible. We have one basic principle that we apply to all services we offer: we must provide tangible value and beneficial service before we are even willing to present or propose it for our clients.

- Pre and/or Post Efficiency Measurements: involves methodical measurement of key energy consuming system's operating parameters (power consumption, light levels, flow-rates, entering/leaving temperature, combustion ratios, etc.) to establish efficiency and functionality of equipment. This is a key component in our method of measuring and verifying guaranteed energy savings are achieved. We also envision this as a potential value-added service that we can offer to those clients that may have implemented energy projects with our competitors.
- Energy Management System Commissioning: providing professional assistance in commissioning / evaluating energy management systems to ensure their functionality and that all sequence of operations have been appropriately implemented.
- Energy Conservation Training: A people-oriented program designed to train your staff, administration, and students on the importance of energy conservation. We work with you to develop a program that helps people see the significant impact they can have on energy consumption and the effect this has on the city and overall global environment. We utilize individuals that are specifically trained and educated to assist with developing and providing this service. We have helped a wide variety of clients develop programs for "getting the word out" to faculty, staff, (students) and local

communities regarding the importance of energy conservation/sustainability and its far-reaching impacts.

- Warranty Assistance: Our project is similar to standard construction in that it carries an overall one-year parts and labor warranty on all equipment installed. We have established strong relationships with leading providers of lamps, ballasts, variable speed drives, motors, chillers, boilers, and other energy-consuming systems, so we are able to obtain extended warranties (the best in the industry) on many pieces of equipment. These additional warranties are detailed in the final documentation. The warranty is fulfilled directly through the installing contractor, with oversight as needed from ESP.
- Preventative Maintenance: City staff, Energy Solutions Professionals, an independent contractor, or a combination thereof will provide maintenance of installed equipment. The decision of how maintenance can best be provided; and by whom, is determined individually for each project based primarily on the maintenance capabilities and desires of our client. In any case, ESP must be assured that the equipment will be properly maintained over time.
  - Energy Solutions Professionals does not require any on-going maintenance agreement be included in our projects. During the Investment Grade Audit, our staff will analyze existing conditions of all energy-consuming equipment and maintenance practices. There will be discussions in workshops to determine whether it is best to maintain equipment with in-house resources, or to outsource some maintenance efforts. Regardless of the approach, we help establish preventative maintenance plans, prepare operations and maintenance manuals, and provide thorough hands-on training on all systems we install.
  - It has been our experience that an effective energy services project will result in less overall maintenance cost for our client. New equipment is often provided to replace older more maintenance intensive equipment. Equipment run time is typically reduced, resulting in less maintenance. Retrofit of existing equipment for improved energy efficiency can result in less maintenance. Expanded computer-based energy management system; provided from a reliable manufacturer, will have minimal maintenance when properly applied, installed, calibrated, and commissioned, as long as it is well cared for.
  - Preventive maintenance is extremely important because it keeps equipment at peak efficiency and performance. This ensures the energy savings are achieved and enhances the environment. The project specific procedure document can be used as a tool to help during personnel transition, such as when you have personnel turnover or decide to redirect those services to an outside provider.
- Measurement and Verification: formal service that quantifies guaranteed savings and establishes a customized plan; based on client needs and desires, for measuring the efficacy of the energy efficiency measures installed.
- Energy Star Certification: Our team can input your data into Energy Star's Portfolio Manager on an annual basis to determine if your buildings qualify for Energy Star Certification.

Financial Parameter Analysis & Options

- Budget and Operational Expenses Review: analysis of client budgets; utility, operating & maintenance, deferred cost, etc., to assist with long-term facility planning in conjunction with energy performance contracting.

- Assistance in Securing Financing for Project: ESP is not a financial advisor; however, we can help secure multiple proposals for various financing options, which give our clients the ability to objectively evaluate and select the financing avenue that best fits your particular objectives and needs.

i) Has your firm, or any of its parents or subsidiaries, ever been involved in litigation/lawsuits resulting from the design and/or implementation of a guaranteed energy cost savings project pursuant to K.S.A. 75-37,125 or within a contiguous state? If yes, explain in detail the circumstances, dates associated with the litigation and the resolution of the case (or current status, if still ongoing). Failure to disclose this information will lead to immediate disqualification.

ESP has never had any litigation/lawsuits resulting from the design and/or implementation of a guaranteed energy cost savings project pursuant to K.S.A. 75-37,125 or within a contiguous state.

j) Provide examples of customers (municipalities) who have completed a performance contract to the end of the term performance guarantee and give results on actual dollar savings achieved.

			Annual Savings	
Project	Preliminary Estimate	Energy Savings Guarantee	Measured & Verified Results	Type of M&V used
City of Prairie Village, KS	$25,700	$39,876	$43,932	IPMVP Option A
Harper County, KS	$27,361	$33,040	$39,949	IPMVP Options A
Ellis County, KS	$49,144	$46,462	$49,669	IPMVP Option A
Brown County, KS	$13,331	$13,786	$15,192	IPMVP Option A
Russell Regional Hospital	$127,683	$123,464	$129,069	IPMVP Option A
Edwards County Hospital	$30,325	$27,293	$28,381	IPMVP Option A
Graham County Hospital	$37,925	$27,815	$28,721	IPMVP Option A

2. Financial Information

Describe the financial soundness and stability of the ESCO (ability to support the performance guarantee).

We have the practical experience, financial wherewithal and savings assurance plan in place that enables us to effectively support the cost and savings guarantees we provide as part of our energy performance contract projects. The following verbiage provides some background regarding our ability to effectively fulfill our guarantee obligations.

• ESP went through a rigorous process to be selected as a pre-approved Energy Service Company (ESCO) for providing energy performance contracting to all public entities in multiple states across the US and the Department of Energy. These entities would not have awarded Energy Solutions Professionals this selection if they did not have confidence that we had the wherewithal to develop effective guaranteed energy savings projects, and have the financial ability to support those guaran-tees.

• We maintain an appropriate level of cash reserve to support our energy savings guarantees, and will continue with this policy as our annual obligations associated with guaranteed savings increase and/or decrease year to year.

• We maintain a 7-figure line of credit with our bank, but have never had to draw on that line of credit. This speaks to our approach of running our business to ensure that we manage cash flow and maintain enough cash reserves to effectively operate the business and support all financial responsibilities.

• ESP maintains an Errors and Omissions Professional Liability insurance policy specifically structured to cover any potential mistakes associated with energy savings calculations (similar in concept to professional engineering errors and omissions insurance).

• We build into our projects an appropriate level of safety-factor that varies with complexity of the measures generating the savings and the magnitude of savings. It typically ranges from 4% to 10%, for the final Guaranteed Savings.

• ESP always takes end-use measurements to verify operating efficiency and energy use of installed equipment. If any piece of equipment is not performing to the standards identified by manufacturers, they are required to correct the deficiency to ensure equipment/systems function at efficiency levels upon which our calculations were based, so the appropriate magnitude of energy savings will be secured.

Our financial stability, corporate structure and commitment to people enabled us to go through the pandemic year without laying off, furloughing or asking anyone to take reduced pay. This is an accomplishment that many of the large; vendor/other affiliation, ESCOs were not able to achieve. We maintain the financial depth needed to ensure we can support a Team capable of providing technically viable and cost-effective solutions, the demonstrated ability to provide Payment and Performance bonds, and the financial strength to support all Savings Guarantees we provide for our clients.

a. Provide Financial Statements for the two (2) most recently completed fiscal years. City may, during the course of the evaluation process, request additional financial information to supplement and clarify

the information provided (this information may be included in electronic format or within the appendix without impacting the page maximum).

We have included our financial statements for the most recently completed fiscal years (2023 and 2022) in the Appendix of this response. As a privately held company, we consider these financial statements to be Proprietary and Confidential.

Per the City's request regarding proprietary information, ESP requests that the City of Abilene do one of the following prior to reviewing the proprietary and confidential financial information:

1. Provide written acceptance that the City of Abilene accepts this information as proprietary and will treat it as such, or

2. Return the proprietary information without review to:

Energy Solutions Professionals, LLC

Attn: Coleen Flathman, Director of Finance

9218 Metcalf, Suite 274

Overland Park, KS 66212

b. Provide information documenting sources of financing and financing methods available to the City.

Financing Sources & Options

Although financing is typically an integral part of every EPC program, it does not constitute a profit center for Energy Solutions Professionals. We are more than willing to evaluate all avenues of potential financing, including working with clients who decide to self-finance projects. We have strong relationships with many of the leading national lending institutions (Bank of America, Flagstar Public Funding, Koch Financial and many others). We work with your staff and administration in selecting a financing arrangement that best meets YOUR needs. Current Tax-Exempt rates have varied between 4.25% - 5.5%; depending on magnitude of project and term desired.

Several potential sources exist for obtaining the funds necessary to enter a proposed Energy Savings Performance Contract with ESP. The following are just a few:

1) Lease-Purchase Financing: ESP offers a variety of lease-purchase finance packages (through independent finance companies) designed to meet our customer's specific needs. Lease-purchase financing will take the savings gained from the installation of the energy-efficient equipment and use it to cover lease costs, equipment, engineering, and energy study fees, without affecting your cash flow or existing capital budgets.

2) Tax Exempt Municipal Leases: An additional caveat for many of our clients is that they may qualify for tax-exempt municipal-lease financing. The lessor's earnings off of the interest are exempt from federal income tax, so they are able to offer considerably lower interest rates. This enables the savings generated by the program to cover a larger amount of up-front work.

3) Utility Rebates: Several utility companies (Evergy) offer rebates for a myriad of different energy-efficiency improvements. ESP's team has secured these rebates for clients, and will work with your staff to identify and secure any/all funding sources of this nature that may be available.

4) Capital Outlay or Other Internal Funding: We do not require that our clients utilize an outsourced financing mechanism. We are more than willing to work with your staff and administration to utilize whatever funds will yield the best long-term financial solution for your organization. It is not uncommon for clients to apply some planned future capital outlay, funds allocated for repair/replacement of equipment that is being addressed in the energy project and/or avoided future cost funds.

5) Energy-Efficiency Grant Funding: There are currently a number of Federal, State and Utility grant programs available. ESP has assisted many of our clients with securing a lot of these funds, which can be applied to a performance contracting procurement plan.

6) 179D Tax Deduction for ESCO: This tax deduction can have significant impact on financial parameters.

7) Federal Renewable Energy Tax Credits: These tax credits and incentives are available to tax exempt entities in the form of direct payment from the Treasury, and can reduce the cost of renewable energy projects (solar, ground source heat pumps etc.) by as much as seventy percent. The base ITC credit is 30 percent for a system under 1MW, with an additional 10 percent available for using domestic content. The other credits are for projects in a specified low-income community or areas impacted by fossil fuel closures.

We have extensive experience in helping to obtain multiple financing proposals for our clients so they can make informed and value-oriented decisions regarding third-party financing options. While we are not a financial advisor; and will not make suggestion regarding who you should select as finance provider, we will lend our expertise to help you secure information to aide you in finding the best possible financing solution for the City of Abilene. Our objective is to help people find the most cost-effective way to implement the project, which maximizes the value obtained from the savings generated through the energy efficiency improvement measures. This may include electing to utilize capital, repair and replacement or other internal funds to pay for the measures identified for inclusion in the program. The primary deciding factor is determining which avenue yields the best long-term value for the City of Abilene.

Flexible Financing Options Available

We have worked with many financing sources, and we have developed agreements that offer maximum flexibility at no cost for our Client. The financing can be set up as a master lease, allowing additional projects at a later date by simply adding a rider to the existing lease. The lease may often be set up so that there is no early or pre-payment penalty, so you may buy-down the principal if funds are available (often with excess savings generated from the guaranteed energy savings program), which can greatly reduce interest costs. The funds may be placed in an escrow account during the construction period, in which case interest earned would accrue to the benefit of the City of Abilene.

c. Provide a letter from its surety company demonstrating the ESCO's capability to provide payment and performance bond associated with construction projects. The letter should also state the bonding capacity of the ESCO.

Energy Solutions Professionals has provided exceptional construction services throughout our history, which has helped us to develop an outstanding relationship with Western Surety Company of CNA Insurance Company (our surety company since the inception of ESP). Our consistent performance on construction projects; coupled with our steady growth and retained equity in the company, has helped us to increase our available bonding line while securing better rates each year. We've grown from an approximate $7M bonding line to over $30M bonding line (NOTE: CNA has indicated they will extend bonding to ESP for any magnitude of project we develop, but the $30M is "pre-approved" value) in the almost eighteen years we've been in business. ESP has successfully secured payment and performance bonds for projects ranging in size from $56,000 to $25,600,000. Additionally, the quality of our construction delivery has enabled us to secure improved (lower) bond rates each year, which allows us to provide better value for our clients. It is worth pointing out that our growth has occurred during a period of significant financial instability within the construction industry as a whole, with surety companies putting significant restrictions upon offering bonding lines at all, much less increasing them.

A letter from our surety is included in the Appendix of this Proposal.

d. Provide a letter of recommendation from a financial institution.

ESP enjoys a very solid relationship with our bank, and we have provided a reference letter from them for your review. We've been with this bank since our inception, which is almost 18 years. We have demonstrated solid business acumen and growth over the years so; even in the midst of recent economic troubles and the tightening of credit markets in the industry and the nation as a whole, ESP secured an increase in our available Line of Credit from $500,000 to $1,000,000. We have not had occasion to draw on this line of credit since we've made sufficient profit each year to sustain our operations and meet all of our business obligations. However, it is good to know that we have credit support available of a magnitude that would enable us to maintain our business operations for an extended period of time.

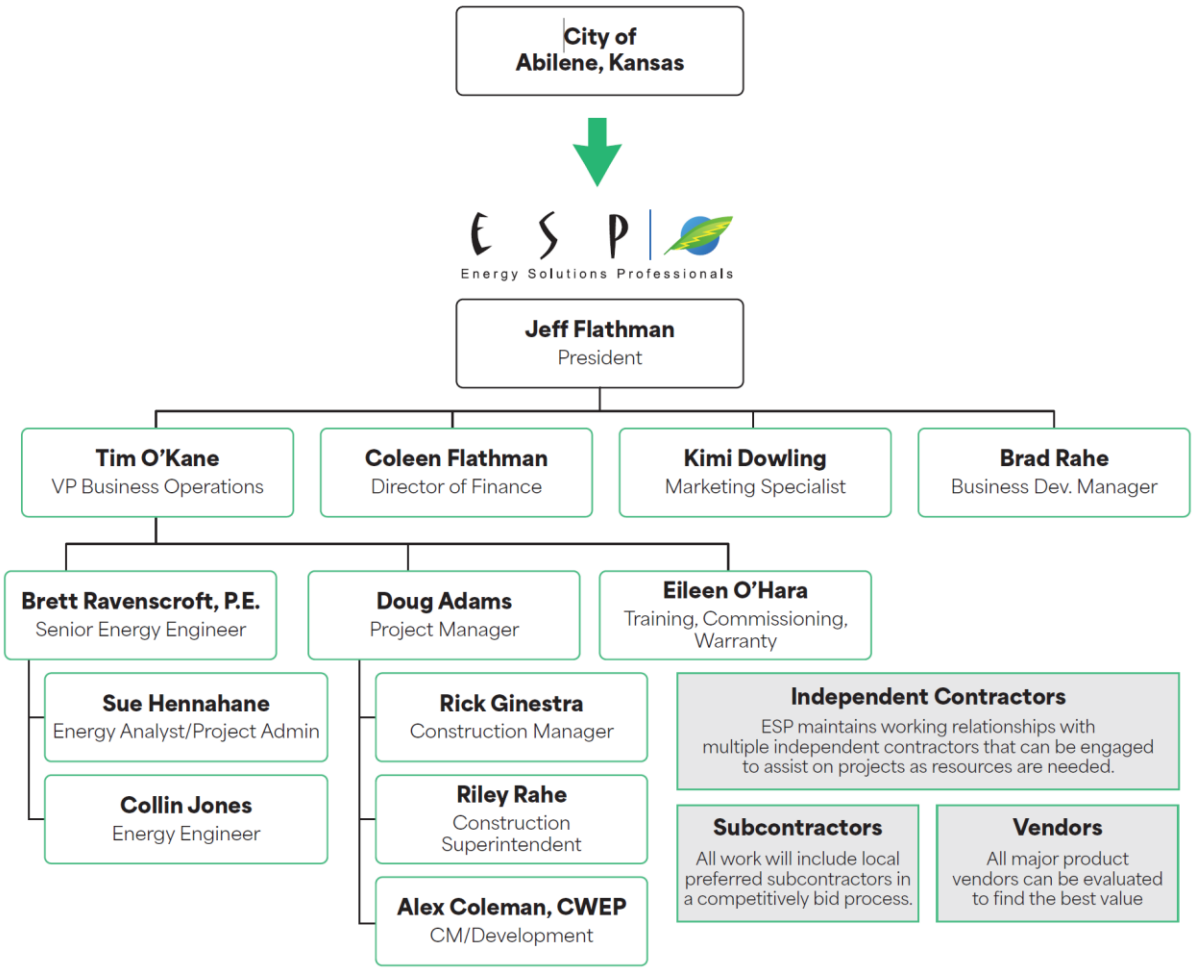
A reference letter from our bank is included in the Appendix of this Proposal.

3. Participants/Personnel

Identify known participants in the project and provide information regarding capabilities and experience of personnel directly assigned to this project that include the following:

a) Organizational chart that clearly describes your ESCO's project organization with supervisory reporting.

The following depicts the ESP team organization chart for this project:



b) A list of key personnel and their responsibilities for the duration of the project contract terms should be listed. Resumes should be provided in the Appendix. In the resumes, indicate the education and professional licensing of each person as it relates to this project. Also, include a list of previous projects in which each team member has played a significant role.

The key Team Members that will take primary responsibility for developing, implementing and providing performance management for the City of Abilene's project are as follows (and highlighted in green in the table following):

- Tim O'Kane – Vice President of Operations: provide oversight and direction to the team during all phases of project development, design, implementation and measurement and verification.
- Brett Ravenscroft, PE, CEM – Sr. Energy Engineer: develop scope of work, secure pricing, calculate savings and manage overall technical and operational aspects of the project
- Collin Jones – Energy Engineer: Support Sr. Energy Engineer in all aspects of the development and design phase of the project including baseline data collection and formatting, field data collection and formatting, and energy analysis.
- Doug Adams – Project Manager: manage schedule, invoicing and contractual issues between ESP, Subcontractors and City of Abilene.
- Alex Coleman – Construction Manager: ESP construction manager coordinates all onsite activities, liaison between subcontractor/ESP/City of Abilene, field-verifies that all aspects of construction are per design intent and set-up to optimize energy efficiency
- Brad Rahe – Business Development: facilitates communications between the City's team, and ESP.

ESP's Team Members are the key to our past and on-going success. We have assembled an experienced team committed to providing a full range of cost-effective, value-oriented energy services. We believe in the value of the services we provide and bring a vast amount of practical experience to bear on each and every project we undertake. While some companies can certainly show that they have more people on staff, few can match the level of experience, and expertise we bring to each team assigned to develop and implement specific projects.

Your project team will be supported by an internal staff dedicated to the success of your project. We feel it is important that you know who they are. Each team members resume includes a list of previous projects in which they have played a significant role. **Resumes for our entire team are included in the Appendix of this Proposal.**

The table below presents our team members and the role(s) they fill. Our team has a sound mix of degreed/licensed engineers, people (including our engineers) with practical and significant field know-how, vast project development and implementation experience, and significant background in financial assistance. This blend of experience enables us to bridge the gap between theoretical and real-world situations so that our solutions achieve the savings we project, while enhancing the working environment within your facilities.

Name	Role/Responsibility	Professional Qualifications	Years' Exp.
Jeff Flathman	President / Business Development, Financing, Project Economics, QA/QC, Risk Management	B.S. Mech. Engineering (EIT – ND)	33
Tim O'Kane	Vice President of Operations	B.J. Advertising	25
Brett Ravenscroft, P.E.	Sr. Energy Engineer / Engineering Analysis, Design, Facility Auditing	B.S. Mech. Engineering P.E. - KS & MO, CEM, CMVP	31
Chris Salzmann	Business Development / Client Representative	B.S. Industrial Engineering AEE, CEM	41
Dr. Brad Rahe, Retired Superintendent	Business Development / Client Representative	Ed.D. Educ. Leadership Ed.S. Educ. Leadership M.S. Educational Admin. B.S. Education	33
Dr. Steve Pegram, Retired Superintendent	Business Development / Client Representative	Ed. D. Educ. Leadership Ed. S. Educ. Leadership M.E. Educational Admin. B.S.E. Education	43
Ron LaCombe, P.E.	Renewable Energy	B.S. Mech. Engineering; M.B.A. P.E. – 14 States; CMVP	32
Collin Jones	Energy Engineer	B.S. Mech. Engineering	4
Alex Coleman	Project Development, Construction Manager	U.S. Army Vet Cert. Water Efficiency Professional, Meter Test	26
Doug Adams	Project Manager	B.S. Business Administration	25
Eileen O'Hara	Training, Warranty, On-Going Support	B.S. Foreign Service; M.B.A.	36
Sue Hennahane	Energy Analyst / Energy Analysis, Administration, Quality Control	B.S. Mech. Engineering M.B.A.	19
Kimi Dowling	Marketing Specialist	B.S.T. Commercial Graphics	11
Coleen Flathman	Dir. of Finance / Financing, Accounting	B.S. Accounting; B.S. Business Admin. CPA; LOMA	27
Riley Rahe	Construction Mgmt. / Site Safety, Scheduling	A.A. Liberal Arts OSHA 10-hour certification	4

The following is a more detailed discussion of each team member's experience and their role on your project:

President

The President leads the entire organization in delivering projects that exceed our clients' expectations. He stays up-to-date on all company projects, identifies and fills resource needs, and manages the overall business of the company to ensure that the organization runs in a smooth and streamlined fashion. By carefully matching the right personnel with the resource needs, he plays an instrumental role in keeping overhead costs low so that more value can be given to the client.

Vice President of Operations

The Vice President of Operations provides oversight management for all engineering, project and construction management, and measurement and verification services, and brings an understanding of both the engineering and design theory; as well as the practical implementation of energy conservation measures. The Vice President of Operations leads the internal effort to develop, maintain, qualify and foster a wide range of relations with product suppliers and installation subcontractors. Additionally, he identifies and vets' new technologies and opportunities that have the potential to save energy and money for our clients.

Business Development Manager

The Business Development Manager works closely with clients to identify their needs and develop solutions to help them address those needs; understanding not only the technical and financial issues faced by clients, but their business and personnel issues that can also be factors in how a project is structured to match their unique situation. The Business Development Manager acts as a key client contact throughout all phases of a project and engages the internal resources necessary to deliver the appropriate solutions. The Business Development Manager coordinates the creation of preliminary and IGA reports for clients, assists in identifying and arranging financing options for clients, and oversees the creation of contract documents necessary for implementation.

Project Manager

The Project Manager's involvement begins during the audit stage and continues throughout construction completion and warranty stages. The Project Manager's role includes development of construction plans and schedules, processing submittals, coordinating the creation of operations, maintenance and warranty manuals, conducting project meetings, creating and processing applications for payment, approving invoices, budget tracking, and general oversight of all construction related matters.

Construction Manager

The Construction Manager's role includes on-site supervision of the installation of energy conservation measures, coordination of construction activity and access between subcontractors and client, oversight of site safety and security, conducting and documenting weekly meetings with client reps and installation contractors, and maintaining and continually updating the project schedule based on work completed and upcoming work schedules.

Director of Marketing

The Director of Marketing is a key contributor to ESP's Preliminary Energy Analysis and will remain active in helping gather critical data and provide all the reports associated with developing, implementing and verifying savings for the energy performance contract. Further, the Director of Marketing will assist with making sure your facility receives positive media coverage for implementing a project that demonstrates fiscal and environmental responsibility to the administration and community.

Energy Analyst/Office Manager

The Energy Analyst will analyze historic utility usage and costs, rate structure and billing history which identifies consumption/cost trends and billing anomalies. The Office Manager is a key contributor to the preparation of reports for Preliminary Energy Audit, IGA and Measurement and Verification phases. Further, the Office Manager serves as the administrative contact during implementation of the Energy Performance Contract - processing applications for payment, securing certificates of insurance and bonds, compilation of submittal and operation and maintenance manuals; as well as assisting with warranty management.

Chief Financial Officer

The Chief Financial Officer is responsible for all accounting and financial operations, including risk management, cash management (accounts payable and receivable) and cost analysis. The Chief Financial Officer's duties will include evaluation and analysis of all financing proposals to ensure that we secure the absolute best value proposal for your facility. Records will be maintained in a generally accepted accounting format, and project finances will be tracked to maintain accuracy of all invoices and purchase orders. This will include those received from vendors/subcontractors and those ESP submits to the City.

Commissioning, Measurement and Verification

The role of Commissioning will be to identify areas of your current systems that may not be working as they were designed and recommend solutions. They will also assist in the process of taking pre and post project measurements of systems to ensure the efficiency goals are being met.

Energy Conservation Trainers

The Energy Conservation Trainers will evaluate the operation of your facilities and meet with your personnel to understand how you currently run your facilities from a human-behavior standpoint, and determine whether there are opportunities to implement energy-saving changes.

Independent Contractors

In addition to our employees, ESP regularly retains the services of several independent contractors to assist in fulfilling our project commitments. Those individuals, and their experience, have been reflected as part of our team experience and their qualifications have been noted above.

4. Project Management Plan

Describe your firm's methodology of developing and implementing comprehensive energy efficiency and conservation programs and projects for the City. Address in detail the following key components, if provided by your firm or team, and how you would approach each one:

a)Facility and infrastructure surveys

Our approach to understanding the City of Abilene's facility and equipment needs will encompass three distinct areas of evaluation:

1. Collect and evaluate historical operating costs

The City's historical operating costs (Utility and Operational & Maintenance) will be gathered and entered into analysis tools that provide trending, benchmarking and comparative testing. This information provides a solid macro-view of the magnitude of operational savings potential, what utility and system-types are the least efficient and hence offer the greatest return, and which buildings are likely to yield the greatest savings.

We will look for any anomalies in terms of seasonal usage/cost trends and billing errors on an annual and monthly basis. Graphs will be created that offer insight on monthly and annual usage/costs, usage/cost-per-square-foot and compare your parameters to those of others in similar climate and locale. We also create pie-charts identifying magnitude of energy use by type and additional pie-charts that identify the energy utilization by system type. These graphs help us focus our energy and facility improvement efforts on those utilities and systems that will generate the greatest savings and/or have the most positive environmental impact.

2. Conduct site-surveys to collect and evaluate site-conditions

a. Confer with operating personnel to identify the type and condition of mechanical, electrical and water systems in each facility. These meetings will identify system set-points, scheduling practices, perceived needs or problem areas, and staff's desire for additional training and/or resources. Discussion topics will include (not limited to):

- Lighting, temperature and humidity control needs
- Recent facility additions and changes, occupant or procedural changes
- Identify previous; and plans/suggestions for future, energy saving measures
- Electric power, steam, chilled water and/or gas distribution concerns

b. Conduct field survey(s) to gain an understanding of existing energy-consuming equipment and systems that are in place. Survey includes evaluating condition of equipment, mechanical rooms, occupied spaces (light-levels, temperatures, perceived comfort and other conditions) and building envelope systems. We also take power, temperature, flow and other pertinent measurements of all major equipment. This

enables us to understand capacity, load characteristics and operating conditions. The survey will include evaluating all primary systems:

- Heating, ventilating and air-conditioning equipment
- Boilers, chillers, cooling towers and related distribution system analysis
- Interior and exterior lighting systems and controls
- Domestic water devices, domestic water heating system, irrigation systems
- Steam system: trap, condensate return and system pressure analysis
- Building envelope (roof, window, door, insulation) assessment
- Energy management system analysis – type of controls, sequence of operations in place and identify advanced saving opportunities

3. Facilitate interviews and workshops

While the historical cost and field data gathered provide the groundwork for technical and financial solutions, the insight garnered from the people in your City (administration, staff, custodians, maintenance and even community) help bring the project to life. We will strive to engage every level of your organization so that we truly understand your needs, objectives and strategic plans. This enables us to put together a truly holistic understanding of your existing situation and desires for the future.

b) Energy modeling and analysis

The analysis of the utility information is critical to understanding where energy dollars are being spent. A thorough analysis can yield clues with regard to confirming trends or identifying anomalies that can point towards opportunities for savings. In addition, a clear understanding of the utility rates and how they affect the true dollar savings that an energy project can provide is an important component in compiling a project that reflects a true and realistic result from a fiscal perspective.
ESP will conduct a comparative analysis of City facility energy usage and cost to similar facilities in the region in order to help understand the viability of implementing energy efficiency measures to reduce costs. In addition, we provide a breakdown of consumption by end-use device in order to help a client understand where they should focus their energy efficiency and facility improvement efforts. Planned and existing system designs may be reviewed by our experienced Professional Engineer(s) to determine if the design falls within current "best-practice" design for energy efficiency and life-cycle cost. We evaluate on a lowest cost to own, not simply lowest first cost basis. An economic analysis regarding the viability of implementing an energy performance contract typically includes projected savings magnitude and the potential magnitude of improvements these savings could fund. Project costs will be acquired from prequalified, preferred local contractors, savings will be calculated and guaranteed, and financing options are developed and presented. This results in a "laundry-list" of potential energy efficiency and/or facility improvement measures that could be provided, with individual cost, savings, payback and related construction schedule for the client's review.

Collect and evaluate historical operating cost data

a. Collect historical utility usage, demand and cost data for gas, electric and water

i. Prefer a minimum of three years
ii. Electronic copy of data is helpful, copies of actual bills is ideal
iii. Utility provider contact names, current rate structure, projected rate changes

b. Collect information regarding historic maintenance costs for all pertinent systems, including but not limited to:
   i. Lighting, mechanical and electrical materials
   ii. Evaluate out-sourced maintenance (controls, HVAC or other)
   iii. Water system chemical treatment, water softening, pool chemicals
   iv. Steam, compressed-air and energy management controls maintenance costs
   v. Building envelope (roofs, windows, doors, etc.) repair and insurance costs

c. Enter operating cost data into analysis tools for evaluation
   i. Utility analysis sheets provide trending, benchmarking and a macro view of where primary opportunities exist. This information enables us to determine how efficient your facilities are (energy utilization indexing), what utility-type to focus saving measures on, discern your heating, cooling and process trends.
      1. Cost and energy consumption per square foot ($/SF, btu/SF, kwh/SF, etc.) provide sound benchmarking parameters about level of opportunity
      2. Monthly and annual usage/cost trends identify historic patterns and anomalies, which provides insight on where to focus solution efforts

Utility Rates

A good understanding of the utility rates is important when calculating energy savings as it's critical that correct rates are applied to provide a true representation of what the City of Abilene should expect to see on their bills after a project is completed. Often times, energy analysts will inadvertently oversimplify rates and fail to provide a true picture of the dollar savings that can be achieved. This can easily happen when rates are tiered such that the base consumption of energy is charged at a higher rate. Within these situations, the more a consumer uses in a given month, the lower the cost per unit of energy becomes; hence when energy consumption is reduced, the lower cost per units may need to be applied to those savings as the base consumption remains.
An average cost of each utility is calculated and these are the rates which are used for the purpose of calculating energy cost savings in the Investment Grade Audit phase.

Energy Utilization

Another key tool for observing where opportunities may exist for improvements is the energy utilization analysis. This is done by looking at the installed capacities of each major type of utility-consuming system and calculating what percentage of that capacity might be in use during any given billing period. The total consumption by all systems is then reconciled with the actual billed consumption during that period. The energy utilization index is used to help pinpoint which systems are consuming the most energy, and thereby offer the best opportunity for developing the largest magnitude of energy savings associated with efficiency improvements.

Baseline Calculation Methodology

Developing an accurate baseline is a critical first step in determining future energy savings. We typically begin by taking (minimum) three years of historical utility data and inputting it into our utility analysis tool. From there, we interview your staff to determine how they operate your equipment and systems, and your normal run-hours. We also install data logging equipment and conduct our own walkthrough and inspection of your facilities. In situations where a client has multiple buildings with separate meters

or submeters, we will evaluate each building independently to understand how each uses energy and reacts to variations in seasons, occupancy, heating and cooling degree days, and other pertinent factors.

Taking these independent pieces of information, we compare them to each other and begin to develop a snapshot of how you use energy both historically and currently. We're then able to create an accurate baseline that both your staff and our team can feel comfortable with as a starting point for determining future savings, greenhouse gas emission reductions, cost savings, and renewable energy capacity.

c) Project development

Project Development (IGA): The Energy Solutions Professionals team views the Investment Grade Audit (IGA) as the technical and financial cornerstone for effective project development. The data collected, dialogue with the client's team and ensuing evaluation provide the keys to making sound energy and facility improvement solution recommendations. A primary goal of the audit is to identify energy saving opportunities that enable our clients to redirect funds from the utility company to investment in their facilities. However, our audit process ensures that the proposed solutions go beyond simply energy savings, to also address the core needs and strategic plans of your organization. We have honed this process over our many years (in excess of 300-years combined experience in energy performance contracting) of providing energy services, and we continually strive to improve our methods and delivery.

Many audits tend to focus solely on energy, technical and financial parameters; however, ESP purposely take a more holistic view that includes understanding your mission, people and organization. The audit provides the basis from which solutions that will impact your facilities, staff and community for many years will be made. As such, it is important to ensure that the solutions offered through it address energy savings opportunities and facility needs, while improving the environment, productivity and morale for people.

ESP will conduct a comparative analysis of facility energy usage and cost to similar facilities in the region in order to help understand the viability of implementing energy efficiency measures to reduce costs. In addition, we provide a breakdown of consumption by end-use device in order to help a client understand where they should focus their energy efficiency and facility improvement efforts. Planned and existing system designs may be reviewed by our experienced Professional Engineer(s) to determine if the design falls within current "best-practice" design for energy efficiency and life-cycle cost. We evaluate on a lowest cost to own, not simply lowest first cost basis. An economic analysis regarding the viability of implementing an energy performance contract typically includes projected savings magnitude and the potential magnitude of improvements these savings could fund. Project costs will be acquired from prequalified, preferred local contractors, savings will be calculated and guaranteed, and financing options are developed and presented. This results in a "laundry-list" of potential energy efficiency and/or facility improvement measures that could be provided, with individual cost, savings, payback and related construction schedule for the client's review.

Our Investment Grade Audit includes an analysis of all (major) energy consuming equipment within your facilities, processes, procedures, environment, people, strategic plan and goals, as well as your financial and business situation. The objective is to ensure a comprehensive study that maximizes solutions and value for our clients. We strive to understand how your facilities currently operate and learn what your future plans are, so that the solutions we offer can address current challenges, while meeting future objectives.

The following outline and descriptions define the primary steps that ESP's team utilize in completing an effective energy and facility audit. We develop project-specific Gantt chart to quantify key milestone

activities and determine interactions between every step necessary in completing the audit, and review this schedule with our clients. It is very important to schedule each aspect of the audit with the client to ensure day-to-day activities are not disrupted, and to make sure all weather-related factors are planned for and dealt with appropriately. These steps are completed iteratively and in parallel.

1. Introduce teams and setup workshops (on-going)

a. It is very important for us to establish channels of communication with both facility/operations personnel and the administrative staff. Our evaluation and resulting solutions impact the technical, financial, people and business aspects of your organization. It is critical to have everyone understand what we are doing, and why. We work with all levels of your organization to facilitate a project that is pertinent to everyone, increasing ownership and optimizing results for all.

b. Our role is to work together with your team to find cost effective and value-driven solutions for your needs and objectives, whatever those may be. We use energy savings and; perhaps, performance contracting as tools to help clients improve their facilities, environment and financial condition (by investing in self rather than utility company). This is the primary message of our introduction workshop, which lays the groundwork for an effective team approach. We want people to know we are there to help develop solutions, not to point fingers about inefficiencies.

c. We use workshops and regular communications to ensure our efforts are focused on the issues that are most important to your team, and to relay those things that represent the greatest opportunity for generating savings. Our aim is to keep you informed of progress, while not becoming a burden on your personnel's efforts to perform their daily functions. We will work with your team to set a schedule for workshop meetings during the audit, and we understand the need for flexibility.

2. Collect and evaluate historical operating cost data

a. Collect historical utility usage, demand and cost data for gas, electric and water
   i. Prefer a minimum of three years
   ii. Electronic copy of data is helpful, copies of actual bills work
   iii. Utility provider contact names, current rate structure, projected rate changes

b. Collect information regarding historic maintenance costs for all pertinent systems, including but not limited to:
   i. Lighting, mechanical and electrical materials
   ii. Evaluate out-sourced maintenance (controls, HVAC or other)
   iii. Water system chemical treatment, water softening, pool chemicals
   iv. Steam, compressed-air and energy management controls maintenance costs
   v. Building envelope (roofs, windows, doors, etc.) repair and insurance costs

c. Enter operating cost data into analysis tools for evaluation
   i. Utility analysis sheets provide trending, benchmarking and a macro view of where primary opportunities exist. This information enables us to determine how efficient your facilities are (energy utilization indexing), what utility-type to focus saving measures on, discern your heating, cooling and process trends.
      1. Cost and energy consumption per square foot ($/SF, btu/SF, kwh/SF, etc.) provide sound benchmarking parameters about level of opportunity
      2. Monthly and annual usage/cost trends identify historic patterns and anomalies, which provides insight on where to focus solution efforts

ii. Operations and maintenance information is evaluated to determine if there are specific problem-area equipment or systems. Maintenance costs are evaluated to determine if you are spending what is expected for general maintenance; specifically for materials and outsourced labor. Potential opportunities for improvements may be identified and discussed with your staff.

3. Collect and evaluate field-data

a. Confer with operating personnel to identify the type and condition of mechanical, electrical and water systems in each facility. These meetings will identify system set-points, scheduling practices, perceived needs, and your staff's desire for additional training and/or resources. Discussion topics will include (not limited to):

i. Lighting, temperature and humidity control needs
ii. Recent facility additions and changes, occupant or procedural changes
iii. Identify previous; and plans/suggestions for future, energy saving measures
iv. Electric power, steam, chilled water and/or gas distribution concerns

b. Conduct field survey(s) to gain an understanding of existing energy-consuming equipment and systems that are in place. Survey includes evaluating condition of equipment, mechanical rooms, occupied/office spaces (light-levels, temperatures, perceived comfort and other conditions), building envelope and process systems. We also take power, temperature, flow and other pertinent measurements of all major equipment. This enables us to understand capacity, load characteristics and operating conditions. The survey will include evaluating all primary utility consuming systems, such as:

i. Heating, ventilating and air-conditioning equipment
ii. Boilers, chillers, cooling towers
iii. Interior and exterior lighting systems and controls
iv. Domestic water - devices, heating system, irrigation systems
v. Steam system; including trap, condensate return and system pressure analysis
vi. Chilled &/or hot water distribution system (pumps, valves, piping) evaluation
vii. Building envelope (roof, window, door, insulation) assessment
viii. Energy management system analysis – type of controls, scheduling, sequence of operations, occupancy-based control functions, advanced saving measures
ix. Process systems and controls – compressed-air, dust-collection, air-filtration, mechanical processes, demand-limiting opportunities, etc.

c. Evaluate all field data, and verify the validity of all information through engineering principals and common-sense analysis. We bridge the gap between theoretical and reality by comparing actual field readings with engineering calculations to verify heating/cooling load needs versus equipment sizing. A comparison of sizing, load calculations and actual operating conditions (comfort) yields insight on where improvement opportunities exist. Our evaluation will take into account energy and operational efficiency, end-of-life equipment and life-cycle costing parameters to provide a true picture of the economic value of each measure considered.

4. Develop solutions to address needs

a. Develop a comprehensive list of energy efficiency and facility improvement needs. This will include items that have good payback (savings vs. cost), critical facility needs and "wish-list" upgrades. This list is generated based on a culmination of analysis of operating costs, existing conditions, deferred maintenance needs and strategic plans. The objectives of facility and administrative team and the impact on facility environment also play a key role in the decision process. Our solutions will always consider and identify the effect on environment and people. Operational savings (utility, operation, maintenance and avoided future costs) are

calculated for each measure, with continuous "sanity" checks for determining interactive impacts that measures have on each other and to ensure reasonableness of calculations.

i. All measures are designed to complement strategic planning, and to go beyond just energy savings to holistically address the organization's needs.
ii. This list is a sound tool for long-term planning in organizations, and typically includes a myriad of opportunities, some which end up not being included in the energy performance contract due to financial; savings payback, constraints.

b. Once a mutually agreed upon list of measures is developed, we obtain firm pricing from multiple subcontractors via a fast-track design-build approach. We pre-qualify all potential subcontractors to ensure quality and to maximize local involvement. All pricing is guaranteed for the scope of work identified, so no contractor-driven change orders will occur.

i. We believe strongly in maximizing value for our clients by getting multiple bids for each scope of work. We will seek out and provide the support necessary to encourage the participation of local contractors to the greatest extent possible. This adds to our time, effort and costs; however, it yields optimal scope and pricing.
ii. We may purchase major equipment directly from vendors in order to reduce markup costs for our clients (saving from 5% - 25% of subcontractor fees)

c. Obtain proposals from leading financiers; based on various combinations of measures, to have a sense of available rates, terms and financing options.

i. The proposals will yield rates for multiple terms (typically 7 to 20 years) of financing, amortization tables, explanation of construction-period interest costs and includes description of how escrow funds are handled.
ii. There is truly a plethora of possible approaches and we work with your team to establish the best long-term solution for your financial situation.
iii. NOTE: since the energy savings are guaranteed by ESP, the lease payments are considered "contingent-liability", so the financing may be considered off-balance-sheet. This means our clients can obtain substantial improvements without impacting their debt-ratio, bonding line or current cash-flows.

5. Produce final report and action plan

The purpose of the Investment Grade Audit report and action plan is to accurately communicate all the findings from the audit, and provide an effective tool for deciding what action steps to take based on these findings.

a. The information provided in the report includes; but is not limited to, an executive summary, utility analysis, existing conditions descriptions, energy and facility improvement measures list; with costs and savings by measure, and descriptions, financing options, savings calculations, pricing evaluations and an implementation plan including potential construction schedule with critical milestones for achieving desired implementation objectives.

b. A draft of the report is completed and presented to the client in a workshop setting. It is during this workshop that various combinations and options of measures to include in a project are evaluated. The list of measures is presented in a table format that allows our clients to easily "pick and choose" what to include, and the financial impacts of these combinations can be instantly understood because we link this table to a pro forma cash flow. Hence, the client has complete control over deciding the scope and magnitude of the final (potential) energy performance contract project.

c. We will include information on all measures evaluated; however, the final report typically identifies the mutually agreed "best-value" scenario for the client's current situation. This

usually includes a combination of good payback energy conservation, energy-saving facility improvement and critical infrastructure need measures.

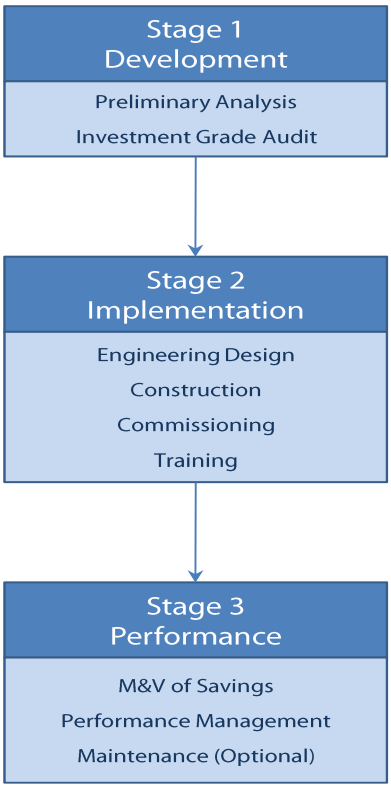
Summary

Our process and methods for completing an Investment Grade Audit are designed to create a collaborative, team-oriented environment in which our highly skilled group of energy and facility professionals supplements your staff to develop truly holistic solutions; ranging from utility supply to demand-side energy consuming systems to the people-oriented energy behavioral training for your specific situation. We will work with all levels of your organization to ensure that energy, facility, environmental, people, business and financial aspects are all considered during the evaluation process. This lays the groundwork from which an effective energy performance contract project may be implemented.

Philosophical Approach

Technical and financial aspects are the foundation of every energy performance contract. We at ESP recognize this; however, we also understand that people and business concerns often form the primary basis for making decisions. That is, things such as comfort, working environment and morale often are even more important than technical criteria. The chances of successful implementation and long-term value decrease dramatically if all four of these areas are not addressed. The future for the City of Abilene facilities can only be properly planned and implemented if historical and current information are used to effectively help shape that future. The process for evaluating each improvement measure should include analysis of all four core areas, and once all factors are weighed a decision regarding including that measure in the final scope can be made. Our grasp of this concept; and the subsequent procedures we have in place for Solution & Design Development and project implementation allows us to provide superior value and holistic long-term solutions.

The illustration shows the philosophical process we will use to complete a successful project. Our team will strive to understand who you are (mission, principles, purpose, roles) and what you do (goals, plans, systems, skills). This provides the key insight for us to structure a program that addresses your needs, while remaining true to your primary mission and principles. It is critical for our team to understand your history, current situation, and future expectations, because an energy performance contract will have a substantial impact on your facilities and your people.



A diverse understanding of both your facilities and project team enables us to structure our program in a manner that truly benefits your entire organization. The fundamental objective of a traditional performance contract is to identify the energy and operational saving measures and implement them. However, it is necessary to ensure that all measures we recommend be evaluated with respect to your critical needs, your overall renovation plans and that they fit within desired financial parameters.

General Overview of Project Management Plan

The Energy Solutions Professionals team has developed and honed our approach to project management over many years in the business, and our collective experience includes roles as the provider and as the recipient of the services. This gives us a unique understanding of what it takes to provide optimal value for our clients. We have specifically geared our process towards maximizing these and other benefits, and our team's vast experience helps us accomplish that goal. As we discussed in the Solution Development Approach, we remain people-oriented by having regularly scheduled workshops to obtain your staff's input. Since the project follows a negotiated process, continual communication and collaborative team-work are keys to overall success.

The typical approach for implementing energy performance contracts involves three phases: project development, project implementation and performance management. The following flow-chart and verbiage give some details regarding what is involved with completing each primary phase of the ESP project management plan. While every company probably has a similar plan, our highly experienced team, independence and streamlined structure enable us to offer unparalleled value and personalization of service that is unmatched within the energy services field, as demonstrated by our multiple repeat clients.

Project development includes two distinct analyses. The Preliminary Energy Analysis (PEA) typically includes review of the most recent year's utility data, brief site survey & analysis, limited needs appraisal, development of projected savings and estimated project magnitude. When the PEA shows that an economically viable project exists, an Investment Grade Audit (IGA) may be conducted. The (IGA) includes 3-year utility review, comprehensive facility analysis, field measurements, project scoping, energy engineering, subcontractor bids for firm pricing, (guaranteed) savings development and a mutually agreed upon measurement and verification plan. The IGA results in comprehensive information that enables sound planning for implementation.

Project implementation usually results in a design-build approach in which ESP takes single-point responsibility for managing the entire process. Final design-build engineering is completed during the implementation stage. Usually, local subcontractors provide labor and materials, and the ESCO provides

construction and project management services. It is normal to include system commissioning; which ensures all mechanical and electrical systems are ready for active service, with implementation services. Comprehensive (hands-on and on-site) technical training is provided for each piece of equipment and/or system installed.

Project performance includes both the functionality of installed equipment, and verification that savings are actually achieved. The commitment from ESP is that prior to a project being "Final", all systems will function as designed. Further, a Measurement & Verification Plan will be carried out that yields quantifiable evidence that savings goals are met.

The management plan identified above represents the "typical" approach that most every energy service company would incorporate in an energy performance contract project. While the steps are fairly generic, the personnel, processes, philosophy and corporate structure of the company providing the services can have a dramatic impact on the results, effectiveness and value the client receives. Energy performance contracting is a largely negotiated procurement process, so it is very important for the client and ESCO teams to develop effective channels of communication and a high degree of trust.

d) Non-construction related energy conservation strategies

ESP offers a number of non-construction related energy conservation strategies which include:

- Energy Awareness Training

Perhaps even more important for the City of Abilene is that we have a formal approach to training your administrative staff, custodial and maintenance staff on how to be more energy efficient within the realm of their duties at the city. This training goes way beyond simply teaching your staff to maintain equipment, and focuses on teaching everyone how they can positively impact the operating costs for the city. We will specifically structure this program to work in conjunction with your existing energy management plan, and we will look to supplement / assist your energy manager by offering some unique tools, training procedures, facility "energy-efficiency-grading" criteria and other energy conservation and sustainability planning techniques.

Our energy conservation training program is designed to create a culture change in your city so that energy-saving habits eventually become the expectation and norm for everyone. Though positive reinforcement, we show your people how to save energy within the realm of their job and sphere of influence, without negatively impacting comfort or the overall environment.

Additional information for the Behavioral Training & Education Program is included in the Appendix.

- Utility Bill / Rate Analysis

ESP will conduct a utility bill and rate analysis for a supply-side provider by following the below steps:

1. Gather Utility Bills: Collect 3 years of bills to identify usage patterns and costs.
2. Understand Rate Structures: Understand fixed charges, variable charges, demand charges, and time-of-use rates.

3. Analyze Usage Patterns: Identify trends in consumption and compare against similar facilities or historical data.
4. Evaluate Providers: Compare costs, reputation, reliability, and contract terms of current and alternative providers.
5. Explore Renewable Options: Consider renewable energy providers for potential long-term savings and sustainability benefits.

- Renewable Energy Options

ESP has the experience to evaluate whether it may make sense for you to install renewable energy systems for electricity (wind &/or solar), water heating (solar) or Heating Ventilating and Air-Conditioning (geothermal). These renewable energy systems typically have long payback periods; however, it may be beneficial for the city to have a feel for what may or may not make long-term fiscal sense to consider.

Solar Photovoltaic System

Solar PV systems consist of solar collecting panels, an electrical transformer, and electrical synchronizing and switch gear that allow the generated energy to be distributed within your building and the electrical grid. The panels collect solar energy in DC voltage which then must be converted to AC. Solar PV systems can also utilize batteries that can store the energy for use when the sun is not available. Note that solar thermal systems are slightly different in that they collect solar energy directly into water and then utilize the heat within the building.

Wind Turbines

Wind turbines utilize wind to rotate a rotor to generate electricity. They come in varying sizes from as low as 1kW for a more residential or small building application up to 2MW in capacity to provide power capacity at a utility scale. The two main types of wind turbines are horizontal axis style and vertical axis style turbines.

The horizontal axis wind turbines typically consist of three (or more) large blades, a hub assembly, and a mounting pole or structure. The hub which houses the generator is oriented in a horizontal position with the blades rotating in a vertical plane. The horizontal axis turbines are more prevalent and perform more efficiently overall at the various wind speeds compared to the vertical style. Horizontal axis wind turbines come in various sizes including small scale residential (1kW) to a large-scale utility size (2MW) and at varying but limited sizes in between.

The vertical axis turbines typically include smaller blades and similar to the horizontal turbines also have a hub and mounting pole or structure. The turbine on a vertical axis wind turbine is positioned vertically and the blades rotate horizontally to power the generator. Vertical axis wind turbines are typically for smaller scale production for smaller loads (<10kW) including residential.

The main consideration for investing in any type of wind generation technology is wind speed and turbine mounting heights. Wind speeds that are consistently over 12 miles per hour (~6 meters / second) would enable enough energy production to garner meaningful savings as opposed to purchasing power from a typical utility provider. In the windiest of locations, sustained wind speeds of 12 mph can only be achieved at elevations of one hundred feet or higher. For this reason, small scale wind energy production is a long payback investment.

Another consideration for making the investment is whether or not the local utility provider will allow back feed of power onto the grid during times when wind generation power exceeds the building power needs. Some local utilities are willing to allow that and provide net metering credit whereas others are not.

A final consideration to any potential wind turbine installation has to do with air traffic. If the potential site is located close to any aircraft landing facility, height restrictions may apply due to safety concerns for those aircraft and limit the available height for mounting of the wind turbine and thus limit the amount of power that can be generated.

Geothermal System

Heat pump systems are a very common method of distributing heating and air conditioning throughout a building. The unique characteristic of a heat pump is that it utilizes the refrigeration cycle on both the cooling side and the heating side. A reversing valve is used to alternate the warm coil and the cold coil from being the one located inside or outside. In other words, when a space needs heating, the warm coil or condenser coil is the one located inside to provide heating for the space. When a space needs cooling, the heat pump acts as a traditional air conditioning unit which has the cold coil or evaporator coil inside to allow for cold air to be distributed for cooling. Heat pump systems can be configured in many ways. Three of the most common heat pumps systems are air to air heat pumps, water source heat pumps, and geothermal (ground source) heat pumps.

Geothermal heat pump systems are similar to water source heat pump systems in that the heat pumps contain individual compressors and transfer heat by way of one direct expansion coil on the air distribution side and a water coil on the heat rejection/absorption side. The geothermal system also incorporates a common water loop that connects all of the heat pumps in the system together. As stated above, the advantage of connecting all of the heat pumps to a common loop is that heat can be moved from one area of the building to another. In essence, an area that needs cooling can reject heat into the common loop and subsequently an area that needs heating at the same time can utilize the heat that was rejected by the heat pump operating in cooling mode. A geothermal system is different than a water source system since it does not utilize boilers or cooling towers. Instead, the geothermal system incorporates an additional loop that is buried in the ground. Thus, the earth becomes the source of heat absorption or heat rejection. Utilizing the relatively constant earth temperature many feet below the surface is what enables the geothermal heat pump system to provide higher energy efficiency.

Although a geothermal heat pump system has a higher initial first cost, its longer life, higher efficiency, and ease of maintenance make it a very cost-effective solution.

- Preventative Maintenance Programs

Preventive maintenance is extremely important for various reasons. One of the primary reasons includes keeping the equipment at peak efficiency and performance. This is the most important aspect of maintenance. It helps to ensure the energy savings are being achieved since our guarantee is usually tied directly to the efficiency of the equipment. ESP recognizes the importance of preventive maintenance and will develop a detailed, clear, project specific procedure to be followed throughout the term of the project so that a transition can easily be made in the event that you decide to redirect services from in-house to out-source, or from one provider to another. Our experience has been that our projects typically reduce the amount of "putting out of fires" that is needed by your in-house staff, so they have more time for actually being proactive with regards to the preventative maintenance plan, reducing your need for outsourced maintenance help.

Energy Solutions Professionals will provide a list of tasks required to periodically be performed on the major energy consuming equipment. These tasks are commonly accepted as minimum preventive maintenance services required in ensuring that equipment works efficiently

Based on the list of preventative maintenance tasks, available time by the maintenance staff, the required tools available, and the level of staff expertise, a joint decision is made with your team as to whether equipment maintenance is to be the responsibility of ESP or the facility staff.

If it is determined that follow-up maintenance is to be provided by ESP, we provide it through pre-qualified, local, and specialized service company(s). Our personnel will manage the maintenance effort; however, the service itself will be provided by specialized service companies. ESP is totally open to negotiating the maintenance services to be provided in order to determine what the best-value approach is for you.

- Data Analytics

Data Analytics is an optional, ongoing service designed to help maintain and enhance long-term energy efficiency by continuously monitoring system performance. Through the installation of data-retrieval systems, it allows for real-time analysis and identification of inefficiencies, enabling proactive adjustments that optimize energy use. However, it is important to note that this service requires a significant upfront investment in the necessary technology, as well as ongoing costs associated with analyzing the data and implementing informed decisions over time. Since this can be very costly, we must closely analyze with the City of Abilene & ESP Team to ensure priorities for spending are met.

e) Engineering and design

Our engineers are 100% responsible for the overall performance of your project, and unlike an engineering design firm, we back it up with a cost, savings and performance guarantee. During the project development process, our engineers will create a conceptual design for each energy conservation measure (ECM) evaluated. The conceptual design will include a detailed scope of work, and a performance

specification which includes equipment quantities, sizing, performance requirements, efficiencies, etc. When the conceptual design is complete, we solicit bids from multiple qualified contractors for the installation of the ECM. The final design details are worked out in collaboration with the selected contractor. The stamped drawings are typically provided by the contractor, after a detailed review and approval by our engineers.

As part of the engineering design process, we feel it is essential that we gain a complete understanding of our client's facilities, systems, people, business and financial situation so that we can design and recommend solutions that optimize value for our clients. We use energy performance contracting as a tool to help address energy efficiency, critical infrastructure needs, environmental / comfort and code-compliance issues. Therefore, we must evaluate every facet of your organization to find the best design solutions for your unique situation.

Our approach to evaluating, recommending and designing energy and facility solutions is based on bridging the gap between theory and reality so that improvements can yield maximum results for our clients. We will utilize all the data collected (as described in IGA Process), engineering principals, computer modeling and the personal input of our clients to develop optimal solutions. Our evaluation and development process is based on maximizing system efficiency, while being sure to meet operating requirements; based on actual measured field data. Our engineers and designers use a combination of engineering principals and logged-data from your facilities to ensure that our designs for solutions are practical and will work effectively in each given facility.

We are totally independent from all vendor, subcontractor and energy suppliers. This enables us to take a truly unbiased and client-focused position on every improvement measure considered for inclusion in the energy performance contract project. We will analyze ***a wide range of available products and services*** and; along with your staff, will mutually determine what products and services offer the best long-term value. We specifically guide this evaluation towards a total-cost-to-own as opposed to lowest-first-cost-criteria, which gives our clients the ability to make sound long-term decisions regarding selection of solution designs.

One of the main driving forces behind all solutions developed for energy performance contracts is energy efficiency. However, we at ESP will always include occupancy comfort, system reliability and safety as factors to consider as part of the final design. It does not do anyone any good to install systems that will not yield a comfortable and positive environment. We task ourselves with knowing about "leading-edge" technology and applying where feasible, while never going so far that we recommend systems that do not have a proven track-record of reliable service. Finally, all of our technical team members have practical field experience, so safety and maintainability are important factors that are weighed in the evaluation and recommendation of solution designs.

The ESP team consists of multiple engineers and technicians who have a vast amount of energy and design engineering experience; with stellar track-records of success providing energy performance contracting services. We provide all conceptual and energy engineering services; which encompasses photometric analysis for lighting, heating/cooling/domestic hot water/etc. load analysis, equipment sizing and selection, energy efficiency and life-cycle analysis of various solution options, energy saving calculations, development of thorough Scope of Work documents for subcontractors to provide bids from and any other engineering services required to fully develop and evaluate effectiveness of energy-efficiency and facility-improvement measures to be recommended within our energy performance contract, IN-HOUSE. We typically will outsource creation and stamping of any engineering design drawings that are

required; however, we will review all plans developed for our projects to ensure they coincide with the conceptual design we developed and will provide the functionality and energy-savings intended.

f) Construction and project management

Energy Solutions Professionals provides an on-site construction manager during the entire project implementation process. Our Construction Managers are ESP team members.

Communication and collaborative team-work are essential for effective construction management on a comprehensive energy project. The bulk of work will consist of retrofitting or replacing equipment in facilities that are currently occupied and fully operational. Hence, communication and planning become essential to making sure that disruption of the day-to-day facility operations is kept to a minimum level. Therefore, we provide a direct Energy Solutions Professionals team-member, as the on-site construction manager during the entire implementation process.

This on-site Construction Manager (CM) will be the liaison between ESP, client staff and all sub-contractors and vendors. The CM will coordinate all on-site issues and be the person that contractors and client staff go to on a daily-basis to resolve any on-site issues. The CM will chair the regularly scheduled (weekly or bi-weekly) on-site construction meetings and distribute meeting minutes from these meetings. The CM is the master scheduler for all construction activities, and must adjust this schedule as needed to minimize negative impact on the client's day-to-day operations. In addition, this person will be responsible for field-verifying that work is being completed per design intent, and ensuring scope is completed on time and within budget. The CM will help collect field-data to be used for fulfilling the measurement & verification plan and Post Implementation Report.

We understand the difference between "substantial" and "final" completion. It is not uncommon for efforts to get lax after substantial completion has been achieved. This is when equipment is in a state of operability, but has not received final check-out. We have a process whereby our Construction Manager oversees site-walkthroughs and creation, tracking and completion of punch-list items for all scopes of work. No work will be considered final until our Construction Manager and a client staff member inspect the work and mutually agree that it is FINAL. We have forms; created specifically for each job, which will be utilized for the walkthrough and punch-list signoff.

We have honed our project planning processes over many years of experience, and practical job-site interaction. As mentioned above, ESP holds regularly scheduled construction meetings throughout the implementation phase of the projects. Our construction manager is tasked with providing an agenda and meeting minutes from the previous meeting prior to each meeting. This ensures these meetings can proceed in an orderly, timely manner, which enhances productivity of all involved. We do not believe in meeting simply for the sake of meeting, and will vary the frequency of the meeting based on the level of activity on-site.

We work with your staff to understand scheduling requirements based on client activity, and relay this to our subcontractors. The subcontractors and our team then develop a three week look-ahead schedule that identifies where they would LIKE to work 3-weeks out, where they PLAN to work 2-weeks out and where they WILL BE that particular week. This schedule is then shared with the client's project team so they can communicate with appropriate facility personnel to confirm whether the proposed schedule may work. This typically yields enough "lead-time" for staff to approve scheduling at each facility, and (when necessary) for our subcontractors to adjust their plans to accommodate client needs, without suffering a dramatic loss in production time.

There are a myriad of factors that must be weighed when putting together the implementation schedule for a comprehensive energy project. First and foremost, we will schedule all endeavors in a manner to minimize disruption of the daily-operations for the agency/client. We need to consider weather factors and try to schedule equipment replacements to not impact occupant comfort (i.e. change chillers in winter and boilers in summer so they can provide conditioning when they're needed). Hence, it may be beneficial to complete any HVAC renovations during mild-temperature months in the spring/fall as opposed to summer or winter months. It is also important to maximize dollar savings generated by the program, so we target getting the primary energy-saving measures installed as early in the process as possible. We recognize that equipment lead-time impacts construction schedule, as it is important not to have construction crews on-site with no materials to be installing, and we have specialized methods for ensuring effective material handling and implementation scheduling.

The fundamental approach is to determine what your desired completion date is, and then work back from there to determine what has to happen to accommodate the required end-date. All the factors mentioned above must be considered and will be included in the creation of the schedule. We utilize scheduling software that allows all construction parameters; including equipment lead-time and delivery, labor hours, available work-hours, holidays, etc., to be factored into scheduling process. The schedule allows identification of critical milestones that must be hit in order for subsequent work to complete on-time. The construction and project managers will monitor this software on a regular basis, and update project status based on real-time field conditions. This coupled with dynamic/regular communication with all parties helps us keep on-time.

There are several factors that have a significant impact on effective project scheduling. Clearly, sound communication channels and proactive planning are two of the primary items that can help projects proceed through implementation and mitigate "mountains out of mole hills" circumstances. It is highly likely that something will go wrong; such as equipment delivery delayed, subcontractor not staffed properly, weather does not cooperate, client activity precludes getting work done in an area as scheduled or other similar issues, during a major construction project. It is the effectiveness of the schedule planning and communication channels that will determine whether a minor issue develops into major problem.

Proactive use of scheduling software and regular communication between the ESCO team, client project team and subcontractors can help avert trouble, and certainly reduces the chance of major problems. ESP's project team works closely with our client, vendors and subcontractors to develop a schedule; typically utilizing Microsoft Project software, that reflects realistic delivery times, committed installation times and buy-in from client staff regarding access and availability to conduct work in given areas. We then tie-together all activities so that everyone can clearly see the impact that each function has on the other (i.e. installation is impacted by availability of space to be "disrupted" and is tied to equipment delivery, which is tied to submittal approval, etc.). Demonstrating this co-dependency allows us to track the key milestones and address each step as it becomes important in the overall project schedule. Holding regularly scheduled construction meetings to review project status, update project schedule and discuss each component's progress provides a proactive platform from which effective project scheduling can be built.

The Microsoft Project software enables the project team (ESP, agency/client & Subcontractor staff) to track each key component of the construction schedule. ESP members will track the Investment Grade Audit progress, contract execution, engineering design, submittal review and approval, purchase-order and subcontract execution, equipment delivery, installation, commissioning and performance management using this tool. As mentioned previously, we establish a desired completion date and then work

back-words to build a schedule that allows the client's objective to be met. The software allows the project team to develop task lists that are interdependent, so we can accurately develop an implementation plan and track each step of the process that leads to successful completion.

Method of Addressing Scope &/or Cost Changes that may Arise

Our projects come with a Guaranteed Cost commitment, so there will be no contractor-driven change orders that increase the price to provide the scope of work identified in our Energy Performance Contract. The entire project is completed through a negotiated process, so there is flexibility to make scope alterations that impact the work installed and the cost to provide the work. Clients sometimes decide they would prefer to adjust the scope by adding and subtracting things from the "contractual" scope. Also, it is not uncommon for us to discover a more effective way of implementing a scope of work, and offer a price deduct; which then enables the client to obtain additional scope (in a different area) of work. We keep a detailed log that identifies all cost adds and deducts and the associated scope of work changes. Unless the client specifically requests changes that cause there to be a cost increase or decrease, this log must balance to "zero" at project completion.

There are two specific areas in which pricing considerations must be closely evaluated:

1. Where the scope of work is highly contingent upon quantity of retrofits (lighting, steam traps, etc.) we solicit unit pricing. Then if the client decides they want to add or delete some portion of the scope there will be a clearly defined unit price available. Additional work could be pursued by the client if project contingency is not utilized during implementation phase.
2. Intrusive work that involves significant demolition can present risks that are difficult to quantify during the project development phase, because parameters simply cannot be discovered without completing the demolition. In these cases, allowances are typically carried so that funds are available to make repairs, or to complete field modifications necessary to address the unforeseen conditions. This is typical for retro-commissioning, asbestos removal and similar efforts, as the extent and cost of repairs is impossible to clearly define prior to the detailed testing and investigative phase. In these cases, we will carry a "contingency/allowance" for the work and track how much actually gets spent.

g) Commissioning

Commissioning is "the process of ensuring that systems are designed, installed, functionally tested, and capable of being operated and maintained to perform in conformity with the design intent" - ASHRAE Guideline 1- 1996. In practical terms commissioning is a dynamic process of running newly-installed or modified energy-consuming systems through tests that ensure the systems will respond and function as designed under all practical operating conditions. The intent is to ensure that energy efficiency is maximized and that systems will effectively provide the functionality for which they were intended.

ESP specifies a Commissioning Plan as part of every Energy Conservation Project with Guaranteed Savings we complete.

There are many benefits for including system commissioning as a key component of an energy performance contract project. It ensures lower utility costs due to efficiently operating systems, and reduces maintenance costs due to a) extended equipment life from properly operating the equipment, and b) effectively trained maintenance crew. Often overlooked but perhaps even more importantly, system commissioning yields higher productivity of the building occupants due to enhanced comfort that results from

properly operating and balanced heating, ventilating and air-conditioning systems. Industry evaluations have demonstrated that effective System Commissioning garners such significant cost savings that it pays for itself within 1-2 years.

ESP often recommends including a comprehensive Retro-commissioning as a stand-alone Energy Conservation Measure in buildings that have older systems that may not be operating as originally intended. Retro-commissioning is the process of evaluating the specific components of heating, ventilation, and air conditioning, building automation and other energy-consuming systems to determine if they are functioning correctly, and subsequently correcting any deficiencies that are found. It is very common for older pneumatic (and even DDC) control systems to be out of calibration or simply not functioning properly at all, which causes significant energy waste and discomfort for occupants within the facility. Several situations can warrant the in-depth process of retro-commissioning. Most often, the need is identified from either a significant increase or unexpected utility cost (outside those caused by weather impact), or from noticeable comfort issues identified by building occupants. Successful completion of retro commissioning can greatly enhance a buildings comfort and combine that benefit with optimal operating efficiency, thus reducing energy costs.

h) Training

An important aspect of sustaining the value of an energy performance contract is to ensure that the client's staff is able to perform and/or monitor equipment for proper maintenance practices. We view the training process as a vital component of every Energy Performance Contract (guaranteed savings project) we implement. We will help ensure that every member of your operations staff receives the training they need in order to feel empowered to provide appropriate service, and instill them with a sense of ownership in the equipment. This will lead to better maintenance and considerably more efficient operation over time. Additionally, this training is designed to instill a sense of how they directly impact energy usage/costs and the importance of maintaining/operating the systems in an efficient manner.

We use a combination of manufacturer and ESP personnel to develop and implement a truly comprehensive training program. History has taught us that there are two basic ingredients that must be included for the training to be something that the facility personnel will actually adhere to: 1) Materials consisting of Operations & Maintenance manuals – specific to their facilities; and 2) Application-specific presentation, preferably on their own equipment. Results are greatly magnified when the training is performed in a "hands-on" environment on the client's equipment, by technician, engineer or team who actually understand the equipment and its function within the actual facility operation. Theoretical instruction and reciting the manufacturer's manual does little good, and actually fosters negative perceptions from the operations staff.

Training is a key process in successful energy performance contracting. We will proactively schedule this service, and will not consider the project "complete" until City of Abilene staff acknowledges having gone through the appropriate training. ESP will prepare literature and O&M Manuals that are site specific to your city. This requires additional effort compared to "boiler-plate" training and manual preparation. However, the resultant operation and maintenance improvements have typically made it well worth this extra effort.

Our project manager will request a quote for a factory training video or additional on-site training when pricing each major system or sophisticated new product. We have learned that this eliminates surprises at the end of a project and allows the budget for projects built by Energy Solutions Professionals to include a usable and functioning system with proper training. The on-site hands-on training allows your

staff to operate the equipment that they will work with on a daily basis. We understand the people side of operating facilities and want to do everything we can to assist you in the long-term value of the project we help you complete.

As part of the project completion process, the facility staff is presented with a complete set of operation and maintenance documentation for all energy conservation measures. This documentation will be compiled into an owner's manual. The owner's manual will contain all pertinent information about the project, including a preventative maintenance plan. We also keep a duplicate copy on file in our corporate office. The result is a properly documented project, an informed client, and excellent customer service.

The owner's manual contains the final as-built designs of the energy conservation measures. They include step-by-step preventive maintenance instructions for each piece of equipment or system that is part of the project. If the project involves multiple buildings, more than one owner's manual may be provided. Training, system inspection and a customer walk-through are finalized after the owner's manuals are delivered.

This program will be expanded and/or modified as the project scope of work is finalized. The training program includes four primary modules as described below, and we have provided estimates of the duration of each:

Systems Overview

- Up to 16-hour (approximate) course directed toward operating and supervisory personnel.
- The course will provide an overview of the design intent and operating theory for controls, heating, and other systems added or modified by the project.
- The course will identify the critical components of each system and opportunities to fine-tune performance.
- The course will be classroom-based and supplemented with a field orientation tour.

Equipment Operation and Maintenance

- Up to 16-hour (approximate) course directed toward operating and maintenance personnel.
- The course will train technicians on basic operation, preventative maintenance, troubleshooting, and repair of new system components.
- Course material will follow procedures recommended by equipment manufacturers and will be presented in an interactive, hands-on environment.

First Follow-Up Course (optional)

- Up to 8-hour course conducted in multiple segments, based on need.
- Course will be scheduled approximately 120 days after primary project training.
- Course content will be determined and developed based on feedback from facility personnel regarding training needs identified from actual system operation.

Additional Follow-Up Courses (optional)

You will have the option to elect for further follow-up training, off-site training, or other training modules as you see fit. Again, we will work closely with you and your staff to customize a training program that is right for you.

Training Manuals

ESP will provide City of Abilene staff with training manuals at the beginning of the course. The manuals will include pictures, graphics, formulae, work sheets, and all other documents needed for thorough training comprehension.

As part of the project commissioning and training process, the city will also be presented with complete sets of hardcopy project owner's manuals covering equipment and integrated systems installed as part of this project. Presenting you with these manuals at project completion, not weeks or months later, allows you to operate your new systems efficiently from day one.

These manuals will include:

- Operation and maintenance documents on all equipment installed.
- Complete engineering drawings (as required) & specifications on all equipment installed.
- Approved submittal history on all equipment installed.
- Any other pertinent project documentation.

Energy Conservation Training

Perhaps even more important for the City of Abilene is that we have a formal approach to training your administrative staff, faculty, custodial and maintenance staff on how to be more energy efficient within the realm of their duties at the city. This training goes way beyond simply teaching your staff to maintain equipment, and focuses on teaching everyone how they can positively impact the operating costs for the city. We will specifically structure this program to work in conjunction with your existing energy management plan, and we will look to supplement / assist your energy manager by offering some unique tools, training procedures, facility "energy-efficiency-grading" criteria and other energy conservation and sustainability planning techniques.

Our energy conservation training program is designed to create a culture change in your city so that energy-saving habits eventually become the expectation and norm for everyone within the city. Though positive reinforcement, we show your people how to save energy within the realm of their job and sphere of influence, without negatively impacting comfort or the overall environment.

i) Safety and quality program

Safety

ESP has not had a safety incident on a jobsite since our founding in 2006. ESP's on-site construction manager is OSHA certified, we have a company safety manual, and we make certain that safety is a topic of discussion at each of the weekly meetings during the installation of the project. These practices and our policies on a drug-free work environment and background checks have helped us avoid the unnecessary and avoidable incidents on jobsites that occur when proper safety procedures are not followed or policies are not in place.

In the DBIA contract we execute with all subcontractors; it is a requirement for them to provide us with a safety manual/plan. All subcontractors are to provide their company safety manual and appropriate safety plan for the scope of the project they are bidding as a submittal. The following is an example of subcontractor deliverables:

ECM	Safety Manual/Safety Plan	Submittals	Commissioning plan	Equipment sizing/ selection	O&M Manual	Start-up Reports	Commissioning reports
#5 – ES Gym HVAC Controls		X			X		X
#7 – ES VRF Retro-Commissioning	X	X	X		X		X
#8 – ES Kitchen Upgrades	X	X	X	X	X	X	X
#12 – HS Gym HVAC Controls		X			X		
#21 – 3-year Preventative Maintenance Plan					X		X

Quality Control

We have numerous procedures to ensure quality control. Some specific examples include:

Workshops: One of the earliest steps in quality control is conducting workshops with our client to understand needs, wants, and the situation at hand. We then have follow-up meetings with you to update progress, get additional direction, and to make sure we are staying on track with our solution development.

Internal Review Processes: All of our projects undergo an internal review to ensure that we have considered everything that our team can think of, addressed any risks, and ultimately met the client's needs. This is a formal group discussion where we analyze all aspects of the project so that everyone is comfortable with what we have developed before presenting a final project to our client.

Submittal Reviews: One of the first steps in the implementation phase is submittal review, where our engineer of record reviews the equipment submittals from vendors and subcontractors to make certain that the equipment being proposed matches what was contractually agreed to.

On-Site Construction Management: Having an on-site construction manager on-site throughout implementation allows us to manage quality during the installation. The construction manager serves as the eyes and ears for the client, is another checkpoint for ensuring that the proper equipment is being in-stalled, and can make certain that installations are being done properly.

Startup, Commissioning, and Measurement & Verification: We require startup reports from subcontractors for the equipment they install and commissioning is provided for systems when required to ensure that an entire system is functioning as intended. Since we provide a savings guarantee, we have to be sure that equipment is performing properly so that you get the savings. We perform our own measurement and

verification of the energy savings and provide you with the opportunity to witness these measurements as a final quality control check.

j) Measurement and verification of results

The method for measuring and verifying the actual savings achieved will be developed in a collaborative approach between ESP and the City of Abilene team members. We typically suggest that this plan include a hands-on, easily quantifiable measurement of system efficiency before and after implementation, and then utilize engineering methods to calculate the resulting energy savings. This takes the verification of savings to a level of measurable and quantifiable parameters that actually prove the savings amount.

Our main objective in developing measurement and verification plans has been to provide the level of verification necessary to clearly demonstrate savings have been achieved, while minimizing the cost to implement the plan. A clearly defined, easily understood measurement and verification plan that reduces the chances for contention or discord and will have dramatic impact on perceived effectiveness of the performance contract. Therefore, it is also crucial to the overall success of these programs to provide measurement and verification services at the lowest cost possible. The important thing to note is that ESP utilizes procedures and principals identified in the ***International Performance Measurement and Verification Protocol (IPMVP)*** when conducting our measurement and verification process. The ***(IPMVP)*** is the standard of our industry.

There are three primary cost factors that impact the overall utility costs for facilities.

1. The efficiency or rate at which the equipment/system consumes energy
2. The number of hours equipment operates for its stated purpose
3. The unit cost for the energy type being impacted.

It needs to be recognized that a change in any one of these three parameters could dramatically impact the utility costs within a given facility.

The main objective for the Measurement and Verification Plan is to provide clear evidence that each energy conservation measure actually had the impact on the primary cost factor that was expected. Further, it is important to balance the verification methodology versus the magnitude of savings generated; that is, don't spend an inordinate amount of time and money to verify a measure that has a relatively small magnitude of savings. Similarly, do not spend lots of time or money verifying measures for which there is a proven track-record and high degree of confidence in the efficacy of the savings.

ESP follows the guidelines of the International Performance Measurement & Verification Protocol (IPMVP) when conducting M&V. The IPMVP is the industry standard for conducting M&V and was originally developed by the Department of Energy as a framework for conducting M&V.

The table below presents the four basic M&V options outlined in the IPMVP. We'll work with you to mutually determine the amount of measurement and verification that is most appropriate for your project, and the methods that will be used to measure and verify the savings.

IPMVP Option	How Savings Are Calculated	Typical Applications
A. Retrofit Isolation: Key Parameter Measurement *Savings* are determined by field measurement of the key performance parameter(s) which define the *energy* use of the *ECM*'s affected system(s) and/or the success of the project. Measurement frequency ranges from short-term to continuous, depending on the expected variations in the measured parameter, and the length of the *reporting period*. Parameters not selected for field measurement are *estimated*. *Estimates* can be based on historical data, manufacturer's specifications, or engineering judgment. Documentation of the source or justification of the *estimated* parameter is required. The plausible *savings* error arising from *estimation* rather than measurement is evaluated.	Engineering calculation of *baseline* and *reporting period energy* from: ○ short-term or continuous measurements of key operating parameter(s); and ○ *estimated* values. *Routine* and *non-routine adjustments* as required.	A lighting retrofit where power draw is the key performance parameter that is measured periodically. Estimate operating hours of the lights based on building schedules and occupant behavior.
B. Retrofit Isolation: All Parameter Measurement *Savings* are determined by field measurement of the *energy* use of the *ECM*-affected system. Measurement frequency ranges from short-term to continuous, depending on the expected variations in the *savings* and the length of the *reporting period*.	Short-term or continuous measurements of *baseline* and *reporting period energy*, and/or engineering computations using measurements of proxies of *energy* use. Routine and non-routine adjustments as required.	Application of a variable-speed drive and controls to a motor to adjust pump flow. Measure electric power with a kW meter installed on the electrical supply to the motor, which reads the power every minute. In the *baseline period* this meter is in place for a week to verify *constant* loading. The meter is in place throughout the *reporting period* to track variations in power use.
C. Whole Facility *Savings* are determined by measuring energy use at the whole *facility* or sub-*facility* level. Continuous measurements of the entire *facility's energy* use are taken throughout the *reporting period*.	Analysis of whole *facility baseline* and *reporting period* (utility) meter data. *Routine adjustments* as required, using techniques such as simple comparison or regression analysis. *Non-routine adjustments* as required.	Multifaceted energy management program affecting many systems in a *facility*. Measure energy use with the gas and electric utility meters for a twelve-month *baseline period* and throughout the *reporting period*.
D. Calibrated Simulation *Savings* are determined through simulation of the *energy* use of the whole *facility*, or of a sub-*facility*. Simulation routines are demonstrated to adequately model actual *energy* performance measured in the *facility*. This Option usually requires considerable skill in calibrated simulation.	Energy use simulation, calibrated with hourly or monthly utility billing data. (Energy end use metering may be used to help refine input data.)	Multifaceted energy management program affecting many systems in a facility but where no meter existed in the *baseline* period. Energy use measurements, after installation of gas and electric meters, are used to calibrate a simulation. *Baseline* energy use, determined using the

		calibrated simulation, is compared to a simulation of *reporting period* energy use.

Source: IPMVP Volume I, Concepts and Options for Determining Energy and Water Savings, April 2007.

General Overview

The reason for measurement and verification is simple: when the client is entering into a guaranteed savings contract in which significant dollars are at stake, and there needs to be some means of proving that the savings are truly achieved. ESP's only objective with respect to Measurement & Verification (M&V) is to provide our clients the evidence they need to feel good about the results, for the least cost possible. It is important to notice that every dollar spent on annual M&V reduces up-front dollars available for facility infrastructure improvement by $7 to $10 dollars. If the annual M&V Fee is $10,000, this reduces the amount of upfront improvements the city receives by $70,000 to $100,000, which is significant. Hence, we at Energy Solutions Professionals work diligently to jointly develop an M&V Plan that will yield the proof and comfort you need that the savings are achieved, while minimizing cost.

Our Team members have experience ***implementing, providing and receiving*** all of the M&V Options identified in the International Performance Measurement & Verification Protocol table above. Every project requires an application-specific M&V evaluation, because each will have its own unique set of improvement measures, and differing levels of client parameters to meet.

While the above is fundamentally true, we at Energy Solutions Professionals are convinced that there may be value in utilizing prescriptive, equipment specific measurement to prove as much of the savings as possible. We prefer to take the M&V Plan into the quantifiable realm of measuring efficiency and operating points (energy consumption, flows. temperatures, etc.) both before and after retrofit work is completed, and then compare the readings. Today's technology offers numerous devices that can be used for accurately taking these pre & post measurements. If the efficiency improved and/or the energy consumption decreased by the guaranteed values, then you know the savings area achievable.

Note that a measurement and verification plan could combine one or any number of the options identified in the IPMVP.

ESP's objective is to clearly quantify savings and provide the comfort level to you that savings are being achieved, while minimizing the on-going cost to you for attaining this assurance. We can provide the measurements on a one-time, multiple-year or continuous basis. However, there are diminishing returns when too much money is spent verifying the savings, so we will work with your staff to determine the best approach for your given application.

The City fully intends on partnering with one firm on the development and implementation of this project and as part of this partnership there is an understanding of a cost associated with the Investment Grade Audit. Please describe you firms approach to pricing an Investment Grade Audit for the City and how it is handled if the City decides it is not in the best interest to move forward once the audit is complete.

The Price for the Investment Grade Audit:

•ESP's Fee for Investment Grade Audit of City of Abilene Facilities = $0.06 / Sq-Ft of facility

- The City can establish which buildings to include in IGA, and calculate corresponding IGA Fee

•Based on Total Square Footage provided by the City of Abilene:

- ESP IGA Fee = Total Square Feet x $0.06/SF = $IGA FEE
- If the WTP/WWTP &/or Distribution system(s) are to be included in the IGA, these process-oriented facilities need to be priced differently than on a $/SF of the control building. This would likely be based upon daily flow-rate or volume of water/wastewater treated and/or distributed.

NOTES REGARDING IGA FEE:

1. ESP is a firm believer in delivering upon our commitments, so if we are unable to identify a viable paid-from-savings project through the process of conducting and delivering the IGA, then the City of Abilene would not owe us the above IGA Fee.
2. ESP does not charge our clients for the IGA until it is completed, so it is common for clients who elect to move forward with an Energy Performance Contract to roll the cost of the IGA into the total project construction cost, and have it paid for by savings. Hence, you do not need to set-aside a line-item budget amount to pay for IGA.
3. Once the IGA is completed, results are reviewed between ESP and City of Abilene team, and a decision regarding what energy-saving, facility-improvement scope (if any) should be pursued via an Energy Performance Contract. If the City decides it is not in their best interest to move forward with implementing any of the measures with ESP, then the IGA Fee would be payable and that is the only obligation the City of Abilene would have to ESP.

k) Guarantee of savings

There are three different levels of savings calculations utilized during the process of developing, implementing and verifying an Energy Conservation project that utilizes a Guaranteed Savings approach to fund the improvements:

1. Preliminary Estimates
2. Guaranteed Projections
3. Measured & Verified

Preliminary Estimates (Request for Proposal stage) level savings calculations are usually arrived at by projecting a savings percent from evaluation of historic utility and other operational costs, facility size and knowledge of the primary energy-consuming system types. Guaranteed Projections (Investment-Grade-Audit stage) level savings are derived from a combination of practical experience, vendor efficiency specifications, field-measured data-logged readings and application of engineering methods, and/or energy modeling of facilities. Measured & Verified savings represent the amount of savings that were actually attained after implementation is completed, based on applying the mutually agreed Measurement & Verification Plan.

The following table shows some of our historical results in regards to our Preliminary Savings Estimates, the Guaranteed Savings that resulted from the Investment Grade Audit, and the actual Measured & Verified Savings for projects.

			Annual Savings	
Project	Preliminary Estimate	Energy Savings Guarantee	Measured & Verified Results	Type of M&V used
Northeast Vernon County Schools	$17,600	$19,541	$22,279	IPMVP Option A
Pittsburg State University	$416,000	$421,412	$417,282 (Year 1) * $474,079 (Year 2)	IPMVP Options A, B, C
Wichita State University	$85,000	$89,381	$93,618	IPMVP Option A
Chisholm Creek Utility Authority	$89,442	$87,321	$91,331	IPMVP Option A
Culver-Stockton College	$197,500	$275,380	$290,790	IPMVP Option A
Bethany College	$106,000	$164,839	$174,435	IPMVP Option A
Liberty Public Schools	$348,000	$484,416	$492,723	IPMVP Option A
Newton USD 373	$176,999	$178,646	$203,549	IPMVP Options A

There are a few key takeaways from this table.

1. You can see that we are somewhat conservative in our Preliminary Estimates historically so that we don't over promise what can be accomplished. Most times, additional opportunities for saving energy are identified during the Investment Grade Audit as we get to better understand your people, your buildings/systems, and your goals for the project.
2. We have experience in all the various types of Measurement & Verification and are comfortable with whichever approach you prefer to ensure that you are comfortable with the level of savings that it achieved.
3. We consistently exceed are savings guarantees. As noted above, on the one occasion where we had a very slight shortfall, we paid the client and worked with them to rectify the issue so that savings are being exceeded in future years.

Below are details regarding each level of savings calculation, including a description of our approach to projecting and verifying Operational & Maintenance savings. This verbiage is designed to offer a general overview and understanding of our theoretical approach to calculating savings. Our team members have a substantial track-record of success associated with accurately calculating savings for each phase of guaranteed energy savings projects. We are convinced that bridging the gap between theoretical assumption and real-world situations by thoroughly evaluating actual operating conditions, utilizing practical assessment of actual conditions and/or field-measurements, and accurately applying this information within the calculations has helped us provide high quality and accurate savings calculations that can be understood by our clients.

Preliminary Estimated Magnitude of Energy Savings

The historic utility cost data provided; combined with knowledge of existing systems garnered during site-visits, and use of standard engineering methods allows us to accurately estimate the projected magnitude

of savings. We have applied these and similar measures numerous times, so we have an understanding of the energy savings (on a percent basis) that similar measures have produced in comparable facility-type settings. These three sets of data; historic utility consumption/cost, existing facility conditions and projected potential improvement measures, allow ESP's members to get within a very reasonable margin of error (typically within 5% to 10%) on the total projected savings magnitude. We typically error on the low-side (prefer to under-promise and over-perform).

Guaranteed Projections (IGA) Savings Calculation Methodology

We utilize computer simulation and engineering methods combined with actual field measured data of existing systems to determine what the true savings potential for each project is. The projected savings are determined through a combination of applying standard practices (computer simulation and/or engineering calculations) with actual field measurements to determine the realistic level of savings attainable. As an example: lighting savings are calculated from room-by-room surveys that reflect existing wattage consumed (measured) compared with what the (projected based on manufacturers efficiency specifications) wattage after retrofit will be.

Through the use of field-measured data and engineering calculations, we are able to determine whether existing equipment is properly sized. This enables us to accurately select replacement and/or retrofit equipment capacities, which creates dramatic cost savings and efficiency gains within the facilities. In addition, we identify comfort problems that may be caused by improperly sized, designed, or installed equipment being utilized in buildings. The ESP team members have extensive experience providing successful guaranteed energy savings programs that enhance, and have an excellent track record of meeting savings projections.

5. Project Experience Summary

Provide a project experience summary for five (5) energy savings performance contracts implemented with municipalities.

Each project experience summary must contain:

a. Project cost

b. Annual savings guaranteed

c. Project term of the contract in years

d. List of improvements

e. Client contact information

 City of Prairie Village, KS 7700 Mission Rd. Prairie Village, KS 66208	**Contact:** David McAuliffe 816-520-0518 **Services:** Energy audits, engineering, project mgmt., construction mgmt., commissioning, training	**Measures Installed:** Geothermal heating & cooling system, lighting retrofits, water conservation, building envelope repairs, energy management control measures	**Project Cost:** $1,300,000 **Guaranteed Savings:** $53,500 (annually) **Contract Term:** 15 years
 City of Salem, MO 400 N. Iron Street Salem, MO 65560	**Contact:** Sally Burbridge 573-729-4811 **Services:** Energy Audit, engineering, financing assistance, project & construction mgmt., commissioning, training	**Measures Installed:** building envelope, windows & doors, roofing, HVAC improvements, tuckpointing, baseball field lighting	**Project Cost:** $1,400,000 **Guaranteed Savings:** $119,000 (ann.) **Contract Term:** 15 years
 City of Moberly, MO 101 W. Reed Moberly, MO 65270	**Contact:** Troy Bock 660-269-7613 **Services:** Audits, engineering, financing assistance, project mgmt., construction mgmt., commissioning, training	**Measures Installed:** advanced metering infrastructure (AMI) water meters, meter billing and accounting software, sequencing batch reactor (SBR) blowers, variable frequency drives (VFDs), programmable logic controller (PLC) upgrades, SCADA programming upgrades and web-enabled interface, pavilion construction with solar	**Project Cost:** $ 4,600,000 / $620,000 **Guaranteed Savings:** $ 565,000 (annually) **Contract Term:** 10 years

 City of Centralia, MO 114 S. Rollins Centralia, MO 65240	**Contact:** Heather Russell 573.682.2139 **Services:** Audits, engineering, financing assistance, project mgmt., construction mgmt., commissioning, training	**Measures Installed:** interior LED lighting improvements; street lighting improvements; building infiltration; Wi-Fi thermostats; destratification fans; retro-commissioning	**Project Cost:** $ 255,000 **Guaranteed Savings:** $ 24,500 (annually) **Contract Term:** 15 years
 Russell Regional Hospital 200 S Main St. Russell, KS 67665	**Contact:** Harold Courtois 785-263-6610 **Services:** Energy audits, engineering, financing assistance, project mgmt., construction mgmt., commissioning, training	**Measures Installed:** Emergency generators, dual-fuel boiler replacement, chiller replacement, condensing unit replacement, multi-zone to VAV conversion, floating head pressure controls, water saving devices, lighting, variable speed drives, energy conservation training	**Project Cost:** $2,000,000 **Guaranteed Savings:** $168,000 (annually) **Contract Term:** 10 years
 Brown County, KS – County Jail 709 Utah St. Hiawatha, KS 66434	**Contact:** John D. Merchant 785-741-5301 **Services:** Energy audits, engineering, project mgmt., construction mgmt., commissioning, training	**Measures Installed:** LED lighting; new HVAC systems; thermostats with humidity control; new laundry equipment. **Large firm estimated the cost of the project to be $979,000 - $1.140 million. Our total cost was $285,000 with an expanded scope**.	**Project Cost:** $285,000 **Guaranteed Savings:** $14,000 (annually) **Contract Term:** cash financing

In addition to the references above, please provide an example of a project where a savings guarantee was not met and the steps taken by the ESCO. If no shortfall has taken place within the history of the ESCO, please provide a written statement signed by an officer of the company stating that no shortfall has taken place.

In 2011 ESP completed a comprehensive energy project for Pittsburg State University (PSU). The project included the installation of a geothermal system as well as occupancy-based controls, steam system upgrades and a comprehensive Energy Behavioral Training program. The total project cost $4.7 million with guaranteed annual savings of $420,000 over 13 years. In the first year, the University had a $4000 (approximately 1%) shortfall in guaranteed savings. ESP immediately issued the University a check for the shortfall. In addition to facility improvements, the project savings paid for a full-time on-site Energy Manager. Over the following year, working with PSU staff and the on-site Energy Manager, ESP was able to develop system adjustments to correct the savings shortfall. The result was that Year 2 savings exceeded the guarantee by 10% (about $40K). The project went from a saving deficit in Year 1 to generating substantial net excess savings for PSU in Year 2. The project has met or exceeded the savings guarantee every year since Year 1.

All project experience summaries must be for the "responding ESCO" operating under its existing name or subsidiary and must be for the "responding ESCO" as a firm. Project experience summaries will be for the firm as a whole, not for an individual.

Failure to provide project experience summaries that meet the minimum requirements noted above will result in the responding firm being deemed nonresponsive to this request for qualifications and that firm will not be considered for this project award.

Client Reference Letters are included in the Appendix of this Proposal.

6. Best Value

a) Briefly describe how the ESCO provides the greatest value for the investment made by the City.

Energy Solutions Professionals is the City of Abilene's best ESCO choice for the following reasons:

1. Totally Independent

As we will discuss throughout this RFQ Response, ESP has no financial ties with any other organization. We are totally free of any vendor, commodity, installation-service or engineering-firm affiliation, which enables us to be totally unbiased in developing, selecting and recommending equipment, services and/or commodity solutions. This fact ensures Abilene that ESP will always recommend the highest quality, lowest cost solutions for every aspect of ***YOUR*** project. We can truly focus upon your specific application(s), requirements and objectives as the guiding principles for every solution we include in your guaranteed energy saving, facility improvement project. Abilene can rest assured that ESP's sole focus is helping you obtain optimal results from the project.

2. Transparent and Competitive-Bid by Design

ESP is a leading provider of Guaranteed Energy Savings Projects in Kansas and Missouri. One of the hallmarks of our approach is *complete cost transparency, or "open book" pricing throughout the project development and delivery process*. This ensures the City of Abilene secures the lowest cost and highest quality project, while directing where funds are spent in order to your goals are met.

Under Kansas Statute 75-37, 125, all competitive bidding requirements are met in the ESCO selection process. As a result, many ESCOs save themselves time and money by building their projects with little or no vendor / subcontractor competitive bidding. ESP invites *multiple (local) contractors and suppliers to bid on all aspects of our projects*, and shares bid results with the City. We are convinced this approach results in *best value (product and price) for the City and maximizes local business participation.*

3. Streamlined Organization

ESP was formed upon the belief that *energy-saving expertise could be provided in a streamlined fashion, where clients receive all the benefits of large company energy proficiency without paying the elevated overhead and profits inherent in large vendor/utility-owned ESCOs*. We are devoted to remaining truly independent so that we can provide unbiased solutions of exceptional quality at the lowest cost for each client's given application; however, an ancillary benefit of this independence is that we have a streamlined structure that reduces costs and makes ESP easier to work with than other ESCOs. We do not need to support the high overhead costs that are inherent in large manufacturer, commodity provider, construction company or engineering firms. Consequently, our costs to provide services are much lower than our competitors, and this is reflected in our project pricing for clients. Our owners and senior executives remain engaged in all aspects of our business, which means ESP has limited "overhead-only" expenses. This structure also makes it much easier to work with ESP since decision-makers are actually engaged in every project and decisions can be made quickly and efficiently. Finally, the streamlined nature of our

corporate structure makes for simpler and more straight-forward contract documents and "rules for engagement".

These three core principals enable the following value-added-benefits:

Ability to work within budget constraints

ESP commits that there will be no change orders initiated by us on your projects. This is critical when completing Guaranteed Energy Cost Savings Contracts because the savings guaranteed at the beginning of the project has to be able to pay for the project over a maximum of 30 years. The scope of work that we commit to will be completed for the price that is guaranteed.

Scope changes and change orders can occur on the project, but they would be initiated by the City for modifications that you would like to make. We typically recommend including a small contingency fund (3%-5% of total project cost) in the project to cover the cost of these changes. This provides the City with some flexibility and the ability to add items or address unforeseen conditions. At the completion of the project, any part of the contingency dollars that you have not spent will be credited back to the City.

REFERENCE LETTER QUOTE:

"During the construction period of the energy savings project we found ESP to be very reliable, used competent subcontractors, completed work on time, and were very mindful of our need to continue to treat patients. Their estimates were extremely accurate and we have actually experienced not only the projected savings but actually greater savings.

Russell Regional Hospital received national recognition from American Society of Healthcare Engineering (ASHE) as the number one hospital for energy savings and greenhouse emissions in the United States. This is quite an honor and we owe the work to ESP."

Harold Courtois, CEO
Russell Regional Hospital

Ability to Meet Schedules

Communication and effective planning are the keys to timely, value-oriented project implementation. Our 3-week look-ahead approach provides a foundation upon which effective coordination of utilities, equipment delivery and storage, and facility interaction is built. The regularly scheduled workshops and construction meetings provide a forum for CIty staff, ESP project team and sub-contractors to discuss construction issues and plan how to facilitate implementation with minimal negative impact on the daily classroom schedule and activities.

There are a myriad of factors that must be weighed when putting together the implementation schedule for an energy performance contract. First and foremost, we will schedule all endeavors in a manner to minimize disruption of the daily-operations for the City. We need to consider weather factors and try to schedule equipment replacements to not impact occupant comfort (i.e. change chillers in winter and boilers in summer so they can provide conditioning when they're needed). It is important to maximize dollar savings generated by the program, so we will try to get the primary energy-saving measures installed as early in the process as possible. We will also ensure that all of our subcontractors are aware that we intend to have a MINIMAL impact on your day-to-day operation. Hence, it may be beneficial to complete any HVAC renovations during mild-temperature months in the spring/fall as opposed to summer or

winter months. We recognize that equipment lead-time impacts the construction schedule, as it is important not to have construction crews on-site with no materials to be installing, and we have specialized methods for ensuring effective material handling and implementation scheduling.

The fundamental approach is to determine what your desired completion date is, and then work back from there to determine what has to happen to accommodate the required end-date. All the factors mentioned above must be considered and will be included in the creation of the schedule. We utilize scheduling software that allows all construction parameters; including equipment lead-time and delivery, labor hours, available work-hours, holidays, etc., to be factored into schedule. The schedule allows identification of critical milestones that must be hit in order for subsequent work to complete on-time. The construction and project managers will monitor this software on a regular basis, and update project status based on real-time field conditions. This coupled with dynamic/regular communication with all parties helps us keep on-time.

BETTER PRICING THAN EQUIPMENT MANUFACTURERS

It may come as a surprise to some, but ESP is able to get better pricing on equipment for your projects than what you will receive from an ESCO who is also a manufacturer (Trane, Johnson Controls, Schneider Electric, etc.) We have proven it time and again in head-to-head pricing where clients have asked ESP and one of these equipment providers' ESCO groups to price the same job. How can this be?

First: When we solicit bids, we engage multiple equipment suppliers, meaning each supplier has to provide their best price. If you work with an ESCO that is also an equipment supplier, you will never get their best price. In fact, they can use the equipment and install price to hide other fees and markups and the Client never knows the difference.

Second: Their internal commercial groups prefer to sell to ESP because they earn commission. When they sell internally to their ESCO group, they don't get that commission.

The actual timing and length of construction can vary greatly depending on the improvements you ultimately decide to include in your project. When the point is reached where the City has selected the items to be included in the project, we would create a very detailed construction schedule that we would use to manage of the required trades and subcontractors so that activities are coordinated and efficient, and daily disruptions are kept to a minimum. Below are some sample schedule images that show the types of schedules we create. As the project becomes more complex, the schedule would as well to ensure the timely completion of each item and to understand any conflicts or delays that may exist.

ESP Project Pricing Approach

There are two primary components; construction costs and service fees, that go into establishing the "Total Project Cost". In order to obtain the "best value" for our clients, ESP offers Open Book approach that closely manages both aspects of the total cost. Since Construction Cost represents up to 85+% of total cost, special attention should be given to minimizing these costs (without sacrificing quality).

Controlling Construction Costs

ESP takes a flat-tier approach to managing subcontractors on our projects. This greatly reduces construction costs by eliminating many multiple-tier markups on both labor and equipment. We have seen as

much as a 30% reduction in construction costs when comparing traditional contracting methods; which is the approach many ESCOs utilize, to this flat-tier approach.

- We competitively bid each trade and all equipment specified for the project, ensuring we secure the best possible pricing for the entire scope.
- We only accept bids from highly qualified and pre-approved contractors and vendors (prequalification based on input from the client, and local contractors to extent possible).
- The project is design-build in nature, so secure value-added ideas from subcontractors.

Construction cost typically represents about 80% to 85(+) % of total project cost, so ESP focuses a material amount of effort upon minimizing construction cost. However, our on-going savings commitment gives the City of Abilene assurance that we cannot sacrifice quality to attain this cost-savings value.

Establishing Professional Service Fees

ESP derives fees for each project individually; and in a collaborative evaluation with you, determines which services (and what magnitude) should be included for your specific project. We are continually honing our processes in order to help us offer high-quality services in the most cost-effective manner. We clearly identify which services we are providing and what the fee for each service will be. We welcome the chance to review and discuss these fees with your staff, and realize that the final fee amounts may be adjusted based on negotiations that we have during the Investment Grade Audit (IGA) process.

Our low overhead (our owners are directly engaged) enables us to provide services at a much more cost-effective rate than other ESCOs can achieve. While this is not always apparent; due to the varying ways markups and fees can be presented, we know from experience and in communicating with our peers, that our fees are lower than our competitor's. We have found that the above approach yields the best possible construction cost and service fee pricing for our clients. Further, we will communicate with your team throughout the IGA to verify what products, sub-contractors and services are desired, and will work together with you to optimize the value achieved. ESP Transparency & Open-Book provides value!

Equipment Selection and Procurement

We pride ourselves on using common-sense, engineering principles and practical field experience in recommending and making equipment selections. After going through the processes identified above to determine equipment and facility needs, we work collaboratively with our client's staff to deter-mine sound equipment replacement and/or retrofit solutions. Our primary objective in selecting equipment is to identify equipment solutions that improve the energy efficiency, facility comfort and maintainability within the City's facilities. We will work with your staff to find equipment that will reduce energy costs, while improving the environment within the buildings. We understand the importance of having access to key components of equipment, and the value that being able to properly maintain equipment has over time. We work with your staff to find ways to improve maintenance access for your equipment.
Some key factors that we weigh when selecting equipment:

- Match current City construction standards and product preferences
- Verify heating/cooling loads and match equipment selection to actual loading conditions (Utilize field-measurements not simply theoretical calculations)
- Evaluate first cost, on-going energy and maintenance costs to find "best life-cycle value"
- Verify what the maintenance track-record is for all vendors who submit bids

- Determine who has the best local support in case of maintenance needs

An advantage to this procurement approach is that the client has much more input in the equipment selection, because it is not a requirement that the "low-bid" provider is selected. Hence, your staff will play a key role in final equipment selection.
We will evaluate cut-sheets and submittal information, and mutually determine which solutions offer the best long-term value for the City.

Water/Wastewater Treatment Facilities Experience

Our research reveals that the City of Abilene's water treatment plant is a reverse osmosis type plant, the first of its kind in the state of Kansas, and has been in operation since 1998. The plant can treat and deliver three million gallons of water a day to the distribution system. There are also 10 ground water wells that are managed and have routine testing procedures to assure a constant and safe water supply to the distribution system. Reportedly, the yearly daily average production is about 1.1 million gallons.[1]

We also discovered that the City of Abilene operates a Sequencing Batch Reactor type of Wastewater Treatment Plant which was constructed in 2008. The plant has a maximum capacity of 1.5 million gallons a day, but typically treats 400,000 to 600,000 gallons a day."[2]

ESP has direct experience auditing and finding ways to improve Sequencing Batch Reactor (SBR) WWTP from our IGA & EPC with Chisholm Creek Utility Authority (CCUA) in Wichita, KS, the City of Moberly, MO, and the City of Sedgwick, KS. In addition, ESP has partnered with Kansas Rural Water Authority (KRWA) and has completed over 60 Energy Audits for KRWA entities in the State of Kansas.

It is our experience that WWT Plant and distribution (as well as WT Plant and Distribution/Meters) can account for the majority of utility costs within a municipal utility budget, so special care and expertise must be placed on evaluating and developing solutions that actually enhance process. Attention must be placed on ensuring the process-solutions improve treatment process and compliance, and not just save money. ESP has practical experience optimizing energy efficiency of a variety of WWT plants; specifically Sequencing Batch Reactor processes, lift/pump stations for distributing wastewater (eliminating odor issues), as well as optimizing potable water treatment, associated distribution systems, leak-detection, water-meter optimization and automated meter-read systems.

ESP implemented the following Energy Conservaton Measures at CCUA for the Water Treatment Plant:

- Well Field Upgrades
  - Appropriately sized pumps
  - VFDs will also allow the pumps to be dialed in to the optimal setting
- Backwash Water Treatment and Recycle
- Chemical Feeding Equipment

[1] https://www.abilenecityhall.com/23/Water-Treatment-Plant
[2] https://www.abilenecityhall.com/21/Wastewater-Treatment-Plant

- Lime Feeding Equipment
- Raw Water Flow Meters
- Water Treatment Plant Disinfection System
- SCADA Controls Upgrades
- Lighting Improvements
- Convert Electric Heat to Natural Gas
- Smart Thermostats

ESP implemented the following Energy Conservaton Measures at CCUA for the Wastewater Treatment Plant & Distribution System:

- Hydrogen Sulfide Abatement / Odor Control – ECO2 System
- Variable speed control of aeration blowers
- Utilize In-Plant Water Effluent In lieu of Potable Water
- Sludge Piping
- Sodium hypochlorite addition prior to UV Disinfection
- Headworks Repairs
- Additional SBR
- UV Disinfection System
- SCADA Controls Upgrades
- Lighting Improvements
- Convert Electric Heat to Natural Gas
- Smart Thermostats

7. Appendices

- Resumes
- Reference Letters
- Bonding Letter
- Banking Reference Letter
- Sample M&V Report
- Behavioral Training/Education Program
- Financial Statements (Proprietary & Confidential)

Per the City's request regarding proprietary information, ESP requests that the City do one of the following prior to reviewing the following proprietary and confidential financial information:

1. Provide written acceptance that the City of Abilene accepts this information as proprietary and will treat it as such, or

2. Return the proprietary information without review to:

Energy Solutions Professionals, LLC
Attn: Coleen Flathman, Director of Finance
9218 Metcalf, Suite 274
Overland Park, KS 66212

Resumes

Jeffrey G. Flathman

President, Managing Member

Jeff has 28 years of experience within the energy efficiency, facility-improvement and heating, ventilating and air-conditioning fields. He has provided business development, financial analysis, utility and facility analysis, design and energy engineering, project and construction management, and performance management services. His experience includes considerable time in the field auditing facilities and measuring equipment parameters. This varied background helps him to effectively communicate every aspect of the energy performance contract project to clients. This provides a better understanding and clearer decision-making ability within all levels of the organizations he serves.

Jeff filled key roles in the successful development, design and implementation of over $113 million in energy service/performance contracting business for over 50 different organizations. In addition, he oversaw the design and construction of several million dollars worth of air-handling and thermal storage equipment for a variety of clients and settings. He has worked in a myriad of environments; including but not limited to, primary and secondary education, colleges and universities, correctional facilities, local and state government, hospitals, commercial buildings and industrial plants.

Education

B.S. Mechanical Engineering,
North Dakota State University

Certifications

Engineer in Training Certification, North Dakota

Training

Mastering Business Development I & II

Prior Experience

Custom Energy Services, LLC 2001-2006

Business Development Manager, Government Market

Responsible for developing and implementing a territory management plan for the government market within Kansas and Missouri (state agencies, local government, colleges and universities).

Energy Masters Corporation 1993-2000

Business Development Associate (1998-2000), Senior Project Engineer/Senior Project Manager (1993-1997)

As a business development associate, Jeff's responsibilities included all sales functions and oversight of project implementation. As a senior project engineer/project manager, Jeff was responsible for all technical and financial aspects of completing energy audits and implementing performance contracts.

The Paul Mueller Company 1991-1992

Applications Engineer

Interface with client, sales and internal engineering to ensure that thermal storage units met the needs for the given application.

Tempmaster/Temperature Industries 1989-1990

Design Engineer (1990), Systems Engineer (1989)

Provided engineering design and layout of custom air-handling units and air distribution devices, which included sizing, selecting all components, cost development, and assembly planning.

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Project History

Client	Project Location	Approximate Size
Energy Audits		
Aurora Metals	Illinois	$60,000
Arlington Wastewater Plant	Virginia	$65,000
Benedictine University	Kansas	N/A
Central Christian College of the Bible	Missouri	N/A
Chrisholm Creek Utility Authority	Kansas	N/A
City of Independence	Missouri	$28,600
City of Pearland	Texas	$30,000
City of Shawnee	Kansas	$11,000
General Motors – Oklahoma City Plant	Oklahoma	$120,000
Hannibal-LaGrange University	Missouri	N/A
Oakwood Country Club	Missouri	N/A
Osawatomie State Hospital	Kansas	$50,000
Republic County Hospital	Kansas	N/A
Washoe County	Nevada	$150,000
Energy Conservation Training		
City of Olathe	Kansas	$72,000
Greenville Country Schools	South Carolina	$2,025,000
Guaranteed Energy Savings Contracts		
Allen County Community College	Kansas	$2,743,950
Belle Plaine School District	Kansas	$584,000
Bethany College	Kansas	$1,925,000
Cathedral Square Towers	Missouri	$1,452,000
Chet Holifield Federal Building	California	$1,200,000
Chisholm Creek Utility Authority	Kansas	$2,400,000
City of Kenner	Louisiana	$722,000
City of Prairie Village	Kansas	$1,300,000
Contra Costa Community College	California	$1,940,000
Culver-Stockton College	Missouri	$3,900,000
Eastern Illinois University	Illinois	$3,400,000
Edwards County Hospital	Kansas	$506,000

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Client	Project Location	Approximate Size
El Dorado Correctional Facility	Kansas	$2,123,556
Ellis County	Kansas	$524,000
Graham County Hospital	Kansas	$650,000
Greenville College	Illinois	$749,490
Harper County	Kansas	$340,000
Hodgeman County	Kansas	$250,000
Hutchinson Correctional Facility	Kansas	$2,704,836
Independence Community College	Kansas	$2,699,701
Kansas Insurance Department	Kansas	$692,419
Kansas Neurological Institute	Kansas	$2,268,817
Kansas School for the Deaf	Kansas	$991,386
Lansing Correctional Facility	Kansas	$3,583,697
Liberty Public Schools	Missouri	$5,906,628
Lino Lakes Correctional	Minnesota	$500,000
Louisiana National Guard	Louisiana	$136,770
Menard Correctional Facility	Illinois	$1,079,988
Metropolitan Community College of Kansas City	Missouri	$3,500,000
Metropolitan Condominiums	Missouri	$532,000
Missouri Fairgrounds	Missouri	$1,800,000
Mulvane USD#263	Kansas	$1,200,000
Neosho County Community College	Kansas	$2,052,304
Neosho County Community College - Domestic Hot Water System	Kansas	$100,000
Norton Correctional Facility	Kansas	$1,682,971
Novato Public Schools	California	$693,000
Nowlin Hall Apartments	Missouri	$883,583
Oak Park Heights Correctional	Minnesota	$2,000,000
Parsons State Hospital	Kansas	$2,011,426
Pershing Lofts	Missouri	$332,000
Pittsburg State University - Campuswide	Kansas	$4,500,000
Pittsburg State University - Geothermal Improvements	Kansas	$4,700,000
Pittsburg State University - Nation Hall	Kansas	$1,519,362
Prairie View Hospital	Kansas	$408,000
Raytown Public Schools	Missouri	$3,200,000

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Client	Project Location	Approximate Size
Red Wing Correctional	Minnesota	$350,000
Red Wing Schools	Minnesota	$2,792,630
Reno County	Kansas	$1,443,273
Russell Regional Hospital	Kansas	$2,040,000
Southeastern Illinois College	Illinois	$4,200,000
Southfork School District	Illinois	$869,308
St. Joseph School District	Missouri	$5,616,000
Stillwater Correctional	Minnesota	$2,500,000
Sulgrave Regency	Missouri	$1,600,000
Tangipahoa Parish	Louisiana	$474,260
Tonganoxie Public Schools	Kansas	$234,500
Truman State University	Missouri	$10,500,000
Union Star R-II	Missouri	$970,000
University of Detroit Mercy	Michigan	$472,606
University of Kansas	Kansas	$25,600,000
Wichita State University	Kansas	$12,300,000
Wichita State University - Residence Hall Improvements	Kansas	$1,600,000
Winfield Correctional Facility	Kansas	$1,425,639
Wornall Plaza Condominiums	Missouri	$670,000

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Timothy R. O'Kane

Vice President of Operations

As Vice President of Operations, Tim leads a team of project managers, engineers, energy analysts, and construction managers in developing, designing, and constructing energy conservation projects, such as lighting, controls, HVAC retrofits, water retrofits, central plant improvements, and renewable energy installations.

Working initially as a drafter for a structural engineering firm, Tim has over 27 years of experience in the engineering and construction industry, with the last 16 focused solely on energy efficiency. His broad experience covers management of business operations (contracting, insurance, human resources, safety, quality control), project management, training, sales and marketing.

Education

B.J. Advertising,
University of Missouri-Columbia

Prior Experience

Custom Energy Services, LLC 2003-2008

Marketing Manager

As the marketing manager, Tim was responsible for the complete planning, strategy, and implementation of marketing efforts for the company's portfolio of service offerings: performance contracting, energy awareness training, and build/own/operate on-site power generation projects. Under his guidance, media coverage of the firm's clients increased every year.

Black & Veatch 1997-2002

Advertising Manager/Graphic Designer (2002), Strategic Marketing Manager—Black & Veatch Telecommunications, Inc. (2001), Marketing Coordinator—Advanced Technology Division (1997-2000)

In his time at Black & Veatch, Tim worked in a wide variety of roles. As advertising manager, he managed budgets, negotiated media buys, and managed relationships with vendors and consultants.

As strategic marketing manager, he conducted client and competitor surveys, tracked media stories, performed market research, wrote business plans, and implemented aggressive focused marketing strategies for rapidly-progressing hi-tech market sectors.

He also developed and maintained over 25 internally hosted project specific web sites designed to share project information with clients in real time, allow for reviews and comments, and track project requests and communications. He made presentations to sell clients on the idea of using project web sites and provided training to new users.

In all of his roles, he was responsible for developing marketing materials, creating client reports and presentations, coordinating proposals for project pursuits.

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Project History

Client	Project Location	Approximate Size
Performance Contracts/Conservation Training		
Culver-Stockton College	Missouri	$3,900,000
Belle Plaine School District	Kansas	$584,000
Northeast Vernon County Schools	Missouri	$172,000
Penn State University-West Halls Residential Complex	Pennsylvania	$1,953,000
Pittsburg State University	Kansas	$4,700,000
Mulvane USD#263	Kansas	$1,200,000
Ottawa School District	Kansas	N/A
University of Kansas	Kansas	$25,600,000
City of Olathe	Kansas	$72,000
Project Web Site Development/Management		
Sirius Satellite Radio—Terrestrial Repeater Network	56 cities	N/A
Becton Dickinson	Nebraska	N/A
Sprint—Data Center	Missouri	N/A
Intel	Arizona	N/A
Proposal/Presentation/Public Relations		
Snowflake White Mountain Power—Marketing for 24MW Biomass Plant	Arizona	$53,000,000
Seaford School District—Grant Proposal for 100kW Solar PV Array	Delaware	N/A
Penn State-Erie—PR for 1.8kW Wind Turbine Installation	Pennsylvania	$3,700,000
Motorola—MOS-12 Expansion	Arizona	$1,100,000,000

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Brett A. Ravenscroft, PE

Senior Energy Engineer

Brett has been in the HVAC industry since 1986. His career began working on, and operating high pressure steam boilers and HVAC in the US Navy. After his military service, he became a registered Class "A" stationary engineer in Kansas City, MO qualifying him to work on and operate high pressure steam systems.

Brett finished his BS in Mechanical Engineering and furthered his training by acquiring his PE and CEM qualifications. He has an excellent attention to detail combined with strong communication skills and a desire to deliver to the customer the results for a successful project.

Brett has been the lead energy engineer for projects ranging from Hospitals, Universities and Military bases. With a combined square footage of well over 5,000,000 SF Brett has lead projects with Energy driven construction costs of over $100 Million combined. Through innovative and common-sense approaches to energy conservation measures, Brett has saved clients over $100 million in combined electrical and natural gas savings.

Prior Experience

Griffith Engineering/Corporate Energy Consultants

Brett's engineering experience in the Design Build and energy services markets have provided him a solid technical and working knowledge of HVAC and control systems, central heating and cooling plants and facilities operation. He also has experience assisting customers with supply-side decisions, specifically how they can more effectively manage their facility resources to reduce energy costs.

Brett has many very successful projects to his credit as listed below.

Education

B.S. Mechanical Engineering,
University of Missouri, Kansas City, MO

Certifications/Training:

- Licensed Professional Engineer: Missouri, Kansas
- Certified Energy Manager
- Certified Measurement & Verification Professional – Association of Energy Engineers

Professional Organizations:

- Member: National Council of Examiners for Engineering and Surveying
- Member: Association of Energy Engineers
- Member of the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

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Project History

Client	Project Location	Approximate Size
Energy Performance Contracts		
Union Station	Kansas City, MO	2.0M
Hutchinson Regional Medical Center	Hutchinson, KS	5.9M
St. Catherine's Medical Center	Garden City, KS	2.5M
Derby USD	Derby, KS	4.5M
University of Central Missouri	Warrensburg, MO	$24.1M
Georgia Tech Research Institute	Marietta, GA	$18M
Clark Atlanta University	Atlanta, GA	$12M
NAS Oceana	Virginia Beach, VA	$44M
White Sands Missile Range	White Sands, NM	$25M
Shriners Children's Hospital	Greenville, SC	$1.2M
Shriners Children's Hospital	Lexington, KY	$1.0M
Riverside General Hospital	Pasadena, TX	$1.5M
Henrico Doctors Hospital	Pensacola, FL	$0.8M
West Houston Medical Center	Houston, TX	$0.5M
West Florida Medical Center	Pensacola, FL	$1.0M

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Dr. Brad Rahe

Business Development Manager

As a business development manager, Brad works closely with clients to identify their needs and to develop relevant solutions that are comprehensive and realistic. He works to understand not only the technical and financial issues that clients face, but also their broader business and mission priorities.

Dr. Rahe is a strong strategic leader with a wealth of experience and expertise in K-12 administration. Brad has led change initiatives that have resulted in positive environments, robust utilization of technology and increased academic excellence, especially for rural districts with distinct challenges. He understands how energy conservation is increasingly important to the strategic goals of sustainability for schools, hospitals and municipalities.

Prior Experience

Brad's successful career in education both as educator and administrator preceded his role at ESP. He served as a Superintendent of Schools for seventeen years; leading the Mulvane USD 263, Holton USD 336, and Humboldt USD 258 school districts. In addition, Brad has worked as a Middle School Principal for Wellington USD 353, Valley Center USD 262 and Independence USD 446 school districts. He began his career as a seventh grade language arts teacher in Great Bend USD 428. Dr. Rahe also served as a senior sales manager for *SchoolDistrictU* and was a project development/ program manager for Banner Creek Science Center in Holton, KS. In addition to his work in K-12 education, Brad was an adjunct professor from 2012-2018 at Southwestern College in Winfield, Kansas.

Civic and Community Activities

Mulvane Educational Foundation
Mulvane Chamber of Commerce
Board of Directors – Banner Creek Science Center
Jackson County Assistance Team
Member Juvenile Justice Corrections Advisory Board
Holton Chamber of Commerce
Humboldt Rotary International
Humboldt Lions Club
Vice President, Humboldt Chamber of Commerce

Education

Ed.D. Educational Administration and Leadership
Oklahoma State University

Ed.S. Educational Administration
Pittsburg State University, Pittsburg, KS

M.S. Educational Administration
Fort Hays State University

B.A. Education
Ottawa University

A.A. Independence Community College

Professional Licenses

District School Administration:
Kansas, Missouri, Oklahoma, Arkansas
Building Level Administration:
Kansas, Missouri, Oklahoma, Arkansas
Building Leadership: Kansas K-12
English – Kansas Highly Qualified 7-12, Arkansas, Oklahoma
Physical Education / Health Kansas 7-12

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Project History

Client	Project Location	Approximate Size
Energy Performance Contracts		
Solomon USD 393	Kansas	$110,000
North Ottawa County USD 239	Kansas	$118,000
Troy USD 429	Kansas	$70,000
Perry-Lecompton USD 343 (Phase I)	Kansas	$787,000
Perry-Lecompton USD 343 (Phase II)	Kansas	$725,000
Valley Falls USD 338	Kansas	$802,000
Valley Falls USD 338 (Phase II)	Kansas	$450,000
Woodson County USD 366	Kansas	$1,200,000
Southwestern College	Kansas	$1,100,000
Newton USD 373 – (Phase 1)	Kansas	$1,140,000
Wabaunsee USD 329	Kansas	$430,000
Brown County Jail	Kansas	$300,000
Kansas Wesleyan University	Kansas	$2,400,000
Hoisington USD 431	Kansas	$663,000
Comanche County USD 300	Kansas	$1,324,000

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Douglas R. Adams, Jr.

Project Manager

As a Project Manager, Doug facilitates the smooth execution of ESP energy performance contracts from conceptual design to implementation. He manages all aspects of the design-build process, from the initial comprehensive energy audit to the completion of construction for all energy conservation measures. He is responsible for pre-construction, construction, start-up, and commissioning services. His duties include managing design consultants and subcontractors and monitoring progress milestones with clients. Doug has the proven ability to build strong relationships with clients and contractors, making him an exceptional liaison and partner with the ability to manage resources under tight deadlines.

Doug brings over twenty-five years of experience in the general construction, healthcare, and real estate development industries with varied roles in operations, logistics and financial management.

Education

B.S., Business Administration
University of Phoenix

Prior Experience

DRA Enterprises – Phoenix, AZ **1995-2019**
Project Manager

Doug managed numerous design-build projects and led internal HR functions for a privately-held construction firm facing rapid growth. Beginning with hands-on construction roles, Doug served as a Construction Superintendent on multiple jobs in health care, senior care, hospitality and real estate markets. He worked with senior management and owners on project design, scope, RFPs, permitting and deliverables, and with onsite contractors and vendors to ensure a timely completion of construction deadlines. Doug was also responsible for oversight of capital expenditures, budgeting and scheduling and OSHA compliance. He has extensive background in legal and HR compliance issues.

Tre Group, LLC – Phoenix, AZ **2003- 2005**
Managing Partner & Project Manager

Doug directed the master planning and project management of a 120-unit luxury, $35 million beach resort condominium in Sonora, Mexico. He led negotiations on site design and initial architectural concepts with U.S. and foreign parties, secured investment funding, oversaw construction and led marketing outreach.

Alexander Coleman

Construction Manager/Project Developer

Alex brings twenty-five years of experience in hands-on installation and project management for energy efficiency improvements across numerous facilities throughout the U.S. and Caribbean. Alex has in-depth expertise in lighting and water efficiencies for municipalities, schools, prisons, hospitals and commercial facilities. He has handled conservation projects from preliminary assessments to construction completion, managing contractors during site audits, construction bids, walk-throughs, and project development. He has led numerous site audits, developed priorities for energy conservation measures, and conducted and measurement and verification reviews.

Alex has managed subcontractors through the entire construction process, ensuring thorough scope of work proposals, product specification and submittal reviews, and measurement and verification data collection. His previous work in on-going process improvements and hands-on problem-solving contributed to the growth in one company's revenues from $2M to over $22M.

Alex's work at ESP entails project oversight for overall cost control, risk management, and feasibility. During the construction phase, he coordinates subcontractors who install lighting, water, HVAC and building envelope energy conservation measures, and ensures timely project completion.

Education

Valencia Community College

Certifications

OSHA 10
NFPA-70E
Aerial and Forklift
LOTO (Lock Out/Tag Out)
Asbestos Recognition
First Aid/CPR/AED
Confined Space
Electrical Safety
MARS Meter Testing

Professional Experience

Aqua Energy 2020-2022
Senior Project Manager – Lighting and Water Solutions

RTS WATER SOLUTIONS 2015-2020

Project Manager– Water Solutions/Utility Meter Replacement Projects

SMARTWATT 2011-2015

Project Manager– Commercial, Industrial, and Small Business Lighting Programs

Industrial Energy Services 2005-2011

Operations Manager/Senior Project Manager– Retail Lighting Projects

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Project History

Client	Project Location	Approx. Size
Energy Performance Contracts		
Wichita Public Schools	Kansas	$500,000
Kansas Wesleyan University	Kansas	$2,400,000
Woodson USD #366	Kansas	$1,200,000
Ft Bragg	North Carolina	$4,300,000
City Of Liberty	Missouri	$4,700,000
City of Raymore	Missouri	$800,000
City of Marquette	Michigan	$12,400,000
FedEx	Nationwide	$5,000,000
Kmart/Sear's	Nationwide	$2,000,000
Walmart	Nationwide	$3,200,000
Advanced Auto Parts	Nationwide	$12,000,000
Ralphs Grocery Stores	Nationwide	$1,200,000
Washington Mutual Bank	California	$1,600,000
Ft. Dix	New Jersey	$2,500,000
Sprint Telephone	Nationwide	$3,700,000

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Collin Jones

Project Manager/Engineer

Collin joined Energy Solutions Professionals in October 2023 as a Project Engineer on the operations team. In this role, Collin works closely with clients to understand their needs, conduct detailed field audits and develop energy savings calculations as a basis for energy conservation measures.

Collin graduated in 2019 from the University of Kansas with a degree in Mechanical Engineering. He brings to ESP hands-on experience in renewable energy installations and mechanical, electrical and plumbing (MEP) system design. He works with a range of leading software solutions for the construction and energy services industry.

Education
B.S., Mechanical Engineering
University of Kansas

Professional Experience

HOSS AND BROWN ENGINEERS 2021 –2023

Staff MEP Engineer

Collin performed a range of mechanical, electrical and plumbing calculations, including utility consumption evaluations and tariff reviews. He drafted plan sets and evaluated submittals and specifications for diverse projects.

SOLAR DESIGN STUDIO 2020- 2021

Contracted PV Electrical Designer

Collin created commercial and residential PV system designs in a rapidly growing studio. His analysis included integration of battery and generator backups. He performed array calculations (wire and conduit sizing, battery storage).

GOOD ENERGY SOLUTIONS 2019- 2020

PV Electrical Designer and Installer

Collin gained first-hand experience in the solar industry at the ground floor level. He performed analyses and detailed calculations for new arrays and evaluated required reinforcements to support existing structures. He managed array installations from design to commissioning.

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Kimi Dowling

Marketing Specialist

Kimi is a skilled marketing specialist with over 11 years of experience in marketing, public relations, and graphic design. Throughout Kimi's career, she has honed her expertise in developing and executing successful marketing strategies for a variety of industries, including higher education and manufacturing.

Trained as a graphic designer, Kimi has skills in many programs including the Adobe Creative Cloud Suite, Figma, and WordPress. In her role as a communications specialist, she has overseen a diverse portfolio of social media accounts, served as a photographer for a range of projects, and played a pivotal role in organizing numerous large-scale events.

Kimi's work at ESP entails social media management, trade show management, marketing material creation, and staff support. Through developing useful promotional materials, she hopes to express the success of projects, promote ways to help clients, and bring great awareness to all that ESP has to offer.

Education

Bachelors of Science in Technology
Commercial Graphics
Pittsburg State University

Certifications

Google UX Design
Professional Certificate

Professional Experience

SARIN ENERGY SOLUTION 2022-2023

Graphic Designer, UX Designer & Marketing Specialist

LABETTE COMMUNITY COLLEGE 2012-2021

Graphic Designer, Photographer & Social Media Manager

COVENANT HARVEST CHURCH 2011-2015

Graphic Designer, Photographer & Social Media Manager

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Eileen O'Hara

Energy Conservation Consultant

Eileen brings over twenty years of experience as a strategic business communicator to ESP. Her early career in academic administration and commercial real estate development led to marketing and strategic planning positions with a global building materials firm. As a consultant, she has conducted numerous marketing analyses and extensive research in energy efficiency in residential markets. She has been certified as a BPI Building Analyst since 2011.

Eileen partners with clients to ensure that awareness and conservation programs are tailored to specific objectives. She works closely with facilities, human resources and senior staff to design programs to reach out to building occupants before, during and after ESP's energy audits and energy performance contracts. Drawing upon behavioral change approaches, she helps nudge clients - watt by watt - to keep a lid on energy use over time.

Prior Experience

Efficiency Girl LLC

Eileen led research into energy efficiency measures for marketing whole house performance. She conducted audits and supported marketing programs during the height of national ARRA funding for training and expansion of the energy workforce.
She recognized the challenges of the industry to raise awareness and marketing education of residential and commercial customers, particularly of heating, cooling and ventilation advances.

Right Management Inc.

Eileen counseled numerous outplacement candidates at all organizational levels during the height of the Great Recession. She was recognized for her empathetic ability to brainstorm with clients, to write outstanding resumes and to coach individuals during one of the toughest job markets in recent years. She conducted research into the emerging green career sector, which piqued her own interest in energy efficiency trends and challenges.

Consultant

Eileen worked on marketing communications, strategic planning and outreach projects for Fortune 500, small business and entrepreneurial clients in telecommunications, building sectors. She conducted training workshops, coached individuals and created toolkits for employee engagement.

Education

MBA

The Darden School,

University of Virginia

BSFS

The School of Foreign Service,

Georgetown University

eScholar

University of Missouri-Kansas City

Certification

BPI Building Analyst

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Project History

Client	Project Location
Energy Conservation Training	
Culver-Stockton College	Missouri
Bethany College	Kansas
Russell Regional Hospital	Kansas
Kansas State Polytechnic	Kansas

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Susan C. Hennahane

Energy Analyst/Office Manager

As an energy analyst, Sue analyzes historic utility usage and costs, rate structure and billing history which identifies consumption/cost trends and billing anomalies. She is a key contributor to the preparation of reports for Preliminary Energy Audits, Investment Grade Audits and Measurement & Verification reports. She serves as the administrative contact during implementation of the Energy Performance Contract - processing applications for payment, securing certificates of insurance and bonds, compilation of submittal and operation & maintenance manuals, as well as assisting with warranty management.

As the Office Manager, Sue is responsible for all administrative functions and strives to make the office operations more efficient. Her duties include invoice processing, ordering supplies, equipment maintenance, creation of templates, scheduling conferences, securing utility rebates, and conducting market research.

Prior Experience

Tennis & Athletic Club, 2010-present

Front Desk Associate

In her role as a front desk associate, Sue provides excellent customer service by greeting clients, answering phones, directing members to classes/courts/etc. She performs point of sale transactions, answers questions, diffuses complaints, gives facility tours and conducts opening/closing procedures.

SCH & Associates, 2004-2010

Publications Editor

In this role, Sue designed and created the layout for several area high school activity programs, school and neighborhood directories, various newsletters and user manuals. She also created ads for several clients that marketed in these publications.

H&R Block, Inc. 1999-2003

Senior Business Analyst

As a Senior Business Analyst, Sue consolidated and posted federal and state tax software development status, tracked issues and resolutions, and communicated milestones across multiple departments. She prepared and delivered budgets, forecasts, variance analysis and was involved with corporate strategic planning. Sue established a month-end financial analyst process and a standardization of reports as well as developed disaster recovery plans across several departments. In addition, she researched viable opportunities and developed and delivered several business cases to upper management.

Andersen Consulting, 1987-1991

Staff Consultant (1987-1989), Senior Consultant (1989-1991)

While at Andersen Consulting, Sue worked in a wide variety of roles primarily in the oil and gas sector. As an Information Systems Consultant, she held increasingly responsible positions as part of a team assigned to evaluate, propose, design and implement information systems to enhance customer efficiency and productivity across a broad range of business sectors.

Education

M.B.A. Information Systems Management,
Baylor University

B.S. Mechanical Engineering,
University of Texas

Community Service

Kansas City Young Matrons – 2008 to present (50-75 hours annually)

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Project History

Client	Project Location
Energy Performance Contracts	
Bonner Springs USD	Kansas
Chisholm Creek Utility Authority	Kansas
Culver-Stockton College	Missouri
Kansas State Polytechnic	Kansas
Sulgrave Regency Condominiums	Missouri
Wornall Plaza	Missouri
Russell Regional Hospital	Kansas
Truman State University	Missouri
Neosho County Community College	Kansas
Pershing Lofts	Missouri
Manhattan Condos	Missouri

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Coleen Flathman

Chief Financial Officer

As the Chief Financial Officer, Coleen is responsible for all accounting and financial operations, including risk management, cash management (accounts payable and receivable) and cost analysis. Her duties include evaluation and analysis of all financing proposals to ensure that we secure the absolute best-value proposal for our clients. She maintains company records in a generally accepted accounting format, and tracks project finances to maintain accuracy of all invoices and purchase orders.

Prior Experience

Employers Reinsurance Corporation, 1991-2000

Auditor (91-99), Senior Marketing Financial Analyst (99-00)

As an Auditor, Coleen was responsible for performing audits at clients throughout the United States and Europe to insure that reinsurance contracts were being reported and accounted for correctly by clients. As a Financial Analyst, Coleen was responsible for accuracy of reporting by reinsurance clients and the related financial statement presentation for insurance regulators, external auditors and reporting to ERC's parent, General Electric. She also performed long term projections for a variety of contracts and set up a reconciliation system for general ledger accounts.

Franklin Savings Association, 1988-1991

Auditor (88-90), Director of Internal Audit (90-91)

As the Director of Internal Audit, Coleen was responsible for all aspects of administration in the internal audit department: hiring, audit planning, budget development and compliance, and work paper review. Specific duties included coordination of performance of various audit procedures with external auditors; development, review and approval of detailed audit programs for each audit, including applicable regulations, available system reports, and standard internal controls; preparation and review of detailed work papers indicating the work performed; evaluation of control systems in the areas audited; and making recommendations for improvements and revenue enhancement. Her role also required her to prepare and review systems flowcharts; identify and document systems of financial and operational controls; and write and review audit reports with senior management.

First City Bancorporation, 1984-1988

Staff Auditor (84-85), Senior Auditor (85-86), Supervisor (86-87), Resident Auditor (87-88)

As audit supervisor and resident auditor, Coleen prepared operational and financial audits for seven member banks and one lead bank. She was responsible for the supervision and training of all staff auditors. She also developed and revised audit programs, wrote and presented audit reports to senior management, and prepared audit work schedules, time status reports and variance analysis.

Education

B.S. Accounting,
University of Kansas

B.S. Business Administration,
University of Kansas

Certifications, Training, Awards

Certified Public Accountant

LOMA Certification

Six Sigma Recognition for Account Reconciliations (1999)

ERC Financial Awards (Chairman's and Managers) – 92, 94, 95, 97, 98

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Rick Ginestra

Construction Manager

Rick has over 38 years of experience within the coal-fired electrical power plant industry. He has worked in a wide variety of roles including apprentice and journeyman electrician, laborer, equipment operator, troubleshooter, programmer and journeyman instrument and process control technician. Rick has performed multiple inspections and maintenance on electrical systems to ensure safety and functionality, adhering to safety standards and local codes.

As a construction manager, Rick provides on-site management that is critical to ensuring the project flows smoothly and has the smallest amount of impact on the client's day-to-day operation. He holds regular on-site meetings in which activities are planned using a three-week look-ahead approach, and all job-site issues are discussed and addressed.

Education

Northwest Missouri State University

Prior Experience

Kansas City Power and Light – Kansas City **1979-2017**

Journeyman – Instrument and Process Control Technician **2003-2017**

Rick's work history involved many roles at KCPL's coal-fired electrical power plants - Grand Avenue, La Cygne, latan and Hawthorn. He designed control logic and conducted programming and troubleshooting of instrument controls. Systems included DCS logic Allen Bradley, Emerson controls, Mark V (Steam turbine controls), and Wonderware. He excelled at programming and troubleshooting pressure transmitters as well as performing calibrations and repairs.

Instrument and Process Control Technician Trainee **2000-2003**

Apprentice / Journeyman Electrician **1990-2000**

Rick worked on ac/dc circuits, motor controllers, plc controls, relay logic and variable frequency drives. He was responsible for interpreting schematics and troubleshooting of high voltage circuitry while adhering to rigorous safety and OSHA standards.

Storeroom Attendant **1983-1990**

This involved organization, stocking of parts, ordering plant supplies and conducting inventory.

Plant Equipment Operator **1980-1983**

Rick was responsible for operating plant equipment and overall safety of the equipment.

Project History

Client	Project Location	Role/Responsibility
Project Experience		
Chisholm Creek Utility Authority	Park City, KS	Construction Manager
Manhattan Condos	Kansas City, MO	Construction Manager
Perry-Lecompton USD 343	Perry, KS	Construction Manager
Solomon USD 393	Solomon, KS	Construction Manager
North Ottawa County USD 239	Minneapolis, KS	Construction Manager

Riley Rahe

Construction Superintendent

Riley joined the Energy Solutions Professionals team in June 2020 as a Construction Superintendent. In this role, Riley works hands-on with clients to implement projects. Riley collaborates with the ESP team to ensure smooth execution of energy conservation measures from day one of construction to final completion.

He communicates daily with client facilities staff to notify them of contractor schedules and to establish parameters for daily working conditions and material deliveries. He supervises subcontractor crews on-site including lighting, building enclosures, water fixtures and HVAC change outs. Riley manages issues regarding construction delays and keeps everyone informed of potential project impacts.

Riley documents daily progress and safety concerns with multiple images and safety checklists, and uploads reports to clients and ESP using Raken software. With this thorough documentation, each project can be tracked throughout the entire construction process.

Riley maintains a punch list for all subcontractors and ensures completion of all items prior to final closeout.

Education

A.A, Liberal Arts, Barton Community College

Additional coursework: Butler Community College

Certifications/Training

OSHA 10

National Career Readiness Certificate – Platinum (ACT WorkKeys)

Prior Experience

Simpson Construction Laborer – Fall 2017

Supported construction remodeling project transforming a high school into a performing arts center. Duties included site security and supervision of temporary employees. Worked full-time while pursuing online classes for Associates degree.

Simpson Construction Intern – Summer 2017

Construction management intern

Participated in summer construction of local elementary school on tight deadline. Responsible for job site supervision and security.

Project History

Client	Project Location	Approx. Size
Energy Performance Contracts		
Kansas Wesleyan University	Salina, KS	
Brown County Jail	Hiawatha, KS	
Woodson County USD	Yates Center, KS	
Neosho County Community College	Chanute, KS	
Southwestern College	Winfield, KS	

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Reference Letters

RUSSELL REGIONAL HOSPITAL

January 30, 2017

To Whom It May Concern:

As the Chief Executive Officer of Russell Regional Hospital, I want to provide our experience with Energy Solutions Professionals (ESP). We first engaged with ESP in 2014, when the company performed an investment grade audit. Following the audit, ESP provided an analysis projecting our energy savings over a 20-year period. The savings projected was important as it would allow us to utilize our revenue for healthcare and important capital needs for our hospital in the future.

Following the investment grade audit, we signed a contract with ESP that totaled $2,037,259, which included two new emergency generators. This project showed that we would achieve payback for the cost of the infrastructure upgrade in about 9.6 years, and enjoy the savings and upgraded equipment for many years to come. The cost of the upgrade was substantially lower than other competitors in Kansas.

During the construction period of the energy savings project we found ESP to be very reliable, used competent subcontractors, completed work on time, and were very mindful of our need to continue to treat patients. Their estimates were extremely accurate and we have actually experienced not only the projected savings but actually greater savings.

Russell Regional Hospital received national recognition from American Society of Healthcare Engineering (ASHE) as the number one hospital for energy savings and greenhouse emissions in the United States. This is quite an honor and we owe the work to ESP. Their estimates were extremely accurate and we have experienced not only the projected savings, but actually greater savings. We adjust our savings for temperature and cost. Here are the energy costs over the past four years:

2013	2014	2015 (Work Completed)	2016
$357,926.35	$349,083.65	$263,511.21	$190,236.54

200 South Main (785) 483-3131 Russell, Kansas 67665-2997

Remember that we achieved substantial savings by June 2015, but in looking to 2013 and 2014 you can see our annual savings have been $167,689.81 and $158,847.11 compared to 2016. Our savings per month have averaged between $10,000 and $13,000 with the best news of all having a new infrastructure and peace of mind with new equipment moving into the future.

Based upon this experience I highly recommend ESP as the firm of choice to make improvement to a facility.

Sincerely,

Harold Courtois

Harold Courtois, CEO

Kevin M. Hill, County Attorney - 740-7401
Dawn M. Boyles, County Clerk - 742-2581
John Merchant, Sheriff - 742-7125

COUNTY COMMISSIONERS
Richard L. Lehmkuhl, District #1
Lamar Shoemaker, District #2
William Pollock, District #3
(785) 742-2471 - FAX-(785) 742-7705

Cheryl S. Lippold, Treasurer - 742-2051
Nellie Brockhoff, Register of Deeds - 742-3741
Steve Markham, Appraiser - 742-7232

COUNTY OF BROWN, STATE OF KANSAS

COURTHOUSE - 601 OREGON ST.
HIAWATHA, KS 66434-2283

May 10, 2021

To whom it may concern,

We are writing to recommend the services of Energy Solutions Professionals. ESP recently finished a job with Brown County and came in under the original contract sum. Their knowledge and attention to detail have aided in saving Brown County $13,677.

We feel confident in recommending ESP's services.

They were not only thorough but also easy to work with and always willing to take the time to discuss our concerns and respond to questions.

If you have any further questions, please feel free to contact us.

Sincerely,

Board of Brown County Commissioners

Richard L. Lehmkuhl, Chairman

Lamar Shoemaker, Member

William Pollock

William Pollock, Member

BETHANY COLLEGE

335 East Swensson Street (785) 227-3311
Lindsborg, KS 67456 www.bethanylb.edu

April 6, 2016

To whom it may concern:

In my role as Director of Campus Facilities for Bethany College, I have had the pleasure of working directly with the staff of Energy Solutions Professionals (ESP) from the initial contact throughout the comprehensive energy auditing, project planning, installation and monitoring processes of a $1.9 million energy performance upgrade project on the Bethany College campus. I have been approached in the past by several Energy Service Companies (ESCO's) with different plans and energy-saving proposals but none addressed the true financial and maintenance needs of the college, nor did they fully guarantee results. ESP is the exception, and they do it with honesty, integrity and a true desire to provide the best possible service to their client.

One of the most important ongoing issues of many small independent colleges is the need to address deferred maintenance and Bethany College is no exception. ESP's focus on energy savings as related to deferred maintenance is unmatched in the industry. They have well-defined, methodical procedures that holistically analyze and target the most cost-effective areas to address and they work intimately with physical plant personnel to make sure that they are addressing the most critical needs. Upgrades that were addressed on the Bethany College campus included lighting retrofits, plumbing retrofits, building infiltration improvements, HVAC system replacements including chillers, boilers, RTU's and split systems, a new HVAC digital energy management system (eliminating old pneumatic systems) and the installation of occupancy-based HVAC controls in several buildings. In addition, ESP provided an energy conservation training program to educate and inform building occupants about efficient energy usage that actually includes students participating in the process.

ESP's management team demonstrated a firm commitment to excellence in keeping the multiple projects on-track, on-time and under budget and a flexibility in being able to make changes to the scope of the project within budget parameters. Their project team members are knowledgeable, experienced and dedicated to providing a high level of service. ESP and their sub-contractors performed their duties around students, faculty and staff in a safe and friendly manner and went out of their way to make sure their work did not interfere with day-to-day operations of the campus.

In a nutshell, the college invested $1.9 million in energy performance upgrades that pay for themselves through energy savings while at the same time eliminating $1.2 million in deferred maintenance – a dream come true for a college on a limited budget, not to mention the benefits realized by the physical plant as a result of new equipment and controls. In addition, the savings guaranteed by ESP is exceeding expectations at 106%, so the college is actually spending less per month than it would have if the energy performance upgrades had not been done. In addition, these savings will continue to be realized throughout the financing term and beyond.

Jeff Flathman and Bob Miller, along with their entire staff are truly dedicated to providing the best service possible and I highly recommend them to anyone searching for similar solutions. Please feel free to contact me with any questions about the projects that were completed or my experiences with Energy Solutions Professionals.

Sincerely,

Randy Jirak, Director of Campus Facilities
National Management Resources
Bethany College 335 E. Swensson, Lindsborg, KS 67456
785-227-3380 Ext. 8316 jirakr@bethanyleb.edu

Graham County Hospital
Graham County Hospital Clinic

To Whom It May Concern:

As Chief Executive Officer of Graham County Hospital, I want to share my experience in working with the team at Energy Solutions Professionals (ESP). Our 37,000 square foot hospital, portions of which date back to the 1950s, was in need of critical renovations in order for us to continue to provide quality healthcare to our area residents. After learning about energy performance contracting, I was interested in determining whether we could save energy and use those utility dollars to help pay for the work.

We received competitive energy audits from Energy Solutions Professionals (ESP) and another firm, and after reviewing both, opted to work with ESP to implement our project due to our comfort with their technical skills, their inclusive approach, and the integrity they displayed throughout the process.

Our project was around a $650,000 undertaking, a significant portion of which involved replacing and centralizing our boilers in order to ease maintenance and reduce energy use. We added a building control system that allows us to monitor and run equipment only when it is needed, and we also replaced older lighting, piping, window air conditioners and windows. Not only are we saving energy, but the comfort inside the building has improved dramatically.

Their team truly excelled at managing the project, completing it on-schedule and within budget. Of key importance was that we had to be able to continue to provide care without disruption, which their on-site staff coordinated without issue, and ensured that our hospital remained clean and operable throughout construction.

Based on our interactions with the entire ESP team, I highly recommend this firm to anyone considering improvements to their facilities. Feel free to contact me if you would like to discuss additional specifics of our experience.

Sincerely,

Melissa Atkins

Melissa Atkins

Chief Executive Officer

304 W. Prout Street/P.O. Box 339/Hill City, Kansas 67642-0339/(785) 421-2121
FAX (785) 421-2034

Northwest Kansas Educational Service Center
703 W. 2nd Ave
Oakley, KS 67748
(913) 672-3125 (913) 672-3175 (fax)

November 5, 2018

To Whom It May Concern:

As the Executive Director of the Northwest Educational Service Center #602 (NKESC), I am writing this letter to share my experience in working with Energy Solutions Professionals (ESP). ESP successfully conducted our investment grade energy audit, worked with us to develop a plan for energy-efficiency and facility-improvements; and then implemented an Energy Performance Contract for the service center.

NKESC utilized energy performance contracting as an avenue to make needed improvements to our service center that wouldn't otherwise have been possible. We elected to use the services of the Facility Conservation Improvement Program (FCIP) through the state of Kansas. The FCIP provided oversight during the audit and throughout the Energy Performance Contract process. ESP identified energy conservation measures for our facility, provided data with cost and payback information for each measure, then assisted us in selecting measures that were either a good return on our investment or addressed critical facility needs.

NKESC was able to get nearly $180,000 in energy-saving improvements for our facility that will be paid for over time with energy and operational savings. The new equipment and technology to improve our facility included LED lighting upgrades, building infiltration improvements, an energy management system that included installing WIFI network programmable thermostats and replacing Split AC systems with high-efficiency units. In addition, ESP provided an energy conservation training program to educate and inform building occupants about efficient energy usage, staff training on using and maintaining newly installed equipment, and energy guidelines that can be tailored for our facility. To fund the project, we utilized a combination of capital funds and a lease purchase agreement. ESP was a great help in assisting us with securing third-party financing for the lease purchase agreement. This energy saving project more than met our goals of upgrading our HVAC system and obtaining facility upgrades without the need of passing on the cost to our member districts to pay for the facility upgrades.

I would highly recommend Energy Solutions Professionals and their dedicated team to others who are in need of similar solutions. Please feel free to contact me if you have any questions or would like to discuss our project and experience with Energy Solutions Professionals in greater detail.

Sincerely,

Daniel C. Thornton

Daniel C. Thornton
Executive Director

Pittsburg State University

VICE PRESIDENT FOR ADMINISTRATION & CAMPUS LIFE

May 20, 2008

To whom it may concern:

In my role as Vice President Administration and Campus Life for Pittsburg State University, I have had the pleasure of working with the founders of Energy Solutions Professionals, Jeff Flathman and Bob Miller, on two different occasions. I was extremely pleased with the integrity and professionalism they displayed while delivering high-quality solutions.

The first project involved over $4.4 million of campus-wide energy efficiency and facility improvements that covered everything from lighting, air conditioning and more efficient water fixtures, to replacement of central plant boilers and chillers. The project began with a significant hurdle when both of our aging primary boilers that provide heating for the majority of campus facilities failed before winter. The team worked hard to get the new boilers installed expeditiously in order to minimize our cost for temporary boiler rental. I was impressed with their ability to complete such a large scope of work that affected nearly every building on campus without causing any significant disturbance to the daily activities of students and staff. Further, they completed the project ahead of schedule and without any price increases.

The second project was a unique and challenging renovation of the HVAC, water, and wastewater piping systems in Nation Hall East and West; two multi-story residence halls that were constructed in the 1950s. Due to their age, the water lines had begun to fail and leak in several places, causing damage and increasing overall water consumption. The work involved tearing into the existing walls to remove and replace the piping systems, along with installing new valves, fan coil units, and temperature controls. The project had to be completed in a tight timeframe over the summer while students were away so that they could return to their rooms for the fall semester, which they accomplished. They were also able to get the domestic water heater for the student housing facility replaced in the same time frame.

Based on my experience with the dedication of these individuals, I continue to recommend them to others who are in need of similar solutions. The University is reaping the rewards of the energy savings and improved facility conditions that resulted from these projects. Please feel free to contact me if you have any questions or would like to discuss my experiences further.

Sincerely yours,

John D. Patterson, Vice President
Administration & Campus Life

1701 South Broadway • Pittsburg, Kansas 66762-7547 • 620/235-4108 fax: 620/235-6002
jpatters@pittstate.edu • www.pittstate.edu/admin/vpacl

Bonding Letter

Bank Reference Letter

Sample M&V Report

Measurement & Verification Report
prepared for

North Wood R-IV

Salem, MO

December 2019

Energy Solutions Professionals

9218 Metcalf | Suite 274
Overland Park, KS 66212
www.energysolutionsprofessionals.com

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Introduction

Energy Solutions Professionals is pleased to present this Measurement & Verification Report to North Wood R-IV School District. This report contains a summary of the measurement and verification plan agreed to when the project was developed, the results of the measurements taken, the savings achieved, and recommendations for ongoing activities and maintenance you can perform that will optimize efficiencies and ensure you continue to meet and exceed savings in future years.

We are pleased to inform you that the results of the measurements taken indicate that you should be exceeding the energy and savings amounts guaranteed for this project (see **Table 1**).

Table 1 | Annual Savings: Guaranteed vs. Achieved

	Guaranteed Annual Savings	**Achieved Annual Savings**
Utilities	$18,187	$18,809
Operations & Maintenance (O&M)	$12,594	$12,594
Totals	**$30,781**	**$31,403**

Notes:

1. The Operation & Maintenance savings were quantified and mutually agreed upon and represent reduced costs for replacement, repairs, materials and/or outsourced maintenance for items that include lighting and HVAC that were replaced through this project.
2. North Wood R-IV keeps 100% of the excess savings generated by this project.

Additional Benefits

While a major goal of this project was to reduce existing utility expenses and divert these dollars for investment in your building, the benefits achieved go well beyond the energy savings, and include the following:

Improved indoor environment

Improving lighting and temperature control has an extremely positive impact. Occupants will continue to benefit from a more comfortable and enjoyable learning and working environment.

New standardized equipment

Newer equipment has fewer maintenance problems, allowing your staff to focus on upkeep and preventative maintenance that will increase the overall life of your new equipment. Standardized equipment also allows for stocking smaller quantities of parts and makes replacements and repairs much easier. We calculate that your Operations & Maintenance savings from this project should be $12,594.

Local economic boost

Implementing this project using dollars that were formerly being spent on utility bills creates a local economic boost by generating jobs, purchases, and projects that would have otherwise not existed. According to the National Association of Energy Services Companies, “for every $1 invested in an

energy efficiency retrofit, 40¢ is returned to the local community in payment for labor and other direct costs purchased locally."

Occupant and community pride

North Wood R-IV is a key part of your local community and the students that you serve. Improving your facilities demonstrates your ongoing commitment to providing the best possible learning and working environment for students, teachers, staff and visitors.

Positive environmental impact

By implementing the energy-saving measures that were part of this program, you are saving energy annually in the amounts of 37,222 kWh of electricity and 11,968 gallons of propane consumption. That has an overall positive impact on the environment, and is equivalent to:

- Saving 11,567 gallons of gasoline per year, or
- The amount of electricity used by 17.9 homes in a year.

Additionally, you have reduced your Carbon Footprint by 226,628 pounds of CO_2e per year.

Recap of Measurement and Verification Plan

Before we began installation of any energy saving measures in your facilities, we mutually agreed to a plan of what upgrades would be measured, how they would be measured, and what savings goals we needed to achieve. We have included the measurement and verification plan that was outlined in the contract below.

Table 2 | Measurement & Verification Plan

ECM Description	M&V Methodology	Measured Parameter	Number of times and/or duration measured
Lighting Improvements			
LED Tube Replacement	Option A	kW	1 time
Fixture replacement			1 time
LED lamp retrofit			1 time
Energy Management System			
Scheduling Setpoints	Option A	Programming	Ongoing
Building Envelope			
Infiltration Reduction	Calculated	N/A	N/A
Mechanical Upgrades			
High efficiency heat pumps	Calculated	N/A	N/A
Roof Work			
Roof Replacement - West & Original Roof Repair - Metal Gym	Calculated	N/A	N/A
Operation and Maintenance			
Operational & Maintenance	Calculated	N/A	N/A

Results of Measurements Taken

Lighting

Energy Solutions Professionals installed new energy-saving LED lamps throughout several buildings. Lighting savings were verified by directly measuring the actual wattage consumption for a representative cross-sectional percentage of the retrofits. These measured values were then compared to the values that were used for calculating the savings. The savings are determined to be achieved when the average measured wattage value (for each representative fixture type measured) is found to be less than the value used for savings calculations.

Table 3 on the following page shows the fixtures measured, the goal wattage, and the actual measured wattage. The measurements show that all of the LED retrofits are exceeding their savings goals. In total, lighting measurements show that the savings for this improvement is performing at 102.9% of the goal.

Table 3 Lighting Measurements

Item Contributing to 90% of Savings	Existing Fixture Type from Lighting Table in Scope of Work	Retrofit Fixture from Lighting Table in Scope of Work	Measured Fixture Count	Baseline Pre-Retrofit Demand	Measured Pre-Retrofit Demand (Average)	Guaranteed Post-Retrofit Demand (Average)	Measured Post-Retrofit Demand (Average-lower is better)	% of Guarantee Achieved
				(watts/fixture)				
1	A2x4T-4L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	97	119.0	119.0	47.0	46.1	101.3%
2	FT-WP-1L-HID-HPS-400W	90W LED Large WallPack	9	464.0	464.0	108.7	108.0	100.2%
3	4'-AW-2L-4'-F32T8	Install new 2x2 flat panels	96	60.0	60.0	31.5	30.0	105.3%
4	P2x4T-4L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	26	60.0	60.0	23.5	20.2	109.0%
5	4'-W-3L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	32	89.0	89.0	35.2	35.9	98.7%
6	GEN-2L-INC-60W	A19-9W-30	26	120.0	120.0	23.1	15.7	107.6%
7	P2x4T-3L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	12	89.0	89.0	35.2	36.2	98.1%
8	P2x4T-4L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	7	119.0	119.0	47.0	47.1	99.9%
9	4'-S-2L-4'-F32T8	Install new 2x2 flat panels	19	60.0	60.0	31.5	29.9	105.6%
10	A2x4T-4L-4'-F32T8	Install new 2x2 flat panels	14	119.0	119.0	34.5	29.9	105.4%
11	4'-S-2L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	14	60.0	60.0	23.5	14.3	125.2%
12	4'-AW-4L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	53	119.0	119.0	47.0	46.8	100.3%
								102.9%

Energy Management System

Energy Solutions Professionals installed a new energy management system to provide central control of the building's HVAC system. The goal of this improvement was to minimize the run time of heating and cooling equipment during unoccupied times while maintaining comfortable indoor temperatures during times of occupancy.

Savings for this measure are achieved by maintaining the set points and schedules per our recommendations. We understand that your buildings, and the activities and occupancy of certain areas of your buildings, are dynamic and that you will need to vary from the optimal setting from time to time. You also have a few areas with special requirements for schedules or temperatures because of the use of a particular space or building. What's most important is that settings are returned to their optimal set point after the unexpected change in schedule and/or set point has occurred.

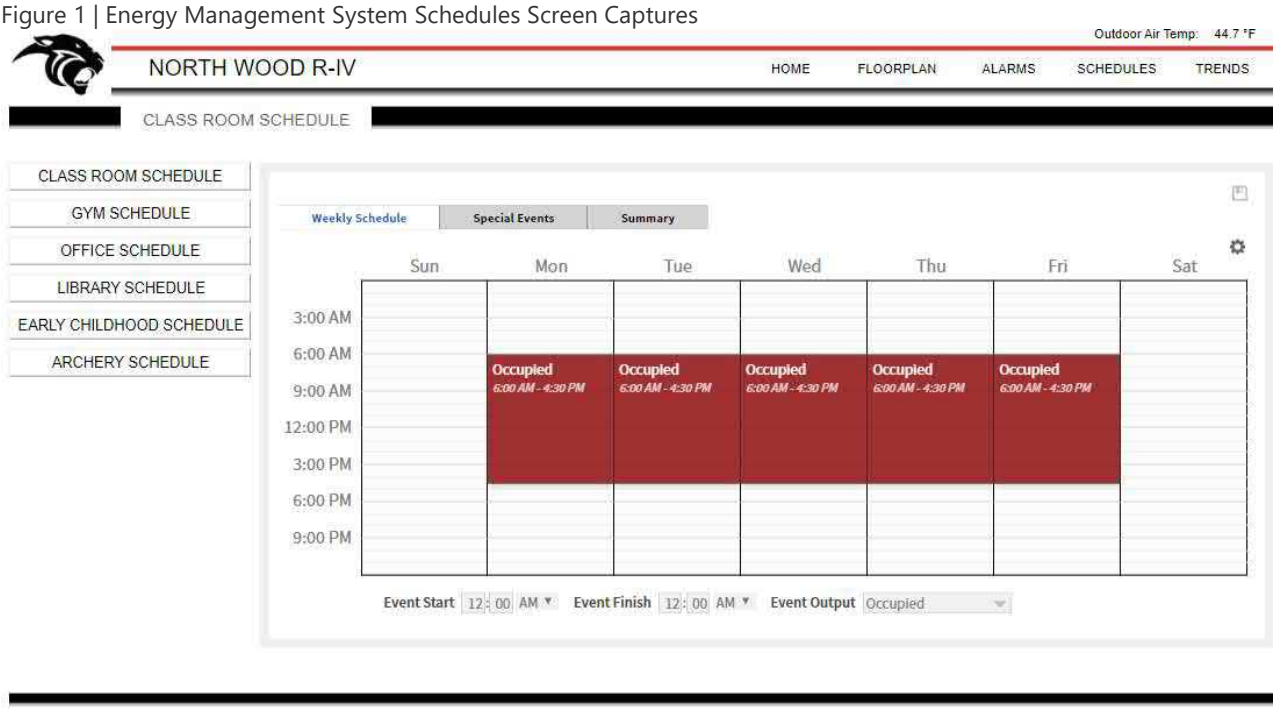
Based on the data we collected, you will be achieving the savings for this measure. Your occupancy schedules are set per our recommendations.

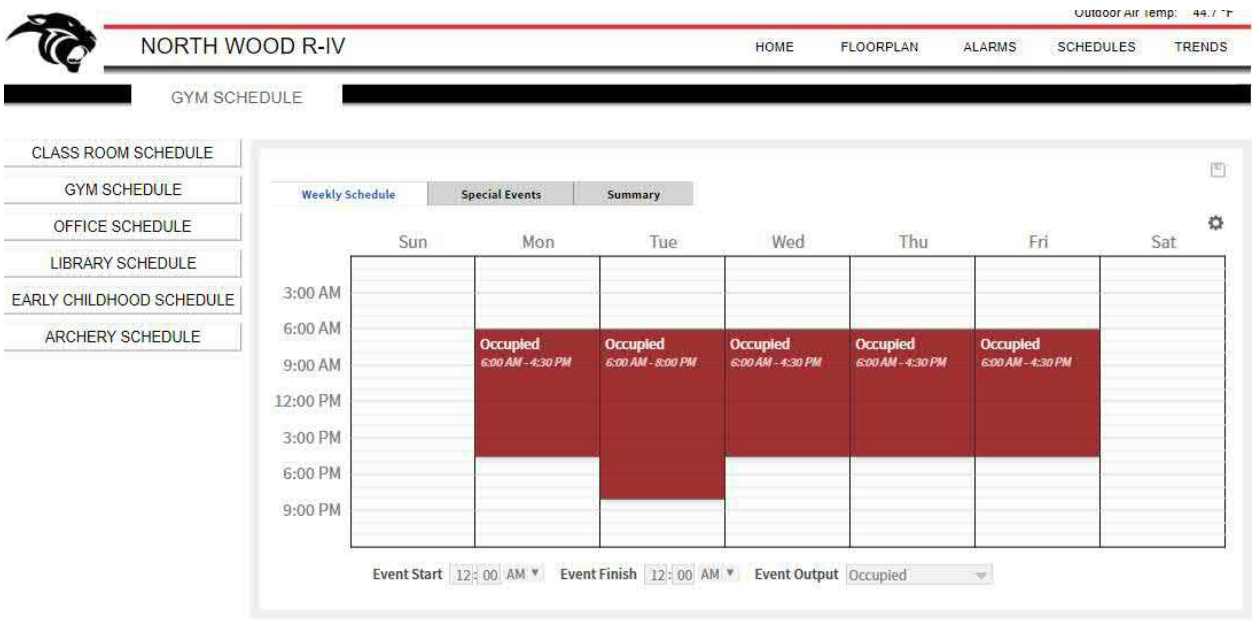
Screen captures showing the goals and actual settings for each of the spaces controlled are included in the appendix of this report.

Table 4 | Energy Management System Setpoints

Temperature Set Points	Heating	Cooling
Occupied	70'F - 74'F	75'F – 78'F
Unoccupied	55'F – 60'F	85'F

Figure 1 | Energy Management System Schedules Screen Captures




NORTH WOOD R-IV
HOME
FLOORPLAN
ALARMS
SCHEDULES
TRENDS
GYM SCHEDULE
CLASS ROOM SCHEDULE
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LIBRARY SCHEDULE
EARLY CHILDHOOD SCHEDULE
ARCHERY SCHEDULE
Weekly Schedule
Special Events
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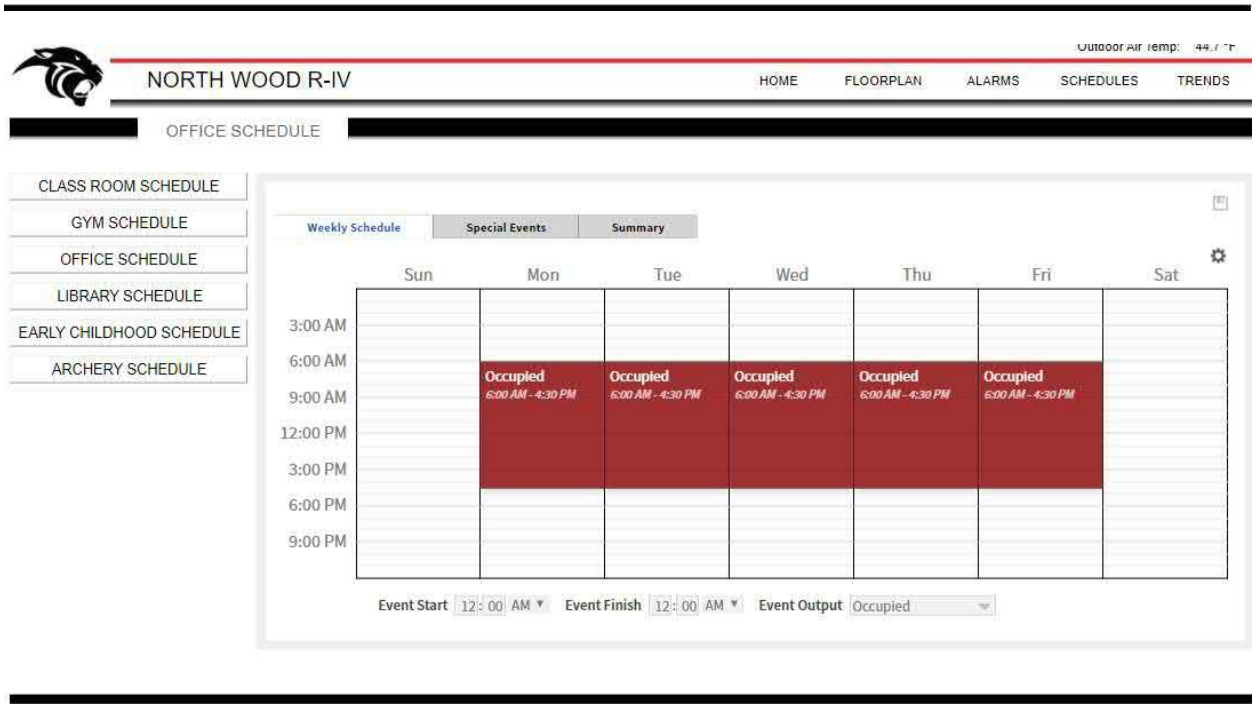
Event Finish 12 : 00 AM
Event Output Occupied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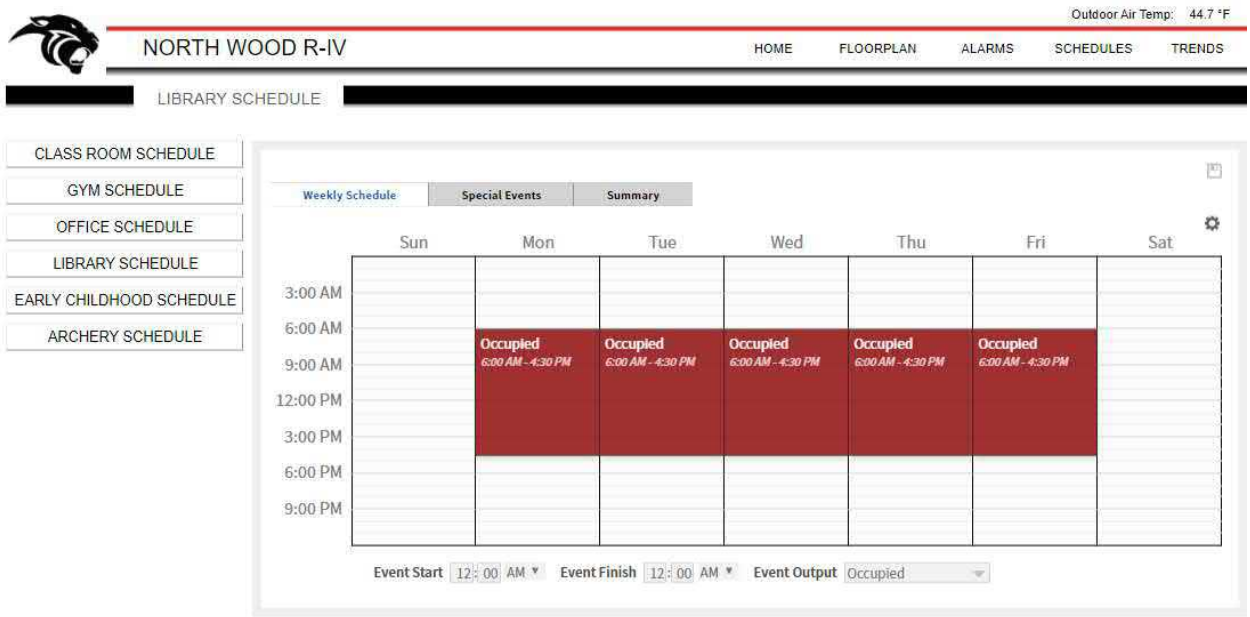
Outdoor Air Temp: 44.7 °F
NORTH WOOD R-IV
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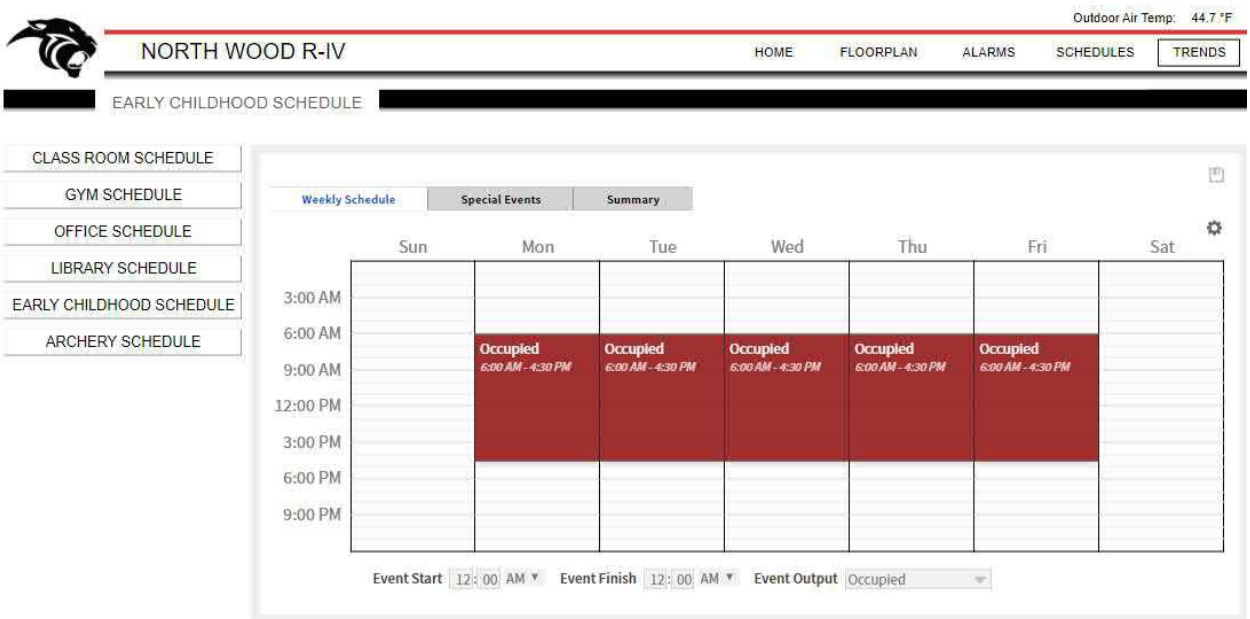
Event Start 12 : 00 AM
Event Finish 12 : 00 AM
Event Output Occupied


Outdoor Air Temp: 44.7 °F
NORTH WOOD R-IV
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6:00 AM - 4:30 PM
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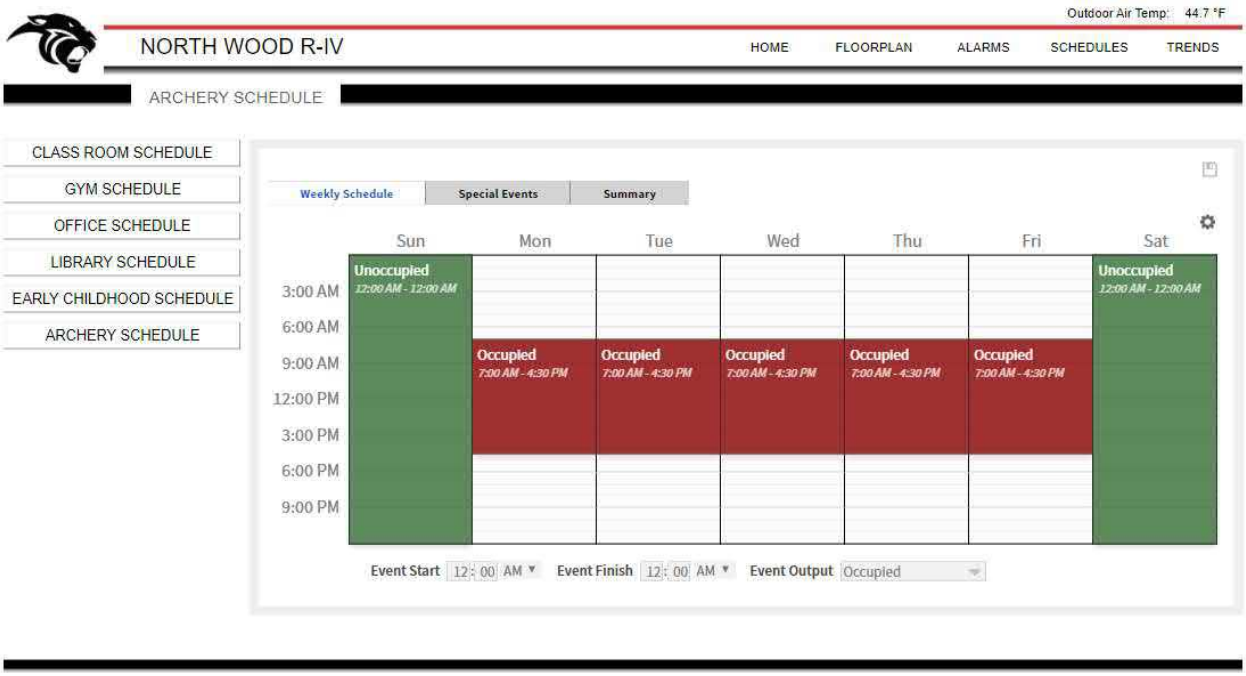
Outdoor Air Temp: 44.7 °F
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9:00 AM
12:00 PM
3:00 PM
6:00 PM
9:00 PM
Unoccupied
12:00 AM - 12:00 AM
Occupied
7:00 AM - 4:30 PM
Event Start 12 : 00 AM
Event Finish 12 : 00 AM
Event Output Occupied

Savings Achieved

We are pleased to report that the energy saving improvements that you selected as part of your performance contracting project are generating savings in excess of our guarantee. The energy saving measures are exceeding the expected goals. Table 5 shows the savings results from each of the energy saving measures.

Table 5 | Performance vs. Guarantee by Energy Saving Measure

NORTH WOOD R-IV - GUARANTEED SAVINGS SUMMARY

	GUARANTEED ENERGY SAVINGS					ACHIEVED ENERGY SAVINGS				
ECM	kW	kWh	Gallons		$	kW	kWh	Gallons		$
LED Lighting Improvements	143	47,809	-	$	3,953	147	49,195	-	$	4,575
Building Envelope Improvements	-	4,262	729	$	1,350	-	4,262	729	$	1,350
Mechanical Upgrades	(116)	(43,947)	7,204	$	5,822	(116)	(43,947)	7,204	$	5,822
Building Management Systems	-	25,828	3,088	$	5,708	-	25,828	3,088	$	5,708
Roof Replacements	-	1,884	948	$	1,355	-	1,884	948	$	1,355
Ceiling Tile Replacements	-	-	-	$	-	-	-	-	$	-
TOTALS	**28**	**35,836**	**11,968**	**$**	**18,187**	**28**	**37,222**	**11,968**	**$**	**18,809**

Ongoing Activities to Maintain Savings

The most important thing that your staff can do to continue to achieve or improve your energy savings is to maintain the systems installed per the manufacturers' and ESP's recommendations. The specific preventative maintenance plans and procedures can be found in the Operations & Maintenance manuals we delivered to you at the end of construction. In addition to maintaining the systems, a key component of achieving and exceeding the savings is to proactively monitor the energy management system to ensure systems are not running when facilities are unoccupied.

Table 6 highlights some of the best practices and suggestions for maintenance and settings that will maximize the savings you are able to achieve in the future.

Table 6 | Preventative Maintenance Suggestions to Maximize Savings

Measure	Preventative Maintenance and Recommendations to Enhance Energy Savings
Lighting	Replace lamps with matching wattage LED lamps
Building Infiltration	Repair any damage to weather stripping, caulking and sealing.
Building Management System	Closely monitor schedules and set points to match occupied hours and establish temperature set points that optimize savings without overly impacting comfort.
Replace AC with Heat Pump Systems	Follow manufacturer's recommended maintenance.

Future Services

This measurement and verification report conclude our current obligation for verifying your savings; however, we look forward to continuing to assist you with warranty issues and hope that we may have the opportunity to work with you again in the future.

ESP also believes that continuing to remind and encourage occupants to save energy in their daily activities will have dramatic impact on lowering your utility bills.

Should you desire to have us conduct any additional measurements of your energy savings in the future, or if you have any other needs, please don't hesitate to contact us. We have truly enjoyed the opportunity to assist North Wood R-IV with your energy and infrastructure needs, and hope that our ***energy efficiency | simply*** approach resulted in ESP exceeding your energy saving and facility improvement expectations for this project.

Copies of Measurement Reports

LIGHTING EFFICIENCY MEASUREMENT & VERIFICATION FORM

Item Contributing to 90% of Savings	Existing Fixture Type from Lighting Table in Scope of Work	Retrofit Fixture from Lighting Table in Scope of Work	Location of Measured Fixtures	Measured Fixture Count	Estimated Pre-Retrofit Usage	Baseline Pre-Retrofit Usage	Estimated Post-Retrofit Usage	Measured Post-Retrofit Usage	Notes
					(watts/fixture)				
1	A2x4T-4L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	Center area-Main entrance || 134 by kitchen	8	119		47.0	45.35	
			South wing || Nurse 129	3	119		47.0	46.8	
			TOTAL =	11			= AVG =	46.07	
2	FT-WP-1L-HID-HPS-400W	90W LED Large WallPack	Exterior	1	464		108.7	107.95	
			TOTAL =	1			= AVG =	107.95	
3	4'-AW-2L-4'-F32T8	Install new 2x2 flat panels	Center area-Main entrance || Main Hall	1	60		31.5	29.97	
			TOTAL =	1			= AVG =	29.97	
4	P2x4T-4L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	Gymnasium w/LEDs already || Hall to gym	4	60		23.5	40.4 20.2	4@ 4TUBE 10.1/TUBE 2@ 2TUBE 10.1/TUBE
			TOTAL =	4			= AVG =		
5	4'-W-3L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	South wing || 133 w/ Library	2	89		35.2	35.91	12-3TUBE 12W/TUBE 11.97
			TOTAL =	2			~~AVG~~	47.88	12-4TUBE 12W/TUBE 11.97
6	GEN-2L-INC-60W	A19-9W-30	Center area-Main entrance || Kitchen	1	120		23.1	15.71	4 BULBS IN EACH Light
			TOTAL =	1			= AVG =		

CLIENT

Mike Manes

NAME (PRINT)

TITLE

SIGNATURE

ESCO

Larry Nichols

NAME (PRINT)

PM ECM

TITLE

SIGNATURE

LIGHTING EFFICIENCY MEASUREMENT & VERIFICATION FORM

7	P2x4T-3L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	South wing || 133 w/ Library	2	89		35.2	36.2	
			TOTAL =	**2**			= AVG =		
8	P2x4T-4L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	Gymnasium w/LEDs already || Hall to gym	1	119		47.0	47.1	
			TOTAL =	**1**			= AVG =		
9	4'-S-2L-4'-F32T8	Install new 2x2 flat panels	Center area-Main entrance || Vestibule/Entrance	3	60		31.5	29.9	TEST OUT OF BOX
			TOTAL =	**3**			= AVG =		
10	A2x4T-4L-4'-F32T8	Install new 2x2 flat panels	Center area-Main entrance || 111	1	119		34.5	29.9	
			TOTAL =	**1**			= AVG =		
11	4'-S-2L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	South wing || 122 elect closet	1	60		23.5	14.3	NEW REST ROOM DISC FIXTURE
			TOTAL =	**1**			= AVG =		
12	4'-AW-4L-4'-F32T8	FF-T84-A2-WAB-10-40 LED Tubes	Gymnasium w/LEDs already || 2 bathrms &	1	119		47.0	46.8	
			TOTAL =	**1**			= AVG =		

CLIENT

Mike Manes

NAME (PRINT)

TITLE

SIGNATURE

ESCO

Larry Nichols

NAME (PRINT)

PM ECM

TITLE

SIGNATURE

Behavioral Training / Education Program

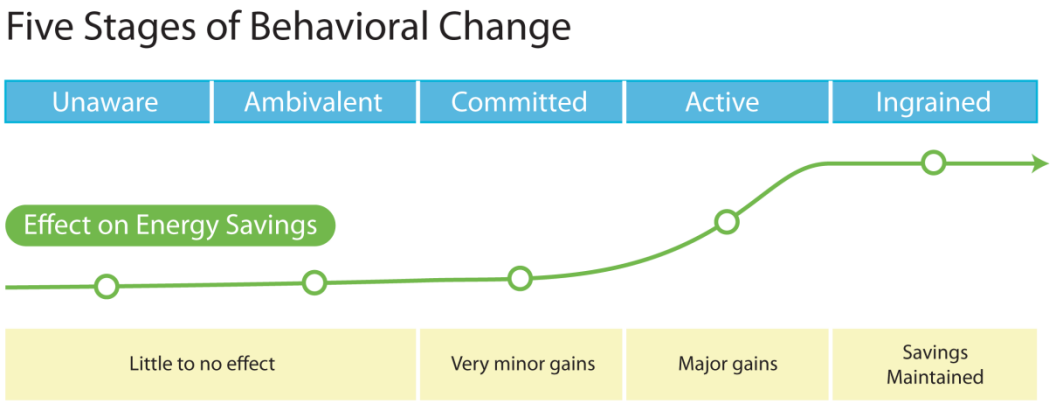
Behavioral Training & Education Program

Program Overview

We have implemented educational behavior-based energy conservation programs for a wide variety of different client types, and have an established and proven approach to securing behavior-based savings that has been successfully applied many times.

Exercise and eat healthy. Two things we all know we should do, yet most of us struggle to accomplish them without some guidance and motivation. It's the reason trainers and dieticians have jobs. Conserving energy is no different. The financial and environmental benefits are apparent, as are many of the basic techniques, but most organizations struggle with how to implement effective energy-saving efforts. We provide the know-how, the motivation and the plan of action to get you proven results. Our team of training and technical experts truly understand what it takes to save energy without compromising comfort. Successful energy conservation training programs require making a profound paradigm change in how your organization thinks about energy. That type of change can only be accomplished through a structured sustainable approach. Otherwise, you'll find that your organization "yo-yo's" just like many dieters; saving a little bit one month, but giving it all back the next, then struggling to get re-motivated and finding it difficult to even save a little, and so on.

Our approach to transforming behaviors is built upon the Stages of Change theory that was originally developed in the late 1970's and early 1980's by James Prochaska and Carlo DiClemente at the University of Rhode Island as part of their Transtheoretical Model of Behavior. Our model is equally applicable to individuals and organizations, and lays out a defined and proven process for creating real sustainable change. Although the steps are shown in a linear fashion, change is a process that occurs over time, and different organizations (and the different people within those organizations) will progress through the stages at different speeds, and may jump from one stage to another at different times. Ultimately, the goal is to elevate the organization and the individuals to the Ingrained Stage, where energy-saving behaviors are second nature.



The following is a description of each of the 5-Stages:

1. **Unaware:** Individuals and organizations that are in the Unaware stage are usually not armed with the facts and consequences associated with their energy-consuming behaviors. They may be resistant or unmotivated, but in many cases, they simply lack good information about their current situation and the impact of their energy-consuming behaviors.

2. **Ambivalent:** Individuals and organizations that are in the Ambivalent stage have learned about the impact of their energy-consuming behaviors, but are evaluating the pros and cons of adopting energy-saving behaviors. They may have a desire to adopt one or more energy-saving behavior, but have concerns about the cost or difficulty of making a change. They may have also unsuccessfully tried to change in the past and have become discouraged.

3. **Committed:** Individuals and organizations that are in the Committed stage believe the pros of attempting to adopt energy-saving behaviors outweigh the cons, and they intend to take action. They often share their commitment with others and take small steps that prepare them for taking action. Individuals and organizations in this stage may have made an attempt to change their behavior previously, but have been unsuccessful in maintaining that change.

4. **Active:** Individuals and organizations in the Active stage are actually changing their energy-consuming behaviors using techniques they have learned. They have replaced their previous behaviors with energy-saving actions. Relapse and regression are most likely at this stage, so ensuring that people see the results of their positive behaviors and have others around them that engage in and support those same behaviors is highly important.

5. **Ingrained:** Individuals and organizations are thought to be in the Ingrained stage when they have successfully attained and maintained energy-saving behavioral changes. While the risk for relapse is still present in this stage, it is less so, and as such individuals and organizations need to exert less effort in engaging in change processes. Reminders, reporting and reinforcement are key activities during the Ingrained stage so that energy-saving behaviors are maintained without backsliding or regression.

Our unique energy conservation training is a people-oriented program backed by technical know-how and years of experience making organizations more energy efficient. Coaching and positive reinforcement are key components to success; however, understanding the science behind the “why and how” of your buildings’ energy use is just as critical to savings energy while not negatively impacting either comfort or equipment operations. We’re experts at both.

Our program educates employees, staff and occupants in energy saving measures that are within their control. We mainly concentrate on after-hour and non-occupied times of day for savings. In this way, the program does not disrupt your primary activities or make the environment uncomfortable. It is in-

tended to improve the environment during occupied hours and increase the savings during non-occupied hours.

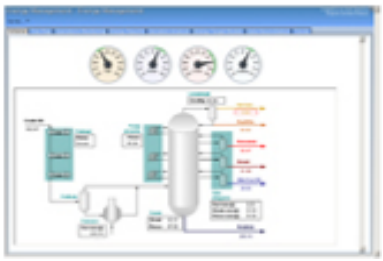
The primary goal of energy conservation training is to identify and reduce wasteful energy consumption by implementing a program that changes human behaviors. Your organization's activities, schedules, needs and buildings are unique and require a training program designed to meet your nuances. With that in mind, our program is customized to each school, and training is conducted in your buildings, so your teachers, staff and students learn how to save energy in the buildings they work and learn in and on the equipment that they work with.

Energy Dashboard Systems

An energy dashboard can be a powerful compliment to an energy-saving behavioral training program. This allows students, teachers, administrators and staff to see, in real time, the effects of their energy saving efforts and it can be an engaging teaching tool. We implemented an energy dashboard solution for Pittsburg State University that provided energy use data for all of the buildings on campus and shared the data through several interactive kiosks.

We'll work with you to identify and select the energy dashboard solution that makes the best sense for your district. While energy dashboards have been around for decades in various forms, the current options vary greatly in capabilities, compatibility and prices. Every major controls company offers some type of dashboard to integrate with their building management software, and new players in the software market are creating powerful tools with user-friendly interfaces that will work on a variety of systems. We'll ensure that the dashboard selected works with your building management system(s) while delivering the interface and data to make it a valuable teaching tool.

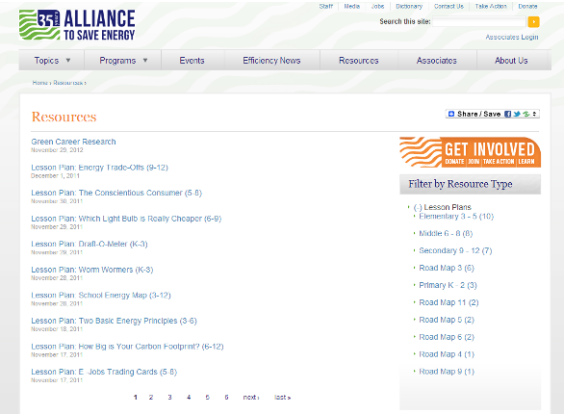
Some of the many Energy Dashboards currently available

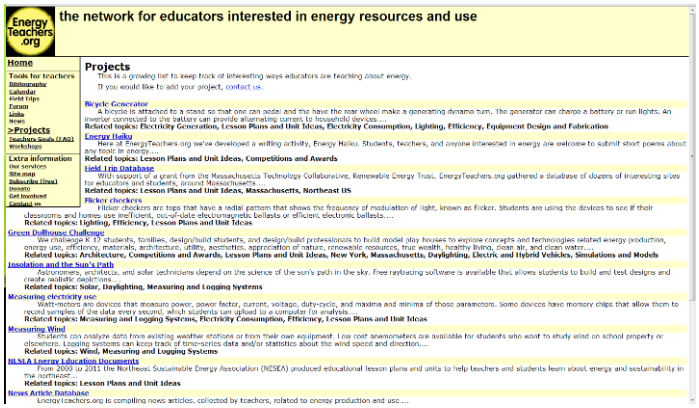


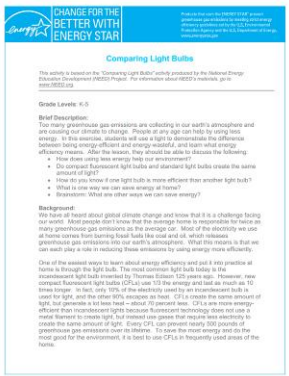
Lesson Plan/Curriculum Support

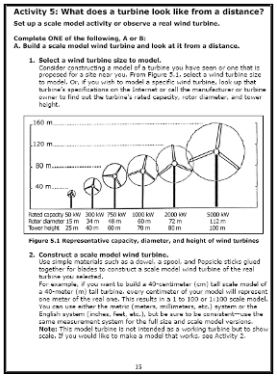
Incorporating lesson plans about energy awareness, energy-saving, sustainability, recycling and other energy-conservation activities gives both students and teachers an opportunity to learn about and engage in energy-saving behaviors. At the same time, we understand that you have education and curriculum requirements to meet, and that the opportunity to incorporate energy-conservation lessons varies from district to district. To be of optimal assistance, we have identified energy-saving lesson plans that are publically available and address grade level's K-12. The lessons range from simple half hour to one-hour activities, to much more in-depth projects and assignments. They were created by teachers for teachers, so they contain clear objectives and instructions and cover a wide range of subjects that include science, math, language arts, social studies, English and geography. We will work with your district to determine what level of support and assistance with energy related lesson plans would be most helpful to you.

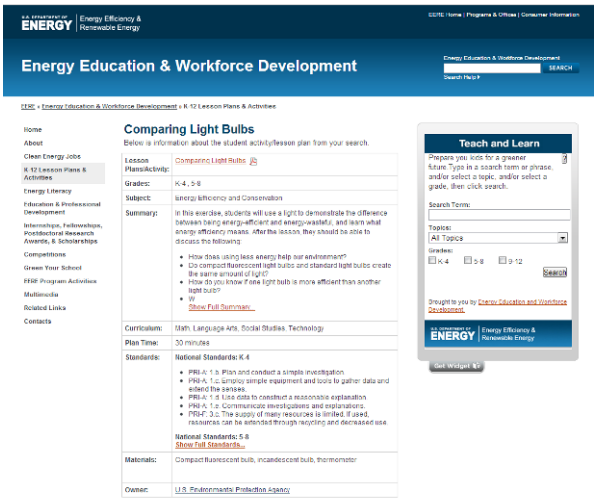
Lesson plan resources for teaching energy-savings and conservation





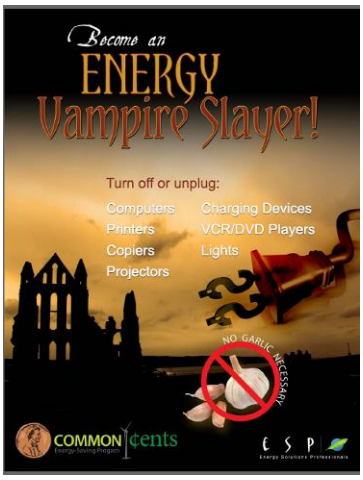


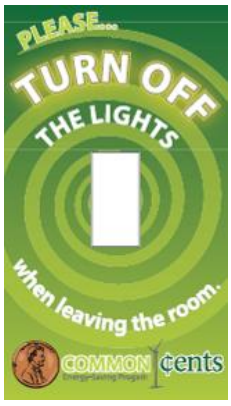


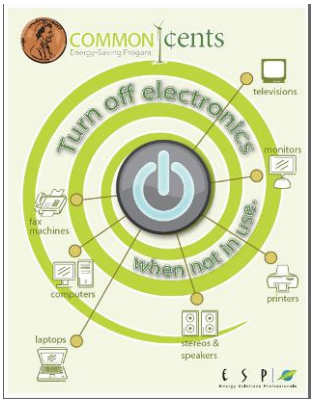


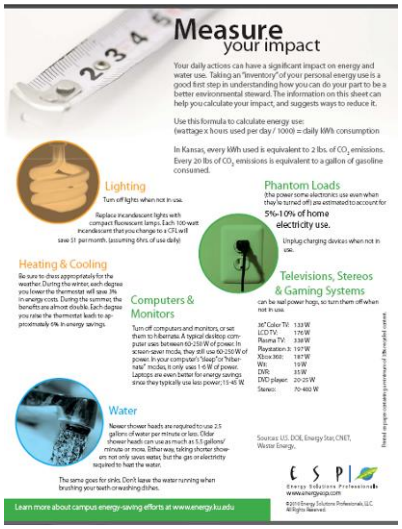
Communication and Program Awareness

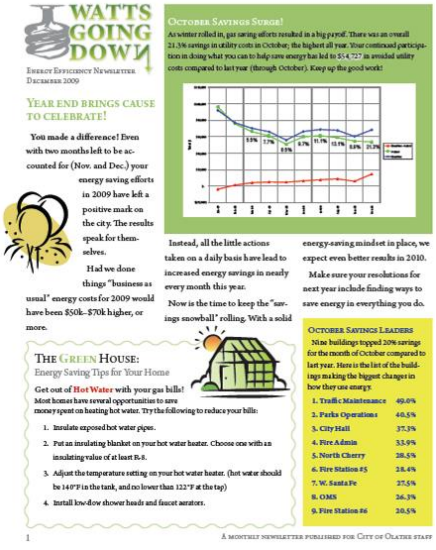
Communicating your energy education program to administrators, teachers, staff and students is a critical element in creating a culture of energy-saving actions and behaviors. We will provide the district with energy saving messages, posters, handouts and other materials that you can post online, hang up in schools, and give to students and teachers. These materials can be customized to be specific to your district. Samples of materials that we have created for other clients are shown below.





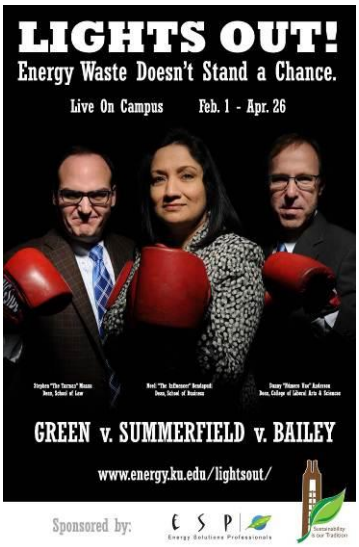




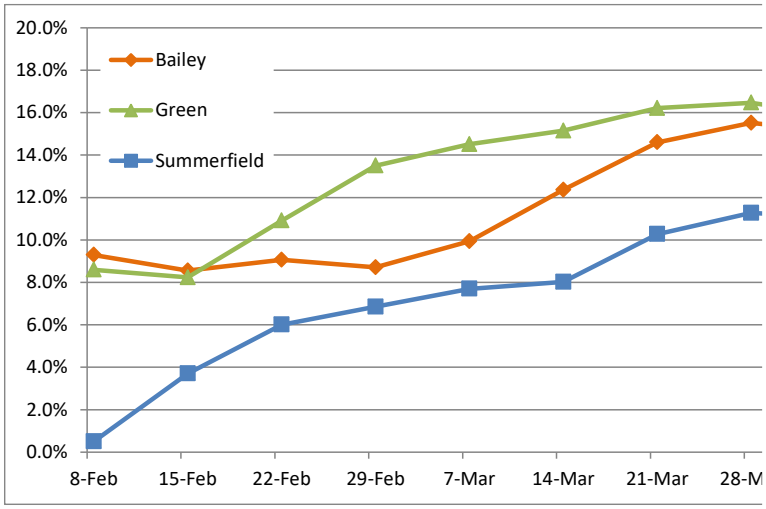


Competitions

Energy-saving competitions are a key part of generating interest and enthusiasm about saving energy. Students enjoy competing against one another in friendly contests, and energy competitions are a good way to harness that competitive spirit. We've successfully implemented energy-saving competitions for multiple clients, and have learned what works well and what doesn't. We'll work with your district to establish a custom-built annual competition so that you can reuse it every year and have a fun way to get students engaged in energy-saving behaviors.



GREEN GORILLA CHALLENGE



ESP Financial Statements

Per the City's request regarding proprietary information, ESP requests that the City do one of the following prior to reviewing the following proprietary and confidential financial information:

1. Provide written acceptance that the City of Abilene accepts this information as proprietary and will treat it as such, or

2. Return the proprietary information without review to:

Energy Solutions Professionals, LLC

Attn: Coleen Flathman, Director of Finance

9218 Metcalf, Suite 274

Overland Park, KS 66212

millig
DESIGN BUILD

Request for Qualifications for Energy Conservation and Capital Reinvestment Program

City of Abilene, KS

Veronica Guerrero, Project Developer
214.668.2648 | vguerrero@milligdb.com

PLAN. DESIGN. BUILD. PERFORM.

November 15, 2024
City of Abilene, KS
419 N. Broadway Abilene, KS 67410

Attn: Ron Marsh, City Manager

Thank you for considering our response to your Request for Qualifications for Energy Conservation and Capital Reinvestment Program in the City of Abilene, KS. We are confident that our team's extensive experience implementing ESCO projects, our Lean construction approach, and our Integrated Project Delivery process will provide exceptional value to the City.

Millig Design Build is a fully integrated MEP design firm and general contractor, specializing in projects that improve engineered systems for decarbonization, building health & safety, and core infrastructure renewal. Our proposed 8-person team has a collective nearly 100 years of design and construction experience and has successfully executed over 150 turnkey projects for public entities since 2001, totalling in capital improvements worth over $400M.

Our clients include: two of the world's top 15 international pharmaceutical manufacturers; biotech research facilities; hospitals; universities; cities; counties; school districts; and state counties. Every team lead at Millig, from engineering to construction and commissioning, is an owner-operator. This ensures a deep commitment to the project's success and minimizes concerns about key personnel turnover.

At Millig Design Build, we aim to revolutionize the delivery of construction projects. We aspire to enhance efficiency and eradicate the cost overruns and blame games that have long plagued our industry. By bringing engineering, construction, and commissioning under one roof, we ensure focused delivery, shortened schedules, and the elimination of non-value elements, paving the way for effective and quality solutions for the City of Abilene.

We are grateful for the opportunity to be considered and are eager to demonstrate the unique value we can bring to this project.

Thank you for the consideration of our proposal.

Let's build something together.

Veronica Guerrero
Project Developer

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APPENDIX

Key Contacts

City of Abilene

419 N Broadway St
Abilene, KS 67410

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785.263.2550

Milling Design Build

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Olathe, KS 66061

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785.218.6824

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913.375.4393

Veronica Guerrero | Project Developer
vguerrero@milligdb.com
214.668.2648

1. Business Qualifications

1A. Brief History of Firm

Overview

Our roots run deep in Kansas. The co-founder and President of Millig Design Build, Scott McVey, and Millig's core team of engineering, construction, and commissioning specialists are all Kansas born and raised and have been completing ESCO projects for public owners in Kansas for more than 23 years. Millig's current Kansas clients include the University of Kansas, Jefferson West School District, Kearny County, DeSoto School District, and the Overland Park Convention Center, among others. Our headquarters is in Olathe, with a secondary office in Lawrence, making us well-positioned to support the City of Abilene in the development and execution of energy conservation projects.

Although we are a local Kansas firm, Millig is a national leader in energy efficiency:

- We were selected in 2023 by the State of Washington to lead a two-year effort to develop a full Decarbonization Master Plan to eliminate fossil fuels from the State Capitol Campus.
- We are currently working with entities like Boulder School District, Aspen School District, City of Arvada, and Washington State University to develop and install major energy conservation projects.
- Millig's team of engineers also travel all over North America, from St. Louis, to Toronto, to Puerto Rico, assessing and developing solutions for two of the world's largest industrial pharmaceutical manufacturers.

Why Millig

Owners choose Millig because we provide all the hard and soft skills necessary for optimal system selection and implementation under one roof, and our unique approach maximizes value delivered to Owners. We specialize in complex, MEP-heavy energy solutions that result in projects that partially or fully pay for themselves through Energy Savings

Our strength lies in our highly technical in-house design and construction expertise. With Millig, the City of Abilene will get the best the industry has to offer. The team assigned to this effort includes senior leadership who are also owner-operators of Millig. As owners of Millig, each leader with a key responsibility has the deepest commitment and motivation to achieve successful project outcomes for the City and will be committed throughout the life of the project.

In our 37-person company, Millig has 10 licensed professional engineers, 3 estimators, and 15 construction professionals with the technical engineering qualifications and the real world construction experience to create energy models, develop life cycle cost assessments, and design the optimal solution for the City of Abilene.

Millig's History & Founding

Millig Design Build was founded in January 2021 by an all-star group of professionals who left a large national ESCO firm because we believed that we could do it better on our own. As a small business, we have low overhead and are able to deliver significantly more value to our clients than we were able to within the large corporate structure. Millig is nimble and adaptable, and because we only execute

around $30M of work per year, every project has to be a success and every client has to be referenceable. Since our inception nearly four years ago, Millig has amassed a project portfolio that includes $84M of ESPC and turnkey projects

Millig Design Build's President and Co-Founder, Scott McVey, previously founded an ESCO named 360 Energy Engineers which operated in Kansas from 2010 to 2015. That firm was purchased by a large national ESCO in 2016 and by 2021, the heads of all the departments within the ESCO group were ready to split off to start Millig.

Cumulatively, our leadership team completed more than 250 ESPC projects with a total value of over $300M. Our all-star team is the most experienced in the industry, averaging over 15 years of experience per person

The first project completed by Millig team members in Kansas was at Lakin Unified School District 215 in 2012 completed in 3 phases for a total of $3M. This project was implemented and executed by the same key Millig team members assigned to the City of Abilene including Scott McVey, Principal-In-Charge, Justin Burwinkle, Engineering Development Lead, Deryl Sarver, Senior Construction Manager, and Kevin Player Director of Project Performance. The scope of work of this project was:

- Removal and replacement of chillers at the Administrative Office
- Removal and replacement of aging steam boilers and chillers at the Middle School
- District wide LED lighting upgrade
- District wide controls upgrade and new ceilings
- Installation of a new 2 pipe hydronic cooling and heating systems

1B. In-House Resources & ESCO Unit

The following section describes how Millig approaches ESPC project execution.

ESCO's Approach to Energy Performance Contracting Work

Under Millig's turnkey project delivery model, the Owner manages only one contract with a single point of responsibility. Millig fills the roles of designer, general contractor, and commissioning agent. This allows Millig to guarantee the cost of the project, as well as provide a guarantee of system performance and energy savings.

Millig's in-house team of MEP engineers, construction managers, and commissioning agents work together from the beginning to meet the Owner's needs and goals. Our process creates a culture of

collaborative problem-solving and innovation, without excuses or blame-shifting, where all project stakeholders have a seat at the table. Our projects are delivered faster and with better outcomes than traditional design-bid- build projects, because there are no silos and Millig controls each step of the process.

Millig's approach to Energy Savings Performance Contracting (ESPC) combines capital facility improvements with high-yield energy efficiency projects. Our process for making building recommendations begins with a fundamental understanding of facility operation and building needs. We blend this understanding with our expertise in highly detailed Life Cycle Cost Analysis.

Rather than basing decisions solely on the quantitative factors of various proposed improvements, we consider input from facility owners, maintenance staff, building characteristics, architectural aspects, and other factors to narrow down potential improvements through qualitative analysis.

The ESPC process consists of four major phases, outlined below, including: Facility Plan; Investment Grade Audit; Project Implementation; and post-construction Performance Period.

Phase	Contract	Major Tasks	Work Product	Outcome

Facility Plan	Consulting agreement or At-Risk	• Site visit
		• Identify & evaluate systems & equipment
		• Baseline modeling
		• Energy modeling
		• Cost estimating (+/-20%)
			• Facility Plan presentation & report
			  ○ Conceptual design
			  ○ Life Cycle Cost Analysis of competing options
			  ○ Financial pro forma
				Practical & actionable roadmap for infrastructure renewal & energy saving projects

Investment Grade Audit (IGA)	Energy Savings Performance Contract (ESPC) Base Agreement	• Milestone meetings w/ updated cost estimates • Incorporation of owner feedback • Constructability review • Complete design, project manual, & bid documents • Conduct subcontractor walks & obtain hard bids	• IGA presentation & report • Construction proposal with Guaranteed Maximum Price (GMP) • Implementation Plan • Site Specific Safety Plan	All-in, shovel-ready project proposal and implementation plan. Guaranteed Maximum Price (GMP) and guaranteed performance and energy savings.
Project Implementation (Construction)	ESPC Construction Amendment	• Contractor buyout • Construction Management • Scheduling & coordination • Full time site supervision • Daily/weekly safety meetings • Owner progress updates	• Project Schedule • As-Built drawings • Close Out documents	Fully managed install of GMP project, ensuring all scope is safely installed as designed
Performance Period (Commissioning, M&V, Warranty)	Included in ESPC Amendment	• Supervision of all equipment startup • Functional testing • Controls integration & testing • Owner training	• CX report • M&V report • 12-month warranty period management	Ensure all systems & equipment perform as designed & Owner is ready to assume system management

Under Millig's fully integrated process, projects are completed more quickly than traditional design bid build projects; this is because we eliminate silos and avoid delays by providing design, preconstruction/estimating, construction and commissioning services in-house.

1C. NAESCO Certification

Millig is not currently NAESCO certified, as it is fairly uncommon for small businesses to be NAESCO certified. The application process is expensive and labor intensive and only the largest ESCO firms in the Country have the means to achieve certification. That said, see below for other certifications.

1D. Other Certifications and Awards

- Millig Design Build is a certified pre-approved Energy Services Company by the State of Washington and the State of Colorado.
- Millig is a member of the Design Build Institute of America (DBIA), American Society of Heating Refrigeration and Airconditioning Engineers (ASHRAE), and Association of Energy Engineers (AEE).
- Millig was named a Small Business Superstar by the Greater Kansas City Chamber of Commerce in 2023.

1E. ESCO Business Unit

Millig does not have a separate ESCO business unit, our entire company's sole purpose is to develop and deliver energy savings projects for public entities that often exceed our guarantees and client expectations. Please refer to section 1B for Millig's ESPC project process.

1F. Location & Headquarters

Millig was founded in Kansas City, with its headquarters in Olathe, KS. Millig's team travels across the country as required by our clients and has additional offices in Denver and Seattle.

> "I would absolutely recommend working with Millig. From the moment we engaged with Millig, it was evident they had a unique approach to integrated problem-solving and efficiency. And their budget-conscious approach to project implementation truly sets them apart. We are happy to now also be working with Millig for the next two years on our district energy decarbonization plan."
>
> - John Lyons, Program Manager, State of Washington Capitol Campus

1G. Product Selection

Product and Vendor Independent

Millig is fully vendor and product independent. This allows us to select systems and equipment that meet owners' criteria while ensuring the lowest whole-life cost safe from any bias due to affiliations with various manufactures or service providers.

On every project, Millig takes a clean slate approach to product selection, letting our clients feedback, data analysis and market conditions lead us to the optimal solution. We focus on selecting systems and equipment that meet the owner's criteria while ensuring the lowest whole-life cost.

The below illustrates the process for selecting systems as a whole as well as the individual equipment used during construction.

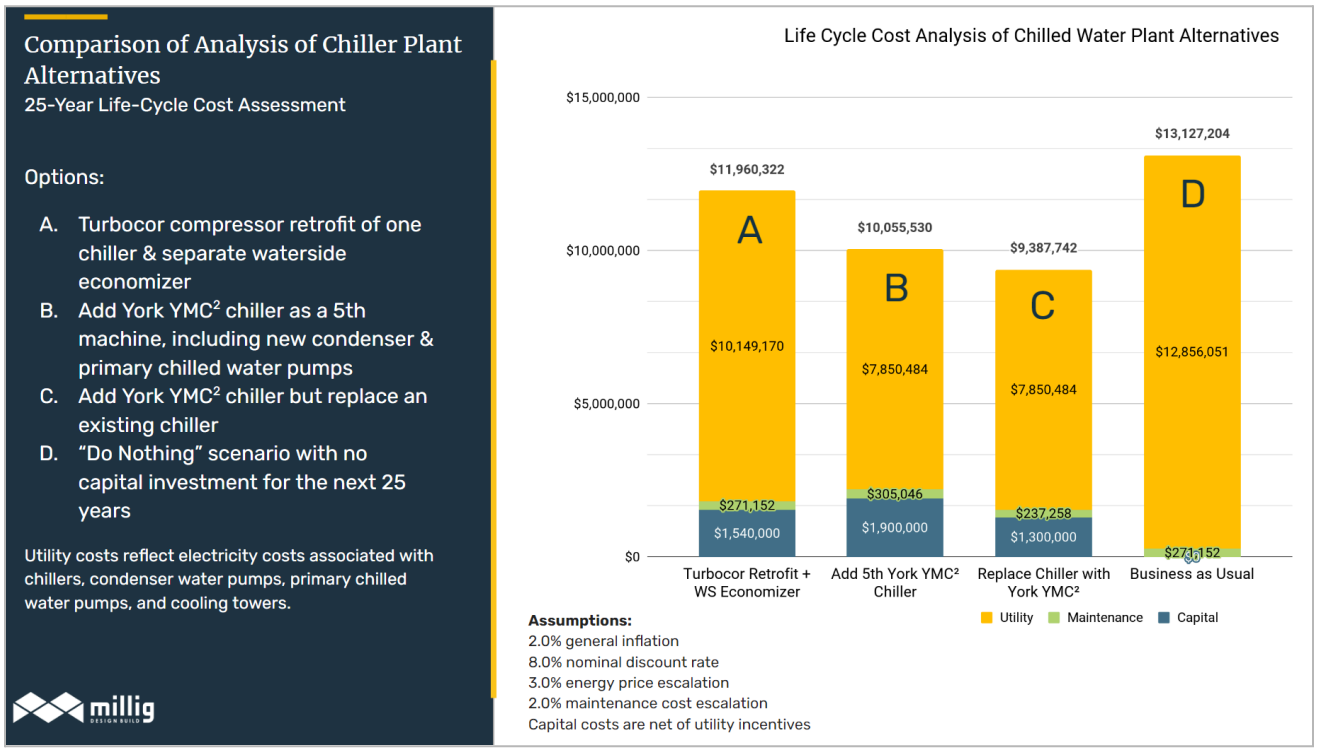
System Selection

To select the optimal solutions for the City of Abilene, Millig will compare all competing options by evaluating the total cost of ownership in a Life-Cycle Cost Analysis (LCCA).

Comparative Analysis of Competing Options

Millig's approach to LCCA includes the following:

1. Complete a rigorous analysis of all major City facilities and obtain utility history.
2. Create a detailed ***digital clone*** of the facility; this digital clone allows us to perform energy modeling and simulate different upgrade options to compare energy savings results.
3. Perform cost estimating and other quantitative and quantitative analysis to determine the total cost of ownership of each competing option.
4. Present the results of the analysis to the project stakeholders for feedback and collaborative selection of the optimal solution.
5. Below is an example LCCA presentation slide. This analysis was provided to the multinational pharmaceutical pharmaceutical company Sanofi-Genzyme to assist in selecting the best long-term option for a campus-wide water-cooled chiller plant.



Equipment Specification

City Operations & Maintenance Engagement

During design, Millig's PEs will engage the City's operations and maintenance staff to gather input on the quality of service the City has received from service providers. The team also works to understand how their resources, capabilities, and staffing may impact the ongoing project success. This information will help the engineers make basis-of-design recommendations and create a list of alternatives that will be used during competitive bidding to drive equipment costs down.

After creating a list of approved manufacturers, the Millig pre-construction team will vet local contractors and equipment reps to ensure that the systems and components being proposed can be supported locally during construction as well as long-after project completion. Our experience has shown that the availability of reliable and high-quality local support can dramatically impact the long-term success of a project.

Millig does not represent or have affiliations with equipment suppliers, every Millig project represents a project where we have installed other companies' products. The below highlights five Millig projects where we utilize different manufacturers for the primary HVAC equipment.

Project Name	Equipment Type	Equipment Manufacturer
Kearny County, KS - Courthouse and Senior Center HVAC	Water-Source VRF	Samsung VRF
Logan County, CO - Justice Center HVAC	Packaged Rooftop Units	Trane
Morgan County Schools, CO - Elementary School(s) HVAC	Packaged Rooftop Units and Outdoor Condensing Units	CaptiveAir, Trane, Reznor, & Carrier
Las Animas County, CO - Courthouse HVAC	Water-Source VRF	Mitsubishi
Lewis County, WA - Jail HVAC	Air-Source Heat Pumps	Daikin

1H. Scope of Work/Services

Our Services

Millig's team possesses extensive experience performing comparative analyses of competing HVAC options and designing VRF systems. As a design builder, our full umbrella of services include:

Facility Audit and Energy Modeling

- Utility Use/Rate Analysis
- Digital Clone & Energy Modeling
- Life Cycle Cost Analysis
- Budgetary Cost Estimating
- Decarbonization Master Planning
- Grant Award Support

Engineering Design

- Mechanical, Electrical, Plumbing Engineering
- Detailed Cost Estimates
- Equipment Specification
- Construction Documents
- Program Management

Pre-Construction Services

- Preliminary Project Schedule
- Project Manual
- Competitive Bidding
- Bid Reviews
- Risk Register
- Site Safety Planning
- Guaranteed Max Price Development

Construction Services

- Permitting
- Equipment Submittals & Procurement
- Construction Management
- Site Supervision
- Scheduling & Budget Management
- Safety Compliance

Post Construction Support

- System Commissioning
- Warranty Support
- Owner Training
- As-Built Drawings
- Punch List
- Commissioning Report
- Measurement and Verification of Energy Savings

1I. Lawsuits

Millig has never been involved in litigation or lawsuits resulting from the design or implementation of a guaranteed energy cost savings project in any Kansas or any other state. Furthermore, Millig's founders and leadership group have never been involved in litigation or a lawsuit relating to any project in their cumulative nearly 200 years of experience in the ESCO industry.

1J.Experience

Below is a list of ESPC projects that this project team and other key Millig members has developed over their combined careers. Additional information about any of these project examples can be provided upon request. A full list of all the projects that Millig has designed, developed, constructed, and commissioned can be provided upon request

				Design & Engineering						Project Dev.			CM		CX
	Client Name	Approximate Contract Value	Year	Scott McVey	Colton Heaps	Leigh Myers	Justin Burwinkle	Dan Nguyen	Aaron Tilden	Amy McVey	Lauren Donley	Aaron Tilden	Justin Pape	Deryl Sarver	Kevin Player
County Government	Finney County, KS	$7M	2017				●		●						●
	Graham County, KS	$500k	2013	●									●	●	●
	Greeley County, KS	$2M	2014	●					●						●
	Harvey County, KS	$2M	2015	●			●		●				●	●	●
	Kearny County, KS	$3M	2021				●		●	●		●		●	●
	Meade County, KS	$1.6M	2016						●					●	●
	Seward County, KS	$2.3M	2017						●					●	
	Thomas County, KS	$3.1M	2020			●			●			●	●	●	●
	Wallace County, KS	$100k	2020						●			●			
	Kit Carson County, CO	$2M	2016			●	●		●						●
	Logan County, CO	$4M	2022	●			●	●	●	●	●	●	●		●
	Logan County, CO	~$3.5M	2022				●	●	●			●	●		●
	Prowers County, CO	$2.8M	2016	●			●		●						●
	Washington County, CO	~$2.3M	2022	●	●			●		●		●	●		●
	Lewis County, WA	~$8M	2022	●		●		●			●			●	
	Spokane County, WA	~$2M	2022	●		●					●				
	Wahkiakum County, WA	$900k	2020	●							●				
K-12 Schools	Atchison County USD 377, KS	$1.5M	2014	●			●						●		●
	Baldwin USD 348, KS	$1.5M	2013	●		●			●						●
	Central Heights USD 288, KS	$1M	2013	●											●
	Colby USD 315, KS	$2.5M	2015	●			●						●	●	●
	Hugoton USD 210, KS	$4M	2014	●					●						●
	Lakin USD 215, KS	$1.5M	2013	●			●						●	●	●
	Lamar School District RE-2, CO	$9M	2020		●										
	McPherson USD 418, KS	$1.5M	2014	●			●							●	
	Oakley USD 274 Ph 1, KS	$1.5M	2014				●						●		●
	Oakley USD 274 Ph 2, KS	$2.1M	2020				●		●			●	●		●
	Pratt USD 382, KS	$4.5M	2017	●					●				●	●	
	Ulysses USD 214, KS	$7M	2015	●			●		●					●	●
	Akron R-1 Schools, CO	~$3.4M	2022	●			●	●				●	●		●
	Burlington School District RE-6J, CO	$8M	2019		●		●		●				●		●
	Byers School District 32J, CO	$1M	2013	●			●						●		●
	Granada School District RE-1, CO	$5.7M	2020		●	●									
	Lamar School District RE-2, CO	$9M	2020		●	●									
	Pueblo County School District 70, CO	$15M	2017	●		●	●			●			●	●	●
	Trinidad School District 1, CO	$14.5M	2021		●					●					
	Creighton Schools, NE	$2M	2017				●						●		
	O'Neil Public Schools, NE	$2M	2016	●			●						●		
	Sutherland Schools, NE	$400k	2015						●				●		
	El Dorado Springs R-II, MO	$400k	2016						●						●
Healthcare	Decatur County, KS	$2M	2014	●					●				●	●	●
	Stafford County, KS	$400k	2016						●						●
	Baptist Saint Anthony, TX	$4.5M	2018	●		●	●							●	●
	Bates Memorial Hospital, MO	$2M	2016						●					●	●
City Gov.	City of Eudora, KS	$1.5M	2015	●			●		●				●		●
	City of Lawrence, KS	$11M	2016	●		●	●		●				●		●

** Key staff on Millig's project team have been implementing projects for over a decade. We want to acknowledge that some of the Millig's team's project experience was gained at a previous employer.previous employer. It takes an entire team to implement these complicated projects and no project on this list was executed entirely, from start to finish, by one individual. That said, every project listed above had current Millig team members in key roles, such as project development, engineering, construction manager, and commissioning*

2. Financial Information

Financial Soundness

Millig operates with the philosophy that cash-healthy businesses are best positioned to weather storms, and therefore, we take a conservative approach to maintaining working capital. We maintain enough cash to cover more than 10% of our aggregate bonding capacity or 12 months of payroll, whichever is greater. Currently, we have over $3.5M dollars in working capital, well-exceeding 10% of our current bonded work to be completed ($26 million) and our 2024 payroll ($3 million).

Our current contract backlog and pipeline are very strong. Our current contract backlog of $18.5 million will cover the next 16 months of operations. With several key contracts expected to be executed within the next month, our backlog will be positioned to support our next two years of operation, even if no additional contracts are added.

Millig is staffed for and actively pursuing both short- and long-term design and construction efforts that are expected to deliver revenue for the 2025 fiscal year that closely matches the 2024 fiscal year projection of $31M. Over the next four years, Millig anticipates an average of 20% year-over-year revenue growth, carefully supplementing all divisions' staffing to maintain consistent quality and performance.

Our growth is not limited by our ability to obtain more work; we are intentionally throttling our growth to match our ability to obtain only the best talent in the industry ("only the top 15%"). Hiring only the top people in their respective fields is a founding principle of Millig and a commitment across all team members. This is to ensure that we do not dilute our team's efficiency, quality, and effectiveness. We are dedicated to employing only the most talented and experienced team members, along with an unwavering commitment to implementing a lean project delivery approach. This results in low company overhead and high project execution efficiency, allowing more dollars to be spent where they are needed: in the communities surrounding the buildings we improve.

2A. Past Years' Financial Statements

See Appendix #1A.

2B. Funding & Financing Assistance

Millig understands the importance of finding creative ways to pay for improvements and often energy savings are insufficient to complete comprehensive projects that make a sizable impact. The Millig team has unparalleled experience in applying for and obtaining funding from various funding sources.

Over the past 4 years, Millig has developed over $80M in projects and have secured/utilized nearly $40M in external funding to lessen the financial burden on our clients. Below are a few opportunities that our team has recent experience with that may apply to the City of Abilene.

- **Inflation Reduction Act and Infrastructure Investment & Jobs Act -** this offers financial incentives through tax credits for entities investing in clean energy and helps fund large-scale infrastructure projects.
- **Utility Incentives -** In the past three years, the Millig team has led multiple clients through the application process and received funding for almost $2M in total utility incentives. This same knowledge and expertise would be utilized to maximize the opportunity for the City of Abilene
- **Project Financing -** We often structure our ESPC projects to be funded through long-term financing which is paid for in part or in full by energy savings. Typically clients will utilize a vehicle called a Non-Appropriated Lease Purchase agreement to finance energy savings project costs. Millig has worked with several lenders, including DA Davidson and the State Treasurer's office, to finance our projects.

2C. Surety Letter

See Appendix 1B.

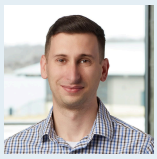
2D. Financial Institution Letter of Recommendation

See Appendix 1C.

3A. Key Staff and Personnel

Millig's specific project team assigned to the City of Abilene has been hand selected to maximize the expertise and experience in the development of ESPC projects, with a combined 100 years of experience executing ESPC projects. Our integrated, in-house team will serve the City of Abilene across three categories: Engineering Design, Construction, and Project Performance.

Below is an organizational chart showing all the identified team members that will assist the City throughout this project. Millig is quick to adapt to projects that have growing and complex scopes, as Millig evaluates the needs of the City, additional team members will be added to the project as needed.

Key Staff/Role/Qualifications	Introduction
Scott McVey, PE Role: Principal-in-Charge PE License: PE.26009 	As President and Co-Founder of Millig Design Build, Scott McVey will lead this team as the Principal-in-Charge. Over his 24-year career, which started in Kansas City, Scott has implemented multi-million dollar infrastructure renewal and ESPC projects in every building type, from leading The City of Lawrence, KS ESPC ~$10M project which resulted in $548,019 in guaranteed annual energy savings, to historic courthouses and school districts throughout the country.. Scott is based in Lawrence Kansas, and has demonstrated success in developing and implementing ESPC projects across North America. Scott McVey will serve as the lead engineer and oversee all aspects of Millig's project team.
Justin Buwinkle, PE Role: Engineering Development Lead PE License: PE.26009 	As a Senior Project Development Engineer and the head of Millig's project development team, Justin Burwinkle has assessed and identified solutions for over 600 facilities across the country. With 11 years of experience producing detailed computer models of facilities and simulations of energy upgrade projects, Justin will lead Millig's team in producing the building-level energy efficiency, load reduction, and heat recovery scopes for individual buildings throughout the City
Veronica Guerrero Role: Project Developer 	Veronica Guerrero is the Project Developer for Kansas City and has almost 10 years of experience developing multi-million dollar projects and working directly with Owners. As an experienced Project Developer, she will ensure that the needs and priorities of the client are properly communicated and prioritized within the Millig team. She will help through every phase of the project from day one until our commissioning team's work has concluded and will spearhead all grant and rebate applications while ensuring that the City understands every step of Millig's Integrated Project Delivery Method.

Key Staff/Role/ Qualifications	Introduction
Deryl Sarver Role: Senior Construction Manager 	Deryl brings 29 years of experience in general construction and HVAC projects, and is an owner-operator of Millig. Deryl has developed the Project Implementation Plan (PMP), schedule, work, coordination plans, and Risk Register for $50M of projects in the last three years alone, he is an instrumental part the execution of ESPC projects and will be responsible for overseeing and coordinating all construction activities, ensuring that the scope is executed efficiently, on schedule, and in compliance with the City of Abilene's quality and safety standards.
Kevin Player Role: Director of Project Performance 	Kevin brings over 15 years of experience as a full-time HVAC and control systems problem-solver, supporting a variety of Millig's highly-technical projects as Millig's lead commissioning agent. He will be responsible for all aspects of system commissioning for the City including testing, verifying, and trouble shooting electrical and mechanical systems. Kevin emphasizes the importance of quality assurance for subcontractors and Millig's internal team.
Josh Slocum, PE Role: Energy Engineer PE License: PE.28630 	Josh brings a particular set of skills to all of Millig's ESPC projects with expertise in decarbonization strategies and greenhouse gas emissions calculations, EQUEST modeling, and custom energy calculations. He will be responsible for supporting project design and development from an energy efficiency perspective and will complete energy calculations for Millig's energy savings guarantee. Josh will also provide Measurement & Verification services after the project begins to produce energy savings. This M&V documentation is critical to validate the actual energy savings achieved by the project, compared to the contractually guaranteed savings. If there is a shortfall, Millig will issue a check to City in that amount. Josh will utilize actual utility bills and weather data to produce the One-Year M&V report after project completion.

4. Project Management Plan

The following page shows an overview of Millig's process. The ten steps shown below are the major tasks and phases of work to be completed for successful project development, construction, and commissioning. The steps are explained in further detail on the following pages.

CITY OF ABILENE, KS

PROJECT DEVELOPMENT TASKS & PHASES

1. **CITY OF ABILENE SITE WALK & RFI**
   Gather utility data & drawings; Discuss goals, priorities, & constraints with City of Abilene stakeholders; Collect onsite data for equipment and conditions.

2. **ENERGY MODELING & LIFE CYCLE COST ASSESSMENT**
   Create a baseline energy models; Model competing HVAC options; Estimate installed & other costs; Generate Life Cycle Cost Analysis for competing options.

3. **PRESENTATION & COLABORATION WITH CITY**
   Share financial details (including costs, energy savings, & operational savings) for each option to City of Abilene stakeholders; Select scopes to move forward into Investment Grade Audit.

4. **IGA AGREEMENT & DESIGN**
   Execute IGA agreement; Design selected scopes; Create subcontractor bid packages.

5. **COMPETITIVE BIDDING & PRECON**
   Solicit contractor interest; Bid Walks; Bid Reviews; Select Best Value contractor.

6. **GUARANTEED MAXIMUM PRICE**
   Establish GMP; Deliver turnkey construction proposal.

7. **CONSTRUCTION AGREEMENT & INSTALLATION**
   Execute project as general contractor; Provide full time Site Supervision & construction mgmt; Maintain safe job site.

8. **COMMISSIONING & TRAINING**
   Test all equipment; Document deficiencies & address issues; Train facility staff and occupants on all new equipment; Manage punch list; Project closeout.

9. **MEASUREMENT & VERIFICATION OF ENERGY SAVINGS**
   Track system performance; Address any potential performance shortfalls; Deliver M&V report to City.

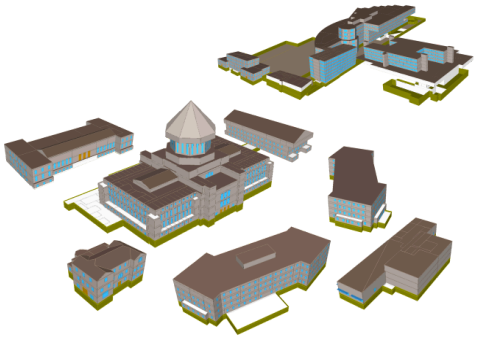
10. **POST PROJECT SUPPORT**
    Handle warranty items and utility incentives; Produce materials to share the project results to the community.

Energy Modeling and Analysis

After Millig's site walk and data gathering is complete, Millig Utilizes the computer simulation program eQUEST to create a 3D computer simulation of the hourly energy use that we refer to as a Digital Clone which includes:

- Building-level systems and operational data
- Physical characteristics & construction types of all facilities
- Detailed modeling of any existing equipment, lighting, and other energy utilizing systems
- Annual weather data
- Below is an example of a recent eQUEST model created for a current Millig client during initial project development

We mine the Digital Clone for data about the existing system & use it to simulate the results of various upgrade options.



Millig's Campus Energy Simulation

Project Development

Early assessment efforts initiate a sequence of steps that ultimately lead to the final solution and budget. Our process for making recommendations begins with a fundamental understanding of the City's operational and building needs. At Millig, the first step in our Project Development process is to take a clean slate approach to evaluate its facilities portfolio. Millig's preferred and default approach is to conduct a comprehensive analysis of all systems within a building including:

- All existing HVAC equipment
- Building automation controls
- Electrical, lighting, and plumbing systems
- Building enveloper
- Facility resilience and renewable energy

After walking the facilities and reviewing plans, Millig's engineers will use their extensive experience to generate a number of upgrade options and suboptions that are feasible for the City of Abilene. We will consider:

- Capital installed costs & constructability
- Ongoing system energy usage
- Complexity of operation
- Ongoing maintenance & component replacement costs
- Availability of qualified subcontractors to install & maintain
- Construction implementation & disruption to facility operation
- Owner preferences for equipment, manufacturers, & contractors

Non-Construction Related Energy Conservation Strategies

A prime example of non-construction-related energy conservation is our in-house controls retrocommissioning (RCx). This process involves a detailed assessment of a building's control systems to identify adjustments to sequences, set points, and schedules that can reduce energy consumption without requiring construction.

For instance, we might discover HVAC equipment running unnecessarily at night or on weekends; by adjusting the schedules for these units and modifying temperature set points, we can achieve significant energy savings. Additional strategies include adjusting outside air percentages or fine-tuning the control sequences for variable air volume (VAV) terminal units. These measures require labor but no new equipment or structural changes, making them a highly cost-effective way to improve energy efficiency.

Other strategies may include using energy monitoring tools to track and manage usage patterns, and engaging occupants in energy-saving practices, all of which contribute to lower energy use and operational costs.

Engineering and Design

If selected as a partner for this project, Millig will work with the City to define project needs, goals, and budget. Our emphasis will be on understanding what brings the City value, which we will use to refine our design criteria and guide the overall integrated project development process.

During the Design Phase, Millig will design to the 60-80% design development level. This allows us to address all design elements that have significant cost implications and develop an accurate guaranteed maximum price (GMP).

Millig's approach is to conduct a comprehensive analysis of all existing systems within a building, including:

- Central plant equipment like boilers, chillers, cooling towers, and pumps
- Heat pumps and VRF equipment
- Air handlers and air distribution systems
- Building automation controls
- Electrical and lighting systems
- Electric vehicle charging opportunities
- Domestic hot water and plumbing systems
- Building envelope systems
- Generators
- Facility resiliency
- Solar photovoltaic, solar therms, and battery storage opportunities

Training

Facilities staff must be equipped with the knowledge and tools required for efficient facility operation/maintenance; Millig conducts training sessions for maintenance staff on each equipment installation.

These sessions are recorded for future reference and can be utilized during staff onboarding if needed. The main objective is to educate the staff on how to operate and troubleshoot the equipment effectively. Our commissioning agents also prepare system manuals that include user-friendly operation tutorials and customized training materials for specific tasks.

Millig can also provide training for building occupants and users to educate and increase comfort level with the new equipment.

Safety Practices and Procedures

Millig is committed to safety and ensuring the safety of our project site. As such, Millig's construction team members will perform risk assessments and develop a site-specific safety plan. In order to maintain a secure environment, the site supervisor and other members of the on-site construction team strictly enforce the following safety procedures on the project site:

- Daily safety checks are conducted by the crew, which encompass verifying the usage of Personal Protective Equipment (PPE) and reviewing the conditions of job site equipment.
- Regular safety inspections carried out by Millig's construction team to ensure adherence to safety protocols and practices by subcontractors.
- A comprehensive safety orientation for all new workers so they understand the project's safety regulations and guidelines.
- Diligent enforcement of well-marked access points, signage, barriers, and strict adherence to daily clean-up rules.

Performance & Energy Savings Guarantee

As a design build contractor Millig's is accustomed to providing far more than the warranties typically included in a plan-spec-build project. Millig's turnkey delivery includes the following:

- Guaranteed Maximum Price (GMP) - Millig will establish project GMP at the time the construction contract is signed. The City of Abilene will never receive a change order, unless it is a City-initiate change order to add scope to the project. Millig will provide full, open book pricing, including substantiating all Millig and subcontractor costs.
- Guarantee of Energy Savings - Millig will guarantee that the project will save a minimum amount of energy; if it doesn't, Millig will cut a check to the City for the amount of the shortfall.
- Guarantee of Performance -Millig will contractually guarantee the performance of the system, including specific metrics like maintaining temperatures within a specific range or maintaining specific indoor air quality levels.

Construction & Project Management

Role of Millig's Construction Manager During Design Phase

One of the primary benefits of integrated project delivery is early and frequent input from the individuals building the project, which is critical to maintaining cost and scope efficiency.

Millig's Construction Manager, Deryl Sarver, is heavily involved with the project team during the Design Phase. He and his team are responsible for estimating, engaging subcontractors, identifying risk, quantifying risk dollars and contingency, scheduling, sequencing, and developing the Guaranteed Maximum Price (GMP).

Deryl and his team have extensive experience managing construction, with a combined project total of over $500M. Furthermore, Justin Pape, a key member of Millig's construction team

has single-handedly managed more than 20 similar turnkey projects for rural clients in the Midwest alone. This team's knowledge of the current construction market, diligence related to risk management, and overall expertise will be utilized during the Design Phase to inform the design solutions recommended for the City of Abilene.

In collaboration with the City and trade contractors, the construction team will produce a detailed Project Management Plan that includes work phasing, the identification of long-lead equipment, project risks with mitigation strategies, and a proposed master project schedule.

Subcontractor Engagement During Design Phase

Millig will identify a pool of potential subcontractors and get feedback from the City. All subcontractors are subject to a pre-qualification process that ensures they can perform the Scope of Work (SOW), understand the tenets of integrated design-build project delivery, and can work effectively under Millig's integrated project approach. When available, we prefer to utilize local and surrounding area contractors.

Millig integrates subcontractors into the process at 60-80% of design development. By bringing in subcontractors early, rather than at the end of the design phase, we gain vital input on constructability, potential cost savings, and scheduling efficiencies. In turn, this maximizes value for the City.

Commissioning & Measurement & Verification

At Millig, we consider a project successful when it meets all of your objectives, stays within budget, and delivers long-term performance. To ensure the highest level of quality control and project delivery, we implement a rigorous and comprehensive commissioning process.

During the design phase, the Project Performance Engineer (PPE), Kevin Players collaborates with the design team to review the design development drawings and control sequences. This proactive approach helps identify any potential issues or conflicts that may arise. Moving into the construction phase, the PPE develops and verifies Pre-functional Checklists (PFCs) to ensure proper installation of all equipment in accordance with the manufacturer's recommendations. This step is crucial because even a seemingly functional system can experience a significantly reduced lifespan if not installed or operated correctly. Additionally, the PPE creates and verifies Test Adjust & Balance (TAB) documents to ensure accurate airflows and hydronic flows within the system.

Lastly, Functional Performance Tests (FTP) are developed and executed to rigorously test and proactively identify any system or equipment issues before project completion. All deficiencies are logged in the CX Issues Log for prompt resolution. The Millig team goes beyond just testing the equipment during installation. We also conduct seasonal testing during the year after construction completes, to ensure the system functions and performs as intended.

Once a project achieves final completion, we initiate the commencement of energy savings which indicates the date we begin tracking energy savings, this is the beginning of the M&V period. During this time, we collect utility bills and monitor the monthly energy usage of each facility to ensure we are meeting our energy savings projections. If for some reason those savings are not being met, Millig's team finds the reason and corrects it early on so the energy savings can get back on track. At the end of the M&V period, we produce an M&V report which documents the actual energy savings experienced by the City. We create a report to document this and compare the actual energy savings achieved with the projected energy savings. If there is a shortfall, Millig sends a check to the City.

5. Project Experience

The below are five examples of Energy Savings Performance contracts implemented with case studies for each.

City of Lawrence, Lawrence, KS*

The City of Lawrence was struggling with rising utility rates and aging equipment across its 40 buildings. They were seeking innovative and budget neutral avenues for resolving a myriad of facility challenges. Millig's team, including Scott Mcvey, Justin Burwinkle, Deryl Sarver, Kevin Player and Josh Slocum led this effort that included the following scope:

- Upgraded lighting to LEDs in 40 city buildings and all City parks
- Redesigned and replaced equipment at the City's Indoor Aquatic Center
- Redesigned and replaced existing boilers and chillers at several community facilities
- Solar PV arrays on two fire stations

Contract Details: $10,937,472 GMP, with $548,019 in guaranteed annual energy savings with a 10.3 year payback

Contact: Eileen Horn, 785.832.3000, Sustainability Director, City of Lawrence

Kearny County, KS

In 2021, Kearny County, Kansas selected the Millig Design team to address failing mechanical systems, building comfort issues, and rising energy costs. At the time of engagement, County maintenance staff were spending an excessive amount of time servicing the antiquated 2-pipe fan coil units and central hydronic plants that served the courthouse and senior center. In addition, neither building included a mechanical ventilation system, the improvements included:

- Replaced existing fan coil units with and hydronic plants with VRF systems and a centralized hydronic plant
- Installed heat recovery ventilators
- New building automation systems
- New architectural ceilings
- Electrical wiring upgrades and new distribution panels

Contract Details: $3,024,020 GMP, with $92,780 in guaranteed annual savings.

Contact: Jana Jenkinson, County Clerk, 620.355.6422, j.jenkinson@kearnycountykansas.com

Skagit County Jail, Mount Vernon, WA

Constructed in 2012, the County Jail was one of the newest buildings in Skagit County's property portfolio, however, it had one of the highest energy use per square foot of all county buildings. Skagit County engaged Millig Design Build to identify the source of the high energy use. Our engineers discovered that there was an error in the original ventilation calculations for the facility as well as several other retrocomissioning (RCx) opportunities.

In 2024, Millig implemented a RCx project with the following scope:

- Retro commissioning of existing ventilation systems
- Reprogramming and calibration of outside airflow stations for existing outside air ventilation airflows
- Retro-commissioning of existing equipment including (13) rooftop units
- Rebalancing of exhaust airflows of existing equipment including (7) general exhaust fans

Contract Details: $175,474 GMP, with $26,919 in guaranteed annual savings and $49,775 of utility incentives for a net payback of 4.5 years.

Contact: Ken Hansen, Department Head, 360.416.1170, scfacilities@co.skagit.wa.us

Sanofi Pharmaceuticals Phase I and Phase II

Sanofi is the 9th largest pharmaceutical manufacturer in the world. Headquartered in France, Sanofi has committed to meeting the carbon emission targets set in the Paris Climate Accord, even at its facilities located in the USA.

To work toward these requirements at one of their critical sites, Sanofi selected Millig Design Build to develop and execute cost effective energy and carbon saving projects at their industrial pharmaceutical manufacturing campus in Framingham, Massachusetts. The scope of work included:

- Redesign and optimization of a 3,000-ton chilled water plant
- Analysis, design, and installation of of water-to-water heat pumps
- Implementation of a new 750-ton high-efficiency chiller

Contract Details: $1,047,504 GMP, with $327,451 in guaranteed annual savings and $257,500 of utility incentives for a net payback of 2.4 years.

Contact: Jarek Lewkowski, Facilities Engineer, Jaroslaw.Lewkowski@sanofi.com, 508.397.5552

Morgan County School District, Fort Morgan, Colorado

In the Spring of 2022, the district hired an engineering consultant to develop bid documents aimed at improving indoor air quality with $2M in ESSER funds. The District was left with a wide spectrum of pricing and no clear path forward leaving the District searching for answers.

After being referred to Millig by a neighboring district, Millig followed its standard procedure, and the team conducted a comprehensive site audit of all District facilities to better understand the current equipment condition and operation. During this analysis, the Millig team identified significant improvement opportunities needed to guarantee proper indoor air quality. The Millig team also identified significant energy savings projects and other deferred maintenance items such as:

- District wide LED lighting retrofit
- Chilled water plant updates
- Building automation controls that helped provide uniformity between all facilities
- Plumbing retrofits
- Custom gymnasium and auditorium lighting

Contract Details: $4,333,903 with $118,710 in guaranteed annual energy savings

Contact: Rob Sanders, Superintendent, 970.768. 1335, rob.sanders@morgank12.co.us

6. Best Value

At Milllig, we take a value-based approach to every project, focusing on what matters and what brings value to the owner and eliminating things that don't

We define value as:

- Prioritizing scope efficiency by focusing on what matters and only providing the City the scope it needs
- Focusing on project delivery efficiency by eliminating waste in the design and construction phases through principles of Lean Construction
- Rigorous preliminary analysis to determine the system with the lowest long-term cost
- Ensuring that Millig and the City of Abilene is aligned in scope to ensure every dollar spent on a project is a wise investment

Ensuring Cost Efficiency

In a typical design and construction project, costs are inflated due to the stacking of risk — but not with a Millig Design Build project. Our PM and CM develop a Guaranteed Maximum Price (GMP) with an appropriate risk contingency budget by defining and assigning risk through a rigorous process with the entire design-build team.

In addition, the City will never experience a change order on a Millig GMP. Should there be design errors, scope gaps, or omissions, Millig is responsible for corrections. Additionally, Millig does not apply professional service fees to any unforeseen conditions necessitating changes to the original scope of work.

Maintaining cost-competitive pricing is fundamental to our ability to provide maximum value to the City of Abilene, and Millig is guided through each project by the principle that value = function/ total cost of ownership.

Thank you for the opportunity to submit this proposal to the City of Abilene, KS.

Let's Build Something Together

APPENDIX

1. **Documents**

   1A. Financial Statements

   1B. Surety Letter

   1C. Financial Institution Letter of Recommendation

2. **Signed Statement by Company Official**

3. **Project Team Resumes**

Millig Design Build

100 E. Park St #200

Olathe, KS 66061

913.214.2680

ldonley@milligdb.com

Statement of Project Savings Guarantee Compliance

Dear Mr. Marsh,

In response to the City of Abilene, KS Request for Qualifications for Energy Efficiency and Capital Reinvestment Program, Section 5, regarding Millig's history of achieving project savings guarantees, we confirm that no shortfall of savings has ever occurred on a Millig project in the history of Millig Design Build.

This statement is provided to certify that there have been no instances of shortfall in guaranteed energy savings within our project portfolio.

Lauren Donley

Lauren Donley

Vice President

Millig Design Build

November 14, 2024

SCOTT MCVEY, PE

President and Principal-in-Charge | Founder

Years of Experience

22

Expertise

Mechanical Design
Electrical Design
Energy Engineering
Energy Modeling
Energy Project Dev.

Education

BS in Mechanical Engineering - Tau Beta Pi

Certifications

Certified Energy Manager
LEED AP
Professional Engineer
OR #96903PE
WA #20120985
KS #PE18834
CO #PE.0059062

Associations

ASHRAE
AEE

PROJECT ROLE & RESPONSIBILITIES

For the City of Denver, Scott McVey, PE, will be involved in strategic planning, technical oversight, and risk management for Millig's overall approach. As a highly-technical mechanical and electrical engineer, Scott will also lead one of Millig's audit teams to find solutions for the most complex and challenging buildings in CCD's portfolio.

RELEVANT EXPERIENCE

President and Principal-in-Charge, Millig Design Build
Scott provides executive leadership, strategic decision-making, and overall management of Millig's operations.

President, Performance Engineering Division, Willdan
Led Willdan's design-build and performance contracting business throughout the Midwest and western states. This included guiding business objectives and strategy while growing their business from $12M to $65M in revenue over six years. Scott also directly produced complex system analysis and design on Willdan's most difficult and complicated projects.

President and Founder, 360 Energy Engineers

- Founded and managed 360 Energy Engineers, acquired by Willdan
- Developed rigorous engineering approach that enhanced client value and distinguished 360 Energy Engineers from traditional ESCOs
- Completed approximately 50 ESPC projects with a track record of meeting or exceeding guaranteed savings projections every time
- Sought and received prequalified ESCO status with four states within the first five years of the company's founding
- Managed an engineering staff that completed projects with a wide range of clients, including public and private K-12; higher education; city and county governments; health care; commercial; industrial; and not-for-profit institutions

Energy Manager, University of Kansas
Responsible for managing a $16M utility budget. This included setting and enforcing energy efficiency standards of new building designs on campus, identifying energy conservation opportunities, and managing separate $18M and $26M ESPC projects.

Sr. Project Development Manager, Schneider Electric
Led the development of over 40 performance contracting projects totaling over $60,000,000 with a combined energy savings of $4M annually.

5-YR PROJECT EXPERIENCE

See page 2.

SCOTT MCVEY, PE

President and Principal-in-Charge | Founder

5-YR. PROJECT EXPERIENCE

Turn-Key Projects

School Districts

Crook County Schools, OR, $1,400,000
Crook County Schools, OR, $500,000
Crook County Schools, OR, $400,000
Hockinson Schools, WA, $800,000
Lamar School District RE-2, CO, $9,000,000
McPherson Schools, KS, $1,600,000
Pratt USD 382, KS $4,500,000
Pueblo County School District 70, CO, $8,600,000
Republic School District, WA, $2,800,000
Thorp School District, WA, $2,600,000

Higher Education

Spokane County Community College, WA, $1,800,000

Healthcare

Baptist Saint Anthony, TX, $4,500,000
Decatur County Hospital, KS, $2,000,000
Spokane Regional Health District, WA, $1,300,000

Local Government

City of Lawrence, KS, $11,000,000
Island County, WA, $3,800,000
Logan County, CO, $4,000,000
Lewis County, WA, $4,600,000
Wahkiakum County, WA, $900,000
Washington, County, CO, $3,000,000

State Government

Washington State Capitol Campus Submetering, Olympia, WA, $750,000
Elihu Harris, CA, $1,700,000

Pharmaceutical Manufacturing

Sanofi, MA, $2,600,000

Decarbonization Master Planning

Providence Hospitals, Chehalis, WA - 300K SF
Providence Hospitals, Seaside, OR - 150K SF
Sanofi, Framingham, MA - 1.5M SF
WA Capitol Campus, Olympia, WA - 3M SF
Thermo Fisher, Cincinnati, OH - 1M SF
Thermo Fisher, St. Louis, MO - 360k SF
Thermo Fisher, High Point, NC - 350k SF
Thermo Fisher, Manati, Puerto Rico - 600k SF
Thermo Fisher, Whitby, Ontario, CA - 325k SF
Thermo Fisher, Missasagua, Ontario, CA - 370k SF
Thermo Fisher, Lenexa, KS - 450k SF
Thermo Fisher, San Jose, CA - 650k SF

JUSTIN BURWINKLE, PE

Senior Project Development Engineer | Partner

Years of Experience

10

Expertise

Mechanical Design
Software Tool Dev.
Energy Engineering
Energy Modeling
Construction Planning
Education & Training

Education

Bachelor of Science
Mechanical Engineering

Certifications

Professional Engineer
KS #26009
MO # PE2021041530
OR # 97644PE
WA # 21009981
CO # PE.0059071

Associations

ASHRAE
DBIA

PROJECT ROLE & RESPONSIBILITIES

Justin has completed over 300 engineering assessments for buildings ranging from courthouses, jails, and schools, to hospitals, campuses, and laboratories. For the City of Abilene, Justin will utilize his extensive experience to lead one of Millig's audit teams in finding practical, cost-effective solutions for the City of Abilene. He will oversee technical execution of the energy audit, design, development of infrastructure improvements. This includes ensuring compliance with applicable codes and regulations, and collaborating with all project stakeholders.

RELEVANT EXPERIENCE

Project Development Engineering Manager, Millig Design Build
Justin leads engineering, design, and collaborative construction planning efforts for Millig Design Build projects across the country. From initial planning and development through construction completion, Justin is dedicated to ensuring projects are delivered at the highest quality and efficiency standards.

Engineering Manager, Willdan Performance Engineering
Managed Willdan Performance Engineering's mechanical and electrical engineering division nationwide. Provided technical training to engineers and developed new design processes and procedures to provide more value to client facility improvement projects and improve collaboration with subcontractor partners.

Mechanical Engineer, Willdan Performance Engineering
Developed comprehensive facility upgrades which combined energy efficiency projects with needed core infrastructure improvements to meet the desires and budget constraints of building owners including private entities, school boards, and county commissioners.

Mechanical Engineer, 360 Energy Engineers
Responsible for mechanical engineering and design of comprehensive HVAC system upgrades for K-12 schools, municipal government, and long-term healthcare. Project management for other scopes of work including lighting, electrical, and building automation controls upgrades. Evaluated and audited more than 100 facilities.

Engineering Intern 360 Energy Engineers
Performed energy audits, created detailed energy models through a combination of eQuest and Carrier HAP software, and assisted with design calculations including equipment sizing and selection. Generated and presented reports of existing HVAC and lighting systems and proposed improvements to each.

5-YR PROJECT EXPERIENCE

See page 2.

JUSTIN BURWINKLE, PE

Project Development Engineer Manager | Partner

5-YR. PROJECT EXPERIENCE

Turn-Key Projects

School Districts

Akron Schools, CO, $3,400,000
Burlington Schools, CO, $11,400,000
Crook County Schools, OR, $2,400,000
Crook County Schools, OR, $1,400,000
Crook County Schools, OR, $500,000
McPherson Schools, KS, $1,600,000
Oakley Schools, KS, $2,100,000
Republic Schools, WA, $2,800,000
Steilacoom Schools, WA, $400,000
Thorp Schools, WA, $2,600,000

Healthcare

Baptist Saint Anthony, TX, $4,500,000
Spokane Regional Health District, WA, $1,300,000

Local Government

City of Lawrence, KS, $11,000,000
Island County, WA, $3,800,000
Kearny County, KS, $3,000,000
Kit Carson County, CO, $2,400,000
Las Animas County, CO, Est. $5,700,000
Logan County, CO, $4,000,000
Logan County, CO, $3,400,000
Washington County, CO, $3,000,000

Decarbonization Master Planning

Providence Hospitals, Chehalis, WA - 300K SF
Providence Hospitals, Seaside, OR - 150K SF
WA Capitol Campus, Olympia, WA - 3M SF
Thermo Fisher, Cincinnati, OH - 1M SF
Thermo Fisher, St. Louis, MO - 360k SF
Thermo Fisher, Lenexa, KS - 450k SF

DERYL SARVER

Construction Department Manager | Partner

Years of Experience

28

Expertise

AutoDesk Inventor
Project Estimation
Pre-Construction
Construction Management
QA/QC
Bid Review
Subcontractor Selection
Scope Development
Project Management

Education

Bachelor of Science Engineering Technology: Construction

Certifications

OSHA 30
First Aid, CPR, AED
Lean Six Sigma Green Belt
LEED Green Associate
Certified Professional Constructor, AIC
OSHA 10

PROJECT ROLE & RESPONSIBILITIES

For the City of Abilene, Deryl's role and responsibilities encompass overseeing and managing the construction activities and operations. This includes developing and implementing construction strategies, coordinating with project stakeholders, managing in-house construction professionals and subcontractors, ensuring compliance with regulatory requirements and safety standards, monitoring project progress and budget, and ensuring timely and successful project delivery.

RELEVANT EXPERIENCE

Construction Department Manager, Millig Design Build
Deryl is responsible for overseeing and coordinating all construction activities, ensuring that all projects are executed efficiently, on schedule, and in compliance with Millig's superior quality and safety standards. His primary duties include developing and implementing departmental strategies and objectives, managing resources, and establishing operational procedures. He's also responsible for supervising project managers, field engineers, and other construction professionals, as well as coordinating with other departments and stakeholders to facilitate smooth project execution.

Senior Construction Manager, Pre-Construction Manager, Willdan Performance Engineering
Deryl worked as the construction manager on a variety of projects for the Performance Engineering Division. He was responsible for the entire construction management portion of projects, including both the project and field management aspects. He ensured projects were delivered on time, within the designated budget, and according to the client's expectations.

Project Manager, Crossland Construction Company Inc.
In his role as project manager, Deryl supervised workers on the project site, inspected and reviewed projects to monitor compliance with building and safety codes, and obtained all of the necessary permits and licenses for projects. Deryl also prepared contracts and negotiated revisions/additions to contractual agreements with architects, consultants, clients, and subcontractors.

Project Manager, Larry Snyder & Company, Inc.
Deryl developed project estimates and created construction schedules for clients and subcontractors. He also qualified, reviewed, and selected subcontractors for individual projects.

5-YR PROJECT EXPERIENCE

See page 2.

DERYL SARVER

Construction Department Manager | Construction Lead | Partner

5-YR. PROJECT EXPERIENCE

Turn-Key Projects

School Districts

Crook County Schools, OR, $2,400,000
Crook County Schools, OR, $1,400,000
Crook County Schools, OR, $500,000
Crook County Schools, OR, $400,000
Hockinson Schools, WA, $800,000
McPherson Schools, KS, $1,600,000
Pratt Schools, KS, $4,500,000
Pueblo D70 Schools, CO, $8,600,000
Republic Schools, WA, $2,800,000

Higher Education

Cowley College, KS, $2,500,000
Spokane Community College, WA, $1,800,000
Coffeyville Community College, KS $3,200,000

Healthcare

Baptist Saint Anthony, TX, $4,500,000
Decatur County Hospital, KS, $2,000,000
Keefe Memorial Hospital, CO, $2,000,000

Local Government

Kearny County, KS, $3,100,000
Lewis County, WA, $4,600,000
Logan County, CO, $4,000,000
Logan County, CO, $3,400,000
Thomas County, KS, $3,100,000
Washington, County, CO, $3,000,000

JOSH SLOCUM, PE

Energy Engineer | Partner

Josh brings over 10 years of experience as a commissioning agent, design engineer, and energy engineer and is an owner-operator of Millig.

For the City of Abilene, Josh will be responsible for supporting project design and development from an energy efficiency perspective, and will complete energy calculations for Millig's energy savings guarantee. Josh has particular expertise in: decarbonization strategies and greenhouse gas emissions calculations; eQUEST modeling; and custom energy calculations.

RELEVANT EXPERIENCE

Owner of Millig since 2021.

Director of Commissioning, Willdan Performance Engineering
Oversaw multiple employees ranging in experience from recently-graduated engineering students to veteran commissioning agents, providing guidance and support to the entire team. Helped develop tools and processes vital to the operation of the department. Developed an entirely new commissioning process utilizing industry standard software. In addition to commissioning responsibilities for a project, also performed Measurement & Verification tasks, calculations, and reports, ensuring that delivered projects performed energy savings and performance criteria. Specialized in system types including packaged equipment, variable refrigerant flow systems, and complex hydronic plants, implementing operating procedures that optimized efficiency without increasing operator complexity to ensure resiliency.

Commissioning Engineer, Willdan Performance Engineering
Independently managed multiple projects providing all commissioning and measurement and verification services including coordination of equipment testing and issue resolution and collaboration with contractors to ensure client satisfaction and project performance. Documented processes and detailed records of tests, results and handover manuals for future reference and project delivery improvement.

Commissioning Intern, 360 Energy Engineers
Developed pre functional testing documentation as well as functional testing procedures for projects ranging from packaged rooftop equipment to ground source heat pump systems. Assisted in testing and issue resolution tasks for projects in the commissioning phase. Completed an entire commissioning process from planning through closeout and verification with minimal supervision.

Engineering Intern, Unilever
Hired to assist financial and accounting departments with organizing files and equipment for upcoming audits because of technical knowledge and organizational expertise. Asked to remain on staff after internship ended to assist with equipment categorization of a newly constructed plant.

Expertise

Mechanical Design
Process Development
Quality Control
HVAC Systems Testing
Control Systems
Facility Management
Education & Training

Education

Bachelor of Science, Mechanical Engineering

Certifications

EBCP
Professional Engineer KS #28630

Associations

ASHRAE
AEE
Existing Building Commissioning Professional (EBCP)

millig
DESIGN BUILD

KEVIN PLAYER, CBCP

Director of Project Performance | Partner

Years of Experience

12

Expertise

Commissioning / M&V
Process Development
Quality Assurance / Control
HVAC Systems Testing
Control Systems
Facility Management
Education & Training

Education

Bachelor of Science
Electrical Engineering

Master of Science
Electrical Engineering

Certifications

Certified Building Commissioning Professional
Niagra4 Technician
Lean Six Sigma - Green Belt
10-Hr OSHA

Associations

AEE

PROJECT ROLE & RESPONSIBILITIES

For the City of Abilene, Kevin will lead Commissioning and Measurement & Verification (M&V) efforts. Kevin will be responsible for quality assurance, staff training, and conducting tests to verify, troubleshoot, and ensure the proper functioning of HVAC and controls systems. Kevin's expertise will be vital in ensuring that all systems operate as intended, delivering optimal performance and efficiency while enhancing the overall functionality of the city's facilities.

RELEVANT EXPERIENCE

Director of Project Performance, Millig Design Build
Kevin leads the Commissioning and Measurement & Verification (M&V) team and is responsible for ensuring that all systems and components of a project are tested, verified, and function as intended as well as ensuring staff is trained to operate and maintain the systems.

Director of Commissioning, Willdan Performance Engineering
Led efforts in Commissioning, Performance Maximization, and Measurement & Verification (M&V). He developed all internal processes & guidelines for the CX Dept ground-up and refined processes for the M&V Dept. He was also responsible for training and managing a staff of six Commissioning and M&V Specialists across the country. In this role, Kevin directly oversaw the approach and execution of all CX and M&V plans and reports produced by Willdan's Performance Contracting Division.

Test Equipment Engineer II, Honeywell
Developed procedures and guidelines for testing radar components of nuclear weapons; designed and developed automated test equipment systems for testing components; coordinated testing strategies and development with engineers and manufacturing; and performed troubleshooting on test equipment and/or nuclear weapons components.

Associate Engineer III, University of Kansas
Designed, developed, and supported radar systems for remote sensing applications; developed procedures for testing radar system components; developed documents for radar system installation and operation for field engineers; and performed troubleshooting of radar systems.

Radar Systems Engineer II, JT3
Troubleshooting and maintenance of radar systems.

5-YR PROJECT EXPERIENCE

See page 2.

KEVIN PLAYER, CBCP

Director of Project Performance | Partner

5-YR. PROJECT EXPERIENCE

Turn-Key Projects

School Districts

Akron Schools, CO, $3,400,000
Burlington Schools, CO, $11,400,000
Crook County Schools, OR, $2,400,000
Crook County Schools, OR, $1,400,000
Crook County Schools, OR, $500,000
Crook County Schools, OR, $400,000
Oakley Schools, KS, $2,100,000
Republic Schools, WA, $2,800,000
Steilacoom Schools, WA, $400,000
Thorp School District, WA, $2,600,000

Higher Education

Spokane County Community College, WA, $1,800,000

Healthcare

Baptist Saint Anthony, TX, $4,500,000
Decatur County Hospital, KS, $2,000,000
Keefe Memorial Hospital, CO, $2,000,000

Local Government

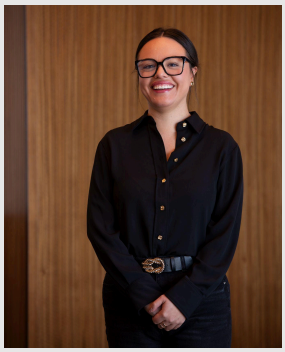
City of Lawrence, KS, $11,000,000
Island County, WA, $3,800,000
Kearny County, KS, $3,000,000
Kit Carson County, CO, $2,400,000
Las Animas County, CO, Est. $5,700,000
Lewis County, WA, $4,600,000
Logan County, CO, $4,000,000
Logan County, CO, $3,400,000
Thomas County, KS, $3,100,000
Washington County, CO, $3,000,000

State Government

Washington State Capitol Campus Submetering, Olympia, WA, $750,000

Commissioning Work

University of Kansas Innovation Park, KS
Overland Park Convention Center, KS



Veronica Guerrero

Project Developer

Veronicaleads efforts to improve and create high-performance facilities in the Midwest primarily throughout Kansas and Missouri. With a background in data analytics, business development and construction sales, she brings a diverse perspective to her projects and bridges the gap between Millig and Owners. Veronica provides technical oversight to design teams to ensure the best possible outcome. She has implemented building improvements across the country, in both the public and private sectors for over 8 years. Veronica has a proven track record of researching grants and incentives for facility owners to reduce the financial burden required to complete the desired scope of work.

Expertise

Grants & Incentives
Owner Engagement
Contracting
Project Development

Education

Bachelor of Arts
Economics

Associations

ASHRAE
IFMA
NAWIC
TEXO

RELEVANT EXPERIENCE

Key Account Manager, AEC
As a Key Account Manager, Veronica oversaw project development and management all the way through implementation making sure that client goals were exceeded while staying on budget. Veronica's primary focus has always been on building and maintaining strong relationships with clients in the commercial and public space. Veronica has been working on facility upgrades for 8 years and maintains a focus on understanding client needs, delivering tailored solutions, and driving business growth through effective account management and collaborative project development

Business Development Manager, The Door Company
As a Business Development Manager, Veronica worked with owners and General Contractors in the state of Texas to provide division 8 commercial solutions for both new construction and existing facilities. Veronica's success in the highly competitive arena of commercial construction was due to her unyielding willingness to go above and beyond to ensure every client got the system needed, quality installation and impeccable customer service. From technical questions about to contract negotiation with owners and general contractors, Veronica used her extensive knowledge to help owners and owner's representatives feel comfortable moving ahead with their investment

millig
DESIGN BUILD

AMERESCO | P1 Service, LLC

Qualifications for

Energy Conservation and Capital Reinvestment Program

Prepared for

City of Abilene, KS
Mr. Ron Marsh, City Manager
419 N. Broadway
Abilene, KS 67410

Submitted by

Ameresco, Inc.
Dana Dunn, Senior Account Executive
Project Administrator
10 S. LaSalle Street, Suite 345
Chicago, IL 60603
(913) 515-4858 | ddunn@ameresco.com

November 1, 2024

Prepared for the City of Abilene, KS

Presented by

Prime Contractor Ameresco, Inc. and Strategic Allience Partner P1 Service, LLC

Dana Dunn, Senior Account Executive
P: (314) 827-3866
C: (913) 515-4858
E: ddunn@ameresco.com

Project management location

P1 Service Office

3030 S. All Hallow Avenue

Wichita, KS 67217

T: (316) 267-3256

This Proposal contains data and information that has been submitted in response to a request for proposal or similar solicitation and is provided in confidence. The contents includes proprietary information and trade secrets that belong to Ameresco, Inc., ("Confidential Information") and is disclosed to the recipient only for purposes of evaluation. In the event Ameresco is awarded a contract or purchase order as a result of or in connection with the submission of this proposal, Customer shall have a limited right as set forth in the governing contract or purchase order to disclose the data herein, but only to the extent expressly allowed.

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City of Abilene

Qualifications for Energy Conservation and Capital Reinvestment Program

Executive Summary

Executive Summary

On behalf of the Ameresco team, thank you for the opportunity to participate in the City of Abilene's *Request for Qualifications: Energy Conservation and Capital Reinvestment Program.*

Ameresco, Inc. and our strategic partner, P1 Service, LLC are aligned to provide the best approach and service to the City of Abilene before, during, and after the project is completed. Our strategic partnership with P1 Service ensures that the long term investments made by the City of Abilene reduces energy and operational expenses.

Ameresco is an American-owned Energy Services Company (ESCO) and is a qualified ESCO with the U.S. Department of Energy and National Association of Energy Services Companies. Seventy percent of our 2023 revenues of $1.4 billion are energy performance contracts and our construction backlog exceeds $3.9 billion.

What Ameresco is most proud of, however, is how often municipalities ask us to come back to do additional phases of work.

The Easy Button

Many of our customers call Ameresco "The Easy Button" and this is validated by how often we do multiple phases of work for customers. We are flexible with our development and installation and accommodate all stakeholders including the city staff and the community. We communicate, schedule, and manage work while accommodating the needs of Abilene. We will work after hours, weekends, and holidays, if necessary, to prevent disruption to the core mission of Abilene.

Financing, Grants, Rebates & Tax Credits

Ameresco's finance professionals deliver customized energy and water solutions through a variety of contracting methods that leverage renewable energy certificates, grants, utility rebates, and tax credits, providing customers options to implement infrastructure upgrades on- or off-balance sheet.

Ameresco staff act as an extension to Abilene and provide expertise in grants and tax incentives. Since our founding, we have assisted our customers with obtaining over $400 million in federal grants.

DOE Under Secretary David Crane and Ameresco's Brad Driver discuss construction logistics.

Risk Mitigation

This is a human business, and many trades are involved in the process. Errors will occur. Ameresco's experience, size and financial stability greatly reduces, or in many cases eliminates, the cost of any unforeseen risks our municipality customers may face. Our experience and business model greatly reduces the risk associated with ESCO projects for the City of Abilene.

Ameresco is the prime performance contractor for this project and is 100% responsible for this project. If issues arise, Abilene contacts one company, Ameresco.

Full Transparency and Open Book Pricing

Ameresco provides full transparency with open book pricing. This means that we will present proposals from multiple subcontractors and equipment vendors to ensure that the city receives the best value for each project dollar. Ameresco's fees will be determined as a percentage of these direct project costs. **All subcontracts, design, engineering, project management, and finance costs will be disclosed during the project development phase.**

This transparency fosters the development of an open, communicative relationship that serves as a foundation for a long-term partnership.

No Change Orders / Guaranteed Maximum Price (GMP)

We are experienced with large performance contracting projects and provide a Guaranteed Maximum Price with No Change Orders, mitigating risk to the city of Abilene.

Vendor and Product Neutral

Ameresco is vendor neutral and independent of all manufacturers and product distributors.

Many skilled trades will participate in this project. Our preference is to utilize local contracting companies. If Abilene has preferred products, companies, or subcontractors and these companies qualify for this project, we will utilize those companies for the ESPC project.

Pricing & Markup Fee Proposed Structure

Proposed ASHRAE Level II Investment Grade Audit:

The Investment Grade Audit (IGA) will be delivered at no cost if the City of Abilene partners with Ameresco and selects Ameresco as the ESCO for implementation of this project.

The IGA cost if Ameresco is not selected as the ESCO for the implementation of the project is negotiable and the IGA cost is dependent upon the scope of work the city decides to include in the Investment Grade Audit.

Corporate Resources

We pledge our full corporate resources to Abilene and we would be honored to have the opportunity to meet with you and the Abilene team, to discuss further.

Should you have any questions or require additional information, please contact Dana Dunn at (913) 515-4858 or email ddunn@ameresco.com.

On behalf of the entire project team at Ameresco and P1 Service, thank you for the opportunity to submit this proposal for consideration.

City of Abilene

Qualifications for Energy Conservation and Capital Reinvestment Program

1. Business Qualifications

1. Business Qualifications

a. History of Firm, Number of Years in ESCO Business

Incorporated in 2000, Ameresco, Inc. (NYSE: AMRC) is a leading independent full-service provider of comprehensive energy services including energy audits, energy efficiency solutions, renewable energy, and energy and utility infrastructure upgrades. Our projects range from traditional guaranteed energy savings performance contracts (ESPC) to wastewater treatment facilities, and every conceivable energy-based solution in between.

With 24 years in the energy services business as an Energy Services Company (ESCO), Ameresco has engineered, constructed and/or **provided guaranteed services for over $14.5B in energy solutions since inception.**

Ameresco has implemented over $600M in energy solutions in the states of Kansas, Colorado, Nebraska, and Missouri. Company-wide, **Ameresco has completed 1,403 Energy Saving Performance Contracts in the past ten years**.

A couple of examples **in Kansas include Ameresco's first project with Pratt Community College in 2002**. The total project amount was $488,938 with annual energy savings of $46,503. Currently, we are a design build contractor for the Unified Government of Wyandotte County and Kansas City, Kansas and we are on our 18th project with this customer including the renovation of the historic courthouse in Kansas City, Kansas.

Our strategic partner for this project, **P1 Service, LLC**, was formed in 2020; however, the founding companies of P1 Service date back to 1919. P1 services all types of building systems in various markets, making it one of the top MEP (Mechanical/ Electrical/Plumbing) contractors in Kansas. P1's broad spectrum of capabilities includes value-added services such as design assist and engineering assist, value engineering, multi-trade fabrication and commissioning, and retro-commissioning. **P1 customers include Memorial Health System and Village Manor in Abilene**. P1 Service has 290 service vehicles and provides 24-hour service, 365 days a year.

Ameresco at a Glance

- **Founded in 2000** and publicly traded on NYSE since 2010
- **$14.5 billion** in energy solutions delivered since inception
- **1,400+** employees
- **$5.5 billion+** in arranged energy project financing

Financial Highlights

2023 Annual Revenue
$1.37 Billion

Total Assets	Credit Facility
$3.7 B	$495 M

Bonding Capacity
$2 Billion

b. In-House Resources and Expertise

Ameresco holds 100% responsibility for the ESPC project and is a one-stop provider with the ability to develop, design, engineer, construct, guarantee, operate, and maintain complex energy efficiency projects and energy conservation measures.

In-House Expertise: Throughout all phases, our in-house expertise sets us apart. As a full-service provider, we offer an extensive energy efficiency portfolio. Some of our services include street lighting, HVAC systems, building envelope, water conservation, motors, smart meters, building controls, fuel switching, and utility distribution systems. We are also experts with combined heat and power (CHP), cogeneration plants, and water and wastewater treatment plant upgrades and rehabilitation. We have completed numerous renewable energy solutions including solar, floating solar, geothermal, green gas, and wind – all of which can be paired with microgrid and battery storage technologies. Ameresco has also developed and operates 37 landfill natural gas plants which produce low-cost energy for cities, counties, and commercial customers, including one located in Jefferson City, MO which provides clean energy to the City of Columbia.

Ameresco has assembled an experienced team of engineers and project managers with expertise in energy efficiency, renewable energy and advanced technology design, development, and construction. Ameresco's team **includes 88 professional engineers**, an in-house automation controls group, and commissioning and compliance teams.

Ameresco's **in-house financing team** consists of seven professionals supported by a traditional finance team of accountants, financial analysts and a corporate controller. **Our structured finance team has raised more than $5.5 billion for our customers for renewable energy and energy efficiency projects.** We deliver customized energy, utility and water solutions through a variety of contracting methods that leverage renewable energy certificates, grants, utility rebates, and tax credits, providing customers options to implement infrastructure upgrades on-or off-balance sheet.

Our in-house construction team has single-source responsibility and is fully responsible for all aspects of project construction. Ameresco will partner with a diverse range of high-quality local subcontractors, selected in accordance with Ameresco's subcontractor prequalification process, with a focus on maximizing local community benefits.

P1 Service, LLC provides 24-hour service, 365 days a year. P1 has 290 service vehicles and 550 employees; 78 employees are in the Topeka office and 80 employees are in the Wichita office. P1 will assist Ameresco with system design, value engineering, long-term maintenance, and training.

Mr. Dana Dunn, Project Administrator, will serve as the City of Abilene's primary point of contact. Additional key individuals are identified in Section 3, Key Program Personnel. While Mr. Dunn will act as the primary point of contact throughout the program, Ameresco will also provide the city with a single point of contact for onsite construction activities.

Expertise in grants, incentives, and rebates: Our team of experts acts as an extension to the Abilene team and incorporates grants, rebates, and tax incentives to ensure our projects receive the maximum possible funding. Ameresco's government relations and policy experts helped shape the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA), and are astutely familiar with all clean energy assistance and tax programs**.**

Since our founding we have assisted our customers with obtaining over $400 million in federal grants, including over $104 million in IRA and IIJA funding to date.

Select examples of Ameresco's grant, rebate, and incentive experience include:

- **City of Tucson LED Street Lighting**: Over $2.2M in utility rebates for this $16M project.
- **Philadelphia Street Lighting**: $9.6M of utility rebates anticipated at project completion.
- **Philadelphia Water Department**: $17M of grant funding from the American Recovery and Reinvestment Act.
- **City of Dallas:** Secured $233,500 in utility rebates for three-site solar project.
- **City of Reno:** Funded through federal grants, bonds, and utility rebates. Energy and operational savings of $1.1M+/yr. will be used to pay off the bonds, with no impact on Reno's general fund.
- **Killeen Regional Airport**: $5M grant from the FAA for parking canopy solar and a terminal lighting retrofit.

c. NAESCO Accreditation, Current Kansas PEC Certification

Ameresco is accredited with the National Association of Energy Services Companies (NAESCO) - certificate is provided in **Appendix A**.

Proof of current Kansas Professionals Engineering Corporation Certification is also provided in **Appendix A.**

d. Certifications, Awards and Credentials

Select Ameresco Certifications and Credentials:

- Ameresco is recognized by both the U.S. Department of Defense and Department of Energy as a federal qualified ESCO. Like NAESCO's accreditation process, these federal qualifications are based on independent evaluations of Ameresco's capabilities and ability to successfully develop, finance, implement, and perform long-term performance services on behalf of its customers.
- Ameresco is an active member and supporter of the Energy Services Coalition on a national level and through state chapters across the United States.
- Ameresco is accredited in all states that prequalify energy service companies. Prequalifications are based on an independent evaluation of our experience and demonstrated technical capabilities, like NAESCO and other accreditation processes.
- Ameresco Safety Certifications:
    - Site Safety Managers, Construction Directors, Project Managers and Construction Managers hold 30-Hour OSHA Construction Safety course completion cards
    - Regional Safety Managers are OSHA Certified Trainers for OSHA Construction Safety Courses
    - Seven Regional Safety Managers and Federal Site Safety Managers are 40-Hour EM 385-1-1 Certified in Hazard Recognition under the U.S. Army Corps of Engineers
    - Four employees hold Construction Health and Safety Technician certifications issued by the Board of Certified Safety Professionals
- Ameresco Cybersecurity: Ameresco meets several compliance requirements such as SOX, SOC 2 Type II, ISO 27001 and NIST Security certifications.

Select Ameresco Awards:

- Silver Award for Energy, Cleantech, and Environment Company of the Year in the 2024 Globee® Awards for American Business
- Best in Biz Awards (2023) Gold - Company of the Year Award (Large – 1000+ employees).
- S&P Global, 2023 Commodity Insights Global Energy Awards (2023)
- Environment + Energy Leader Top Project of the Year Award (2023)
- Frost & Sullivan, 2023 Energy Services Company of the Year, North America
- Midwest Energy Efficiency Alliance (MEEA) Inspiring Efficiency Impact Award (2023) – for Ameresco's Chicago Smart Lighting Program
- Solar Power World Top Solar Contractors (2022, 2020)

P1 Service Certifications:

- Critical Environment Certification
    - P1 Group's Critical Environment Certification (CEC) services use technology and highly skilled technicians to provide certification and repairs to controlled environments in hospitals, pharmacies, and laboratories.
- MSCA STAR Qualified Contractor

  - The MSCA (Mechanical Service Contractors of America) STAR is a national program only recognizing the best in the industry. To become a STAR contractor, a company must meet the absolute highest standards, which are verified by a leading national trade association.
- NEBB Certified Contractor
  - P1 is certified by the National Environmental Balancing Bureau for excellence in building enclosure, cleanroom and fume hood performance testing, sound and vibration measurement, commissioning and retro-commissioning, and testing, adjusting, and balancing (TAB).

e. Ameresco's ESPC Business Unit

Ameresco has over 1,500 employees with the following job classifications:

- Engineering 23%
- Project Management and Safety 18%
- Post-Construction (M&V and O&M) 18%
- Administrative (Finance, HR, IT, Legal) 16%
- Business Solutions 13%
- Technology and Consulting 8%
- Other 4%

Our team of experts will develop and deliver custom solutions that meet the sustainability goals of the City of Abilene.

f. Locations

Ameresco services for this project will be managed out of the P1 Service Wichita office location:
3030 S All Hallow Ave
Wichita, KS 67217
P: (316) 267-3256

Ameresco's Midwest headquarters:
Ameresco, Inc.
10 S. LaSalle Street, Ste 3450
Chicago, IL 60603

P1 Service is headquartered in Lenexa, KS and has four branch offices located in Wichita, KS, Topeka, KS, St. Joseph, MO, and Ankeny, IA.

g. Ameresco is Vendor-Neutral

Ameresco is both **vendor and technology neutral** across all products and service lines and independent of any parent company or other competing lines of business. Ameresco is not affiliated with or a subsidiary of any equipment or system manufacturers. Our energy and utility resource projects are not influenced by the sale of equipment or systems.

This allows us to provide the best products and solutions with no technical or vendor bias. Technology and products are recommended to the city based on the ability to best meet the needs of Abilene for the lowest possible cost.

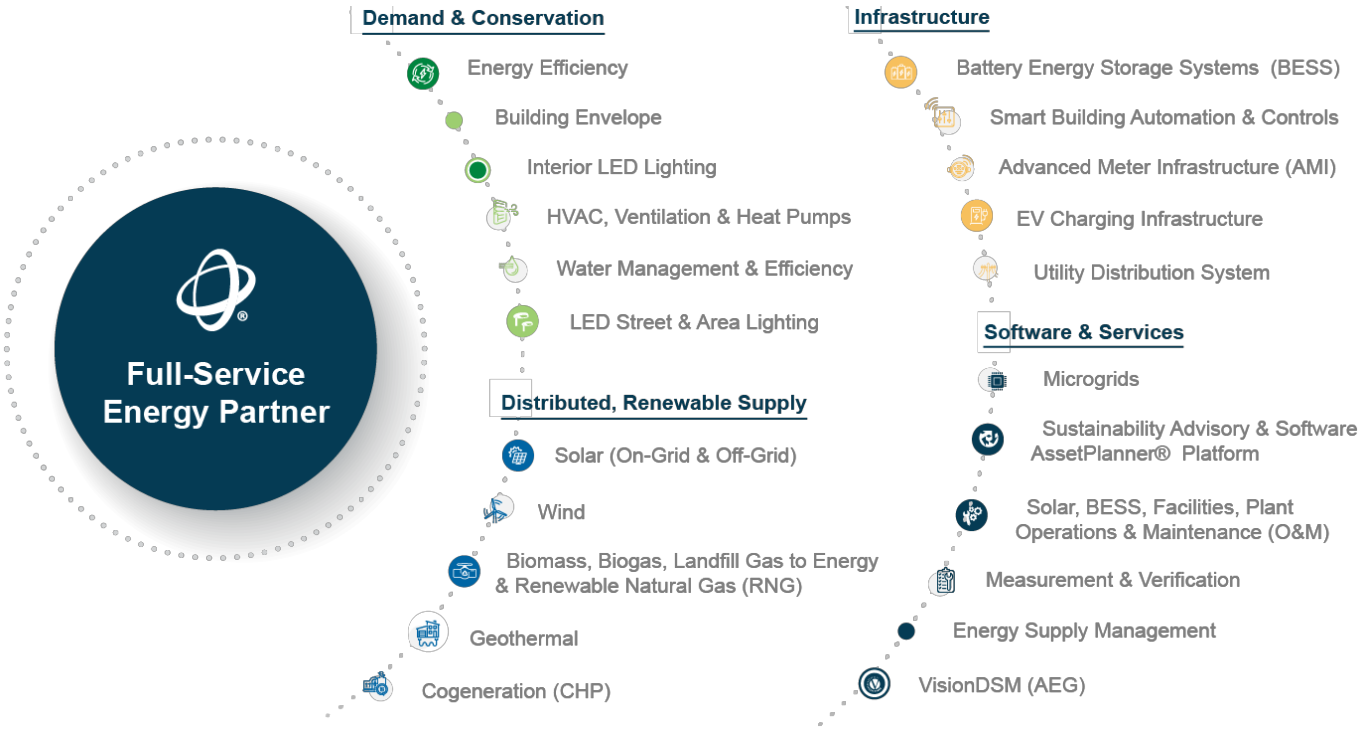
At the same time, our position as a nationally recognized ESCO results in preferred pricing with leading equipment manufacturers. We have national buying agreements with major manufacturers to ensure that our customers receive the highest quality products, at the lowest possible cost available.

Because we do not manufacture equipment or systems, **every project implemented by Ameresco has installed or integrated other manufacturers' products.** Examples of the multiple manufacturers' products we use and system integrations that we do on a daily basis are shown in the table below.

Client	System	Manufacturers	Integrations
City of Boulder, CO (Brenton building)	HVAC	Trane	Integrated new Trane variable refrigerant flow system to Allerton brand building automation system (BAS)
City of Boulder, CO (Main Library)	DDC (direct digital control)	Allerton	Integrated multiple HVAC system (Carrier, Trane, custom AHUs and more) to new Allerton brand BAS
City of Arvada, CO (Arvada Center)	Boilers, chillers, and RTUs	Delta controls, York Daikin, Aerco	Integrated new RTUs, boilers and chillers to existing Delta Controls BAS
City of Arvada, CO (Streets, Fleet and Water Shops)	VFD (variable frequency drives)	ABB	Integrated new ABB variable frequency drives into existing BAS.
City of Plainview, TX	Water meters and AMI (advanced metering infrastructure)	Diehl residential meters Neptune water meters	Installed and integrated all software and associated data with Tyler Technologies billing software, including the new AclaraOne AMI software and VertexOne's WaterSmart customer portal
Woodlands Water, TX	Water meters and AMI	Neptune water meters	Installed and integrated all software and associated data with Tyler Technologies billing software, including the new AclaraOne AMI software and VertexOne's WaterSmart customer portal

h. Ameresco's Range of Energy/Utility Services and Capabilities

Ameresco's complete range of energy/utility services and capabilities offered is illustrated in the graphic below:



The following table describes some of Ameresco's energy and utility services and capabilities:

Energy & Utility Services & Capabilities	Description
Building and facility energy analysis	After gaining a comprehensive understanding of the city's goals and objectives during a Preliminary Energy & Utility Assessment, Ameresco will conduct an Investment Grade Audit to analyze current resource consumption and identify the project's scope of work and delivered cost. Ameresco will spend considerable time working to assess the city's needs and understand how its resources are expended before specific ECMs are identified and further developed. Data drives our Energy Analytics & Supply solutions ranging from our asset management software, AssetPlanner™, to energy procurement services for negotiating contracts and stabilizing customers' energy budgets. This topic is also addressed in Section 4 below.
Engineering, design, and equipment selection	Ameresco's project developers and engineers perform the preliminary and final design, equipment selection, and costing for all ECMs, including any renewable energy components that may be included in the final project. This process will be transparent to the city. This topic is also addressed in Section 4 below.

Energy & Utility Services & Capabilities	Description
Installation and commissioning	As with the design and auditing stages, an Ameresco staff member manages project implementation. Energy projects require a special skill set to construct ECMs in a manner that will result in the optimum savings. A lead project manager and construction managers (depending on the project size, duration, and complexity) will manage the implementation of the work. The project manager will be the primary point of contact between the city and Ameresco. This topic is also addressed in Section 4 below.
Monitoring and performance verification	During the project development phase, Ameresco will assign a measurement and verification (M&V) specialist to the project who will be responsible for ensuring the correct data has been collected and mutually agreed upon to develop the baseline energy and operational costs. The M&V specialist will also be involved in the implementation and commissioning stages of the project to ensure that the post-retrofit measurements and metering are installed properly, and the data is collected in a thorough and efficient manner. A more detailed description is in Section 4.j.
Operations & Maintenance (O&M)	Ameresco's approach to energy and utility resource solutions ensures end-to-end technical guidance, from project inception to continued systems O&M. Ameresco knows that a well-designed and properly executed O&M program along with training is a crucial element ensuring equipment performance as well as energy, operational, and maintenance savings the project will produce. Our strategic Partner, P1 Service **can respond to equipment repair 24 hours per day, 365 days per year.** This topic is also addressed in Section 4 below.
Related training	A strong focus on energy saving strategies and system O&M is a key to a successful project. Ameresco will work with the city of Abilene to provide information, training, and oversight necessary to effectively operate the newly installed systems. The project manager will assemble the O&M documentation in a training manual and conduct the training in a way that is most appropriate to the specific ECMs installed. A more detailed training description is in Section 4.i.
Water/wastewater treatment equipment analysis	Wastewater treatment plants account for a large percentage of a city's electric bill, which may provide an excellent opportunity for energy savings. Pumps, motors, and blowers are often good candidates for replacement. Because aeration could account for over 50 percent of the energy used by wastewater plants, converting mechanical aerators to diffused aeration can be beneficial. Where diffusers are already in place, updating existing equipment with automatic dissolved oxygen controls is often a good measure. Depending on the size of the plant; methane gas can be used to create energy for larger plants if the plants have existing anaerobic digesters. **The City of Troutdale, Oregon** partnered with Ameresco for a $2.2 million turnkey ESPC project to complete upgrades throughout its 20-year old wastewater treatment plant. Improvement measures included replacing the aeration basin blower; installing ultra-fine bubble diffusers; upgrading the UV disinfection system; installing new HVAC controls; and retrofitting lighting fixtures with LEDs. The new effluent water distribution piping was designed to reuse water from the effluent well, reducing the plant's need for potable water. These improvements alleviate the risk associated with aging equipment, while reducing the annual energy, gas, and water costs to the city.

Energy & Utility Services & Capabilities	Description
Utility metering	Ameresco develops smart/automatic metering projects with local governments. Our delivery team is focused on providing municipal utility customers with non-revenue water reduction projects to conserve important resources**, which becomes particularly important during times of growing water shortages.** Many utility companies are focusing their attention, time, and resources on improving operational efficiencies. The growing variety and availability of flow measurement technologies more accurately measures consumption, especially in low flow ranges, is making this more attainable. Integrated leak detection systems take accountability a step further. Working in parallel, these technologies reduce the cost of operating and maintaining distribution infrastructure and data collection, as well as the associated variable production costs for chemically treating and pumping clean, safe drinking water to citizens. Municipal utility projects reduce operations and maintenance expenses by decreasing labor costs. These projects also increase billable water and corresponding sewer revenues through the installation of more accurate meters.
Street lighting	**Ameresco is a national leader in citywide streetlight conversion projects.** Ameresco implemented one of the first citywide light-emitting diode (LED) streetlight projects in the US for the City of Longview, Washington in 2010. As part of this project, Ameresco helped to secure a $500,000 state energy efficiency grant and $400,000 in utility incentives. Ameresco also executed the City of Chicago's $160 million Smart Lighting Project, which is the largest LED streetlight retrofit project in the United States.
Landfill gas	Ameresco has built more landfill gas (LFG) projects in the western US than any developer. Over the past two decades, Ameresco has engineered, constructed, and/or provided guaranteed services for nearly 40 operating biogas projects throughout the US. Along with our renewable natural gas (RNG) projects, Ameresco has one of the nation's largest LFG-to-electricity portfolios. We successfully bring projects online in a quick and cost-effective manner.
Renewable Energy	Ameresco provides the experience and expertise needed to design solar photovoltaic (PV) systems that meet the local utility companies' technological requirements (site interconnection regulations and equipment specifications), as well as any requirements established by the agencies providing additional rebates or incentives. Ameresco has designed and implemented more than 800 MW of solar PV projects.

i. Litigation Statement

Ameresco, Inc. does not have any parent companies. Neither Ameresco nor its subsidiaries have ever been involved in litigation/lawsuits resulting from the design and/or implementation of a guaranteed energy cost savings project pursuant to K.S.A. 75-37,125 in Kansas or within a contiguous state (MO, NE, CO).

j. Completed Contracts to End of Performance Guarantee Term

Many of Ameresco's customers will cancel the measurement and verification (M&V) portion of their energy savings performance contracts after the first few years, rather than continue M&V to the end of the full guarantee term. While it is always the customer's option to continue M&V

throughout the entire contract term, some chose to end it because there is a cost associated with M&V, and these customers are satisfied after a few years of verified savings that the savings will continue. Below is an example of savings on a contract that included M&V through the 10-year guarantee term.

In 2009, Ameresco was contracted by the State of Kentucky to implement a $2.9M energy and utility conservation project at the Kentucky Horse Park (KHP). Projects included an extensive inflow and infiltration project at KHP, benefitting the park as well as the Lexington Fayette Urban County Government sewer district through the repair of the sanitary sewer manholes and repair or replacement of the sewer piping; solar tracking skylights; upgrades to the existing swimming pool; solar-powered trash compaction; and solar domestic water heating systems.

Guaranteed Annual Savings ($)	Achieved Savings Year 1 ($)	Achieved Savings Year 2 ($)	Achieved Savings Year 3 ($)	Achieved Savings Year 4 ($)	Achieved Savings Year 5 ($)	Achieved Savings Year 6 ($)	Achieved Savings Year 7 ($)	Achieved Savings Year 8 ($)	Achieved Savings Year 9 ($)	Achieved Savings Year 10 ($)
334,439	361,886	381,931	368,161	437,142	397,073	365,449	361,184	367,593	360,188	394,938

Below are guarantee data for the performance of the South Bend, Indiana and Wichita Falls, Texas; these projects described in Section 5, Project Experience Summaries.

South Bend, Indiana – Convention Center

Commodity	Units	Guaranteed Annual Savings	Achieved Savings Year 1	Achieved Savings Year 2	Achieved Savings Year 3	Achieved Savings Year 4	Achieved Savings Year 5
Electricity	kWh	1,062,226	1,173,938	1,173,938	1,173,938	1,173,938	1,173,938
Natural Gas	Therms	638	638	638	638	638	638
Other (Utility)	$	84,004	95,899	95,899	98,776	101,739	104,792
Other (Operational)	$	6,500	6,500	6,630	6,763	6,898	7,036
Other (Capital Cost Avoidance)	$	362,936	362,936	370,195	377,599	385,151	392,854
TOTAL	**$**	**453,441**	**465,335**	**472,724**	**483,137**	**493,788**	**504,681**

Commodity	Units	Guaranteed Annual Savings	Achieved Savings Year 6	Achieved Savings Year 7	Achieved Savings Year 8	Achieved Savings Year 9	Achieved Savings Year 10
Electricity	kWh	1,062,226	1,173,938	1,173,938			
Natural Gas	Therms	638	638	638			
Other (Utility)	$	84,004	97,334	100,245			
Other (Operational)	$	6,500	7,177	7,320			
Other (Capital Cost Avoidance)	$	362,936	400,711	408,725			
TOTAL	**$**	**453,441**	**505,223**	**516,291**			

Wichita Falls, Texas – AMI System Installation and Water Meter Replacement

Commodity	Units	Guaranteed Annual Savings	Achieved Savings Year 1	Achieved Savings Year 2	Achieved Savings Year 3	Achieved Savings Year 4	Achieved Savings Year 5
AMI System/Water Meters	$	1,074,688	1,454,809	1,498,453	1,543,406		
TOTAL	**$**	**1,074,688**	**1,454,809**	**1,498,453**	**1,543,406**		

Wichita Falls, Texas – Street Lighting Retrofit

Commodity	Units	Guaranteed Annual Savings	Achieved Savings Year 1	Achieved Savings Year 2	Achieved Savings Year 3	Achieved Savings Year 4	Achieved Savings Year 5
Other (Utility)	$	146,297	168,496	209,640	215,921	222,417	
TOTAL	**$**	**146,297**	**168,496**	**209,640**	**215,921**	**222,417**	

City of Abilene

Qualifications for Energy Conservation and Capital Reinvestment Program

2. Financial Information

2. Financial Information

In 2023, Ameresco revenues were $1.4 billion with a construction backlog of $3.9 billion. Ameresco is a leading independent energy services companies in the United States. For the year ending 2023, Ameresco had total assets of approximately $3.7 billion and a $495 million credit facility.

As a solid indicator of our performance track record, we maintain a $2 billion surety credit facility through a corporate provider with an AM Best Rating of "A Excellent." Ameresco has the financial resources and strength necessary to undertake and successfully complete this project for the City of Abilene.

2.a. Financial Statements

As a publicly traded company, Ameresco's most current prospectus, including balance sheet and cash flow statement is provided within our audited, publicly available annual 10-K financial statement information filed with the U.S. Securities and Exchange Commission (SEC). Financial statements for the two most recently completed fiscal years are included in **Appendix B**.

2.b. Sources of Financing and Financing Methods Available

Ameresco's technology and vendor-neutral approach flows through to our financing and allows for multiple options. Ameresco has assisted our customers with **sourcing and raising more than $5.5 billion of project financing over the past 24 years**, from various lending sources.

Ameresco has broad experience working with municipalities and because we have financing experts in-house, *there is no additional fee to our municipal customers for our financing and grant services.*

We do not have one predetermined method of financing. We base the solutions on three primary criteria:

- Allowable financing structures following the state statutes.
- The financing and incentives available to our clients.
- Our client's goals for risk/reward, timing, and ownership.

It is most common for financing solutions to be bid out to financing entities, including local entities in and surrounding the city of Abilene that support our industry. Financing vehicles may include one or a combination of the following methods:

- Tax-exempt lease purchase (TELP)
- Energy Service Agreements (ESA)
- Power Purchase Agreements (PPA)
- Energy Savings Performance Contracting (ESPC)
- Energy-as-a-Service (EaaS)
- Energy-Efficiency-as-a-Service (EEaaS)
- Public-Private Partnership (P3)
- State or federal loan programs
- Monetization of renewable energy credits (RECs) or other state-based energy credit markets
- On-Bill Financing (OBF) through Investor-Owned Utility (IOU) programs
- Financing provided through Ameresco
- Capital lease financing
- Installation payment financing

2.c. Surety Letter and Bonding Capacity

Evidence of Ameresco, Inc.'s bonding ability is provided in Appendix C.

2.d. Letter of Recommendation, Financial Institution

Ameresco's letter of recommendation from Bank of America is provided in Appendix C.

City of Abilene

Qualifications for Energy Conservation and Capital Reinvestment Program

3. Personnel

3. Personnel

Executive Oversight

Steve Taggart, Vice President
Role: Corporate Oversight

Ken Gross
Sr. V.P., Safety, Quality Assurance Risk Management
Role: Safety Oversight

Rusty Roderick
VP, Business Development
Role: P1 Service Executive Oversight

John O'Herron
Director of Business Solutions
Role: Project Oversight

ABILENE KANSAS

AMERESCO

Dana Dunn
Sr. Account Executive
Role: Project Administrator
Main Point of Contact

Scott Faller
Director of Operations
Role: Management of Project Operations

PROJECT DEVELOPMENT & AUDIT → **DESIGN & ENGINEERING** → **IMPLEMENTATION** → **PERFORMANCE PERIOD**

Marc Retish
Senior Business Manager
Role: Asset Assessment Lead

Bill Frede
Project Development Manager
Role: P1 Service Project Development Support

Tim Farkas
Director of Finance
Role: Financing Lead

AUDIT
Cassidy Ellis
Sustainability, Equity & Funding
Role: Grant Funding

Erin Ells
Senior Project Development Engineer
Role: Project Development

Gary Crabtree,
Sr. Project Developer
Role: ECM Review

Tom Bane
Manager of Construction
Role: Construction Oversight

Shaun Bauerle
Senior Program Manager
Role: Program Management

Andy Dunbar
General Manager
Role: P1 Service Execution Management

Casey Rohaus
Sr. Project Execution Manager
Role: P1 Service Execution Management

Jared Hughes
Manager - Performance Assurance
Role: M &V Lead

b. Key Personnel List with Responsibilities

Resumes for Ameresco, Inc. and P1 Service have been provided in **Appendix D.**

Ameresco Key Team Members	Responsibility
Dana Dunn, Senior Account Executive	Project Administrator & Point of Contact
Steve Taggert, Vice President	Regional Executive Oversight
Ken Gross, Senior Vice President – Safety	Safety Oversight
John O'Herron, Director	Project Oversight
Scott Faller, Director of Operations	Engineering, Design Management of Project Operations
Marc Retish, Senior Business Manager	Asset Management Lead
Tim Farkas, Director of Finance	Financing Lead
Cassidy Ellis, Sustainability & Funding Manager	Grant Funding
Erin Ells, Senior Project Development Engineer	Project Development
Gary Crabtree, Senior Project Developer	ECM Review
Tom Bane, Manager of Construction	Construction Management and Training
Shaun Bauerle, Senior Program Manager	Program Management
Jared Hughes, Manager Performance Assurance	Performance Monitoring, M&V Lead
P1 Service, LLC Key Team Members	**Responsibility**
Rusty Roderick, Vice President, Business Development	P1 Service Executive Oversight
William Frede, General Manager	P1 Service Development Support
Casey Rohaus, Senior Project Execution Manager	P1 Service Execution Management
Andy Dunbar, General Manager	P1 Service Execution Management

City of Abilene

Qualifications for Energy Conservation and Capital Reinvestment Program

4. Project Management Plan

4. Project Management Plan

Ameresco's approach to developing a project can be summed up in three words: **comprehensive, collaborative, and customized**.

We work collaboratively with our customers to determine the best methodology to upgrading their infrastructure, ensuring the city's operational and financial goals are at the forefront. This begins with energy and utility resource analyses to identify areas of deferred maintenance and opportunities for infrastructure upgrades. Typically, efficiency measures and upgrades include lighting, water, heating, ventilation, cooling, building envelope, smart meters, and controls. If desired by the customer, we can provide distributed generation solutions to balance or offset reliance on the grid and increase benefits of renewable energy and advanced energy management.

Ameresco Project Management Phases

Project Development

- Project Proposal/Preliminary Comprehensive Audit
- Investment Grade Audit
- Financing
- Contract Execution

Final Design & Engineering

- Design documents and specifications development
- Equipment selection
- Submittals, construction schedule, and customer approval

Implementation & Commissioning

- Implementation of approved scope
- Construction management
- Commissioning, testing, and customer acceptance

Performance Period

- Site Personnel training
- Optional operations and maintenance services
- Measurement and verification

a. Facility and infrastructure surveys

Step 1: Needs Identification. At project inception, Ameresco will partner with the city's staff to understand the specific goals and objectives of the program, key stakeholders, and existing conditions.

Step 2: Field Data Acquisition. Ameresco engineers gather data on utility rates, historical consumption, the facilities and infrastructure. Engineers review all information and document our understanding of building condition, operations, and performance. We model building systems lifecycles, validate our assumptions with key personnel, and identify any knowledge gaps. In this way, Ameresco can quickly gain insights as to which buildings present the greatest energy, utility resource, and cost savings opportunities. This is the Preliminary Energy & Utility Assessment which identifies various energy and utility resource conservation measures (ECMs) and facility improvement measures (FIMs). To gain an accurate picture of existing conditions, Ameresco will:

- Review as-built drawings for existing buildings and perform onsite surveys with in-house project designers and engineer(s).
- Interview facility/maintenance director and staff, administration, and any other stakeholders.
- Analyze recent utility and submeter data to evaluate operation schedules, utility demand and usage, rate structures, and areas of excessive energy and/or utility resource use.

- Update and/or review any previous utility audits or feasibility studies recently conducted by/for the city.

b. Energy modeling and analysis

Step 3: Energy and Utility Resource Analysis Costing and ECM/FIM Definition.

By Step 3, Ameresco will have identified which sites have the largest opportunity for energy efficiency based on benchmarking across multiple performance metrics. We will have synthesized all data and information gathered through field data acquisition and individual ECMs/FIMs are specified. The savings potential of each ECM/FIM is determined, and preliminary and utility resource energy baselines are established.

In a parallel effort, the cost estimating for all the identified ECMs/FIMs is begun using a combination of contractor quotes and pricing databases. The ECMs/FIMs are then subjected to further analysis, resulting in conceptual design, firm savings, and implementation price. Ameresco's in-house Senior Project Managers (SPMs) are heavily involved in cost estimating.

Step 4: Financial Modeling. The financial analysis will incorporate the cost and savings developed in the third step into the appropriate financial model(s) for the project. These models incorporate requests from the city and applicable interest rates and terms to produce a financial scenario that supports the required investment and debt service.

Step 5: Investment Grade Audit. While the goal of the Preliminary Energy & Utility Assessment is to identify the potential opportunity and the ability to finance an Energy Savings Performance Contract (ESPC), the IGA serves to more firmly define the scope of work and final cost. The IGA is an ASHRAE Level 2 Audit and is a technical audit which provides Abilene the costs and savings associated with each facility improvement measure to ensure an accurate and complete understanding of all the factors associated with the project.

c. Project development

Step 6: Permanent Financing. Based on the city's needs and objectives, a selection will be made from a variety of financing options that will be supported by Ameresco's savings guarantee, ensuring that payments will be made from the savings of the project.

Step 7: Contract Execution. During this step, the final IGA report is presented to the city. This report will include a detailed description of the scope of work, energy calculations, measurement and verification (M&V) protocols, financing terms and conditions, and areas to be upgraded. The resultant Energy Services Agreement will ensure that the systems will be upgraded, and sustainability goals advanced. The guaranteed energy savings will pay for the project, reduce operating costs, and allow the city to allocate more of its finite resources towards other priorities.

d. Non-construction related energy conservation strategies

Ameresco can provide a Behavioral Modification Program for the city to promote non-construction related energy conservation. This behavior change campaign is designed to engage all city staff in activities of resource conservation. The program has been designed to pinpoint wasteful behaviors, educate individuals on the importance of reducing waste, educate and train individuals on waste reduction strategies, measure program results, provide feedback through interactive and engaging displays, and incentivize individuals to take action. Ameresco's approaches will be combined with customized strategies based on the unique character of Abilene and the unique opportunities and

challenges presented there. The primary goal is to weave energy and water conservation practices into the fabric of daily life, to make it a reliable and long-term source of savings. The specific goals of the program include:

1. Fostering attitudes that value energy efficiency and lead to concrete behaviors that decrease energy consumption
2. Improving efficiency of measures through training and proper use
3. Ensuring occupant comfort with installed measures
4. Providing a vital communication link between city staff, city administrators, and the Ameresco team
5. Providing measurement and continuous feedback loops combined with incentive systems designed to encourage responsible energy and water usage

e. Engineering and design

Step 1: Detailed ECM Design. Ameresco's experienced project developers will complete the conceptual designs. Ameresco's engineering team will lead the design and engineering work and will ensure that any intermediate design submittals are prepared for the city's review in a timely fashion.

Step 2: Equipment Specification. The final equipment selections, subject to the city's approval, will ensure that the guaranteed equipment performance and savings/revenue will be achieved and sustained for the full contract term.

Step 3: Submittals, Construction Schedule, City Approval. Following the city's final review and approval of submittals, the submittals will become formal project documents. The equipment and materials will be installed in accordance with these plans, drawings, schedules, and specifications. All submittals are prepared by Ameresco's professional engineering staff or reviewed if consultants supplemented the firm's in-house resources. A construction schedule will also be included in the submittals.

f. Construction and project management

Step 1: Implementation, City Coordination, Pre-Construction Meetings. Once the city has reviewed and approved all the final submittals and issued a Notice to Proceed, pre-construction meetings can be held. At these meetings, site personnel and Ameresco's Senior Project Manager (SPM) will confirm all the details needed to ensure smooth implementation of the improvements at each facility including all site safety, security, background checks, and badging requirements.

The SPM is responsible for the successful construction of the project, on schedule and within budget. Two critical roles that Ameresco's SPM fulfills are customer service and quality assurance. The SPM reports directly to Ameresco's Director of Construction, who retains ultimate responsibility for all implementation period activities. These activities include, but are not limited to, oversight of procurement and subcontracting, construction budgets and cost control, installation progress, completion, training, commissioning, project close, and ensuring a smooth transition into the long-term performance period.

Step 2: Equipment Procurement. The procurement process begins as soon as Ameresco has received the Notice to Proceed. Any equipment and materials that Ameresco will furnish for installation will be purchased in a timely manner to be available for the coordinated construction efforts. The SPM will be responsible for procurement logistics to ensure that all the equipment and materials meet contract specifications, and that procurement is accomplished in the most cost-effective manner possible. Ameresco is not bound by low-bid requirements; therefore, equipment can be acquired that provides the best value while meeting guaranteed performance levels. Competitive procurement solicitations are the favored and typical means of ensuring cost-effectiveness while maintaining best value.

As noted earlier, Ameresco's **independent position in this marketplace** means that we have no pull-through product or service goals. Technology and products are recommended based on their ability to best meet the needs of our customers for the lowest possible cost.

Step 3: Subcontract Solicitations/Executions. Ameresco recommends subcontractors to perform work for the city based on the proven track record and capabilities of the firm. Ameresco facilitates a competitive process by issuing detailed scopes of work as Request for Proposals (RFPs) for each ECM/FIM. Low bid is not necessarily the deciding factor in Ameresco's selection and award process, as subcontractors are chosen based on a holistic evaluation of their ability to add value and enhance the service provided to the city. That said, Ameresco will ensure that everything is fairly bid and seek feedback from the city on their preferences based on the bid results and respondent reputations. All subcontractors must be able to accomplish the specified work on time within the budget, meet all established utilization goals, and maintain appropriate state licenses.

Ameresco's success depends upon timely, professional quality workmanship performed by qualified subcontractors who are proficient in the specific technology. In addition to price and technical proficiency, a premium is placed on the ability of the contractor to work cooperatively in a non-disruptive fashion within occupied city facilities and sites. Ameresco engages local subcontractors who have a proven track record of success in similar facilities. During the design phase, Ameresco will establish a prequalified list of local subcontractors and vendors in collaboration with the city's staff.

We are committed to utilizing the maximum amount of local labor and vendors to bring the greatest value to the community.

Step 4: ECM/FIM Construction. Two critical responsibilities the SPM assumes are quality assurance and customer satisfaction. Ameresco's SPM must ensure that equipment and materials meet the contract specifications and that all work is accomplished in a timely and professional manner. The SPM will oversee all subcontractor and supply vendor activities to ensure minimal disruption, and will serve as the primary point of contact throughout the implementation phase. All issues or concerns that arise will be addressed immediately and resolved to the city's satisfaction.

g. Commissioning

Step 5: Commissioning, Testing, City Acceptance. When the installation of an ECM/FIM, a whole facility, or logical grouping of ECMs/FIMs is completed satisfactorily, Ameresco's staff and the installation contractor will commission and test the systems in accordance with the

detailed plan described in the ECM/FIM write-ups in the detailed IGA. The development and design engineering staff responsible for the conception and finalization of these measures will also assist in the commissioning phase. The city's facilities and maintenance staff will be invited to the commissioning events to ensure their complete understanding of the new equipment and recently installed systems. Ameresco's operations manager will also be intimately involved in this process as part of his responsibility for long-term measurement and verification (M&V) activities.

h. Training

Ameresco and our strategic partner, P1 Service will work with the appropriate staff members to provide information, training, and oversight necessary to effectively operate the newly installed systems. The SPM will supervise training efforts, assemble the O&M documentation in a training manual, and direct the training in a way that is most appropriate to the specific ECMs installed. By providing training in the proper O&M of the newly installed ECMs, both Ameresco and the city are assured of sustained performance of the equipment and persistence of energy and utility resource savings.

Training typically commences during the commissioning phase of new equipment and systems. The training format includes an introduction to the overall installation and the benefits of the equipment and systems. Each ECM will be explained in detail, including how to operate, maintain, and troubleshoot. Documentation will include review of O&M manuals, drawings, and equipment specification literature. A hands-on approach will be encouraged to facilitate understanding of all presented material. The training will emphasize the essential role that equipment users and operators play in energy conservation, as poorly maintained equipment will not perform as efficiently, and may experience more frequent breakdowns and a shortened useful service life. Informal training can also be provided throughout the contract term and may be accomplished in conjunction with an O&M contract.

i. Safety and quality program

Ameresco's Senior Project Manager (SPM) will serve as the project safety representative and is responsible for a safe environment for all tradesmen and facility occupants. The SPM will oversee construction-related activities to ensure compliance with all applicable OSHA, state and local codes and regulations. All phases of project design, implementation, long-term performance monitoring, and operations and maintenance (O&M) services are achieved with safety as our number one focus. Additionally, P1 Service's commitment to "safety first, quality always" has made it a trusted partner for all facility-related matters.

In construction, insurance companies use an organization's Experience Modification Rating (EMR) to gauge the past cost of injuries and future chances of risk; the average EMR is 1.0, with numbers above 1.0 indicating higher risk. Over the past 10 years, our EMR has averaged 0.71. Not only does this speak to our effective safety practices, but it also means that Ameresco's insurance premiums are lower than average, which translates into lower overhead and better project value for our clients.

No financial goal, work task, client deliverable, or schedule demand is worth an injury or environmental compromise. It is the responsibility of every Ameresco employee, supplier, contractor, partner, and vendor to strive to work safely and in an environmentally responsible

fashion. In fact, **Ameresco considers good health, safety, and environmental performance as a fundamental element of providing industry-leading comprehensive energy solutions on behalf of our clients.**

Ameresco is committed to meeting or exceeding 100 percent compliance to all established safety and health regulations, zero accidents, and maintaining a safe and healthy work environment. We currently have implemented policies, procedures, training, and self-assessments to ensure compliance with the following federal regulations, in addition to any site-specific and jurisdictional-specific requirements:

- OSHA 29 CFR 1910 (General Industry Standards)
- OSHA 29 CFR 1926 (Construction Standards)
- U.S. Army Corps of Engineers EM 385-1-1 (US Military Safety Standards)
- U.S. Department of Energy 10 CFR 851 (Worker Safety & Health Standards)

The Ameresco Corporate Safety & Health Program incorporates an Integrated Safety Management System (ISMS) approach to ensure compliance and quality in relation to project-specific goals and objectives. The ISMS is a practical approach to the prevention of accidents and emphasizes the necessity of on-site accountability and management of safety planning. A central premise is that work planning starts with a focus on the nature of the job to be performed and assessment of the hazards involved in each step. Using self-assessment and feedback from the site personnel, continuous improvement in each safety process is expected. Ameresco's ISMS approach is based on defining the scope of work, analyzing the potential hazards, developing, and implementing mitigation controls, performing the work safely, and providing feedback for improvement.

Because of Ameresco's commitment to safety and strong safety record, Ameresco has received the National Safety Council's (NSC) Occupational Safety Excellence Achievement Award as well as the NSC's Industry Leader Award.

j. Measurement and verification of results

Long-term measurement and verification (M&V) services and annual reconciliation of performance and savings will be carried out in accordance with the site-specific M&V plan. The M&V plan presented in the IGA will be written in accordance with the International Performance Measurement & Verification Protocol (IPMVP). **All specific protocols must be explained to and accepted by the city before project construction can begin. The M&V plan will be developed mutually with the city during the IGA and will be fully documented prior to the start of construction.**

Measurement and Verification. Ameresco's M&V methodology is incorporated throughout each phase of the project. During project development, Ameresco will assign an M&V specialist who will be responsible for ensuring the correct data has been collected to develop the baseline energy and operational costs. The M&V specialist will also be involved in the implementation

and commissioning stages of the project to ensure that the post-retrofit measurements and metering are installed properly, and that the data is collected in a thorough and efficient manner.

Ameresco will coauthor the development of a detailed and comprehensive M&V plan with the city, including ongoing monitoring, to ensure actual savings are attained. This is a critical element of the performance contract because it provides the basis for the energy savings guarantee and debt-service payment. The specific M&V Plan will be submitted with the final IGA and will be included as a schedule in the Energy Services Agreement. M&V involves two essential components:

1. Verifying the ability of the project to generate all the projected and/or guaranteed savings
2. Measuring actual, periodic performance of the project against established baseline(s)

While there are a variety of ways to accomplish the two primary M&V tasks, a critical prerequisite is to establish the baseline(s). Baselines are developed from a rigorously derived end-use analyses, onsite measurements, and historical energy consumption data. Techniques range from stipulating all factors affecting ECM/FIM performance to installing extensive, highly accurate metering systems. M&V plans vary depending upon the complexity of the measure, expected magnitude of savings from the measure, and the city's aversion to risk.

k. Guarantee of savings

To determine energy savings, we compare the energy use associated with a facility or certain energy consuming systems within a facility before installation of the ECM/FIM (baseline) and after installation of the ECM/FIM (post-installation).

Energy Savings = (Baseline Energy Use) – (Post Installation Energy Use)

The International Performance Measurement and Verification Protocol (IPMVP) was established as a consensus approach to measuring and verifying efficiency investments. The IPMVP has four options (A, B, C, and D) which provide industry-approved procedures for baseline development and post-retrofit M&V. Ameresco will work with Abilene to collaboratively determine the appropriate M&V approach for the city.

Optional Operation & Maintenance (O&M) Services. The city shall retain full and complete authority over its equipment and facilities during the contract term. Therefore, the city may choose to perform the O&M internally and/or have the O&M performed by others at their discretion, provided all maintenance procedures meet or exceed the standards set forth in the contract. These standards will be clear, concise, and thoroughly documented as part of the training. O&M manuals will be submitted to the city upon commencement of the performance period services. If the city deems it appropriate to accomplish the required O&M through a third party, these standards shall serve as a minimum level of service.

At the city's discretion, Ameresco can offer a comprehensive O&M service plan in the final contract. This O&M plan will help to ensure that energy savings are maintained over the term of the contract and extend the useful life of installed equipment. Ameresco's strategic partner, **P1 Service** is recommended for O&M services for the city based on its stellar reputation, qualifications, and provides 24 hours a day, 365 days a year service.

4b. Pricing Approach

Ameresco is well experienced with implementing projects with no change orders for an agreed-upon scope of work. Our approach to pricing the Investment Grade Audit (IGA) for the City of Abilene allows for flexibility and can be established either as a price per square foot ($/ft^2) for buildings or as a fixed total price based the overall audit scope.

The majority of IGAs developed by Ameresco result in project implementation. This is due to our upfront diligence and established milestone check-ins throughout the audit process to calibrate and align potential recommendations.

Proposed ASHRAE Level II Investment Grade Audit:

The Investment Grade Audit (IGA) will be delivered at no cost, if the City of Abilene partners with Ameresco and selects Ameresco as the ESCO for the project implementation of this project.

Should the city decide not to move forward, Ameresco would submit a bill to the city for the pre-negotiated audit breakage fee.

City of Henderson, NV Testimonial

Implementing energy-saving programs that help preserve our community's natural resources for future generations is a key component of our vision to be America's Premier Community."

Andy Hafan, Mayor
City of Henderson

Veterans Integrated Services Network, Region 6, NC Testimonial

"The superior performance of these Federal buildings reflects the leadership, dedication and contributions of GSA and VA building designers, operators, and managers who are responsible for the Federal government's real property assets."

Department of Energy
Federal Energy Management Program

City of Abilene

Qualifications for Energy Conservation and Capital Reinvestment Program

5. Project Experience

5. Project Experience Summaries

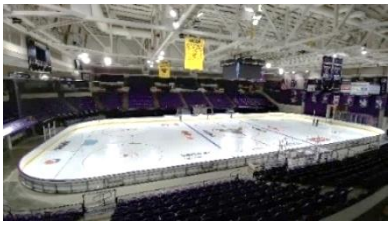
| 1 | City and County of Denver, CO

Project Name	**City and County of Denver Phase I Energy Performance Agreement**
Facility Type and Use	Municipal facilities including police district, recreation centers, libraries, fire stations, 911 call center
Project Size -Number of Buildings -Total Square Footage	14 of the city's most energy intensive buildings 272,891 square feet
Project Description	**Phase I** Ameresco partnered with the Strategic Initiatives Division of General Services and with funding provided by Denver's Environmental Health Department to identify and implement an energy performance contract (EPC). Beginning construction in January 2016, Denver's EPC included a total of 88 energy efficiency improvements to 14 of the city's most energy intensive buildings. Through these improvements, the city will save over $2.4 million in the first 15 years. **Phase II** Beginning with an Investment Grade Audit of 22 library and recreation center facilities comprising over 525,000 square feet, Phase II included interior and exterior lighting upgrades, as well as the installation of a motorized reel and cable systems to deploy and retract new fabric pool covers by the push of a button at the Washington Parks and Recreation Center. Additionally, an energy information system (EIS) was installed for real-time electricity and natural gas metering monitoring using Ameresco's AssetPlanner software that will allow the city to: • Track energy performance over time, including demand interval data. • Benchmark against industry targets. • Identify savings opportunities and develop accurate reporting. • Create consumption baselines and cost avoidance reports using built-in weather normalization. • Assess greenhouse gas emissions and calculate the carbon footprint of assets. **Phase III** Recently, Ameresco was selected for a Phase III initiative to perform investment grade audits across several parks and recreation, golf, and public safety facilities comprising approximately 2 million square feet.
a. Phase I Project Cost: Installed Project Costs	• $1,992,641
Phase I Project Cost: Financed Amount	• $2,258,407

| 1 | City and County of Denver, CO

b. Phase I Guaranteed Annual Savings ($)	• $122,377 (Year 1)
c. Phase I Guarantee Period	Apr 2017 – Mar 2020
d. Phase I List of Improvements	• Interior and exterior lighting retrofits • Lighting controls • Energy management control system (emcs) upgrades • Pump improvements • Pipe and equipment insulation • Pool covers • Vending machine controls • Transport gas • Building envelope measures • Education program and live energy monitoring
e. Client contact Information	Tom Ochtera, Energy Manager P. 720.913.5708 E. Thomas.Ochtera@denvergov.org
Phase I Financing/Funding Source	Tax-Exempt Lease Purchase

| 2 | City of Mankato, MN

Project Name	**City of Mankato, MN Energy Services Agreement (Phase 1) and Amendment**
Facility Type and Use	Municipal Facilities including Public Works, Water and Wastewater Treatment Plants, Airport Terminal and Hangars, Parks and Support Buildings, Fire Stations, Parking Garages, and Streetlight Infrastructure The Phase I Amendment added the Mankato Civic Center.
Project Size -Number of Buildings -Total Square Footage	26 Facilities and Metered Streetlight Infrastructure 1,020,266 square feet
Project Description	The City of Mankato partnered with Ameresco, Inc. to implement a strategic plan to maximize sustainable energy reduction savings within the framework of the city's desired payback term. Ameresco identified a self-funding scope of work which generates cost savings benefits, reduces operating costs, and minimizes impending capital improvement expenditures.  As a result of the successful Phase I project, an Amendment to the original contract was issued to implement several improvements at the Civic Center. Measures included new air cooled chiller, boiler plant upgrades, arena space dehumidification, arena air handler upgrades, isolation doors, and building automation system upgrades.

a. Project Cost: Installed	• $7,127,106 • Phase I: $4,617,006; Phase I Amendment: $2,510,100
Project Cost: Financed	• Not applicable
b. Guaranteed Annual Savings ($)	• Phase I: $257,729 (Year 1) • Amendment: $69,593 (Year 1)
c. Guarantee Period*	Phase I: Mar 2018 – Feb 2020; Amendment: Mar 2019 – Feb 2021
d. List of Improvements	Phase I • Facility LED Lighting Upgrades and LED Streetlights • Water Conservation • Building Envelope Improvements • Mechanical Insulation Improvements • Building Automation Improvements • Boiler Replacement at Intergovernmental Center Amendment • New Air Cooled Chiller • Boiler Plant Upgrades • Arena Space Dehumidification • Arena Air Handler Upgrades • Building Automation System Upgrades
e. Client contact Information	Parker Skophammer, Director of Administrative Services P. 507-387-8739 E. pskophammer@mankatomn.gov
Financing/Funding Source	Owner-Funded via Bond

*Following the delivery of the Year 1 and Year 2 reports, the City elected to discontinue Measurement and Verification Services, stating "*The City of Mankato accepts that the Guaranteed Savings will be deemed achieved for the balance of the Guarantee Period and no further M&V services will be performed.*" [Jim Tatge, Facilities Project Coordinator, City of Mankato]

*Like Phase I, the city discontinued Measurement and Verification activities following the delivery of the Year 2 report, confident that savings would persist.

| 3 | City of South Bend, IN

Project Name	**Century Convention Center ESPC and Solar**
Facility Type and Use	Convention Center
Project Size -Number of Buildings -Total Square Footage	1 Facility 225,000 square feet
Project Description	In March 2015, the City of South Bend selected Ameresco to implement several improvements to the 225,000 ft^2 Century Center Convention Center aimed at reducing energy costs and helping market the 38-year-old building to a wider array of clients. *"One of several vendors to bid on the project, **Ameresco was chosen because of its experience working with local governments**", said Leanna Belew, the convention center's general manager. -- South Bend Tribune, March 2, 2015* As a result of the successful Phase I project, a Phase II contract was implemented in December 2021 to perform energy upgrades at the Morris Performance Arts Center. Measures included boiler and pump replacement; HVAC system replacements and upgrades; heat pump controls upgrades; new building automation system; plumbing fixture replacements; roofing replacement; fire alarm system replacement; and LED lighting upgrades
a. Project Cost: Installed Project Costs	• $4,936,784
Project Cost: Financed Amount	• $4,936,784
b. Guaranteed Annual Savings ($)	• $453,441 (Year 1)
c. Guarantee Period	Nov 2016 – Oct 2031
d. List of Improvements	• Lighting replacements and upgrades • HVAC system and controls upgrades • Ceiling tile replacements • Roofing replacement • Installation of solar PV and public display showing current and historic solar production
e. Client contact Information	Eric Horvath, Public Works Director P. 574.235.9251 E. ehorvath@southbendin.gov
Financing/Funding Source	Tax-Exempt Lease Purchase

| 4 | City of Wichita Falls, TX

Project Name	**Phase I: City of Wichita Falls AMI System Installation and Water Meter Replacement** **Phase II: City of Wichita Falls Streetlighting Retrofits**
Facility Type and Use	Municipal Water and Streetlighting Infrastructure
Project Size	**Phase I: 33,249 Water Meters** **Phase II: 5,500 Streetlights**
Project Description	By retrofitting and replacing energy, water, and lighting system equipment, Wichita Falls was able to increase revenue and operational efficiencies while reducing operations and maintenance (O&M) costs and electricity consumption. **Phase I** Following a collaborative evaluation of four different AMI systems and water metering technologies, Ameresco installed a turnkey fixed-based advanced metering infrastructure (AMI) system and replaced positive displacement meters with smart water meters throughout the city. The project replaced 33,249 water meters and rebuilt 189 existing water meters. **Phase II** Following the successful Phase I project, Phase II included the replacement of approximately 5,500 existing street lights with energy efficient LED fixtures.
a. Project Cost: Installed Project Costs	• Phase I: $15,884,487 • Phase II: $2,880,784
Project Cost: Financed Amount	• Phase I: $16,561,360 • Phase II: $2,895,784
b. Guaranteed Annual Savings ($)	• Phase I: For water distribution AMI projects, cost savings comes from reduced inaccuracies in meter readings as well as from reduced errors in billings. There are additional cost savings from reduced manual meter reading (meter reader labor and vehicle use) and from reduced life cycle replacement costs of the new meters. Ameresco does not guarantee revenue increase from replacing water meters. Rather, we guarantee that the new water meter average accuracy is at least 98.5 percent. • Phase II: 146,297 (Year 1)
c. Guarantee Period	Phase I: Jul 2018 – Jun 2038 Phase II: Sep 2019 – Aug 2034
d. List of Improvements	• Water meter replacement and advanced metering infrastructure (AMI) • LED streetlighting
e. Client contact Information	Blake Jurecek, Assistant City Manager P. 940.761.7404 E. blake.jurecek@wichitafallstx.gov
Financing/Funding Source	Phase I: Tax-Exempt Lease Purchase Phase II: Qualified Energy Conservation Bonds

| 5 | City of Knoxville, TN

Project Name	**City of Knoxville Energy Savings Performance Contract**
Facility Type and Use	Various city buildings including parks facilities, fire station, golf course, convention center,
Project Size	104 buildings, 40 ball fields/parks, and 3 golf courses Approximately 2 million square feet
Project Description	The City of Knoxville utilized renewable energy and energy efficiency solutions to save over a million dollars a year and enhance public spaces and official buildings. At the Knoxville Convention Center, Ameresco installed a 30-kilowatt rooftop solar photovoltaic system as part of a comprehensive energy efficiency project. In addition to the solar installation, the facility added new energy efficient boilers, a 30-ton air cooled chiller and energy efficient lighting systems to reduce the center's carbon footprint and make the building more sustainable. At the Fire Department Headquarters, Ameresco installed a solar hot water heater with natural gas backup to replace a large electric hot water system. Ameresco also installed a City-wide energy management system (EMS) for remote monitoring, controlling, and troubleshooting of the HVAC systems.
a. Project Cost: Installed Project Costs	• $13,800,000
b. Guaranteed Annual Savings ($)	• $1,105,041
c. Guarantee Period	2011 – 2024
d. List of Improvements	• Parking lot LED lighting • Solar PV at Knoxville Convention Center • Replaced steam boilers at the Knoxville Convention Center with 10 high-efficiency condensing boilers • Air cooled chiller • Lighting systems and controls • Solar hot water heater with natural gas backup • Constructed a 1.25 million-gallon pond to provide irrigation for a golf course • Steam boiler replacements • City-wide energy management system (EMS) • Installed automated pool covers
e. Client contact Information	Brian Blackmon, Sr. Account Manager , Milepost Consulting (former Director of Sustainability for the City of Knoxville) (865) 803-5864 brianb@engagemilepost.com
Financing/Funding Source	Tax-Exempt Lease Purchase 3rd Party Financing

Project Example of Savings Guarantee Not Met

Over the past 24 years, Ameresco has experienced savings shortfalls. While shortfalls do not happen often, they do occur and by upholding our guarantees, we have found that it strengthens our relationships with our customers.

A shortfall occurred at the City of Casa Grande, one of our multi-phase client references who we continue to maintain a strong and successful relationship with. During the first year of Casa Grande's Phase III solar operation, production fell short of the guaranteed value by approximately $6,000. Ameresco compensated the city for this shortfall against annual service costs, per their request. The second year of production was above the guaranteed value and is projected to continue providing electricity above the guaranteed amount. Ameresco went on to perform another phase of solar as well as a citywide LED streetlighting project.

At Prairie View A&M University, a shortfall in the Year 1 energy savings was largely due to the central utility plant (CUP) being controlled manually by facility personnel instead of allowing the installed systems to operate automatically per the design of the project. Deficiencies of installed metrology equipment, the introduction of a new chiller outside of Ameresco's scope of work, and a higher-than-designed chilled water setpoint also contributed to the deficit. To remedy the situation, Ameresco provided additional training to the maintenance staff and re-commissioned the CUP to its recommended parameters, which accounted for an energy savings surplus in the Year 2 performance guarantee period.

The bottom line is, when shortfall occurs on a project, our engineers will evaluate the measure to determine why the measure is not performing as expected. If the shortfall occurred due to a defect in the way the measure is installed or is operating, we will repair it at Ameresco's cost and compensate the customer for that years' savings shortfall. If the shortfall is going to continue to reoccur due to a mistake in calculating the energy savings or misapplication of a particular technology, Ameresco may decide to install additional energy conservation measures at Ameresco's cost to produce the guaranteed energy savings.

City of Wichita Falls, TX Testimonial

"The City of Wichita Falls has owned its own street lighting system for 35 years. With Ameresco's help, the City was able to reduce its street lighting electrical budget from $1.1 million to $250,000 per year!"

John Burrus
Director of Aviation, Traffic & Transportation
City of Wichita Falls

City of Gatesville, TX Testimonial

"Ameresco has a great amount of experience in this area of municipal infrastructure projects and we are grateful for the steps they're taking to help us optimize how we monitor and optimize water usage across the community."

Bill Parry
City Manager for the City of Gatesville

City of Abilene

Qualifications for Energy Conservation and Capital Reinvestment Program

6. Best Value

6. Best Value

Ameresco's cost-competitive advantages include:

- **In-house expertise.** Ameresco self-performs the professional services required on our projects which keeps our costs down, ensures a high level of quality and consistency, and allows us to guarantee the maximum amount of energy savings from our projects.
- **Centralized data analytics.** Based on the needs of Abilene, we can deploy our energy analytics software, which can pull building automation data from a variety of systems into a centralized source where advanced analytics are performed to identify energy savings opportunities and operational inefficiencies or issues.
- **Best-in-class solutions with no technical or vendor bias.** Ameresco is not a manufacturer of products, so we do not have to use proprietary systems. This provides the city of Abilene unbiased recommendations, and we assist our customers in choosing the best systems to meet their needs, at the best prices.
- **Purchasing power.** As the largest ESCO in the US, Ameresco utilizes products from diverse vendors, with a volume and frequency that allows us to achieve discount savings which we, in turn, pass onto our customers.
- **Reduced risk to the city of Abilene.** Selecting Ameresco allows the city to secure the value of an energy services company (ESCO) with a national footprint, while also benefitting from a local partner, P1 Service, who will provide continuous local support for the long haul.
- **We stand behind our guarantees.** Ameresco is prepared to leverage our experience to reduce operating costs, improve energy efficiency and systems performance and ensure and guarantee performance results.
- **Excellent customer service.** Ameresco's strategic partnership with P1 Service provides the City of Abilene 24-hour service, 365 days a year. Long term maintenance options for the equipment installed will also be provided, eliminating the maintenance required for up to 10 years after the equipment is installed.

City of Abilene

Qualifications for Energy Conservation and Capital Reinvestment Program

Appendices

Appendix A

National Association of Energy Services Companies (NAESCO) certificate

Proof of current Kansas Professionals Engineering Corporation Certification

Appendix A

National Association of Energy Services Companies (NAESCO) certificate

NAESCO
ACCREDITED
Energy Service Provider

Certificate of Accreditation

This is to certify that

AMERESCO

has participated in the Accreditation Program and Review and has been recognized by the National Association of Energy Service Companies to be an Accredited **Energy Service Provider**.

Wes Walker
Chairman

Timothy D. Unruh
Executive Director

June 2023
Certification of Accreditation covers a period of **3 years** from date of issuance.
Accredited since 2002.

Proof of current Kansas Professionals Engineering Corporation Certification

Kansas State Board of Technical Professions

Kansas Board of Technical Professions Licensee Details

Demographic Information

Licensee Name: AMERESCO INC

Location Information

City: Framingham
State: MA
Zip: 01701

License Information

License Number:	E-2530	**License Type:**	Professional Engineer Facility	**License Status:**	Active
Originally Issued:	3/11/2015	**Last Renewed:**	11/29/2022	**Expiration:**	12/31/2024
Obtained By:	Application				

Digital Documents

No Related Licensing Documents

Close Window

Appendix B

Financial statements for the two most recently completed fiscal years

AMERESCO

Annual Report 2023

Vision

Energizing a sustainable world

Mission

Leading the quest to change the world as the trusted sustainability partner creating valued, single-sourced, efficient energy solutions delivered with passion, expertise, teamwork and a relentless focus on customer satisfaction.

Values

Ameresco's values shape our culture and the way we conduct business. Our values are aligned with C.A.R.I.N.G. about our stakeholders and are instrumental in guiding every aspect of our business.

AMERESCO®

2022 Annual Report

Vision

Energizing a sustainable world.

Mission

Leading the quest to change the world as the trusted sustainability partner creating valued, single-sourced, efficient energy solutions delivered with passion, expertise, teamwork and a relentless focus on customer satisfaction.

Values

Ameresco's values shape our culture and the way we conduct business. Our values are aligned with CARING about our stakeholders and are instrumental in guiding every aspect of our business.

About Ameresco

Leading the Cleantech Transformation

Ameresco, Inc. (NYSE:AMRC) is a leading cleantech integrator and renewable energy asset developer, owner and operator. Our comprehensive portfolio includes energy efficiency, infrastructure upgrades, asset sustainability and renewable energy solutions.

Our approach begins by addressing energy demand with analytics and efficiency measures to reduce energy consumption. Then, we right-size innovative options for energy supply with renewable and distributed solutions. As a long-term partner, we can also provide ongoing operations and maintenance services to support clients' energy objectives. Ameresco's sustainability services in support of clients' pursuit of net zero include upgrades to a facility's energy infrastructure and the development, construction, and operation of distributed energy resources.

Technical independence coupled with our advanced technology portfolio allows us to integrate best-in-class solutions for the unique needs of each customer, paired with practical financial solutions. Whether focused on securing infrastructure upgrades, meeting sustainability goals, or creating resiliency, our customers benefit from a single provider of comprehensive clean technology solutions.

Drawing from more than 20 years of experience, Ameresco has successfully completed energy saving, environmentally responsible projects with Federal, state and local governments, healthcare and educational institutions, housing authorities, and commercial and industrial customers across North America and Europe.

$205M
2022 YTD adjusted EBITDA

$1.8B
2022 revenue

$2.6B
project backlog

389 MWe
owned assets in operation

470 MWe
owned assets in development

$1.2B
operations & maintenance (O&M) backlog

14.7 Mt
2022 carbon emission reduction

95+M Mt
cumulative carbon emission reduction since 2010

$13B
energy solution projects

Use of Non-GAAP Financial Measures: This summary and CEO message include references to adjusted EBITDA, which is a Non-GAAP financial measure. As non-GAAP financial measures are not intended to be considered in isolation or as a substitute for GAAP financial measures, you should carefully read the Form 10-K included in this Annual Report, which includes our consolidated financial statements prepared in accordance with GAAP. For a description of the Non-GAAP financial measures, including the reasons management uses these measures and a reconciliation of the Non-GAAP financial measures to the most directly comparable financial measures prepared in accordance with GAAP, please see the section in the back of Ameresco's earnings release issued on February 27, 2023, available at https://ir.ameresco.com/news-events/press-releases/detail/558/ameresco-reports-fourth-quarter-and-full-year-2022.

Caution concerning forward-looking statements: Additionally, the CEO message includes statements that, to the extent they are not recitations of historical fact, constitute forward-looking statements within the meaning of the federal securities laws, and are based on Ameresco's current expectations and assumptions. For a discussion identifying important factors that could cause actual results to differ materially from those anticipated in the forward-looking statements, see the company's filings with the Securities and Exchange Commission, including "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors" in the Form 10-K portion of this Annual Report.

Dear Shareholders

2022 was an outstanding year for financial performance as Ameresco completed its fifth consecutive year of record revenue and profits. The robust performance of revenue growth (50%) and adjusted EBITDA growth (34%) reflect how well our advanced technology portfolio and capabilities are aligned with the market demand. Thanks to our deep bench of industry expertise, we were able to deliver these impressive full year results while navigating challenging global issues.

We entered 2023 with over $6 billion in visibility from the combination of our total project backlog, Energy Assets and O&M revenue backlog. We expanded our portfolio of operating Energy Assets to 389 MWe, and our owned assets in development to 470 MWe at the end of the year. These results are a testament to the hard work and dedication of our employees, the strength of our business strategy, and our commitment to meeting the needs of our customers.

2022 delivered an increase in market activity for Ameresco's solution offerings. Our customers continue to evaluate the recently enacted Inflation Reduction Act (IRA) and are working to prioritize the type and timing of their projects. The support for a very broad range of technologies provided by the IRA greatly favors comprehensive solution providers such as Ameresco. We believe this is the most transformational legislation affecting our industry, providing a long-term runway for advanced clean technology deployments for years to come.

As we continue to grow and gain visibility, so does the need for increased communications with our investor community. I am pleased that Ameresco held its first Investor Day in March 2022, providing deep dive sessions into solution offerings, competitive advantages, and market activity. We were also proud to have customers present on behalf of their successful Ameresco projects, including sustainability leaders from Bank of America and the GSA.

We are also proud of the major accomplishments completed in Europe in 2022, including our decarbonization award with the City of Bristol, UK. In addition to being selected for this transformational net zero municipal project, our Greek joint venture was also selected as the contractor for a 100 MW PV project in Northern Greece. Both of these projects not only represent very large contracts for Ameresco, but also some of the largest in their respective geographies, significantly raising our regional profile. In addition, in the fourth quarter of 2022, we announced the acquisition of a 5 MW wind farm in Ireland, further building our portfolio of wind assets in Europe.

The Renewable Natural Gas (RNG) market continued to grow throughout 2022, driving an investor-focused tour of our 91st Avenue RNG Plant tour in Phoenix, Arizona in the fourth quarter. With over 20 years of vertically integrated experience in self-developing biogas plants, we are one of the leading players in the RNG space, and believe we have significant competitive advantages in developing, constructing and operating these plants. Federal incentives in the transportation market plus a push by large institutions, utilities, universities, and corporate customers should make this a very attractive market for many years to come. With 20 biogas plants in our Assets in Development pipeline, we believe our RNG franchise will continue to be a significant driver of shareholder value.

As demand for our solutions increases, we remain focused on our investment in people and advanced technologies to maintain our position as a market leader and capture emerging opportunities. Our accelerated growth is being driven by an expanding addressable market, both related to industry trends – decarbonization, resiliency, policy support – and Ameresco's investments in expertise, new cleantech offerings, and flexible financial solutions.

Our commitment to sustainability extends beyond our clients, and we continued to make progress towards our own environmental, social, and governance (ESG) goals during the year. Our ESG program remains a top corporate focus, and I am pleased to share that we secured multiple awards throughout 2022 for the strength of our ambassador teams and ESG initiatives.

As 2022 delivered another year of record revenue and profits, I want to thank each and every one of our dedicated employees. It is their heartfelt dedication, tireless work ethic, and relentless pursuit of innovation that enables us to be the company that we are today. And for that, I am forever grateful.

In closing, our success in 2022 would also not have been possible without the ongoing support of our shareholders. We are grateful for your continued confidence in our company and our vision for the future. As we look ahead to the coming years, we remain committed to pursuing growth opportunities, investing in our people and our technology, and delivering exceptional value to our customers.

Sincerely,

George Sakellaris
President & CEO

Customer Highlights

Bristol City Leap
Bristol, UK

Determined to achieve carbon neutrality by 2030, the City of Bristol chose Ameresco, with its essential sub-contractor Vattenfall Heat UK, as partners for the Bristol City Leap project, a 20-year concession to decarbonise the city. Spanning 34 ward areas, the Bristol City Leap project will address all sectors of the built environment including public facilities such as hospitals, universities, and schools, as well as industrial, commercial, and residential buildings. Under a Public Private Partnership, Ameresco will work alongside numerous city stakeholders to provide energy efficiency upgrades, including wind and solar, and long-term operation and maintenance. Over the first five years of the partnership, the project is expected to deliver 140,000 tonnes of carbon savings, and 182 MW of zero-carbon energy generation.

Taylor Farms
San Juan Bautista, California, USA

North America's largest producer of healthy fresh foods, Taylor Farms, partnered with Ameresco, Bloom Energy (BE) and Concept Clean Energy (CCE) to install a microgrid capable of taking one of their California food processing facilities completely off the traditional grid. Ameresco will install a 2 MW / 4 MWh battery into a microgrid combined with BE's 6 MW fuel cells and CCE's 2 MW of solar power that is designed to power the entire 450,000 sq. ft. facility. This collaboration combines the strength of each technology – fuel cells' ability to generate resilient, always-on power, daytime power generation from solar, and energy storage benefits from batteries – to fulfill the facility's 24/7 power needs completely, independently, and cost-effectively.

Wells Fargo
Multiple Locations, USA

After meeting their renewable energy goals through the purchase of Renewable Energy Certificates since 2017, Wells Fargo sought to transition to long-term agreements that support the development of net-new renewable energy sources. Ameresco emerged as the preferred collaborator due to the demonstrated ability to deliver a broad scope of services across multiple project types, locations, and regulatory frameworks. The project included a combined 30 MW of onsite solar generation and 45,000 MWh of annual solar generation for nearly 100 locations, such as a 6.5 MW carport and rooftop system at Wells Fargo's Chandler, AZ campus, a 5.5 MW combination rooftop/ground mount system at property in San Antonio, TX, and the largest behind the meter 2 MW ground mount solar system to offset loads at their Des Moines, IA campus.

Customer Highlights

Kūpono Solar
Joint Base Pearl Harbor-Hickam, O'ahu, Hawaii, USA

Kūpono Solar, located at Joint Base Pearl Harbor-Hickam, is a joint venture between Ameresco and Bright Canyon Energy that aims to bring clean energy to the residents of O'ahu. Once operational, the project is designed to produce 42 MW of solar energy with a four-hour duration battery energy storage system to equal 168 MWh. The batteries are designed to store solar energy beyond sunset hours, enabling the project to deliver sustainable, renewable energy to power approximately 10,000 homes on O'ahu. This combined solar and battery storage system, situated on 131 acres of underutilized Navy land, is expected to offset more than 50,000 tons of CO_2 per year from Hawaii's environment, which is equivalent to carbon emissions from 12,000 cars.

Holy Cross Energy & Colorado Mountain College
Glendale Springs, Colorado, USA

The largest project of its kind in Colorado, Ameresco's 22-acre solar and battery energy storage complex with Holy Cross Energy furthers the cooperative utility's goal of providing 100% clean energy to their members by 2030. The 5 MW solar PV and 15 MWh battery energy storage system was built on land leased from Colorado Mountain College (CMC) to offset electricity usage and transition the college towards renewable energy solutions. Ameresco designed, built, operates and maintains the over 13,500 solar modules and battery energy storage complex under a Power Purchase Agreement. The solar complex is designed to offset 6,853 metric tons of CO2 and 100% of the electricity use of three CMC campuses advancing the college towards its 2050 carbon neutrality goal.

Prince Edward Island Slemon Park Microgrid
Prince Edward Island, Canada

Ameresco partnered with Prince Edward Island (PEI) Energy Corporation to strengthen the renewable energy solutions in PEI through the Slemon Park Microgrid project. Utilizing the park's unique infrastructure, the microgrid implementation was co-located with a 10 MW solar facility and energy storage assets. The direct current-coupled energy storage, which equates to 1.5 MWh, shares the same interconnection with additional energy storage units and the solar grid, and benefits commercial businesses and local residents. By storing energy for later use, the Slemon Park Microgrid aims to foster local economic prosperity, manage peak load demands, and improve grid resiliency. The project is expected to offset 4,500 tons of CO2 annually and furthers PEI's goal of net zero energy by 2030.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2022

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____.

Commission File Number: 001-34811

Ameresco, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**04-3512838**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
111 Speen Street, Suite 410 Framingham, Massachusetts	**01701**
(Address of Principal Executive Offices)	(Zip Code)

(508) 661-2200
(Registrant's Telephone Number, Including Area Code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Class A Common Stock, par value $0.0001 per share	AMRC	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☑ Accelerated Filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐
Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☑

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. Yes ☐ No ☑

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b). Yes ☐ No ☑

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold on the New York Stock Exchange on June 30, 2022, the last business day of the registrant's most recently completed second fiscal quarter, was $1,447,717,111.

Indicate the number of shares outstanding of each of the registrant's classes of common stock as of the latest practicable date.

Class	Shares outstanding as of February 24, 2023
Class A Common Stock, $0.0001 par value per share	33,948,362
Class B Common Stock, $0.0001 par value per share	18,000,000

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement for our 2023 annual meeting of stockholders are incorporated by reference into Part III.

AMERESCO, INC.

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NOTE ABOUT FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K (”Form 10-K” or “Report”) contains “forward-looking statements” within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (“the Exchange Act”). All statements, other than statements of historical fact, including statements regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans, objectives of management, expected market growth and other characterizations of future events or circumstances are forward-looking statements. These statements are often, but not exclusively, identified by the use of words such as “may,” “will,” “expect,” “believe,” “anticipate,” “intend,” “could,” “estimate,” “target,” “project,” “predict” or “continue,” and similar expressions or variations. These forward-looking statements include, among other things, statements about:

- our expectations as to the future growth of our business and associated expenses,
- our expectations as to revenue generation,
- the future availability of borrowings under our revolving credit facility,
- the expected future growth of the market for energy efficiency and renewable energy solutions,
- our backlog, awarded projects and recurring revenue and the timing of such matters,
- our expectations as to acquisition activity,
- the impact of any restructuring,
- the uses of future earnings,
- the expected energy and cost savings of our projects,
- the expected energy production capacity of our renewable energy plants,
- the impact of the ongoing macroeconomic challenges, including supply chain disruptions, and shortage of materials, and
- the impact of the U.S. Department of Commerce’s solar panel import investigation
- the impact of regulation, including the IRA

These forward-looking statements are based on current expectations and assumptions that are subject to risks, uncertainties, and other factors that could cause actual results and the timing of certain events to differ materially and adversely from the future results expressed or implied by such forward-looking statements. Risks, uncertainties, and factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section titled “Risk Factors,” set forth in Item 1A of this Form 10-K and elsewhere in this Report. The forward-looking statements in this Form 10-K represent our views as of the date of this Report. Subsequent events and developments may cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so and undertake no obligation to do so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Form 10-K.

ADDITIONAL NOTES

The terms “Ameresco,” “Company,” “we,” “our,” “us,” or “ourselves” included in this Report mean Ameresco, Inc. and its consolidated subsidiaries, collectively.

Rounding adjustments applied to individual numbers and percentages shown in this Report may result in these figures differing immaterially from their absolute values.

PART I

Item 1. Business

Company Overview

Ameresco is a leading clean technology integrator and renewable energy asset developer, owner, and operator. Our comprehensive portfolio includes energy efficiency, infrastructure upgrades, asset sustainability, and renewable energy solutions.

Our core offerings include the development, design, arrangement of financing, construction, and installation of solutions that deliver measurable cost and energy savings while enhancing the operations, energy security, infrastructure, and resiliency of a facility. These solutions range from upgrades to a facility's energy infrastructure to the development, construction, and operation of renewable energy plants. As a trusted sustainability partner, we are always on a mission to help customers lower their overall carbon footprint and reduce their environmental impact.

Our product independence coupled with our deep technical bench allows us to integrate best-in-class advanced technology solutions for the unique needs of each customer.

Drawing from decades of experience, we develop these tailored energy projects for federal, state, and local governments, educational and healthcare institutions, airports, public housing authorities, commercial/industrial customers, transportation and infrastructure, and utilities across the United States, Canada, the United Kingdom, and Europe.

We have sourced and raised approximately $4.5 billion in project financing while delivering $13.0 billion in energy solutions since our inception. Our growth is driven by staying ahead of the curve and at the leading edge of innovation taking place in the energy sector, offering new products and services to new and existing customers.

In addition to organic growth, strategic acquisitions of complementary businesses and assets, and entering into joint venture arrangements has been, and continues to be an important component to our growth strategy. These strategies enable us to broaden our service offerings and expand our geographical reach.

To best serve our expansive customer base, we have approximately 60 regional offices located throughout North America and the United Kingdom and more than 1,300 dedicated energy and business professionals with years of proven experience and a strong commitment to customer satisfaction. We offer our customers the resources needed to successfully plan, finance, execute and operate energy programs to create sustained economic and operating benefits to fulfill their unique requirements.

Our Services

Our portfolio of service and product offerings aim to create value and provide energy efficient and renewable solutions to the organizations we serve in the pursuit of a sustainable future.

Energy Efficiency Measures & Upgrades

- Water management, efficiency and reclamation
- Renewable energy, storage & microgrids
- Heating, ventilation, cooling, building envelope
- Smart metering and controls
- Chillers and boilers

Renewable Energy, Storage & Microgrids

- Solar photovoltaic ("PV")
- Combined heat and power ("CHP") and co-generation plants
- Geothermal
- Renewable natural gas ("RNG")
- Wind power
- Microgrid
- Battery storage
- EV charging infrastructure
- Hydrogen

Energy Infrastructure

- Smart building modernization and retrofits
- Design-build new construction
- Utilize a full range of technologies related to building systems, facility infrastructure, energy- and water-consuming systems
- Integrated project design and implementation

Energy Analytics & Supply

- Enterprise energy management services
- Proprietary asset management software
- Energy procurement services

Operations & Maintenance ("O&M")

- End-to-end technical guidance
- Skilled technicians to operate and maintain renewable energy systems

Our core services are the development, design, engineering, and installation of projects designed to reduce the energy and O&M costs of our customers' facilities. These projects generally include a variety of measures that incorporate innovative technology and techniques, customized for the facility and designed to improve the efficiency of major building systems, such as heating, ventilation, cooling and lighting systems, while enhancing the comfort and usability of the buildings.

We also offer the ability to incorporate analytical tools designed to provide improved building energy management capabilities and enable customers to identify opportunities for energy cost savings. We typically commit to customers that our energy efficiency projects will satisfy agreed upon performance standards upon installation or achieve specified increases in energy efficiency. Generally, the forecasted lifetime energy and operating cost savings of the energy efficiency measures we install are designed to defray all or almost all of the cost of such measures. In many cases, we assist customers in obtaining private third-party financing, grants, or rebates for the cost of constructing the facility improvements, resulting in little or no upfront capital expenditure by the customer. After a project is complete, we may operate, maintain and repair the customer's energy systems under a multi-year O&M contract, designed to provide us with recurring revenue and visibility into the customer's evolving needs.

In addition, we serve certain customers by developing and building small-scale renewable energy plants located at or close to a customer's site. Depending on the customer's preference, we will either retain ownership of the completed plant or build it for the customer. Most of our small-scale renewable energy plants to date consist of solar PV installations and plants constructed adjacent to landfills, that use landfill gas ("LFG") to generate energy. We also design and build, and own, operate and maintain plants that utilize biogas from wastewater treatment processes. Our largest renewable energy project that we operate for a customer uses biomass as the primary source of energy. For information on how we finance the projects that we own and operate, please see the disclosures under Note 2, "Summary of Significant Accounting Policies", Note 9, "Debt and Financing Lease Liabilities" and Note 11, "Variable Interest Entities and Equity Method Investments" to our consolidated financial statements in Item 8 of this Report.

Our Lines of Business

Smart Energy Solutions Projects

Our Smart Energy Solutions Projects are primarily energy efficiency projects, which entail the design, engineering, and installation of an ever-increasing array of innovative technologies and techniques designed to improve the energy efficiency and control the operation, of a building's energy- and water-consuming systems. In certain projects, we design and construct a central plant or cogeneration system providing power, heat and/or cooling to a building, or a small-scale plant that produces electricity, gas, heat or cooling from renewable sources of energy for a customer, as well as battery energy storage. Our projects generally range in size and scope from a one-month project to design and retrofit a lighting system to a more complex 36-month project to design and install a central plant or cogeneration system or other small-scale plant. Projects we have constructed or are currently working on include designing, engineering and installing energy conservation and resiliency measures across school buildings,

large, complex energy conservation, and energy security projects for the federal government, and municipal-scale street lighting projects incorporating smart city controls.

O&M

After an energy efficiency or renewable energy project is completed, we often provide ongoing O&M services under multi-year contracts. These services offer end-to-end technical guidance and include operating, maintaining, and repairing facility energy systems, such as boilers, chillers, and building controls, as well as central power and small-scale plants. For larger projects, we frequently maintain staff on-site to perform these services. In addition to providing O&M services for our own projects, we also provide similar services on projects we did not construct for various customers.

Ameresco-owned Energy Assets

Ameresco-owned energy assets are small-scale power plants that we develop, design, construct, finance and own/operate and are included in our consolidated balance sheets. These assets may sell electricity, heat, cooling, processed biogas, or renewable biomethane fuel under short-or long-term contracts. We also offer Energy as a Service ("EaaS"), where we design, construct, finance and own/ operate various energy conservation measures on a customer's site and sell them the output or availability of these items under a short-or long-term contract.

We have constructed and are currently developing, designing, and constructing a wide range of renewable energy plants using:

- biogas (generated from landfills, wastewater treatment plants, and the agricultural sector)
- advanced biofuels
- biomass and other bio-derived fuels
- solar PV
- wind and hydro sources of energy
- battery storage

Most of our renewable energy assets to date have involved the generation and sale of:

- electricity from solar PV or battery storage
- electricity, thermal, renewable fuel, or biomethane using biogas as a feedstock

In the case of our biogas-fueled projects, we purchase biogas that otherwise would be combusted or vented, process it, and either use it as a renewable fuel source in our energy plants to produce and sell electricity and/or thermal, or sell it as a renewable fuel source to a third party. We also design and build, and operate and maintain facilities that process biogas into biomethane (or renewable natural gas) that can be transported, primarily through the nation's natural gas pipeline grid or in some cases through tanker trucks, and sold to third parties. The rights to use the site for the plant and the purchase of raw feedstock fuel for the plant are also obtained by us under long-term agreements with terms at least as long as the associated output supply agreement. Our supply agreements typically provide for fixed prices or prices that escalate at a fixed rate or vary based on a market benchmark. See "We may assume responsibility under customer contracts for factors outside our control, including, in connection with some customer projects, the risk that fuel prices will increase" in Item 1A, Risk Factors.

As of December 31, 2022, we owned and operated 162 small-scale renewable energy plants including solar PV installations which generate electricity or deliver renewable gas fuel with a combined capacity of approximately 389 megawatt equivalents ("MWe") and have energy assets in development and construction with a combined capacity of approximately 530 MWe, which includes 60 MWe attributable to a non-controlling interest.

The table below shows the type and number of plants we owned and operated as of December 31, 2022:

Plants Owned and Operated	**Quantity**
Biogas: RNG	4
Biogas: non-RNG	22
Solar and battery assets	132
Other	4
Total plants owned and operated	162

Other

Our other lines of business include photovoltaic solar energy products and systems ("integrated-PV"), consulting, and enterprise energy management services.

Customer Arrangements

Energy Savings Performance Contracts ("ESPCs")

For our energy efficiency projects, we typically enter into ESPCs, under which we agree to develop, design, engineer and construct a project for a customer and also commit that the project will satisfy agreed upon performance standards that vary from project to project. These performance commitments are typically based on the design, capacity, efficiency, or operation of the specific equipment and systems we install. Our commitments generally fall into three categories:

- ***Pre-agreed energy reduction commitment:*** our customer reviews the project design in advance and agrees that, upon or shortly after completion of the installation of the specified equipment comprising the project, the commitment will have been met.
- ***Equipment-level commitment:*** we commit to a level of energy use reduction based on the difference in use measured first with the existing equipment and then with the replacement equipment.
- ***Whole building-level commitment:*** requires demonstration of energy usage reduction for a whole building, often based on readings of the utility meter where usage is measured. Depending on the project, the measurement and demonstration may be required only once, upon installation, based on an analysis of one or more sample installations, or may be required to be repeated at agreed upon intervals generally over periods of up to 25 years. We often assist these customers in identifying and obtaining financing through rebate programs, grant programs, third-party lenders, and other sources.

Under our contracts, we typically do not take responsibility for a wide variety of factors outside of our control and exclude or adjust for such factors in commitment calculations. These factors include, among others, variations in energy prices and utility rates, weather, facility occupancy schedules, the amount of energy-using equipment in a facility, and the failure of the customer to operate or maintain the project properly. Typically, our performance commitments apply to the aggregate overall performance of a project rather than to individual energy efficiency measures. Therefore, to the extent an individual measure underperforms, it may be offset by other measures that overperform during the same period. In the event that an energy efficiency project does not perform according to the agreed upon specifications, our agreements typically allow us to satisfy our obligation by adjusting or modifying the installed equipment, installing additional measures to provide substitute energy savings or paying the customer for lost energy savings based on the assumed conditions specified in the agreement. Many of our equipment supply, local design, and installation subcontracts contain provisions that enable us to seek recourse against our vendors or subcontractors if there is a deficiency in our energy reduction commitment. See "We may have liability to our customers under our ESPCs if our projects fail to deliver the energy use reductions to which we are committed under the contract" in Item 1A, Risk Factors.

The projects that we perform for governmental agencies are governed by particular qualification and contracting regimes. Certain states require qualification with an appropriate state agency as a precondition to performing work or appearing as a qualified energy service provider for state, county, and local agencies within the state. For example, the Commonwealth of Massachusetts and the states of Colorado and Washington pre-qualify energy service providers and provide contract documents that serve as the starting point for negotiations with potential governmental customers. Most of the work that we perform for the federal government is performed under Indefinite Delivery, Indefinite Quantity ("IDIQ") and Multiple Award Construction Contract agreements between government agencies and us. These agreements allow us to contract with the relevant agencies to implement energy and infrastructure projects, but no work may be performed unless we and the agency agree on a task order or delivery order governing the provision of a specific project. The government agencies enter into contracts for specific projects on a competitive basis. We and our affiliates are currently parties to an IDIQ agreement with the U.S. Department of Energy ("DOE") expiring in 2026. We are also party to agreements with other federal agencies, including the U.S. Army Corps of Engineers, the Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic, and the U.S. General Services Administration.

Payments by the federal government for energy efficiency measures are based on the services provided and the products installed but are limited to the savings derived from such measures, calculated in accordance with federal regulatory guidelines and the specific contract's terms. The savings are typically determined by comparing energy use and other costs before and after the installation of the energy efficiency measures, adjusted for changes that affect energy use and other costs but are not caused by the energy efficiency measures.

Energy Supply Contracts

For the energy assets that we own and operate, we generally enter into (i) long-term power purchase agreements ("PPAs") to supply electricity, (ii) long-term energy supply agreements ("ESAs") to supply medium British Thermal Unit ("BTU") biogas or thermal energy, (iii) gas purchase agreements ("GPAs") to supply RNG, or (iv) EaaS contracts where we sell the output or availability of various energy conservation measures to third parties.

The third parties we enter into PPAs, ESAs, or EaaS contracts with include but are not limited to municipalities, the Federal government, commercial and industrial customers, or utilities. The third parties we sell RNG to include, but are not limited to, brokers, traders, utilities, municipalities, industrial facilities, or other large purchasers of energy.

Our Business Segments

Our company is primarily organized by region, where each region may perform our key services under our various lines of business. Our reportable business segments largely follow our regional segmentation. For the year ended December 31, 2022 our reportable business segments were as follows:

- U.S. Regions
- U.S. Federal
- Canada
- Alternative Fuels (formerly Non-Solar Distributed Generation)
- All Other

On January 1, 2022, we changed the structure of our internal organization and our "All Other" segment now includes our U.S.-based enterprise energy management services previously included in our U.S Regions segment and our U.S. Regions segment now includes U.S. project revenue and associated costs previously included in our former Non-Solar DG segment. As a result, previously reported amounts have been reclassified for comparative purposes.

Our U.S. Regions, U.S. Federal and Canada segments offer energy efficiency products and services which include the design, engineering, and installation of equipment and other measures to improve the efficiency and control the operation of a facility's energy infrastructure, renewable energy solutions, and services and the development and construction of small-scale plants that we own or develop for customers that produce electricity, gas, heat, or cooling from renewable sources of energy and O&M services.

Our Alternative Fuels segment sells electricity and processed RNG derived from biomethane from small-scale plants that we own and operate, and provides O&M services for customer owned small-scale RNG plants.

The "All Other" category offers enterprise energy management services, consulting services, energy efficiency products and services outside of the U.S. and Canada, and the sale of solar PV energy products and systems which we refer to as integrated-PV.

The table below shows the percentage of revenues by segment for the last three years:

	2022	2021	2020
% of Revenues by Segment [1]			
U.S. Regions	61.6 %	45.3 %	41.0 %
U.S. Federal	21.5 %	32.3 %	36.6 %
Canada	3.2 %	4.1 %	4.6 %
Alternative Fuels	6.3 %	9.1 %	8.1 %
All Other	7.4 %	9.2 %	9.7 %
Total revenues	100.0 %	100.0 %	100.0 %

(1) See Note 3 "Revenue from Contracts with Customers" for our disaggregated revenue and Note 20 "Business Segment Information" for additional information.

Sales and Marketing

Our sales and marketing approach is to offer customers customized and comprehensive energy efficiency solutions tailored to meet their economic, operational, and technical needs. We identify project opportunities through referrals, requests for proposals ("RFPs"), conferences and events, website, digital campaigns, telemarketing, and repeat business from existing customers. Our direct sales force develops and follows up on customer leads. As of December 31, 2022, we had 180 employees in direct sales.

In preparation for a proposal, our team typically conducts a preliminary audit of the customer's needs and requirements and identifies areas to enhance efficiencies and reduce costs. We collect and analyze the customer's utility bill and other data related

to energy use. If the bills are complex or numerous, we often utilize our proprietary enterprise energy management software tools to scan, compile and analyze the information. Our experienced engineers visit and assess the customer's current energy systems and infrastructure. Through our knowledge of the federal, state, and local governmental and utility environments, we assess the availability of energy, utility or environmental-based payments for usage reductions or renewable power generation, which helps us optimize the economic benefits of a proposed project for a customer. Once awarded a project, we perform a more detailed audit of the customer's facilities, which serves as the basis for the final specifications of the project and final contract terms.

For renewable energy plants that are not built or located on a customer's site or use sources of energy not within the customer's control, the sales process also involves the identification of sites with attractive sources of renewable energy and obtaining necessary rights and governmental permits to develop a plant on that site. For example, for LFG projects, we start with gaining control of an LFG resource located close to the prospective customer. For solar and wind projects, we look for sites where utilities are interested in purchasing renewable energy power at rates that are sufficient to make a project feasible. Where governmental agencies control the site and resource, such as a landfill owned by a municipality, the customer may be required to issue an RFP to use the site or resource. Once we believe we are likely to obtain the rights to the site and the resource, we seek customers for the energy output of the potential project, with whom we can enter into a long-term PPA.

Customers

We strive to be a trusted sustainability partner creating valued, single-sourced, efficient energy solutions delivered with passion, expertise, teamwork, and a relentless focus on customer satisfaction.

Our customers choose to prioritize efficiency and the development of clean, green energy sources and our solutions are customized to serve the specific needs of each customer and meaningfully reduce or offset their carbon footprint. From energy conservation through a variety of measures to the generation of green, renewable power, our customers and their communities reap the benefits of reducing energy consumption, costs, and associated carbon emissions.

In 2022, we served customers throughout the United States, Canada, and Europe. Approximately 46.0% of our revenues were derived from federal, state, provincial, or local government entities, including public housing authorities, public universities, and municipal utilities. Our federal customers include various divisions of the U.S. federal government. The U.S. federal government is considered a single customer and segment for reporting purposes (see table above under "Our Business Segments"). For the year ended December 31, 2022, our largest 20 customers accounted for approximately 73.4% of our total revenues. Other than the U.S. federal government, one customer represented 39.6% of our revenues during this period.

See "Provisions in our government contracts may harm our business, financial condition and operating results" in Item 1A, Risk Factors for a discussion of special considerations applicable to government contracting and "The loss of one of our significant customers or our failure to perform on our contract with that customer in accordance with its terms could adversely affect us" in Item 1A, Risk Factors for further discussion.

Competition

While we face significant competition from a large number of companies, we believe that few offer the objective technical expertise and full range of services we do.

Our principal competitors include:

- ***Smart Energy Solutions*:** Constellation Energy Group, Inc. (an Exelon company), Energy Systems Group, Honeywell, Johnson Controls, NORESCO (a unit of Carrier Global Corporation), Schneider Electric, Siemens Building Technologies, and Trane Technologies (an Ingersoll-Rand company). We compete primarily on the basis of our comprehensive, independent offering of energy efficiency and renewable energy services and the breadth and depth of our expertise.
- ***Energy Assets:*** In the LFG and RNG market our principal competitors primarily include large, national project developers and owners of landfills who self-develop projects using LFG from their own landfills, and other national renewable natural gas developers/owners such as Archaea Energy, Montauk Renewables, Vanguard Renewables, Opal Fuels, and divisions of large multi-national oil and gas conglomerates. In the Solar PV and Battery Storage market our principal competitors include Borrego Solar Systems, BlueWave Solar, Citizens Energy Group, Nexamp Inc., SunPower Corp., Solect Energy, and Syncarpha Capital. We may also compete with many large independent power producers and utilities, as well as a large number of smaller developers of renewable energy projects. In EaaS, our competitors include Engie, Enel X, Schneider Electric SE, and Redaptive, Inc. We compete for renewable energy projects primarily on the basis of our experience, reputation, and ability to identify and complete high quality and cost-effective projects.
- ***O&M Services:*** EMCOR Energy Services, Comfort Systems USA, Honeywell, Johnson Controls, and Veolia. In this area, we compete primarily on the basis of our expertise and quality of service.

See “We operate in a highly competitive industry, and our current or future competitors may be able to compete more effectively than we do, which could have a material adverse effect on our business, revenues, growth rates, and market share” in Item 1A, Risk Factors for further discussion of competition.

Regulatory

Various regulations affect the conduct of our business. Federal and state legislation and regulations enable us to enter into ESPCs with government agencies in the United States. The applicable regulatory requirements for ESPCs differ in each state and between agencies of the federal government. We are also subject to local regulations in the international jurisdictions where we operate, including Canada, the United Kingdom, and Greece.

Our projects must conform to all applicable electric reliability, building and safety, and environmental regulations and codes, which vary from place to place and time to time. Various federal, state, provincial, and local permits are required to construct an energy efficiency project or renewable energy plant.

Renewable energy projects are also subject to specific governmental safety and economic regulation. States and the federal government typically do not regulate the transportation or sale of LFG unless it is combined with and distributed with natural gas, but this is not uniform among states and may change from time to time. States regulate the retail sale and distribution of natural gas to end-users, although regulatory exemptions from regulation are available in some states for limited gas delivery activities, such as sales only to a single customer. The sale and distribution of electricity at the retail level is subject to state and provincial regulation, and the sale and transmission of electricity at the wholesale level is subject to federal regulation. While we do not own or operate retail-level electric distribution systems or wholesale-level transmission systems, the prices for the products we offer can be affected by the tariffs, rules and regulations applicable to such systems, as well as the prices that the owners of such systems are able to charge. The construction of power generation projects typically is regulated at the state and provincial levels, and the operation of these projects also may be subject to state and provincial regulation as “utilities.” At the federal level, the ownership and operation of, and sale of power from, generation facilities may be subject to regulation under the Public Utility Holding Company Act of 2005 (“PUHCA”), the Federal Power Act (“FPA”), and Public Utility Regulatory Policies Act of 1978 (“PURPA”). However, because all of the plants that we have constructed and operated to date are small power “qualifying facilities” under PURPA, they are subject to less regulation under the FPA, PUHCA and related state utility laws than traditional utilities.

If we pursue projects employing different technologies or with a single project electrical capacity greater than 20 megawatts, we could become subject to some of the regulatory schemes which do not apply to our current projects. In addition, the state, provincial, and federal regulations that govern qualifying facilities and other power sellers frequently change, and the effect of these changes on our business cannot be predicted.

LFG power generation facilities require an air emissions permit, which may be difficult to obtain in certain jurisdictions. Renewable energy projects may also be eligible for certain governmental or government-related incentives from time to time, including tax credits, cash payments in lieu of tax credits, and the ability to sell associated environmental attributes, including carbon credits. Government incentives and mandates typically vary by jurisdiction.

Some of the demand reduction services we provide for utilities and institutional customers are subject to regulatory tariffs imposed under federal and state utility laws. In addition, the operation of, and electrical interconnection for, our renewable energy projects are subject to federal, state, or provincial interconnection and federal reliability standards also set forth in utility tariffs. These tariffs specify rules, business practices, and economic terms to which we are subject. The tariffs are drafted by the utilities and approved by the utilities’ state, provincial, or federal regulatory commissions.

See our section entitled “Risks related to Regulations or Governmental Actions” in Item 1A, Risk Factors.

Human Capital Management

We believe our employees are Ameresco’s greatest resource, as they come together to creatively integrate our advanced technology portfolio and develop innovative, transformative energy solutions for our customers.

The diversity of our team coupled with our deep bench of technical expertise enables us to tackle the most complex energy opportunities. Supporting our employees and the communities in which we serve is paramount to our success.

We focus on team-based employee philanthropy, wellness-focused employee benefits, and donating our time to our local communities through education and training.

As of December 31, 2022, we had a total of 1,363 employees based in 46 U.S. states, including the District of Columbia, six Canadian provinces, and four office locations throughout the United Kingdom

Philanthropic Activities

We actively participate in philanthropic activities that support our local communities and provide an opportunity for dynamic team building. During 2022, our employees were encouraged to use paid community service days to donate time and creative energy to the organizations that touch them personally and to give back to the environment and their communities. As a result, we experienced increased participation in both volunteer activities and employee match charitable giving.

Diversity, Equity, Inclusion and Justice

We welcome, support, and celebrate unique ways of thinking. We believe innovation demands diversity of thought, and Ameresco has done well by welcoming and celebrating employees from diverse backgrounds. We are proud to be an equal opportunity workplace and an Affirmative Action employer.

To educate, support, and promote the culture of diversity, equity, inclusion and justice at Ameresco, diversity in the workplace is discussed at all levels in the organization. Annual diversity in the workplace training is rolled out to all Ameresco employees. This comprehensive training is critical to ensuring we are focused on educating our teams and fostering a culture that is all-inclusive.

Recruiting is a key element in our commitment to diversity, equity, inclusion and justice. Our talent team focuses on attracting and recruiting a diverse workforce by partnering with organizations such as the National Society of Women in Construction, Browning The Green Space, New England Women in Energy and the Environment, Hire Heroes USA, and Dolce Center for Advancement of Veterans and Service Members.

During the year ended December 31, 2022, our global workforce is made up of 22% female, 77% male, and 1% not declared. In addition, 33% of our executive management team are female and 21% of our managers are female.

Benefits with a Purpose

The health, safety, and well-being of our employees continues to be a top priority at Ameresco. In addition to competitive salaries, we are committed to regularly evaluating a competitive benefits portfolio, striving to provide resources to our employees that assist with work-life balance.

While employee healthcare costs and access to a wide variety of doctors have always been at the top of our criteria list, we also continued to focus our 2022 benefit offerings on our mental health and well-being offerings. We wanted to ensure our employees have a variety of help and resources available, offered in platforms and services they felt comfortable using, should they need it.

In addition, we offered a comprehensive Employee Assistance Plan to all Ameresco employees and their family members should they need assistance with any life planning matters. And in support of some of the new applications and corporate programs, we rolled out memberships to Care.com, Gympass, and Headspace and Virgin Pulse mobile apps.

Energy Outside the Office

Whether it is through our philanthropic activities, our quest to provide an inclusive culture, or our focus on the well-being of our people, Ameresco benefits from the open communication seen between our employees. We encourage activities outside of our offices to enhance the employee experience.

Career Advancement

Ameresco strives to implement creative ways for our employees to support career advancement. To facilitate our employees' career development with a focus on retention, we have improved on the frequency of career path discussions, training, and succession planning. To expand on the career training offered in 2021, we offered performance management training to employees and managers during 2022. The career path discussions identified specific training programs, mentorship opportunities, continued degree programs and certification programs – all of which will provide the tools necessary to assist our employees in their career development.

When it comes to the innovative solutions that we deliver to our customers, it is critical for the Ameresco team to be at the forefront. Every month our Corporate Marketing Team hosts a Center of Excellence in Advance Technology training session available to all employees. Each session features a different topic to cover various aspects of Ameresco's solution portfolio and is presented by our internal subject matter experts. All employees are encouraged to attend live and participate in the Q&A.

In 2022, we continued to further integrate and invest in our Learning Management System ("LMS") in our Workday Enterprise Management platform to centralize and have the capability to measure development metrics such as training hours per employee.

We provide a tuition reimbursement program to support career development within our organization. In addition, we support employee growth by investing in career advancing certification programs for our employees.

For more information on our initiatives noted above, please see our 2022 Environmental, Social and Governance Report which will be available at www.ameresco.com.

Seasonality

See "Our business is affected by seasonal trends and construction cycles, and these trends and cycles could have an adverse effect on our operating results" in Item 1A, Risk Factors and "Overview — Effects of Seasonality" in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations" for a discussion of seasonality in our business.

Geographic Information

Financial information about our domestic and international operations may be found in Note 16, "Geographic Information" of our consolidated financial statements included in Item 8 of this Form 10-K, which information is incorporated herein by reference.

Additional Information

Periodic reports, proxy statements, and other information are available to the public, free of charge, on our website, www.ameresco.com, as soon as reasonably practicable after they have been filed with the Securities and Exchange Commission ("SEC"), and through the SEC's website, www.sec.gov. We include our website address in this report only as an inactive textual reference and do not intend it to be an active link to our website. None of the material on our website is part of this Report.

Item 1A. Risk Factors

We face many risks. If any of the events or circumstances described below actually occur, we and our businesses, financial condition or results of operations could suffer, and the trading price of our Class A Common Stock could decline. Our current and potential investors should consider the following risks and the information contained under the heading "Cautionary Note Regarding Forward-Looking Statements" before deciding to invest in our securities.

Risks Related to Our Business

If demand for our energy efficiency and renewable energy solutions does not develop as we expect, our revenues will suffer, and our business will be harmed.

We believe, and our growth plans assume, that the market for energy efficiency and renewable energy solutions will continue to grow, that we will increase our penetration of this market and that our revenues from selling into this market will continue to increase over time. If our expectations as to the size of this market and our ability to sell our products and services in this market are not correct, our revenues will suffer, and our business will be harmed.

In order to secure contracts for new projects, we typically face a long and variable selling cycle that requires significant resource commitments and requires a long lead time before we realize revenues.

The sales cycle for energy efficiency and renewable energy projects in general take from 18 to 42 months, with sales to federal government and housing authority customers tending to require the longest sales processes. Our sales cycle has been further lengthened as a result of macroeconomic conditions and we cannot predict the timeline for our selling cycle in the current conditions. Our existing and potential customers generally follow extended budgeting and procurement processes, and sometimes must engage in regulatory approval processes related to our services. Our customers often use outside consultants and advisors, which contributes to a longer sales cycle. Most of our potential customers issue an RFP, as part of their consideration of alternatives for their proposed project. In preparation for responding to an RFP, we typically conduct a preliminary audit of the customer's needs and the opportunity to reduce its energy costs. For projects involving a renewable energy plant that is not located on a customer's site or that uses sources of energy not within the customer's control, the sales process also involves the identification of sites with attractive sources of renewable energy, such as a landfill or a favorable site for solar PV, and it may involve obtaining necessary rights and governmental permits to develop a project on that site. If we are awarded a project, we then perform a more detailed audit of the customer's facilities, which serves as the basis for the final specifications of the project. We then must negotiate and execute a contract with the customer. In addition, we or the customer typically need to obtain financing for the project.

This extended sales process requires the dedication of significant time by our sales and management personnel and our use of significant financial resources, with no certainty of success or recovery of our related expenses. A potential customer may go through the entire sales process and not accept our proposal. All of these factors can contribute to fluctuations in our quarterly financial performance and increase the likelihood that our operating results in a particular quarter will fall below investor expectations. These factors could also adversely affect our business, financial condition and operating results due to increased spending by us that is not offset by increased revenues.

We may not recognize all revenues from our backlog or receive all payments anticipated under awarded projects and customer contracts.

As of December 31, 2022 and 2021, we had backlog of approximately $1.0 billion and $1.5 billion, respectively, in expected future revenues under signed customer contracts for the installation or construction of projects, which we sometimes refer to as fully-contracted backlog; and we also had been awarded projects for which we do not yet have signed customer contracts with estimated total future revenues of an additional $1.6 billion and $1.5 billion, respectively. As of December 31, 2022 and 2021, we had O&M backlog of approximately $1.2 billion and $1.1 billion, respectively. Our O&M backlog represents expected future revenues under signed multi-year customer contracts for the delivery of O&M services, primarily for energy efficiency and renewable energy construction projects completed by us for our customers.

Our customers have the right under some circumstances to terminate contracts or defer the timing of our services and their payments to us. In addition, our government contracts are subject to the risks described below under "Provisions in government contracts may harm our business, financial condition and operating results." The payment estimates for projects that have been awarded to us but for which we have not yet signed contracts have been prepared by management and are based upon a number of assumptions, including that the size and scope of the awarded projects will not change prior to the signing of customer contracts, that we or our customers will be able to obtain any necessary third-party financing for the awarded projects, and that we and our customers will reach agreement on and execute contracts for the awarded projects. We are not always able to enter into a contract for an awarded project on the terms proposed. As a result, we may not receive all of the revenues that we include in the awarded projects component of our backlog or that we estimate we will receive under awarded projects. If we do not receive all of the revenue we currently expect to receive, our future operating results will be adversely affected. In addition, a delay in the receipt of

revenues, even if such revenues are eventually received, may cause our operating results for a particular quarter to fall below our expectations.

If we are not able to complete, perform or operate our projects on a profitable basis or as we have committed to our customers, we could become subject to liquidated damages, and our reputation and our results of operations could be adversely impacted.

Development, installation, and construction of our energy efficiency and renewable energy projects, and operation of our renewable energy projects, entails many risks, including:

- failure or delays in receiving components and equipment that meet our requirements,
- failure or delays in obtaining all necessary rights to land access and use,
- failure or delays in receiving quality performance of contractors and other third-party service providers,
- increases (including as a result of inflation) in the cost of labor, equipment, and commodities needed to construct or operate projects,
- failure or delays in obtaining permitting and addressing other regulatory issues, license revocation, and changes in legal requirements,
- failure or delays in obtaining other governmental support or approvals, or in overcoming objections from members of the public or adjoining land owners;
- shortages of equipment or skilled labor,
- unforeseen engineering problems,
- failure of a customer to accept or pay for renewable energy that we supply,
- weather interferences, catastrophic events including fires, explosions, earthquakes, droughts, and acts of terrorism; and accidents involving personal injury or the loss of life,
- environmental, archaeological or geological conditions
- health or similar issues, a pandemic, or epidemic, such as COVID-19,
- labor disputes and work stoppages,
- mishandling of hazardous substances and waste, and other events outside of our control.

Any of these factors could give rise to construction delays, costs in excess of our expectations or cause us not to meet commitments given to our customers. We have, for example, experienced disruptions in development, installation and construction as a result of supply chain and logistics challenges, COVID-19 and the related quarantines, facility closures, and we may continue to experience such disruptions. In addition, the impacts of climate change have caused us to experience more frequent and severe weather interferences which has impacted our construction timelines, and this trend may continue. Furthermore, while the passage of the Inflation Reduction Act ("IRA") may increase the demand for our service and project offerings, it may also increase demand and cost for labor, equipment and commodities needed for our projects. These factors and events could prevent us from completing construction of our projects, cause defaults under our financing agreements or under contracts that require completion of project construction by a certain time, give rise to liquidated damages or penalties, cause projects to be unprofitable for us, or otherwise impair our business, financial condition, and operating results.

For example, our Turnkey Engineering, Procurement, Construction and Maintenance Agreement and the underlying purchase orders dated as of October 21, 2021 (the "SCE Agreement") with SCE obligated us to achieve certain substantial completion milestone dates for the facilities no later than August 1, 2022, and for at least two years thereafter meet specified availability and capacity guarantees. In 2022, SCE instructed us to adjust the project schedule into 2023. As previously disclosed, we made force majeure claims under the SCE Agreement as battery supply delays resulting from COVID-19 lockdowns in several regions around China, newly implemented Chinese transportation safety policies and related supply chain delays impacted our ability to achieve the August 1, 2022 completion date. We are in ongoing discussions with SCE about the applicability of force majeure relief to the project delays. If we fail to satisfy certain milestone obligations, fail to come to an agreement with SCE of appropriate extensions of these milestones and force majeure relief, or fail to meet the availability and capacity guarantees, we may be subject to liquidated damages and under certain circumstances SCE may have a right to terminate the agreement.The requirement to pay liquidated damages or the loss of business from SCE could have a material adverse effect on our reputation, business or results of operations.

A significant decline in the fiscal health of federal, state, provincial, and local governments could reduce demand for our energy efficiency and renewable energy projects.

Historically, including for the years ended December 31, 2022 and 2021, 46% and 67%, respectively, of our revenues have been derived from sales to federal, state, provincial, or local governmental entities, including public housing authorities, public universities, and municipal utilities. We expect revenues from this market sector to continue to comprise a significant percentage of our revenues for the foreseeable future. A significant decline in the fiscal health of these existing and potential customers may make it difficult for them to enter into contracts for our services or to obtain financing necessary to fund such contracts, or may

cause them to seek to renegotiate or terminate existing agreements with us. In addition, if there is a partial or full shutdown of any federal, state, provincial or local governing body this may adversely impact our financial performance.

Provisions in our government contracts may harm our business, financial condition and operating results.
A significant majority of our fully-contracted backlog and awarded projects is attributable to customers that are governmental entities. Our contracts with the federal government and its agencies, and with state, provincial, and local governments, customarily contain provisions that give the government substantial rights and remedies, many of which are not typically found in commercial contracts, including provisions that allow the government to:

- terminate existing contracts, in whole or in part, for any reason or no reason,
- reduce or modify contracts or subcontracts,
- decline to award future contracts if actual or apparent organizational conflicts of interest are discovered, or to impose organizational conflict mitigation measures as a condition of eligibility for an award,
- suspend or debar the contractor from doing business with the government or a specific government agency, and
- pursue criminal or civil remedies under the False Claims Act, False Statements Act, and similar remedy provisions unique to government contracting.

Under general principles of government contracting law, if the government terminates a contract for convenience, the terminated company may recover only its incurred or committed costs, settlement expenses, and profit on work completed prior to the termination. If the government terminates a contract for default, the defaulting company is entitled to recover costs incurred and associated profits on accepted items only and may be liable for excess costs incurred by the government in procuring undelivered items from another source. In most of our contracts with the federal government, the government has agreed to make a payment to us in the event that it terminates the agreement early. The termination payment is designed to compensate us for the cost of construction plus financing costs and profit on the work completed.

In ESPCs for governmental entities, the methodologies for computing energy savings may be less favorable than for non-governmental customers and may be modified during the contract period. We may be liable for price reductions if the projected savings cannot be substantiated. In addition to the right of the federal government to terminate its contracts with us, federal government contracts are conditioned upon the continuing approval by Congress of the necessary spending to honor such contracts. Congress often appropriates funds for a program on a September 30 fiscal-year basis even though contract performance may take more than one year. Consequently, at the beginning of many major Governmental programs, contracts often may not be fully funded, and additional monies are then committed to the contract only if, as and when appropriations are made by Congress for future fiscal years. Similar practices are likely to also affect the availability of funding for our contracts with Canadian, as well as state, provincial, and local government entities. If one or more of our government contracts were terminated or reduced, or if appropriations for the funding of one or more of our contracts is delayed or terminated, our business, financial condition and operating results could be adversely affected.

The projects we undertake for our customers generally require significant capital, which our customers or we may finance through third parties, and such financing may not be available to our customers or to us on favorable terms, if at all.
Our projects for customers are typically financed by third parties. For small-scale renewable energy plants that we own, as well as certain larger projects for customers, such as the battery storage project with SCE, we typically rely on a combination of our working capital and debt to finance construction costs. If we or our customers are unable to raise funds on acceptable terms when needed or if we do not have sufficient working capital or availability under our existing financing arrangements, we may be unable to secure customer contracts, the size of contracts we do obtain may be smaller or we could be required to delay the development and construction of projects, reduce the scope of those projects or otherwise restrict our operations. Delays in customer projects could also subject us to claims by customers. Furthermore, the terms of financing arrangements that we may enter into, including increases in interest rates as compared to historical rates, have in the past and could in the future impact the profitability of our projects. In addition, any inability by us or our customers to raise the funds necessary to finance our projects or construction costs could materially harm our business, financial condition, and operating results.

Project development or construction activities may require us to make significant investments without first obtaining project financing or having final customer contracts, which could increase our costs and impair our ability to recover our investments.
We are at times required to spend significant sums for preliminary engineering, permitting, legal and other expenses before we can determine whether a project is feasible, economically attractive, or capable of being built. We will often choose to bear the costs of such efforts prior to obtaining project financing, prior to getting final regulatory approval and prior to our final sale to a customer, if any. We have for example in the past commenced, and may in the future commence, development of certain projects, such as battery and solar projects, prior to having entered into final binding contracts with the customer.

We expect to invest a significant amount of capital to develop projects whether owned by us or by third parties. If we are unable to complete the development of a project or enter into contracts with the customer, we may write-down or write-off some or all of

these capitalized investments, which would have an adverse impact on our net income in the period in which the loss is recognized and could have an adverse impact our ability to finance our operations.

We are exposed to the credit risk of some of our customers.
Most of our revenues are derived under multi-year or long-term contracts with our customers, and our revenues are therefore dependent to a large extent on the creditworthiness of our customers. During periods of economic downturn, our exposure to credit risks from our customers' increases, and our efforts to monitor and mitigate the associated risks may not be effective in reducing our credit risks. Our reliance on one or a few customers for a material portion of our revenue further exacerbates this risk. In the event of non-payment by one or more of our customers, our business, financial condition and operating results could be adversely affected.

Our business is affected by seasonal trends and construction cycles, and these trends and cycles could have an adverse effect on our operating results.
We are subject to seasonal fluctuations and construction cycles, particularly in climates that experience colder weather during the winter months, such as the northern United States and Canada, and climates that experience extreme weather events, such as wildfires, storms, or flooding, or at educational institutions, where large projects are typically carried out during summer months when their facilities are unoccupied. In addition, government customers, many of which have fiscal years that do not coincide with ours, typically follow annual procurement cycles and appropriate funds on a fiscal-year basis even though contract performance may take more than one year. Further, government contracting cycles can be affected by the timing of, and delays in, the legislative process related to government programs and incentives that help drive demand for energy efficiency and renewable energy projects. As a result, our revenues and operating income in the third and fourth quarter are typically higher, and our revenues and operating income in the first quarter are typically lower, than in other quarters of the year. As a result of such fluctuations, we may occasionally experience declines in revenue or earnings as compared to the immediately preceding quarter, and comparisons of our operating results on a period-to-period basis may not be meaningful.

Failure of third parties to manufacture quality products or provide reliable services in a timely manner or at prices that are acceptable to us could cause delays in the delivery of our services and completion of our projects, which could damage our reputation, have a negative impact on our relationships with our customers and adversely affect our growth.
Our success depends on our ability to provide services and complete projects in a timely manner, which in part depends on the ability of third parties to provide us with timely and reliable products and services at acceptable prices. In providing our services and completing our projects, we rely on products that meet our design specifications and components manufactured and supplied by third parties, as well as on services performed by subcontractors. We also rely on subcontractors to perform substantially all of the construction and installation work related to our projects; and we often need to engage subcontractors with whom we have no experience for our projects. We, our subcontractors and other third parties have been impacted by the global supply chain delays as well as restrictions imposed because of the COVID-19 pandemic. This has resulted in and may continue to result in delays in our ability to provide our services and complete our projects in a timely manner. In addition, some of the third parties we engage for our design, construction and operation projects operate internationally and our reliance on their products and services may be impacted by economic, political, and labor conditions in those regions as well as the uncertainty caused by the evolving relations between the United States and these regions, including China.

If any of our subcontractors are unable to provide services that meet or exceed our customers' expectations or satisfy our contractual commitments, our reputation, business and operating results could be harmed. In addition, if we are unable to avail ourselves of warranty and other contractual protections with providers of products and services, we may incur liability to our customers or additional costs related to the affected products and components, which could have a material adverse effect on our business, financial condition, and operating results. Moreover, any delays, malfunctions, inefficiencies, or interruptions in these products or services could adversely affect the quality and performance of our solutions and require considerable expense to establish alternate sources for such products and services. This could cause us to experience difficulty retaining current customers and attracting new customers, and could harm our brand, reputation, growth, and operating results.

We may have liability to our customers under our ESPCs if our projects fail to deliver the energy use reductions to which we are committed under the contract.
For our energy efficiency projects, we typically enter into ESPCs under which we commit that the projects will satisfy agreed-upon performance standards appropriate to the project. These commitments are typically structured as guarantees of increased energy efficiency that are based on the design, capacity, efficiency, or operation of the specific equipment and systems we install. Our commitments generally fall into three categories: pre-agreed, equipment-level and whole building-level. Under a pre-agreed efficiency commitment, our customer reviews the project design in advance and agrees that, upon or shortly after completion of installation of the specified equipment comprising the project, the pre-agreed increase in energy efficiency will have been met. Under an equipment-level commitment, we commit to a level of increased energy efficiency based on the difference in use measured first with the existing equipment and then with the replacement equipment upon completion of installation. A whole

building-level commitment requires future measurement and verification of increased energy efficiency for a whole building, often based on readings of the utility meter where usage is measured. Depending on the project, the measurement and verification may be required only once, upon installation, based on an analysis of one or more sample installations, or may be required to be repeated at agreed upon intervals generally over periods of up to 25 years.

Under our contracts, we typically do not take responsibility for a wide variety of factors outside our control and exclude or adjust for such factors in commitment calculations. These factors include variations in energy prices and utility rates, weather, facility occupancy schedules, the amount of energy-using equipment in a facility, and failure of the customer to operate or maintain the project properly. We rely in part on warranties from our equipment suppliers and subcontractors to back-stop the warranties we provide to our customers and, where appropriate, pass on the warranties to our customers. However, the warranties we provide to our customers are sometimes broader in scope or longer in duration than the corresponding warranties we receive from our suppliers and subcontractors, and we bear the risk for any differences, as well as the risk of warranty default by our suppliers and subcontractors.

Typically, our performance commitments apply to the aggregate overall performance of a project rather than to individual energy efficiency measures. Therefore, to the extent an individual measure underperforms, it may be offset by other measures that overperform during the same period. In the event that an energy efficiency project does not perform according to the agreed-upon specifications, our agreements typically allow us to satisfy our obligation by adjusting or modifying the installed equipment, installing additional measures to provide substitute energy savings, or paying the customer for lost energy savings based on the assumed conditions specified in the agreement. However, we may incur additional or increased liabilities or expenses under our ESPCs in the future. Such liabilities or expenses could be substantial, and they could materially harm our business, financial condition, or operating results. In addition, any disputes with a customer over the extent to which we bear responsibility to improve performance or make payments to the customer may diminish our prospects for future business from that customer or damage our reputation in the marketplace.

We may assume responsibility under customer contracts for factors outside our control, including, in connection with some customer projects, the risk that fuel prices will increase.

We typically do not take responsibility under our contracts for a wide variety of factors outside our control. We have, however, in a limited number of contracts assumed some level of risk and responsibility for certain factors — sometimes only to the extent that variations exceed specified thresholds — and may also do so under certain contracts in the future, particularly in our contracts for renewable energy projects. For example, under a contract for the construction and operation of a cogeneration facility at the U.S. Department of Energy Savannah River Site in South Carolina, a subsidiary of ours is exposed to the risk that the price of the biomass that will be used to fuel the cogeneration facility may rise during the 19-year performance period of the contract. Several provisions in that contract mitigate the price risk. In addition, although we typically structure our contracts so that our obligation to supply a customer with biogas, electricity or steam, for example, does not exceed the quantity produced by the production facility, in some circumstances we commit to supply a customer with specified minimum quantities based on our projections of the facility's production capacity. In such circumstances, if we are unable to meet such commitments, we may be required to incur additional costs or face penalties. Despite the steps we have taken to mitigate risks under these and other contracts, such steps may not be sufficient to avoid the need to incur increased costs to satisfy our commitments, and such costs could be material. Increased costs that we are unable to pass through to our customers could have a material adverse effect on our operating results.

Our business depends on experienced and skilled personnel and substantial specialty subcontractor resources, and if we lose key personnel or if we are unable to attract and integrate additional skilled personnel, it will be more difficult for us to manage our business and complete projects.

The success of our business and construction projects depends in large part on the skill of our personnel and on trade labor resources, including with certain specialty subcontractor skills. Competition for personnel, particularly those with expertise in the energy services and renewable energy industries, is high and may intensify with the IRA driving more demand for clean energy product and service offerings and as such demand for skilled personnel in the industry. In the event we are unable to attract, hire and retain the requisite personnel and subcontractors, we may experience delays in completing projects in accordance with project schedules and budgets. Further, any increase in demand for personnel and specialty subcontractors may result in higher costs, causing us to exceed the budget on a project. Either of these circumstances may have an adverse effect on our business, financial condition, and operating results, harm our reputation among and relationships with our customers and cause us to curtail our pursuit of new projects.

Our future success is particularly dependent on the vision, skills, experience, and effort of our senior management team, including our executive officers and our founder, principal stockholder, president, and chief executive officer, George P. Sakellaris. If we were to lose the services of any of our executive officers or key employees, our ability to effectively manage our operations and implement our strategy could be harmed and our business may suffer.

We have been and may continue to be impacted by macroeconomic conditions such as supply chain challenges, a shortfall of certain products needed for our business, and inflationary pressures.
Global trade conditions that originated during the COVID-19 pandemic continue to persist and have been exacerbated by the war in Ukraine. These conditions may also have long-lasting adverse impact on us and our industries independently of the progress of the pandemic. For example, pandemic-related issues have exacerbated port congestion and intermittent supplier shutdowns and delays, resulting in additional expenses to expedite delivery of critical equipment. These conditions, combined with an increased demand for certain products needed for our business, such as lithium-ion battery cells and solar panels has created a shortfall of and increased costs for these products, which has caused challenges and delays in our projects and may impact the profitability of our projects. We cannot predict the duration or direction of current global trends or their sustained impact or how the COVID-19 pandemic may evolve and impact our business. If we experience unfavorable global market conditions, our business, prospects, financial condition, and operating results may be harmed.

For example, we are dependent on the continued supply of lithium-ion battery cells for our energy storage products, and we will require substantially more cells to grow our battery storage business based on our current plans. Currently, we rely on limited number of suppliers for these cells. Any disruption in the supply of battery cells from our suppliers could limit our growth for projects involving battery energy storage. In addition, the cost and mass production of battery cells, depends in part upon the prices and availability of raw materials such as lithium, nickel, cobalt and/or other metals. The prices for these materials fluctuate and their available supply may be unstable, depending on market conditions, regulation and global demand for these materials. As a result of increased global production of energy storage products and electric vehicles, suppliers of these raw materials may be unable to meet our volume or timing needs. Any reduced availability of these materials may adversely impact our access to battery cells and our growth, and any increases in their prices may reduce our profitability if we cannot recoup such costs in our project pricing. Moreover, our inability to meet demand may harm our brand, growth, prospects and operating results.

A failure of our information technology ("IT") and data security infrastructure or cyber or other security incidents, vulnerabilities or other deficiencies, could adversely impact our business, reputation or results of operation or could cause us to default under our contractual obligations.
We rely upon the capacity, reliability, and security of our IT and data security infrastructure and our ability to expand and continually update this infrastructure in response to the changing needs of our business. Our existing systems or any new ones we implement may not perform as expected face the challenge of supporting our older systems and implementing necessary upgrades. If we experience a problem with the functioning or a security breach of our IT systems, the resulting disruptions could have an adverse effect on our business. We receive and store personal information in connection with our human resources operations and other aspects of our business. Despite our implementation of security measures, our IT systems are vulnerable to damages from computer viruses, natural disasters, unauthorized access, cyber-attacks, and other similar disruptions, and we have experienced such incidents in the past. Any system failure, accident, or security breach could result in disruptions to our operations. A material network breach in the security of our IT systems could include the theft of our intellectual property, trade secrets, customer information, human resources information, or other confidential matter.

We have been subject to and may in the future experience cybersecurity threats, including advanced and persistent cyberattacks, phishing and social engineering schemes, particularly on internet applications. Such cyber and other security threats could compromise the assets we own and operate or data in our systems. In addition, cybersecurity incidents at our vendors, customers and partners may have similar negative impact on our business operations. For example, we engage third-party vendors who receive and store personal and sensitive information in connection with our operations, including our human resources functions such as background checks. We do not have control over or access to the IT infrastructure of these vendors. Our vendors have and may in the future experience network breaches and other cyberattacks. In such instances, we are not be able to fully investigate the incidents and may not be able to implement measures to defend such attacks. Furthermore, third-party vendors may not notify us of such incidents timely or at all, making it more difficult for us to identify and mitigate cybersecurity risks. Although we devote resources to our cybersecurity programs and have implemented security measures to protect our assets, systems and data, there can be no assurance that our efforts will prevent these threats. Because the techniques used to obtain unauthorized access, to disable or degrade systems, and to generate cyber attacks change frequently, have become increasingly more sophisticated, and may be difficult to detect for periods of time, we may not anticipate these acts or respond adequately or timely.

As these threats continue to evolve and increase, we may be required to devote significant additional resources in order to protect against these attacks and to identify and remediate any security vulnerabilities. To the extent that any attacks, disruptions or security breach results in a loss or damage to our data, or an inappropriate disclosure of information, or adversely impact the assets we own or operate , it could cause significant damage to our reputation, affect our relationships with our customers and employees, lead to claims against us and ultimately harm our business and operating results.

If we cannot obtain surety bonds and letters of credit, our ability to operate may be restricted.
Federal and state laws require us to secure the performance of certain long-term obligations through surety bonds and letters of credit. In addition, we are occasionally required to provide bid bonds or performance bonds to secure our performance under energy efficiency contracts. In the future, we may have difficulty procuring or maintaining surety bonds or letters of credit, and obtaining them may become more expensive, require us to post cash collateral or otherwise involve unfavorable terms. Because we are sometimes required to have performance bonds or letters of credit in place before projects can commence or continue, our failure to obtain or maintain those bonds and letters of credit would adversely affect our ability to begin and complete projects, and thus could have a material adverse effect on our business, financial condition and operating results.

We operate in a highly competitive industry, and our current or future competitors may be able to compete more effectively than we do, which could have a material adverse effect on our business, revenues, growth rates, and market share.
Our industry is highly competitive, with many companies of varying size and business models, many of which have their own proprietary technologies, competing for the same business as we do. Many of our competitors have longer operating histories and greater resources than us and could focus their substantial financial resources to develop a competitive advantage, others may be smaller and able to adapt to the constantly changing demand of the market more quickly. The passage of the IRA and the opportunities it brings could intensify competition in our industry. Our competitors may also offer energy solutions at prices below cost, devote significant sales forces to competing with us or attempt to recruit our key personnel by increasing compensation, any of which could improve their competitive positions. Any of these competitive factors could make it more difficult for us to attract and retain customers, cause us to lower our prices in order to compete, and reduce our market share and revenues, any of which could have a material adverse effect on our financial condition and operating results. We can provide no assurance that we will continue to effectively compete against our current competitors or additional companies that may enter our markets. In addition, we may also face competition based on technological developments that reduce demand for electricity, increase power supplies through existing infrastructure or otherwise compete with our products and services. We also encounter competition in the form of potential customers electing to develop solutions or perform services internally rather than engaging an outside provider such as us.

Our small-scale renewable energy plants may not generate expected levels of output.
The small-scale renewable energy plants that we construct and own are subject to various operating risks that may cause them to generate less than expected amounts of processed biogas, electricity, or thermal energy. These risks include a failure or degradation of our, our customers' or utilities' equipment; an inability to find suitable replacement equipment or parts; less than expected supply of the plant's source of renewable energy, downtime to our plants based such as biogas or biomass ; or a faster than expected diminishment of such supply. For example, in 2022 we had to undertake some unscheduled maintenance at some of our RNG plants impacting the energy output from such plants. Any extended interruption in the plant's operation, or failure of the plant for any reason to generate the expected amount of output, could have a material adverse effect on our business and operating results. In addition, we have in the past, and could in the future, incur material asset impairment charges if any of our renewable energy plants incur operational issues that indicate that our expected future cash flows from the plant are less than its carrying value. Any such impairment charge could have a material adverse effect on our operating results in the period in which the charge is recorded.

We have not entered into long-term offtake agreements for a portion of the output from our small-scale renewable energy plants and a portion of the related renewable identification numbers ("RINs") are not subject to long term contracts.
We have not entered into long-term offtake agreements for a portion of the output from our small-scale renewable energy plants, particularly RNG and non-RNG plants, and we may sell portions of the processed RNG, medium-BTU gas or electricity produced by the facility at wholesale prices, which are exposed to market fluctuations and risks. Similarly, we have not entered into long-term agreements with respect to the RINs for which the production and sale of such biofuel may qualify. The failure to sell such processed RNG, medium-BTU gas, electricity, or the related RINs at a favorable price, or at all could have a material adverse effect on our business and operating results.

We may not be able to replace expiring offtake agreements with contracts on similar terms. If we are unable to replace an expired offtake agreement with an acceptable new contract, we may be required to remove the small-scale renewable energy plant from the site or, alternatively, we may sell the assets to the customer.
We may not be able to replace an expiring offtake agreement with a contract on equivalent terms and conditions, including at prices that permit operation of the related facility on a profitable basis. If we are unable to replace an expiring offtake agreement with an acceptable new revenue contract, the affected site may temporarily or permanently cease operations or we may be required to sell the power produced by the facility at wholesale prices which are exposed to market fluctuations and risks. In the case of a solar photovoltaic installation that ceases operations, the offtake agreement terms generally require that we remove the assets, including fixing or reimbursing the site owner for any damages caused by the assets or the removal of such assets. Alternatively, we may agree to sell the assets to the site owner, but the terms and conditions, including price, that we would

receive in any sale, and the sale price may not be sufficient to replace the revenue previously generated by the small-scale renewable energy plant.

Operation of energy assets involves significant risks and hazards customary to the energy industry and may be further impacted by the effects of climate change. We may not have adequate insurance to cover these risks and hazards, or other risks beyond our control.

Hazards such as fire, explosion, structural collapse and machinery failure are inherent risks in our operations. These and other hazards can cause significant personal injury or loss of life, severe damage to and destruction of property, plant and equipment and contamination of, or damage to, the environment. The occurrence of any one of these events may result in curtailment of our operations or liability to third parties for damages, environmental cleanup costs, personal injury, property damage and fines and/or penalties, any of which could be substantial. Strategic targets, such as energy-related facilities, may also be at greater risk of hostile cyber intrusions or other security attacks, including those targeting information systems as well as electronic control systems. Such events could severely disrupt business operations and result in loss of service to customers, as well as create significant expense to repair security breaches or system damage.

Furthermore, certain of our facilities, projects and suppliers are located in or operate operations in locations that are susceptible to natural disasters. The frequency of weather-related natural disasters may be increasing due to climate change. The occurrence of a natural disaster, such as tornados, earthquakes, droughts, floods, wildfires or localized extended outages of critical utilities or transportation systems, or any critical resource shortages, affecting us could cause a significant interruption in our business or damage or destroy our facilities. While we maintain insurance to protect against these and other risks, some of these events may be excluded from insurance coverage or our coverage may not be sufficient against all hazards or liabilities to which we may be subject. Insurance may also not continue to be available at all or at rates or on terms similar to those presently available. Any losses not covered by insurance could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We plan to expand our business in part through future acquisitions and joint ventures, but we may not be able to identify or complete suitable acquisitions.

Historically, acquisitions have been a significant part of our growth strategy. We plan to continue to use acquisitions of companies or assets and co-investments with third parties using joint ventures to expand our project skill-sets and capabilities, expand our geographic markets, add experienced management, increase our product and service offerings and add to our energy producing asset portfolio. However, we may be unable to implement this growth strategy if we cannot identify suitable acquisition or joint venture candidates or partners, reach agreement with targets on acceptable terms or arrange required financing for acquisitions or joint ventures on acceptable terms. In addition, the time and effort involved in identifying acquisition or joint venture candidates and consummate transactions may divert the attention and efforts of members of our management from the operations of our company.

We may be required to write-off or impair capitalized costs or intangible assets in the future, or we may incur restructuring costs or other charges, each of which could harm our earnings.

In accordance with generally accepted accounting principles in the United States, we capitalize certain expenditures and advances relating to our acquisitions, pending acquisitions, project development costs, interest costs related to project financing and certain energy assets. In addition, we have considerable unamortized assets. From time to time in future periods, we may be required to incur a charge against earnings in an amount equal to any unamortized capitalized expenditures and advances, net of any portion thereof that we estimate will be recoverable, through sale or otherwise, relating to: (i) any operation or other asset that is being sold, permanently shut down, impaired or has not generated or is not expected to generate sufficient cash flow; (ii) any pending acquisition that is not consummated; (iii) any project that is not expected to be successfully completed; and (iv) any goodwill or other intangible assets that are determined to be impaired.

In response to such charges and costs and other market factors, we may be required to implement restructuring plans in an effort to reduce the size and cost of our operations and to better match our resources with our market opportunities. As a result of such actions, we would expect to incur restructuring expenses and accounting charges which may be material. Several factors could cause a restructuring to adversely affect our business, financial condition, and results of operations. These include potential disruption of our operations, the development of our small-scale renewable energy projects and other aspects of our business. Employee morale and productivity could also suffer and result in unintended employee attrition. Any restructuring would require substantial management time and attention and may divert management from other important work. Moreover, we could encounter delays in executing any restructuring plans, which could cause further disruption and additional unanticipated expense. See also Note 2, “Summary of Significant Accounting Policies” and Note 5, “Goodwill and Intangible Assets, Net”, to our consolidated financial statements appearing in Item 8 of this Report.

Any future acquisitions that we may make could disrupt our business, cause dilution to our stockholders and harm our business, financial condition or operating results, and our use of joint ventures could expose us to additional risks and liabilities.

If we are successful in consummating acquisitions, those acquisitions could subject us to a number of risks, including:

- the purchase price we pay could significantly deplete our cash reserves or result in dilution to our existing stockholders,
- we may find that the acquired company or assets do not improve our customer offerings or market position as planned,
- we may have difficulty integrating the operations and personnel of the acquired company,
- key personnel and customers of the acquired company may terminate their relationships with the acquired company as a result of the acquisition,
- we may experience additional financial and accounting challenges and complexities in areas such as tax planning and financial reporting,
- we may incur additional costs and expenses related to complying with additional laws, rules or regulations in new jurisdictions,
- we may assume or be held liable for risks and liabilities (including for environmental-related costs) as a result of our acquisitions, some of which we may not discover during our due diligence or adequately adjust for in our acquisition arrangements,
- our ongoing business and management's attention may be disrupted or diverted by transition or integration issues and the complexity of managing geographically or culturally diverse enterprises,
- we may incur one-time write-offs or restructuring charges in connection with the acquisition,
- we may acquire goodwill and other intangible assets that are subject to amortization or impairment tests, which could result in future charges to earnings, and
- we may not be able to realize the cost savings or other financial benefits we anticipated.

We own, and in the future may acquire or establish, operating or development projects in joint ventures. Joint ventures inherently involve a lesser degree of control over business operations. Our joint venture partners may have economic and business interests that are inconsistent with ours, we may lack sole decision-making authority, and disputes between us and our joint venture partners could subject us to delays, litigation and increased expenses. Some of our joint venture projects may be capital intensive and if our joint venture partner does not contribute capital they are required to, this could result in delays in our development projects and increased our capital expenditures. These factors could have a material adverse effect on our business, financial condition, and operating results.

International expansion is one of our growth strategies, and international operations will expose us to additional risks that we do not face in the United States, which could have an adverse effect on our operating results.

We generate a portion of our revenues from operations outside of the United States, mainly in Canada and the United Kingdom. International expansion is one of our growth strategies, and we expect our revenues and operations outside of the United States will expand in the future. These operations will be subject to a variety of risks that we do not face in the United States, and that we may face only to a limited degree in Canada and the United Kingdom, including:

- building and managing a highly experienced foreign workforce and overseeing and ensuring the performance of foreign subcontractors,
- increased travel, infrastructure and legal and compliance costs associated with multiple international locations,
- additional withholding taxes or other taxes on our foreign income, and tariffs or other restrictions on foreign trade or investment,
- imposition of, or unexpected adverse changes in, foreign laws or regulatory requirements, many of which differ from those in the United States,
- increased exposure to foreign currency exchange rate risk,
- longer payment cycles for sales in some foreign countries and potential difficulties in enforcing contracts and collecting accounts receivable,
- difficulties in repatriating overseas earnings,
- international and regional economic, political and labor conditions in the countries in which we operate, including the uncertainty caused by the evolving relations between the United States and China, and other geopolitical tensions; and
- political unrest, war, incidents of terrorism, pandemics, or responses to such events, including fluctuations in the severity and duration of the COVID-19 pandemic and resulting restrictions on business activity which may vary significantly by region.

Our overall success in international markets will depend, in part, on our ability to succeed in differing legal, regulatory, economic, social, and political conditions. We may not be successful in developing and implementing policies and strategies that will be effective in managing these risks in each country where we do business. Our failure to manage these risks successfully could harm our international operations, reduce our international sales, and increase our costs, thus adversely affecting our business, financial condition and operating results. Some of our third-party business partners have international operations and are also subject to these risks and if our third-party business partners are unable to appropriately manage these risks, our business may be harmed.

Risks related to Regulations or Governmental Actions

Our business depends in part on federal, state, provincial and local government support for energy efficiency and renewable energy, and a decline in such support or the imposition of additional taxes, tariffs, duties, or other assessments on renewable energy or the equipment necessary to generate or deliver it, could harm our business.
We depend in part on legislation and government policies that support energy efficiency and renewable energy projects that enhance the economic feasibility of our energy efficiency services and small-scale renewable energy projects. This support includes legislation and regulations that authorize and regulate the manner in which certain governmental entities do business with us; encourage or subsidize governmental procurement of our services; encourage or in some cases require other customers to procure power from renewable or low-emission sources, to reduce their electricity use or otherwise to procure our services; and provide us with tax and other incentives that reduce our costs or increase our revenues. In addition, the U.S. government generally has not taken action to materially burden the international supply chain, which has been important to the development of renewable energy facilities at acceptable prices. Any reductions or modifications to, or the elimination of, governmental incentives or policies that support renewable energy or the imposition of additional taxes, tariffs, duties or other assessments on renewable energy or the equipment necessary to generate or deliver it, could result in, among other things, the lack of a satisfactory market for the development and/or financing of renewable energy projects, or adversely impact our ability to complete projects for existing customers and obtain project commitments from new customers. For example, antidumping and countervailing duty rates could be put in place as a result of the U.S. Department of Commerce's investigation into an antidumping and countervailing duties circumvention claim on solar cells and panels supplied from Malaysia, Vietnam, Thailand and Cambodia and the trade restrictions imposed by the US government on Chinese entities determined to be acting contrary to U.S. foreign policy and national security interests, including the Uyghur Forced Labor Prevention Act, which, with limited exception, prohibits the importation of all goods or articles mined or produced in whole or in part in the Xinjiang Uyghur Autonomous Region could increase the overall cost of our product offerings and reduce our ability to offer competitive pricing in certain markets. Although we maintain policies and procedures to maintain compliance with all governmental laws and regulations, these and other similar trade restrictions that may be imposed against Chinese entities in the future may have the effect of restricting the global supply of, and raising prices for supplies needed for our business, such as polysilicon and solar products, batteries, and semiconductors. Due to the uncertainty in the regulatory and legislative processes, we cannot determine the effect any such legislation and regulation may have on our products and operations.

A substantial portion of our earnings are derived from the sale of renewable energy certificates ("RECs") and other environmental attributes, and our failure to be able to sell such attributes could materially adversely affect our business, financial condition and results of operation.
A substantial portion of our earnings are attributable to our sale of renewable energy certificates ("RECs") and other environmental attributes generated by our energy assets. These attributes are used as compliance purposes for state-specific or U.S. federal policy. We own and operate solar PV installations which derive a significant portion of their revenues from the sale of solar renewable energy certificates ("SRECs"), which are produced as a result of generating electricity. The value of these SRECs is determined by the supply and demand of SRECs in the states in which the solar PV installations are installed. Supply is driven by the amount of installations and demand is driven by state-specific laws relating to renewable portfolio standards.

We also own and operate renewable natural gas plants that may deliver biofuels into to the nation's natural gas pipeline grid. Such biofuel may qualify for certain environmental attribute mechanisms, such as RINs which are used for compliance purposes under the Renewable Fuel Standard ("RFS") program. The RFS is a U.S. federal policy that requires transportation fuel to contain a minimum volume of renewable fuel. The U.S. Environmental Protection Agency ("EPA") administers the RFS program and may periodically undertake regulatory action involving the RFS, including annual volume standards for renewable fuel. Some of our biofuel may also qualify for various state incentives, such as the Low Carbon Fuel Standard ("LCFS"), the pricing or availability of which may fluctuate.

We sometimes seek to sell forward a portion of our SRECs and other environmental attributes under contracts to fix the revenues from those attributes for financing purposes or hedge against future declines in prices of such environmental attributes. If our renewable energy facilities do not generate the amount of renewable energy attributes sold under such forward contracts or if for any reason the renewable energy we generate does not produce SRECs or other environmental attributes for a particular state, we may be required to make up the shortfall of SRECs or other environmental attributes under such forward contracts through purchases on the open market or make payments of liquidated damages. RECs are created through state law requirements for utilities to purchase a portion of their energy from renewable energy sources and changes in state laws or regulation relating to RECs may adversely affect the availability of RECs or other environmental attributes and the future prices for RECs or other environmental attributes, which could have an adverse effect on our business, financial condition, and results of operations.

We may have exposure to additional tax liabilities and our effective tax rate may increase or fluctuate, which could increase our income tax expense and reduce our net income and we may not be able to utilize the full value of tax credits and incentives

available under the IRA or may become subject to penalties if we fail to meet requirements for these credits and incentives. This may have an adverse effect on our business and operating results.
Our provision for income taxes is subject to volatility and could be adversely affected by changes in tax laws or regulations, particularly changes in tax incentives in support of energy efficiency. The IRA, which is effective for years after January 1, 2023, contains extended and expanded clean energy tax credits such as the Investment Tax Credit ("ITC"), the Production Tax Credit ("PTC"), and created other financial incentives designed to promote the development of certain domestic clean energy projects. In order to receive the full value of such credits and incentives, our projects must satisfy a number of requirements including prevailing wage and apprenticeship requirements. If we fail to comply with these requirements, the value of the credits may be limited, and we may become subject to financial penalties. Furthermore, until the Treasury Department and IRS issues additional guidance on which types of projects are eligible for the tax credits and incentives and how projects can demonstrate compliance with the requirements, we may not receive full value of the tax credits and incentives, which could increase our income tax expense, reduce our net income and impact the profitability of our projects. There is also uncertainly if IRA incentives may be cut back in the future. In addition, the timing of when assets are placed in service has in the past and could in the future impact our tax rate. If we experience unexpected delays in this timing, we may not be able to take advantage of the ITC as expected. If we are not able to utilize the ITC as expected this could have an adverse effect of our financial results.

Our tax rate has historically been significantly impacted by the IRC Section 179D deduction. This deduction is related to energy efficient improvements we provide under government contracts. The Consolidated Appropriations Act, 2021 made permanent the Section 179D Energy Efficient Commercial Building Deduction. That Act, along with the IRA, also made changes to the way the deduction is calculated. If those changes or clarifying guidance issued by the IRS result in lower levels of energy efficiency improvements, it could impact the deduction available and the tax rate.

In addition, like other companies, we may be subject to examination of our income tax returns by the U.S. Internal Revenue Service and other tax authorities; our U.S. federal tax returns for 2019 through 2022 are subject to audit by federal, state, and foreign tax authorities. Though we regularly assess the likelihood of adverse outcomes from such examinations and the adequacy of our provision for income taxes and tax reserves, there can be no assurance that such provision is sufficient and that a determination by a tax authority will not have an adverse effect on our net income.

Changes in the laws and regulations governing the public procurement of ESPCs could have a material impact on our business.
We derive a significant amount of our revenue from ESPCs with our government customers. While federal, state and local government rules governing such contracts vary, such rules may, for example, permit the funding of such projects through long-term financing arrangements; permit long-term payback periods from the savings realized through such contracts; allow units of government to exclude debt related to such projects from the calculation of their statutory debt limitation; allow for award of contracts on a "best value" instead of "lowest cost" basis; and allow for the use of sole source providers. To the extent these rules become more restrictive in the future, our business could be harmed.

We need governmental approvals and permits, and we typically must meet specified qualifications, in order to undertake our energy efficiency projects and construct, own and operate our small-scale renewable energy projects, and any failure to do so would harm our business.
The design, construction, and operation of our energy efficiency and small-scale renewable energy projects require various governmental approvals and permits and may be subject to the imposition of related conditions that vary by jurisdiction. In some cases, these approvals and permits require periodic renewal. We cannot predict whether all permits required for a given project will be granted or whether the conditions associated with the permits will be achievable. The denial of a permit essential to a project or the imposition of impractical conditions would impair our ability to develop the project. In addition, we cannot predict whether the permits will attract significant opposition or whether the permitting process will be lengthened due to complexities and appeals. Delay in the review and permitting process for a project can impair or delay our ability to develop that project or increase the cost so substantially that the project is no longer attractive to us. We have experienced delays in developing our projects due to delays in obtaining permits and may experience delays in the future. If we were to commence construction in anticipation of obtaining the final, non-appealable permits needed for that project, we would be subject to the risk of being unable to complete the project if all the permits were not obtained. If this were to occur, we would likely lose a significant portion of our investment in the project and could incur a loss as a result. Further, the continued operations of our projects require continuous compliance with permit conditions. This compliance may require capital improvements or result in reduced operations. Any failure to procure, maintain and comply with necessary permits would adversely affect ongoing development, construction and continuing operation of our projects.

In addition, the projects we perform for governmental agencies are governed by particular qualification and contracting regimes. Certain states require qualification with an appropriate state agency as a precondition to performing work or appearing as a qualified energy service provider for state, county, and local agencies within the state. For example, the Commonwealth of Massachusetts and the states of Colorado and Washington pre-qualify energy service providers and provide contract documents

that serve as the starting point for negotiations with potential governmental clients. Most of the work that we perform for the federal government is performed under IDIQ agreements between a government agency and us or a subsidiary. These IDIQ agreements allow us to contract with the relevant agencies to implement energy projects, but no work may be performed unless we and the agency agree on a task order or delivery order governing the provision of a specific project. The government agencies enter into contracts for specific projects on a competitive basis. We and our subsidiaries and affiliates are currently party to an IDIQ agreement with the U.S. Department of Energy expiring in 2026. We are also party to similar agreements with other federal agencies, including the U.S. Army Corps of Engineers and the U.S. General Services Administration. If we are unable to maintain or renew our IDIQ qualification under the U.S. Department of Energy program for ESPCs, or similar federal or state qualification regimes, our business could be materially harmed.

Many of our small-scale renewable energy projects are, and other future projects may be, subject to or affected by U.S. federal energy regulation or other regulations that govern the operation, ownership, and sale of the facility, or the sale of electricity from the facility.

PUHCA and the FPA regulate public utility holding companies and their subsidiaries and place constraints on the conduct of their business. The FPA regulates wholesale sales of electricity and the transmission of electricity in interstate commerce by public utilities. Under PURPA, all of our current small-scale renewable energy projects are small power "qualifying facilities" (facilities meeting statutory size, fuel, and filing requirements) that are exempt from regulations under PUHCA, most provisions of the FPA and state rate and financial regulation. None of our renewable energy projects are currently subject to rate regulation for wholesale power sales by the Federal Energy Regulatory Commission ("FERC") under the FPA, but certain of our projects that are under construction or development could become subject to such regulation in the future. Also, we may acquire interests in or develop generating projects that are not qualifying facilities. Non-qualifying facility projects would be fully subject to FERC corporate and rate regulation, and would be required to obtain FERC acceptance of their rate schedules for wholesale sales of energy, capacity, and ancillary services, which requires substantial disclosures to and discretionary approvals from FERC. FERC may revoke or revise an entity's authorization to make wholesale sales at negotiated, or market-based, rates if FERC determines that we can exercise market power in transmission or generation, create barriers to entry or engage in abusive affiliate transactions or market manipulation. In addition, many public utilities (including any non-qualifying facility generator in which we may invest) are subject to FERC reporting requirements that impose administrative burdens and that, if violated, can expose the company to civil penalties or other risks.

All of our wholesale electric power sales are subject to certain market behavior rules. These rules change from time to time, by virtue of FERC rulemaking proceedings and FERC-ordered amendments to utilities' or power pools' FERC tariffs. If we are deemed to have violated these rules, we will be subject to potential disgorgement of profits associated with the violation and/or suspension or revocation of our market-based rate authority, as well as potential criminal and civil penalties. If we were to lose market-based rate authority for any non-qualifying facility project we may acquire or develop in the future, we would be required to obtain FERC's acceptance of a cost-based rate schedule and could become subject to, among other things, the burdensome accounting, record keeping and reporting requirements that are imposed on public utilities with cost-based rate schedules. This could have an adverse effect on the rates we charge for power from our projects and our cost of regulatory compliance. Wholesale electric power sales are subject to increasing regulation. The terms and conditions for power sales, and the right to enter and remain in the wholesale electric sector, are subject to FERC oversight. Due to major regulatory restructuring initiatives at the federal and state levels, the U.S. electric industry has undergone substantial changes over the past decade. We cannot predict the future design of wholesale power markets, or the ultimate effect ongoing regulatory changes will have on our business. Other proposals to further regulate the sector may be made and legislative or other attention to the electric power market restructuring process may delay or reverse the movement towards competitive markets.

If we become subject to additional regulation under PUHCA, FPA, or other regulatory frameworks, if existing regulatory requirements become more onerous, or if other material changes to the regulation of the electric power markets take place, our business, financial condition, and operating results could be adversely affected.

Changes in utility regulation and tariffs could adversely affect our business.

Our business is affected by regulations and tariffs that govern the activities and rates of utilities. For example, utility companies are commonly allowed by regulatory authorities to charge fees to some business customers for disconnecting from the electric grid or for having the capacity to use power from the electric grid for back-up purposes. These fees could increase the cost to our customers of taking advantage of our services and make them less desirable, thereby harming our business, financial condition, and operating results. Our current generating projects are all operated as qualifying facilities. FERC regulations under the FPA confer upon these facilities key rights to interconnection with local utilities and can entitle qualifying facilities to enter into power purchase agreements with local utilities, from which the qualifying facilities benefit. Changes to these federal laws and regulations could increase our regulatory burdens and costs and could reduce our revenues. State regulatory agencies could award renewable energy certificates or credits that our electric generation facilities produce to our power purchasers, thereby reducing the power sales revenues we otherwise would earn. In addition, modifications to the pricing policies of utilities could require

renewable energy systems to charge lower prices in order to compete with the price of electricity from the electric grid and may reduce the economic attractiveness of certain energy efficiency measures.

Some of the demand-reduction services we provide for utilities and institutional clients are subject to regulatory tariffs imposed under federal and state utility laws. In addition, the operation of, and electrical interconnection for, our renewable energy projects are subject to federal, state, or provincial interconnection and federal reliability standards that are also set forth in utility tariffs. These tariffs specify rules, business practices, and economic terms to which we are subject. The tariffs are drafted by the utilities and approved by the utilities' state and federal regulatory commissions. These tariffs change frequently, and it is possible that future changes will increase our administrative burden or adversely affect the terms and conditions under which we render service to our customers.

Compliance with environmental laws could adversely affect our operating results.
Costs of compliance with federal, state, provincial, local and other foreign existing and future environmental regulations could adversely affect our cash flow and profitability. We are required to comply with numerous environmental laws and regulations and to obtain numerous governmental permits in connection with energy efficiency and renewable energy projects. In addition, we may become subject to additional legislation and regulation regarding climate change, and we may incur significant additional costs to comply with existing and new requirements. If we fail to comply with these requirements, we could be subject to civil or criminal liability, damages, and fines. Existing environmental regulations could be revised or reinterpreted, and new laws and regulations could be adopted or become applicable to us or our projects, and future changes in environmental laws and regulations, including those intended to combat climate change, could occur. These factors may materially increase the amount we must invest to bring our projects into compliance and impose additional expense on our operations. In addition, private lawsuits or enforcement actions by federal, state, provincial, and/or foreign regulatory agencies may materially increase our costs. Certain environmental laws make us potentially liable on a joint and several basis for the remediation of contamination at or emanating from properties or facilities we currently or formerly owned or operated or properties to which we arranged for the disposal of hazardous substances. Such liability is not limited to the cleanup of contamination we actually caused. Although we seek to obtain indemnities against liabilities relating to historical contamination at the facilities we own or operate, we cannot provide any assurance that we will not incur liability relating to the remediation of contamination, including contamination we did not cause. We may not be able to obtain or maintain, from time to time, all required environmental regulatory approvals. A delay in obtaining any required environmental regulatory approvals or failure to obtain and comply with them could adversely affect our business and operating results.

Our activities and operations are subject to numerous health and safety laws and regulations, and if we violate such regulations, we could face penalties and fines.
We are subject to numerous health and safety laws and regulations in each of the jurisdictions in which we operate. These laws and regulations require us to obtain and maintain permits and approvals and implement health and safety programs and procedures to control risks associated with our projects. Compliance with those laws and regulations can require us to incur substantial costs. Moreover, if our compliance programs are not successful, we could be subject to penalties or to revocation of our permits, which may require us to curtail or cease operations of the affected projects. Violations of laws, regulations and permit requirements may also result in criminal sanctions or injunctions. Health and safety laws, regulations and permit requirements may change or become more stringent. Any such changes could require us to incur materially higher costs than we currently have. Our costs of complying with current and future health and safety laws, regulations and permit requirements, and any liabilities, fines or other sanctions resulting from violations of them, could adversely affect our business, financial condition, and operating results.

We are subject to various privacy and consumer protection laws.
Our privacy policy is posted on our website, and any failure by us or our vendor or other business partners to comply with it or with federal, state, or international privacy, data protection or security laws or regulations could result in regulatory or litigation-related actions against us, legal liability, fines, damages and other costs. We may also incur substantial expenses and costs in connection with maintaining compliance with such laws. Globally, laws such as the General Data Protection Regulation ("GDPR") in Europe and new and emerging state laws in the United States on privacy, data, and related technologies, have created new compliance obligations and significantly increases fines for noncompliance. Although we take steps to protect the security of our customers' personal information, we may be required to expend significant resources to comply with data breach requirements if third parties improperly obtain and use the personal information of our customers or we otherwise experience a data loss with respect to customers' personal information. A major breach of our network security and systems could have negative consequences for our business and future prospects, including possible fines, penalties and damages, reduced customer demand for our services, and harm to our reputation and brand.

Risks Related to our Indebtedness

Our senior credit facility, project financing term loans and construction loans contain financial and operating restrictions that may limit our business activities and our access to credit and they may not be sufficient to fund our capital needs and growth.
Provisions in our senior credit facility and term loan, project financing term loans and construction loans impose customary restrictions on our and certain of our subsidiaries' business activities and uses of cash and other collateral. These agreements also contain other customary covenants, including covenants that require us to meet specified financial ratios and financial tests.

We have a $200 million revolving senior secured credit facility and $75 million term loan that mature March 2025 as well as a $220 million delayed draw term loan that matures September 4, 2023 (collectively, the "Senior Credit Facilities"), which are subject to the quarter end ratio covenant described below as well as certain other customary operational covenants. As of December 31, 2022, the balance of our Senior Credit Facilities were $477.9 million. These Senior Credit Facilities may not be sufficient to meet our needs as our business grows, and we may be unable to extend or replace them on acceptable terms, or at all. Under these facilities, we are required to maintain a maximum ratio of total funded debt to EBITDA (as defined in the agreement) of less than 4.0 to 1.0 as of December 31, 2022 and 3.5 to 1.0 beginning with the quarter ending March 31, 2023. We are also required to maintain a debt service coverage ratio (as defined in the agreements) of at least 1.5 to 1.0. EBITDA for purposes of the facilities excludes the results of certain renewable energy projects that we own and for which financing from others remains outstanding and the results of our joint ventures.

In addition, our project financing term loans and construction loans require us to comply with a variety of financial and operational covenants. Although we do not consider it likely that we will fail to comply with any material covenants for the next twelve months, we cannot assure that we will be able to do so. Our failure to comply with these covenants may result in the declaration of an event of default and cause us to be unable to borrow under our Senior Credit Facilities. In addition to preventing additional borrowings under these facilities, an event of default, if not cured or waived, may result in the acceleration of the maturity of indebtedness outstanding under it or the applicable project financing term loan, which would require us to pay all amounts outstanding. If an event of default occurs, we may not be able to cure it within any applicable cure period, if at all. Certain of our debt agreements, including our Senior Credit Facilities, also contain subjective acceleration clauses based on a lender deeming that a "material adverse change" in our business has occurred. If these clauses are implicated, and the lender declares that an event of default has occurred, the outstanding indebtedness would likely be immediately due and owing. If the maturity of our indebtedness is accelerated, we may not have sufficient funds available for repayment or we may not have the ability to borrow or obtain sufficient funds to replace the accelerated indebtedness on terms acceptable to us or at all.

If our subsidiaries default on their obligations under their debt instruments, we may need to make payments to lenders to prevent foreclosure on the collateral securing the debt.
We typically set up subsidiaries to own and finance our renewable energy projects. These subsidiaries incur various types of debt which can be used to finance one or more projects. This debt is typically structured as non-recourse debt, which means it is repayable solely from the revenues from the projects financed by the debt and is secured by such projects' physical assets, major contracts and cash accounts and a pledge of our equity interests in the subsidiaries involved in the projects. Although our subsidiary debt is typically non-recourse to Ameresco, if a subsidiary of ours defaults on such obligations, or if one project out of several financed by a particular subsidiary's indebtedness encounters difficulties or is terminated, then we may from time to time determine to provide financial support to the subsidiary in order to maintain rights to the project or otherwise avoid the adverse consequences of a default. In the event a subsidiary defaults on its indebtedness, its creditors may foreclose on the collateral securing the indebtedness, which may result in our losing our ownership interest in some or all of the subsidiary's assets. The loss of our ownership interest in a subsidiary or some or all of a subsidiary's assets could have a material adverse effect on our business, financial condition and operating results.

The London interbank offered rate ("LIBOR") calculation method under certain of our financing arrangements may change as LIBOR is expected to be phased out by June 2023.
Certain of our project financing term loans permit or require interest on the outstanding principal balance to be calculated based on LIBOR. After June 30, 2023, the United Kingdom Financial Conduct Authority (the "FCA") will no longer require banks to submit rates for the calculation of LIBOR. As a result, actions by the FCA, other regulators, or law enforcement agencies may result in changes to the method by which LIBOR is calculated. While we have transitioned our senior credit facilities and some of our other financing arrangements from LIBOR, we still have financing arrangement that utilize LIBOR, and we cannot predict the effect of the FCA or any other reforms to LIBOR that may be enacted in the United Kingdom or elsewhere.

Risks Related to Ownership of Our Class A Common Stock

The trading price of our Class A common stock is volatile.
The trading price of our Class A common stock is volatile and could be subject to wide fluctuations, some of which are beyond our control. During the year ended December 31, 2022, our Class A common stock has traded at a low of $40.73 and a high of $86.73. The stock market in general has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of publicly traded companies. If the stock market in general experiences a significant decline, the trading price of our Class A common stock could decline for reasons unrelated to our business, financial condition, or operating results. As a result of this volatility, you may not be able to sell your Class A common stock at or above the price you paid for it, and you may lose some or all of your investment. Additionally, although historically there has not been a large short position in our Class A common stock, securities of certain companies have recently experienced extreme and significant volatility as a result of a large aggregate short position driving up the stock price over a short period of time, which is known as a "short squeeze." Furthermore, some companies that have had volatile market prices for their securities have had securities class actions filed against them. If a suit were filed against us, regardless of its merits or outcome, it would likely result in substantial costs and divert management's attention and resources. This could have a material adverse effect on our business, operating results, and financial condition.

Holders of our Class A common stock are entitled to one vote per share, and holders of our Class B common stock are entitled to five votes per share. The lower voting power of our Class A common stock may negatively affect the attractiveness of our Class A common stock to investors and, as a result, its market value.
We have two classes of common stock: Class A common stock, which is listed on the NYSE and which is entitled to one vote per share, and Class B common stock, which is not listed on any security exchange and is entitled to five votes per share. The difference in the voting power of our Class A and Class B common stock could diminish the market value of our Class A common stock because of the superior voting rights of our Class B common stock and the power those rights confer.

For the foreseeable future, Mr. Sakellaris or his affiliates will be able to control the selection of all members of our board of directors, as well as virtually every other matter that requires stockholder approval, which will severely limit the ability of other stockholders to influence corporate matters.
Except in certain limited circumstances required by applicable law, holders of Class A and Class B common stock vote together as a single class on all matters to be voted on by our stockholders. Mr. Sakellaris, our founder, principal stockholder, president, and chief executive officer, owns all of our Class B common stock, which, together with his Class A common stock, represents approximately 74% of the combined voting power of our outstanding Class A and Class B common stock. Under our restated certificate of incorporation, holders of shares of Class B common stock may generally transfer those shares to family members, including spouses and descendants or the spouses of such descendants, as well as to affiliated entities, without having the shares automatically convert into shares of Class A common stock. Therefore, Mr. Sakellaris, his affiliates, and his family members and descendants will, for the foreseeable future, be able to control the outcome of the voting on virtually all matters requiring stockholder approval, including the election of directors and significant corporate transactions such as an acquisition of our company, even if they come to own, in the aggregate, as little as 20% of the economic interest of the outstanding shares of our Class A and Class B common stock. Moreover, these persons may take actions in their own interests that you or our other stockholders do not view as beneficial.

Though we may repurchase shares of our Class A common stock pursuant to our share repurchase program, we are not obligated to do so and if we do, we may purchase only a limited number of shares of Class A common stock.
In May 2016, we announced a stock repurchase program under which the Company is authorized to repurchase, in the aggregate, up to $17.6 million of our outstanding Class A common stock. However, we are not obligated to acquire any shares of our Class A common stock, and holders of our Class A common stock should not rely on the share repurchase program to increase their liquidity. The amount and timing of any share repurchases will depend upon a variety of factors, including the trading price of our Class A common stock, liquidity, securities laws restrictions, other regulatory restrictions, potential alternative uses of capital, and market and economic conditions. Any stock repurchase would be through open market transactions or in privately negotiated transactions, in accordance with applicable securities laws and regulatory limitations. We may reduce or eliminate our share repurchase program in the future. The reduction or elimination of our share repurchase program, particularly if we do not repurchase the full number of shares authorized under the program, could adversely affect the market price of our common stock.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters is located in Framingham, Massachusetts, where we occupy approximately 23,000 square feet under a lease expiring on June 30, 2025. We occupy regional offices in Phoenix, Arizona; Oak Brook, Illinois; Portland, Maine; Columbia, Maryland; Charlotte, North Carolina; Knoxville, Tennessee; Renton, Washington, Richmond Hill, Ontario; and London, England, each less than 20,000 square feet, under lease agreements. In addition, we lease space, typically of lesser size, for 50 field offices throughout North America and the United Kingdom We also own 160 small-scale renewable energy plants throughout North America and two in Ireland, which are located on sites we own or lease, or sites provided by customers. We expect to add new facilities and expand existing facilities as we continue to add employees and expand our business into new geographic areas.

Item 3. Legal Proceedings

In the ordinary conduct of our business we are subject to periodic lawsuits, investigations, and claims. Although we cannot predict with certainty the ultimate resolution of such lawsuits, investigations, and claims against us, we do not believe that any currently pending or threatened legal proceedings to which we are a party will have a material adverse effect on our business, results of operations, or financial condition.

As previously disclosed, the staff of the United States SEC requested information with respect to revenue recognition for our software-as-a-service businesses during the period beginning January 1, 2014 through September 30, 2020. We cooperated with the SEC's request and in August 2022 the SEC staff notified us that their review has been concluded, and that they do not intend to recommend any further action at this time.

For additional information about certain proceedings, please refer to Note 15, "Commitments and Contingencies", to our consolidated financial statements included in this Report, which is incorporated into this item by reference.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

Our Class A common stock trades on the New York Stock Exchange under the symbol "AMRC".

As of February 24, 2023, and according to the records of our transfer agent, there were 11 shareholders of record of our Class A common stock. A substantially greater number of holders of our Class A common stock are "street name" or beneficial holders, whose shares are held of record by banks, brokers, and other financial institutions.

Our Class B common stock is not publicly traded and is held of record by George P. Sakellaris, our founder, principal stockholder, president, and chief executive officer, and a trust which Mr. Sakellaris's immediate family members are trustee and beneficiaries.

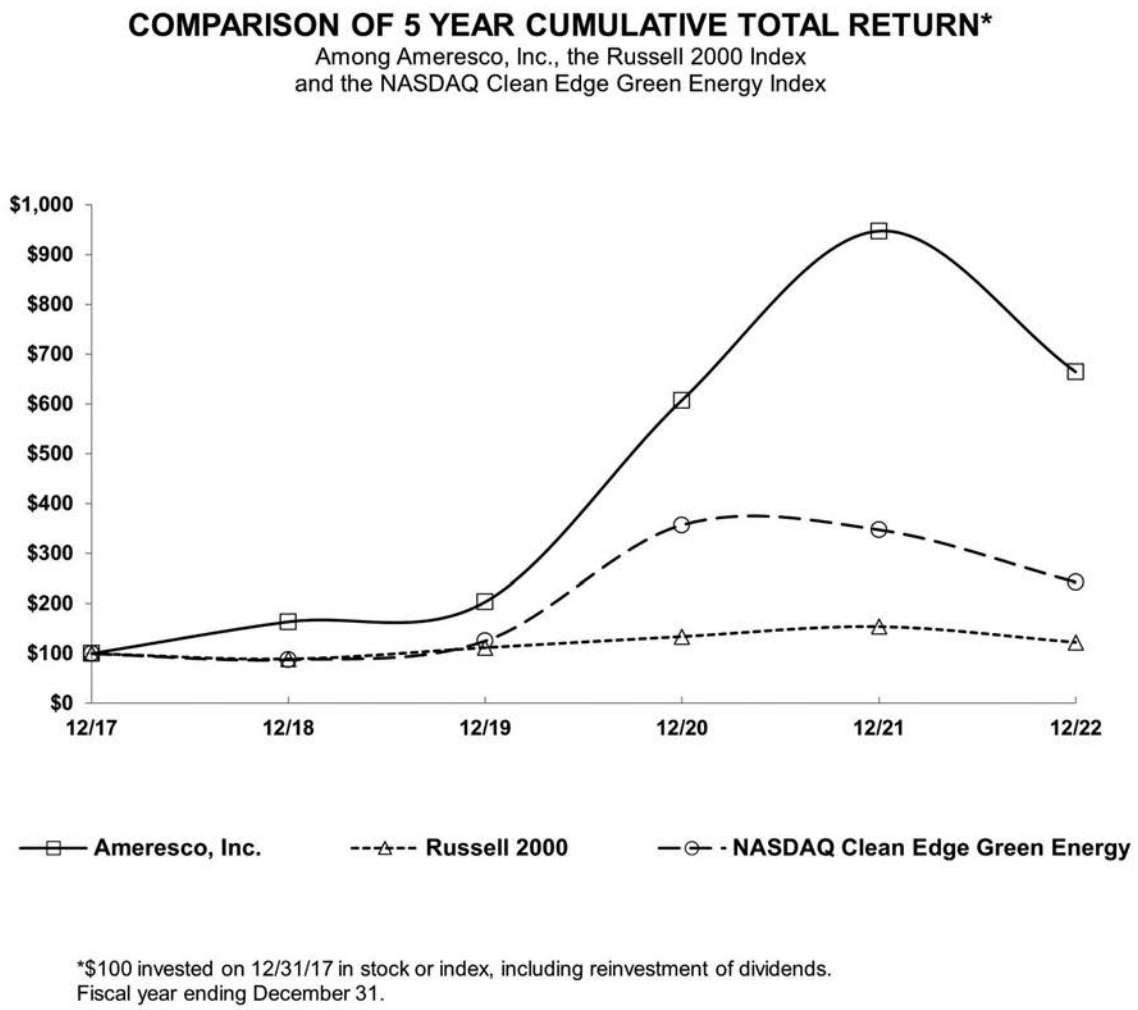
Dividend Policy

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain earnings, if any, to finance the growth and development of our business and do not expect to pay any cash dividends for the foreseeable future. Our revolving senior secured credit facility contains provisions that limit our ability to declare and pay cash dividends during the term of that agreement. Payment of future dividends, if any, will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in current or future financing instruments, provisions of applicable law and other factors our board of directors deems relevant.

Stock Performance Graph

The following performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 (the "Securities Act") or the Exchange Act, except to the extent that we specifically incorporate it by reference into such filing.

The following graph compares the cumulative total return attained by our Class A common shareholders with the Russell 2000 index and the NASDAQ Clean Edge Green Energy index. The information presented assumes an investment of $100 on December 31, 2017 and that all dividends were reinvested. The graph shows the value that each of these investments would have had at the end of each year.



	12/31/2017	12/31/2018	12/31/2019	12/30/2020	12/30/2021	12/31/2022
Ameresco, Inc.	$100.00	$163.95	$203.49	$607.44	$946.98	$664.42
Russell 2000 Index	$100.00	$88.99	$111.70	$134.00	$153.85	$122.41
NASDAQ Clean Edge Green Energy Index	$100.00	$87.89	$125.39	$357.14	$347.70	$242.88

Shareholder returns over the indicated period should not be considered indicative of future shareholder returns.

Issuer Purchases of Equity Securities

We did not repurchase any shares of our common stock under our stock repurchase program authorized by the Board of Directors on April 27, 2016 (the "Repurchase Program") during the quarter ended December 31, 2022. As of December 31, 2022, there were shares having a dollar value of approximately $5.9 million that may yet be purchased under the Repurchase Program.

Under the Repurchase Program, we are authorized to repurchase up to $17.6 million of our Class A common stock. Stock repurchases may be made from time to time through the open market and privately negotiated transactions. The amount and timing of any share repurchases will depend upon a variety of factors, including the trading price of our Class A common stock, liquidity, securities laws restrictions, other regulatory restrictions, potential alternative uses of capital, and market and economic conditions. The Repurchase Program may be suspended or terminated at any time without prior notice and has no expiration date.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes and other financial information included in Item 8 of this Report. Some of the information contained in this discussion and analysis are set forth elsewhere in this Report, including information with respect to our plans and strategy for our business and related financing, and includes forward-looking statements that involve risks and uncertainties. You should review the "Risk Factors" included in Item 1A of this Report for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

Ameresco is a leading clean technology integrator with a comprehensive portfolio of energy efficiency and renewable energy supply solutions. We help organizations meet energy saving and energy management challenges with an integrated, comprehensive approach to energy efficiency and renewable energy. Leveraging budget neutral solutions, including ESPCs and PPAs, we aim to eliminate the financial barriers that traditionally hamper energy efficiency and renewable energy projects.

Drawing from decades of experience, Ameresco develops tailored energy management projects for its customers in the commercial, industrial, local, state and federal government, K-12 education, higher education, healthcare, public housing sectors, and utilities.

We provide solutions primarily throughout the U.S., Canada, the United Kingdom, and Europe, and our revenues are derived principally from energy efficiency projects, which entail the design, engineering, and installation of equipment and other measures that incorporate a range of innovative technology and techniques to improve the efficiency and control the operation of a facility's energy infrastructure; this can include designing and constructing a central plant or cogeneration system for a customer providing power, heat and/or cooling to a building, or other small-scale plant that produces electricity, gas, heat or cooling from renewable sources of energy. We also derive revenue from long-term O&M contracts, energy supply contracts for renewable energy operating assets that we own, integrated-PV, and consulting and enterprise energy management services.

In addition to organic growth, strategic acquisitions of complementary businesses and assets, and joint venture arrangements have been an important part of our growth enabling us to broaden our service offerings and expand our geographical reach. In December 2021, we completed the acquisition of Plug Smart, an Ohio-based energy services company that specializes in the development and implementation of budget neutral capital improvement projects including building controls and building automation systems, which is included in our U.S. Regions segment. The pro forma effects of this acquisition were not material to our operations for the fiscal years presented. During 2022, we entered into joint venture arrangements in Greece and California and acquired an operating wind farm in Ireland.

Key Factors and Trends

The Inflation Reduction Act

The IRA was signed into law by President Biden on August 16, 2022. The bill invests nearly $369 billion in energy and climate policies. The provisions of the IRA are intended to, among other things, incentivize domestic clean energy investment, manufacturing, and deployment. The IRA incentivizes the deployment of clean energy technologies by extending and expanding federal incentives such as the ITC and the Production Tax Credit ("PTC"). We view the enactment of the IRA as favorable for the overall business climate for the renewable energy industry, however, we are continuing to evaluate the overall impact and applicability of the IRA to our current and planned projects, and we may experience a delay in our sales cycles and new award activity as our customers consider the applicability of the IRA. The IRA may increase the competition in our industry and as such increase the demand and cost for labor, equipment and commodities needed for our projects.

Supply Chain Disruptions and Other Global Factors

We continue to monitor the impact of global economic conditions on our operations, financial results, and liquidity, including the result of supply chain challenges, development of the COVID-19 pandemic, war in Ukraine, evolving relations between the U.S. and China, and other geopolitical tensions. The impact to our future operations and results of operations as a result of these global trends remains uncertain and the challenges we face, including challenges and increases in costs for logistics and supply chains, such as increased port congestion, and intermittent supplier delays as well as shortage of certain components needed for our business, such as lithium-ion battery cells, semiconductors, and other components required for our clean energy solutions may continue or become more pronounced.

During the year ended December 31, 2022, we were impacted by supply chain disruptions and varying levels of inflation, as a result of COVID-19 and macroeconomic conditions, causing delays in the timely delivery of material to customer sites and delays and disruptions in the completion of certain projects, including those pursuant to the SCE Agreement, and increased shipping and transportation costs, as well as increased component and labor costs. This negatively impacted our results of operations during the year ended December 31, 2022. We expect the trends of supply chain challenges and inflationary pressures to continue beyond this year. We continue to monitor macroeconomic conditions to remain flexible and to optimize and evolve our business as appropriate to address the challenges presented from these conditions.

On April 1, 2022, the U.S. Department of Commerce initiated an investigation to determine whether imports of crystalline silicon photovoltaic cells and modules which are manufactured in Cambodia, Thailand, Vietnam, or Malaysia using components from China are circumventing existing anti-dumping ("ADD") and countervailing duties ("CVD") on solar cells and modules from China. The full investigation is estimated to take 365 days. In June 2022 President Biden announced an executive action which guaranteed that any duties that could be levied as a result of this investigation, will not be imposed on imports by U.S importers between June 2022 and June 2024.

While the Biden executive action will prevent new duties stemming from this investigation from being applied during this period, the Commerce Department investigation continues. In December 2022, the Department issued a preliminary determination which found that certain solar products from these four countries were, in fact, circumventing existing Chinese tariffs. The final results of the investigation are expected to be issued by May 1, 2023. If the Department upholds it preliminary ruling, new tariffs could be applied beginning June 2024. Additionally, legislation has been introduced in both the U.S. Senate and U.S. House of Representatives seeking to overturn President Biden's executive action that suspended solar import duties.

Given that the Biden policy remains in place and that we have an existing inventory of solar panels from a large purchase several years ago, we do not expect that this investigation will have a material impact on our business in the near term. However, any resulting duties or other trade restrictions imposed may disrupt the solar panel supply chain, increase the cost for solar cells and panels, and ultimately impact the demand for clean energy solutions. We are closely monitoring the investigation and any regulations issued in connection with it.

Climate Change and Effects of Seasonality

The global emphasis on climate change and reducing carbon emissions has created opportunities for our industry. Sustainability has been at the forefront of our business since its inception and we are committed to staying at the leading edge of innovation taking place in the energy sector. We believe the next decade will be marked by dramatic changes in the power infrastructure with resources shifting to more distributed assets, storage, and microgrids to increase overall reliability and resiliency. The sustainability efforts are impacted by regulations, and changes in the regulatory climate may impact the demand for our products and offerings. See "Our business depends in part on federal, state, provincial and local government support or the imposition of additional taxes, tariffs, duties, or other assessments on renewable energy or the equipment necessary to generate or deliver it, for energy efficiency and renewable energy, and a decline in such support could harm our business" and "Compliance with environmental laws could adversely affect our operating results" in Item 1A, Risk Factors..

Climate change also brings risks, as the impacts have caused us to experience more frequent and severe weather interferences, and this trend is expected to continue. We are subject to seasonal fluctuations and construction cycles, particularly in climates that experience colder weather during the winter months, such as the northern United States and Canada, and climates that experience extreme weather events, such as wildfires, storms or flooding, hurricanes, or at educational institutions, where large projects are typically carried out during summer months when their facilities are unoccupied. In addition, government customers, many of which have fiscal years that do not coincide with ours, typically follow annual procurement cycles and appropriate funds on a fiscal-year basis even though contract performance may take more than one year. Further, government contracting cycles can be affected by the timing of, and delays in, the legislative process related to government programs and incentives that help drive demand for energy efficiency and renewable energy projects. As a result, our revenues and operating income in the third and fourth quarter are typically higher, and our revenues and operating income in the first quarter are typically lower, than in other quarters of the year, however, this may become harder to predict with the potential effects of climate change. As a result of such fluctuations, we may occasionally experience declines in revenues or earnings as compared to the immediately preceding quarter, and comparisons of our operating results on a period-to-period basis may not be meaningful.

Our annual and quarterly financial results are also subject to significant fluctuations as a result of other factors, many of which are outside our control. See "Our business is affected by seasonal trends and construction cycles, and these trends and cycles could have an adverse effect on our operating results" in Item 1A, Risk Factors.

The SCE Agreement

In October 2021, we entered into a contract with SCE to design and build three grid scale BESS at three sites near existing substation parcels throughout SCE's service territory in California with an aggregate capacity of 537.5 MW ("the SCE Agreement"). The engineering, procurement and construction price is approximately $892.0 million, in the aggregate, including two years of O&M revenues, subject to customary potential adjustments for changes in the work. The SCE Agreement required substantial completion of all facilities, subject to extension for specified force majeure events and customer-caused delays, to be completed no later than August 1, 2022 (the "Guaranteed Completion Date") and provided for availability and capacity guarantees. We have made force majeure claims under the SCE Agreement as battery supply delays resulting from COVID-19 lockdowns in several regions around China, newly implemented Chinese transportation safety policies and related supply chain delays impacted our ability to achieve the Guaranteed Completion Date on August 1, 2022. In 2022, SCE also instructed us to adjust the project schedule into 2023 and in early 2023 we made further weather-related force majeure claims. Under the terms of the SCE Agreement, we are entitled to recover costs associated with schedule changes requested by SCE. We are working with SCE to analyze and estimate these costs as well as the applicability and scope of force majeure relief based on our force majeure claims. If we fail to come to an agreement with SCE about extensions to the Guaranteed Completion Date and the applicability of force majeure relief, we may be required to pay liquidated damages up to an aggregate maximum of $89 million and may not be able to recover costs associated with schedule changes, and under certain circumstances SCE may have a right to terminate the agreement.

Despite the delays, the SCE projects progressed further during the quarter ended December 31, 2022. Considering the schedule adjustments requested by SCE and the delays disclosed earlier, we anticipate the projects to be in service and achieve substantial completion prior to the summer of 2023. However, a majority of our revenues under this contract were recognized in 2022 based upon costs incurred in 2022 relative to total expected costs on this project.

Stock-based Compensation

During the year ended December 31, 2022, we granted 1,605,000 common stock options to certain employees and 12,978 restricted stock units to our non-employee Directors' under our 2020 Stock Incentive Plan. As a result, our stock-based compensation expense increased from $8.7 million for the year ended December 31, 2021 to $15.0 million for the year ended December 31, 2022. The increase in the number of stock options granted and higher grant date fair value resulted in the increased stock-based compensation in 2022. In addition, our unrecognized stock-based compensation expense increased from $41.1 million at December 31, 2021 to $46.7 million at December 31, 2022, and is expected to be recognized over a weighted-average period of three years. See Note 14 "Stock-based Compensation and Other Employee Benefits" for additional information.

Backlog and Awarded Projects

Backlog is an important metric for us because we believe strong order backlogs indicate growing demand and a healthy business over the medium to long term, conversely, a declining backlog could imply lower demand.

The following table presents our backlog:

	As of December 31,	
(In Thousands)	2022	2021
Project Backlog		
Fully-contracted backlog	$ 1,001,325	$ 1,509,300
Awarded, not yet signed customer contracts	1,638,640	1,542,760
Total project backlog	$ 2,639,965	$ 3,052,060
12-month project backlog	$ 595,020	$ 1,296,410
O&M Backlog		
Fully-contracted backlog	$ 1,231,120	$ 1,131,660
12-month O&M backlog	$ 89,520	$ 70,306

Our $892 million SCE Agreement was entered into in October 2021 and increased our fully-contracted backlog at December 31, 2021 compared to December 31, 2022, and the majority of our revenues under this contract were recognized in 2022.

Total project backlog represents energy efficiency projects that are active within our sales cycle. Our sales cycle begins with the initial contact with the customer and ends, when successful, with a signed contract, also referred to as fully-contracted backlog.

Our sales cycle recently has been averaging 18 to 42 months. Awarded backlog is created when a potential customer awards a project to Ameresco following a request for proposal. Once a project is awarded but not yet contracted, we typically conduct a detailed energy audit to determine the scope of the project as well as identify the savings that may be expected to be generated from upgrading the customer's energy infrastructure. At this point, we also determine the subcontractor, what equipment will be used, and assist in arranging for third party financing, as applicable. Recently, awarded projects have been taking an average of 12 to 24 months to result in a signed contract and convert to fully-contracted backlog. It may take longer, as it depends on the size and complexity of the project. Historically, approximately 90% of our awarded backlog projects have resulted in a signed contract. After the customer and Ameresco agree to the terms of the contract and the contract becomes executed, the project moves to fully-contracted backlog. The contracts reflected in our fully-contracted backlog typically have a construction period of 12 to 36 months and we typically expect to recognize revenue for such contracts over the same period.

Our O&M backlog represents expected future revenues under signed multi-year customer contracts for the delivery of O&M services, primarily for energy efficiency and renewable energy construction projects completed by us for our customers.

We define our 12-month backlog as the estimated amount of revenues that we expect to recognize in the next twelve months from our fully-contracted backlog. See Note 2 "Summary of Significant Accounting Policies" for our revenue recognition policies. See "We may not recognize all revenues from our backlog or receive all payments anticipated under awarded projects and customer contracts" and "In order to secure contracts for new projects, we typically face a long and variable selling cycle that requires significant resource commitments and requires a long lead time before we realize revenues" in Item 1A, Risk Factors.

Assets in Development

Assets in development, which represents the potential design/build project value of small-scale renewable energy plants that have been awarded or for which we have secured development rights, were estimated at $1,625.7 million as of December 31, 2022, including $98.8 million attributable to a non-controlling interest, and $1,247.5 million as of December 31, 2021. The portion related to spending for EaaS assets was approximately $36.4 million and $70.0 million at December 31, 2022 and 2021, respectively. These are also important metrics because they help us gauge our future capacity to generate electricity or deliver renewable gas fuel which contributes to our recurring revenue stream.

Results of Operations

The following table sets forth certain financial data from the consolidated statements of income for the periods indicated [(1)]:

	Year Ended December 31,					
	2022		2021		Year-Over-Year Change	
(In Thousands)	Dollar Amount	% of Revenues	Dollar Amount	% of Revenues	Dollar Change	% Change
Revenues	$1,824,422	100.0 %	$1,215,697	100.0 %	$ 608,725	50.1 %
Cost of revenues	1,533,589	84.1 %	985,340	81.1 %	548,249	55.6 %
Gross profit	290,833	15.9 %	230,357	18.9 %	60,476	26.3 %
Selling, general and administrative expenses	157,841	8.7 %	134,923	11.1 %	22,918	17.0 %
Operating income	132,992	7.3 %	95,434	7.9 %	37,558	39.4 %
Other expenses, net	27,273	1.5 %	17,290	1.4 %	9,983	57.7 %
Income before income taxes	105,719	5.8 %	78,144	6.4 %	27,575	35.3 %
Income tax expense (benefit)	7,170	0.4 %	(2,047)	(0.2)%	9,217	(450.3)%
Net income	$ 98,549	5.4 %	$ 80,191	6.6 %	$ 18,358	22.9 %
Net income attributable to non-controlling interest and redeemable non-controlling interest	$ (3,623)	(0.2)%	$ (9,733)	(0.8)%	$ (6,110)	(62.8)%
Net income attributable to common shareholders	$ 94,926	5.2 %	$ 70,458	5.8 %	$ 24,468	34.7 %

(1) A comparison of our 2021 and 2020 results can be found in Item 7 of our 2021 Form 10-K filed with the SEC.

Our results of operations for the year-ended December 31, 2022 reflect year-over-year growth in terms of revenues, operating income, and net income attributable to common shareholders. All financial result comparisons are against the prior year period.

Our strong operating results are due to the following:

- ***Revenue:*** total revenues increased primarily due to a $577.3 million, or 64%, increase in our project revenue attributed to the timing of revenue recognized based upon costs incurred to date relative to total expected costs on active projects, including our SCE battery storage project.
- ***Cost of Revenues and Gross Profit:*** the increase in cost of revenues is primarily due to the increase in project revenues described above, however, our gross profit as a percent of revenues decreased due to the higher revenue contribution from our lower margin, design-build SCE battery storage project.
- ***Selling, General and Administrative Expenses:*** the increase is primarily due to higher net salaries and benefits of $13.4 million as a result of increased headcount and an increase in non-cash stock-based compensation expense and higher insurance costs related to the continued growth of the business.
- ***Other Expenses, Net:*** Other expenses, net, includes gains and losses from derivatives transactions, foreign currency transactions, interest expense, interest income, amortization of financing costs and certain government incentives. Other expenses, net increased primarily due to higher interest expenses, net of interest income of $12.1 million related to a higher average balance on our senior secured debt facility, partially offset by an increase in government incentives of $1.6 million.
- ***Income before Income Taxes:*** the increase is due to reasons described above.
- ***Income Tax Expense (Benefit):*** the provision for income taxes is based on various rates set by federal, state, provincial, and local authorities and is affected by permanent and temporary differences between financial accounting and tax reporting requirements. The effective tax rate was higher in 2022 as compared to 2021 primarily due to higher domestic income resulting in higher state taxes, lower levels of compensation deductions related to employee stock option exercises, and less favorable tax adjustments related to partnership flip transactions, partially offset by the availability of additional Section 179D deductions for 2021 and 2022. The tax benefit rate for 2021 was favorable, primarily due to increases in the benefits associated with energy efficiency tax incentives, including Section 48 Solar Investment Tax Credits, deductions associated with the Section 179D Commercial Buildings Energy Efficiency Tax Deduction, and compensation deductions resulting from employee stock option disqualifying dispositions.
- ***Net Income and Earnings Per Share:*** Net income attributable to common shareholders increased due to the reasons described above. Basic earnings per share for 2022 was $1.83 an increase of $0.45 per share compared to 2021. Diluted earnings per share for 2022 was $1.78, an increase of $0.43 per share, compared to 2021.

Business Segment Analysis

Our reportable segments for the year ended December 31, 2022 were U.S. Regions, U.S. Federal, Canada, Alternative Fuels (formerly Non-Solar Distributed Generation ("Non-Solar DG")), and All Other. On January 1, 2022, we changed the structure of our internal organization, and our "All Other" segment now includes our U.S.-based enterprise energy management services previously included in our U.S Regions segment and our U.S. Regions segment now includes U.S. project revenue and associated costs previously included in our former Non-Solar DG segment. As a result, previously reported amounts have been reclassified for comparative purposes. See Note 20 "Business Segment Information" for additional information about our segments.

Revenues

	Year Ended December 31,		Year-Over-Year Change	
(In Thousands)	2022	2021	Dollar Change	% Change
U.S. Regions	$ 1,123,343	$ 551,118	$ 572,225	103.8 %
U.S. Federal	391,891	392,948	(1,057)	(0.3)
Canada	58,558	49,483	9,075	18.3
Alternative Fuels	114,459	111,223	3,236	2.9
All Other	136,171	110,925	25,246	22.8
Total revenues	$ 1,824,422	$ 1,215,697	$ 608,725	50.1 %

- ***U.S. Regions:*** the increase is primarily due to a $561.0 million, or 115%, increase in project revenues attributable to the timing of revenue recognized based upon costs incurred to date relative to total expected costs on active projects, including our SCE battery storage project, versus the prior year and a $7.9 million, or 20%, increase in revenue from the growth of our energy assets in operation.
- ***U.S. Federal:*** the decrease is primarily due to a $6.8 million, or 2%, decrease in project revenue attributable to the timing of revenue recognized as a result of the phase of active projects compared to the prior year, partially offset by an

increase of $4.8 million in O&M revenue and a $0.9 million, or 19%, increase in revenue from the growth of our energy assets in operation.

- ***Canada:*** the increase is primarily due to higher project revenues which were partially offset by unfavorable foreign exchange rates.
- ***Alternative Fuels:*** the increase is primarily due to a $2.3 million, or 2%, increase in energy asset revenues resulting from the continued growth of our operating portfolio and increased renewable gas production levels.
- ***All Other:*** the increase is due to a $15.7 million increase in project revenues primarily in the United Kingdom related to an increase in volume and progression of certain active projects and a $8.5 million increase in integrated-PV revenues resulting from increased activity in the oil and gas market.

Income before Income Taxes and Unallocated Corporate Activity

	Year Ended December 31,		Year-Over-Year Change	
(In Thousands)	2022	2021	Dollar Change	% Change
U.S. Regions	$ 88,531	$ 38,285	$ 50,246	131.2 %
U.S. Federal	50,866	52,388	(1,522)	(2.9)
Canada	2,554	1,581	973	61.5
Alternative Fuels	22,989	27,774	(4,785)	(17.2)
All Other	11,959	5,477	6,482	118.3
Unallocated corporate activity	(71,180)	(47,361)	(23,819)	50.3
Income before income taxes	$ 105,719	$ 78,144	$ 27,575	35.3 %

- ***U.S. Regions:*** the increase is primarily due to the higher revenues described above, partially offset by higher salaries and benefit costs, and other expenses which included a non-cash adjustment to recognize additional contingent consideration related to one of our acquisitions.
- ***U.S. Federal:*** the decrease is due primarily to the decrease in revenues described above, partially offset by a decrease in operating expenses attributed to an increase in earnings recognized from an unconsolidated equity investment.
- ***Canada:*** the increase is primarily due to the increase in project revenues described above.
- ***Alternative Fuels:*** the decrease is primarily due to higher direct costs related to unplanned downtime, higher depreciation expense related to the timing of assets placed in operations, and higher interest expense, partially offset by lower mark to market losses on our unhedged commodity gas swaps, and lower other expenses which included an impairment charge in the prior year.
- ***All Other:*** the increase is primarily due to higher revenues noted above.
- Unallocated corporate activity includes all corporate level selling, general and administrative expenses and other expenses not allocated to the reportable segments. We do not allocate any indirect expenses to the segments. Corporate activity increased primarily due to higher salaries and benefit costs of $9.8 million, which includes a $6.3 million increase in non-cash stock-based compensation expense due to increased option grants with a higher grant date fair value, and increased insurance costs and interest expenses described above.

Liquidity and Capital Resources

Overview

Since inception, we have funded operations primarily through cash flow from operations, advances from Federal ESPC projects, our senior secured credit facility, and various forms of other debt (see “Project Financing” below). In addition, in March 2021, we completed an underwritten public offering of 2,875,000 shares of our Class A Common Stock, for total net proceeds of $120.1 million. See Note 13 “Equity and Earnings per Share” for additional information.

Working capital requirements can be susceptible to fluctuations during the year due to timing differences between costs incurred, the timing of milestone-based customer invoices and actual cash collections. Working capital may also be affected by seasonality, growth rate of revenue, long lead-time equipment purchase patterns, advances from Federal ESPC projects, and payment terms for payables relative to customer receivables.

We expect to incur additional expenditures in connection with the following activities:

- equity investments, energy asset acquisitions and business acquisitions that we may fund from time to time
- capital investment in current and future energy assets
- material, equipment, and other expenditures for large projects

We regularly monitor and assess our ability to meet funding requirements. We believe that cash and cash equivalents, working capital and availability under our revolving senior secured credit facility, combined with our right (subject to lender consent) to increase our revolving credit facility by $100.0 million, and our general access to credit and equity markets, will be sufficient to fund our operations for twelve months from filing this Report and thereafter. We funded a significant portion of the contract expenditures for our SCE battery storage project in advance of customer receipts during the year ended December 31, 2022. With the schedule adjustment requested by SCE and the anticipated timeline for completing the projects, we expect to continue to incur and fund capital expenditures for the SCE battery project into the first half of 2023, net of any cash collected on amounts invoiced.

We continue to evaluate and take action, as necessary, to preserve adequate liquidity and ensure that our business can continue to operate and that we can meet our capital requirements during these uncertain times. This may include limiting discretionary spending across the organization and re-prioritizing our capital projects amid times of political unrest, the evolution of the COVID-19 pandemic, the duration of supply challenges, and the rate and duration of the inflationary pressures. For example, increases in inflation and interest rates have impacted overall market returns on assets. We have therefore been particularly prudent in our capital commitments over the past few quarters, ensuring that our assets in development continue to align with our hurdle rates.

Senior Secured Credit Facility — Revolver and Term Loans

On March 4, 2022, we entered into the fifth amended and restated senior secured credit facility, which increased the aggregate amount of total commitments from $245.0 million to $495.0 million. This amendment increased the aggregate amount of the revolving commitments from $180.0 million to $200.0 million, increased the existing term loan A to $75.0 million, and extended the maturity date of the revolving commitment and term loan A from June 28, 2024 to March 4, 2025. In addition, it added a delayed draw term loan A for up to $220.0 million through a September 4, 2023 maturity date, increased the total funded debt to EBITDA covenant ratio from a maximum of 3.50 to 4.50 for the quarter ended March 31, 2022; 4.25 for the quarter ended June 30, 2022; 4.00 for the quarters ended September 30, 2022 and December 31, 2022; and 3.50 thereafter. The amendment also specified the debt service coverage ratio to be less than 1.5 and increased our limit under an energy conservation project financing to $650.0 million, which provides us with flexibility to grow our federal business further. At December 31, 2022, our senior secured credit facility outstanding was $477.9 million, we had funds of $0.3 million available under the revolving credit facility, and had $16.8 million in letters of credit outstanding.

On June 9, 2022, we entered into the first amendment to the fifth amended and restated senior secured credit facility, which temporarily increased the maximum indebtedness incurred under an energy conservation project financing from $650.0 million to $725.0 million from and after April 1, 2022 to and including December 30, 2022. As of December 31, 2022, the maximum indebtedness incurred under an energy conservation project financing reverted back to $650,000.

Project Financing

Non-recourse Construction Revolvers and Term Loans

We have entered into a number of construction and term loan agreements for the purpose of constructing and owning certain renewable energy plants. The physical assets and the operating agreements related to the renewable energy plants are generally owned by wholly owned, single member “special purpose” subsidiaries of Ameresco. These construction and term loans are structured as project financings made directly to a subsidiary, and upon commercial operation and achieving certain milestones in the credit agreement, the related construction loan converts into a term loan. While we are required under generally accepted accounting principles (“GAAP”) to reflect these loans as liabilities on our consolidated balance sheets, they are generally non-recourse and not direct obligations of Ameresco, Inc.

Our project financing facilities contain various financial and other covenant requirements which include debt service coverage ratios and total funded debt to EBITDA, as defined. Any failure to comply with the financial or other covenants of our project financings would result in inability to distribute funds from the wholly-owned subsidiary to Ameresco, Inc. or constitute an event of default in which the lenders may have the ability to accelerate the amounts outstanding, including all accrued interest and unpaid fees.

Material non-recourse construction revolvers and term loan financing during the year ended December 31, 2022 was our Non-recourse Fixed Rate Note, 6.50%, due October 2037.

As of December 31, 2022, our total construction and term loans outstanding was $300.8 million. See Note 9 “Debt and Financing Lease Liabilities” for additional information about these loans.

Non-recourse Sale-leasebacks and Financing Leases

We have entered into sale-leaseback arrangements for solar PV energy assets with multiple investors and in accordance with Topic 842, Leases, all sale-leaseback transactions that occurred after December 31, 2018, were accounted for as failed sales and the proceeds received from the transactions were recorded as long-term financing facilities.

As of December 31, 2022, our total sale-leasebacks classified as long-term financing facilities outstanding was $120.9 million.

As of December 31, 2022, our total financing leases outstanding was $16.1 million. These are our sale-leaseback arrangements entered into as of December 31, 2018 which remain under the previous guidance.

See Notes 8 “Leases” and 9 “Debt and Financing Lease Liabilities” for additional information on these financing facilities.

While we are required under GAAP to reflect these lease payments as liabilities on our consolidated balance sheets, they are generally non-recourse and not direct obligations of Ameresco Inc., except that we have guaranteed certain obligations relating to taxes and project warranties, operation, and maintenance.

Federal ESPC Liabilities

We have arrangements with certain third-parties to provide advances to us during the construction or installation of projects for certain customers, typically federal governmental entities, in exchange for our assignment to the lenders of our rights to the long-term receivables arising from the ESPCs related to such projects. These financings totaled $478.5 million in principal amounts as of December 31, 2022 and $532.3 million as of December 31, 2021. Under the terms of these financing arrangements, we are required to complete the construction or installation of the project in accordance with the contract with our customer, and the liability remains on our consolidated balance sheets until the completed project is accepted by the customer.

We are the primary obligor for financing received, but only until final acceptance of the work by the customer. At this point recourse to us ceases and the ESPC receivables are transferred to the investor. The transfers of receivables under these agreements do not qualify for sales accounting until final customer acceptance of the work, so the advances from the investors are not classified as operating cash flows. Cash draws that we received under these ESPC agreements were $238.4 million during the year ended December 31, 2022 and are recorded as financing cash inflows. The use of the cash received under these arrangements is to pay project costs classified as operating cash flows and totaled $259.5 million during the year ended December 31, 2022. Due to the manner in which the ESPC contracts with the third-party investors are structured, our reported operating cash flows are materially impacted by the fact that operating cash flows only reflect the ESPC contract expenditure outflows and do not reflect any inflows from the corresponding contract revenues. Upon acceptance of the project by the federal customer the ESPC receivable and corresponding ESPC liability are removed from our consolidated balance sheets as a non-cash settlement. See Note 2, “Summary of Significant Accounting Policies”, to our consolidated financial statements in this Report.

Other

We issue letters of credit and performance bonds, from time to time, with our third-party lenders, to provide collateral.

Selected Measures of Liquidity and Capital Resources

	December 31,	
(In Thousands)	**2022**	**2021**
Cash and cash equivalents	$ 115,534	$ 50,450
Working capital	$ 189,283	$ 164,361
Availability under revolving credit facility	$ 345	$ 121,176

Cash Flows

The following table summarizes our changes in cash and cash equivalents:

(In Thousands)	Year Ended December 31, 2022	2021
Cash flows used in operating activities	$ (338,288)	$ (172,296)
Cash flows used in investing activities	(328,358)	(205,257)
Cash flows provided by financing activities	730,227	365,461
Effect of exchange rate changes on cash	(747)	309
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ 62,834	$ (11,783)

Our service offering also includes the development, construction, and operation of small-scale renewable energy plants. Small-scale renewable energy projects, or energy assets, can either be developed for the portfolio of assets that we own and operate or designed and built for customers. Expenditures related to projects that we own are recorded as cash outflows from investing activities. Expenditures related to projects that we build for customers are recorded as cash outflows from operating activities as cost of revenues.

Cash Flows from Operating Activities

Our cash flow from operating activities in 2022 decreased over 2021 primarily due to a $159.4 million increase in unbilled revenue (costs and estimated earnings in excess of billings) due to the timing of when certain projects are invoiced, including our SCE battery storage project, a decrease of $47.3 million in accounts payable, accrued expenses and other current liabilities, and an increase of $9.8 million in Federal ESPC receivables, partially offset by an increase of $18.4 million in net income.

Cash Flows from Investing Activities

During 2022, we made capital investments of $304.6 million in new energy assets and $18.0 million in major maintenance of energy assets, compared to $170.3 million and $8.6 million, respectively, in 2021. Last year we paid $14.9 million, net of cash received, for an acquisition and also contributed $9.0 million to an equity investment.

We currently plan to invest approximately $325.0 million to $375.0 million in capital investments in 2023, principally for the construction or acquisition of new renewable energy plants.

Cash Flows from Financing Activities

Our primary sources of financing during 2022 were proceeds of $468.5 million from long-term debt financings and construction revolvers, $252.7 million from advances on Federal ESPC projects and energy assets, and net proceeds from our senior secured revolving credit facility of $137.9 million, partially offset by repayments of long-term debt totaling $161.9 million.

During 2021, we received net proceeds of $186.0 million from long-term debt financings, $161.2 million from advances on Federal ESPC projects and energy assets, and net proceeds of $120.1 million from our equity offering, partially offset by repayments of long-term debt totaling $98.2 million.

We currently plan additional financings of $250.0 million to $300.0 million in 2023 to fund the construction or acquisition of new renewable energy plants as discussed above.

We may also, from time to time, finance our operations through issuance or offering of equity or debt securities.

Critical Accounting Policies and Estimates

Preparing our consolidated financial statements in accordance with GAAP involves us making estimates and assumptions that affect reported amounts of assets and liabilities, net sales, and expenses, and related disclosures in the accompanying notes at the date of our financial statements. We base our estimates on historical experience, industry and market trends, and on various other assumptions that we believe to be reasonable under the circumstances. However, by their nature, estimates are subject to various assumptions and uncertainties, and changes in circumstances could cause actual results to differ from these estimates, sometimes materially.

We believe that our policies and estimates that require our most significant judgments are considered our critical accounting policies and are discussed below. In addition, refer to Note 2 “Summary of Significant Accounting Policies” for further details.

Revenue Recognition

As described in Note 2, we recognize revenue from the installation or construction of projects over time using the cost-based input method. We use the total costs incurred on the project relative to the total expected costs to satisfy the performance obligation. When the estimate on a contract indicates a loss or claims against costs incurred reduce the likelihood of recoverability of such costs, we record the entire estimated loss in the period the loss becomes known. In addition, some contracts contain an element of variable consideration, including liquidated damages and/or penalties, which requires payment to the customer in the event that construction timelines or milestones are not met. We estimate the total consideration payable by the customer when the contracts contain variable consideration provisions, based on the most likely amount anticipated to be recognized for transferring the promised goods or services. As a result, we may constrain revenue to the extent that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

To the extent a contract is deemed to have multiple performance obligations, we allocate the transaction price of the contract to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract.

Significant judgement is required to estimate the total expected costs and variable consideration for projects that typically have a construction period of 12 to 36 months. Any increase or decrease in estimated costs to complete a performance obligation without a corresponding change to the contract price could impact the calculation of cumulative revenue to date and gross profit on the project. Similarly, if we recognize revenue based upon our current estimate of variable consideration, and our estimate is later adjusted, we may be required to increase or decrease cumulative revenue to date and gross profit on the project. Factors that may result in a change to our estimates include unforeseen engineering problems, construction delays, the performance of contractors and major material suppliers, and unusual weather conditions, among others.

We have a long history of working with multiple types of projects and preparing cost estimates, and we rely on the expertise of key personnel to prepare what we believe are reasonable best estimates given available facts and circumstances. Due to the nature of the work involved, however, judgment is involved to estimate the costs to complete and the amounts estimated could have a material impact on the revenue we recognize in each accounting period. We cannot estimate unforeseen events and circumstances which may result in actual results being materially different from previous estimates.

Impairment Assessments

We evaluate our long-lived assets, including goodwill and intangible assets, for impairment as events or changes in circumstances indicate the carrying value of these assets may not be fully recoverable, and at least annually (December 31st) for goodwill and intangible assets that have indefinite lives. Examples of such triggering events applicable to our assets include a significant decrease in the market price of a long-lived asset or asset group, a current-period operating or cash flow loss combined with a history of operating or cash flow losses, a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset or asset group, or adverse industry or economic trends.

We evaluate recoverability of long-lived assets and definite-lived intangible assets by estimating the undiscounted future cash flows associated with the expected uses and eventual disposition of those assets. When these comparisons indicate that the carrying value of those assets is greater than the undiscounted cash flows, we recognize an impairment loss for the amount that the carrying value exceeds the fair value.

The process of evaluating the potential impairment of long-lived assets, goodwill and intangible assets requires significant judgment. For goodwill, we estimate the reporting unit's fair value and compare it with the carrying value of the reporting unit, including goodwill. If the fair value is greater than the carrying value of its reporting unit, no impairment is recorded. Fair value is determined using both an income approach and a market approach. The estimates and assumptions used in our calculations include revenue growth rates, expense growth rates, expected capital expenditures to determine projected cash flows, expected tax rates and an estimated discount rate to determine present value of expected cash flows. These estimates are based on historical experiences, our projections of future operating activity and our weighted-average cost of capital. Unforeseen events and changes in circumstances or market conditions could adversely affect these estimates, which could result in an impairment charge.

Based on our goodwill impairment assessment, all of our reporting units with goodwill had estimated fair values that exceeded their carrying values by at least 20% as of December 31, 2022 and 61% as of December 31, 2021. During the year ended December 31, 2021, we recognized a long-lived asset impairment charge of $1.9 million on one of our energy asset groups. See Note 7 "Energy Assets" for additional information.

Income Taxes

We are subject to income taxes in the U.S. and five foreign jurisdictions. Significant judgment is required in determining income tax expense, deferred tax assets and liabilities and uncertain tax positions. The underlying assumptions are also highly susceptible to change from period to period. We took advantage of the Safe Harbor commence-construction provisions contained in IRS Notice 2018-59 by pre-purchasing solar equipment in 2019 thereby preserving the ability to take 30% ITC for projects placed in service before 2024. However, the IRA signed by the President on August 16, 2022 increased the ITC rate back to 30% for projects placed in service after January 1, 2022 and before January 1, 2033. If these or other deductions and credits expire without being extended, or otherwise are reduced or eliminated, our effective tax rate would increase, which could increase our income tax expense and reduce our net income. In addition, our tax rate has historically been significantly impacted by the IRC Section 179D deduction. This deduction is related to energy-efficient improvements we provide under government contracts. The Consolidated Appropriations Act, 2021 made permanent the Section 179D Energy Efficient Commercial Building Deduction. That Act made changes to the way the deduction is calculated. On December 23, 2022, the IRS issued Announcement 2023-1 which clarified the energy efficiency standards which will be applied to projects placed in service for 2021 and 2022. If those changes result in lower levels of energy efficiency improvements, it could impact the deduction available and the tax rate.

We accrue for the estimated additional tax and interest that may result from tax authorities disputing uncertain tax positions. We believe we have made adequate provisions for income taxes for all years that are subject to audit based upon the latest information available. We operate within multiple taxing jurisdictions and are subject to tax audits in these jurisdictions. These audits can involve complex issues and may require an extended period of time to resolve. We recognize tax benefits from uncertain tax positions only if we believe that it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. Although we believe that we have adequately reserved for our uncertain tax positions, we can provide no assurance that the final tax outcome of these matters will not be materially different. We adjust these reserves when facts and circumstances change, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences may affect the provision for income taxes in the period in which such determination is made and could have an impact on our results of operations.

On a quarterly basis, we assess our current and projected earnings by jurisdiction to determine whether or not our earnings during the periods when the temporary differences become deductible will be sufficient to realize the related future tax benefits. Should we determine that we would not be able to realize all or part of our net deferred tax asset in a particular jurisdiction in the future, a valuation allowance to the deferred tax asset would be charged to income in the period such determination was made. This valuation allowance is maintained for deferred tax assets that we estimate are more likely than not to be unrealizable based on available evidence at the time the estimate is made. The determination of whether a valuation allowance for deferred tax assets is appropriate is subject to considerable judgment and requires an evaluation of all positive and negative evidence, including our historical financial results, the source and consistency of those results, whether they should be adjusted for certain one-time or nonrecurring items, whether losses cumulatively exceed income over a reasonable period of time, the availability of tax planning strategies, availability of carryback and carryforward periods, and other factors, including our expectations of future taxable income. Adjustments to income tax expense to the extent we establish a valuation allowance or adjust this allowance in a period could have a material impact on our financial condition and results of operations.

Recent Accounting Pronouncements

See Note 2 of the “Notes to Consolidated Financial Statements” for a discussion of recent accounting standards.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to changes in interest rates and foreign currency exchange rates because we finance certain operations through fixed and variable rate debt instruments and denominate our transactions in U.S. dollars, Canadian dollars, British pounds sterling (“GBP”), and Euros. Changes in these rates may have an impact on future cash flows and earnings. We manage these risks through normal operating and financing activities and, when deemed appropriate, through the use of derivative financial instruments.

Interest Rate Risk

We had cash and cash equivalents totaling $115.5 million as of December 31, 2022 and $50.5 million as of December 31, 2021. Our exposure to interest rate risk primarily relates to the interest expense paid on our senior secured credit facility.

Derivative Instruments

We do not enter into derivative instruments for trading or speculative purposes. However, through our subsidiaries we do enter into derivative instruments for purposes other than trading purposes. Certain of the term loans that we use to finance our

renewable energy projects bear variable interest rates that are indexed to short-term market rates. We have entered into interest rate swaps in connection with these term loans in order to seek to hedge our exposure to adverse changes in the applicable short-term market rate. In some instances, the conditions of our renewable energy project term loans require us to enter into interest rate swap agreements in order to mitigate our exposure to adverse movements in market interest rates. All but two of the interest rate swaps that we have entered into qualify and have been designated as cash flow hedges. In the past, we entered into commodity swap contracts in order to hedge our exposure to adverse changes in the short-term market rates of natural gas, which have not been designated for hedge accounting, and may do so in the future.

We have also entered into term loan agreements that contain make-whole provisions that qualify as embedded derivatives and are required to be bifurcated from their host term loan agreement and valued separately. These derivatives cannot be hedged.

By using derivative instruments, we are subject to credit and market risk. The fair market value of the interest rate and commodity swaps are determined by using valuation models whose inputs are derived using market observable inputs, including interest rate yield curves, and reflects the asset or liability position as of the end of each reporting period. When the fair value of a derivative contract is positive, the counterparty owes us, thus creating a receivable risk for us. We are exposed to counterparty credit risk in the event of non-performance by counterparties to our derivative agreements. We minimize counterparty credit (or repayment) risk by entering into transactions with major financial institutions of investment grade credit rating. The fair value of these make-whole provisions was determined based on available market data and a with and without model.

Our exposure to market interest rate risk is not hedged in a manner that completely eliminates the effects of changing market conditions on earnings or cash flow. See Notes 2 “Summary of Significant Accounting Policies”, 18 “Fair Value Measurement”, and 19 “Derivative Instruments and Hedging Activities” included in Item 8 of this Report for additional information about our derivative instruments.

Foreign Currency Risk

We have revenues, expenses, assets, and liabilities that are denominated in foreign currencies, principally the Canadian dollar and British pound sterling (“GBP”). Also, a significant number of employees are located in Canada and the United Kingdom, and our subsidiaries in those countries transact business in those respective currencies. As a result, we have designated the Canadian dollar as the functional currency for Canadian operations. Similarly, the GBP has been designated as the functional currency for our operations in the United Kingdom When we consolidate the operations of these foreign subsidiaries into our financial results, because we report our results in U.S. dollars, we are required to translate the financial results and position of our foreign subsidiaries from their respective functional currencies into U.S. dollars. We translate the revenues, expenses, gains, and losses from our Canadian and United Kingdom subsidiaries into U.S. dollars using a weighted average exchange rate for the applicable fiscal period. We translate the assets and liabilities of our Canadian and United Kingdom subsidiaries into U.S. dollars at the exchange rate in effect at the applicable balance sheet date. Translation adjustments are not included in determining net income for the period but are disclosed and accumulated in a separate component of consolidated equity until sale or until a complete or substantially complete liquidation of the net investment in our foreign subsidiary takes place. Changes in the values of these items from one period to the next which result from exchange rate fluctuations are recorded in our consolidated statements of changes in stockholders’ equity as accumulated other comprehensive income (loss). For the year ended December 31, 2022, due to the weakening of the Canadian dollar and GBP versus the U.S. dollar, our foreign currency translation resulted in a loss of $3.4 million which we recorded as a decrease in accumulated other comprehensive loss, compared to $0.2 million for the year ended December 31, 2021. As a consequence, gross profit, operating results, profitability, and cash flows are impacted by relative changes in the value of the Canadian dollar and GBP. We have not repatriated earnings from our foreign subsidiaries but have elected to invest in new business opportunities there. See Note 10, “Income Taxes” to our consolidated financial statements in this Report. We do not hedge our exposure to foreign currency exchange risk.

Item 8. Financial Statements and Supplementary Data

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Ameresco, Inc.

Opinions on the Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Ameresco, Inc. (the Company) as of December 31, 2022 and 2021, and the related consolidated statements of income, other comprehensive income, changes in redeemable non-controlling interests and stockholders' equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes (collectively, the financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Goodwill Impairment

As described in Notes 2 and 5 to the financial statements, management tests the Company's goodwill, which had a balance of $70.6 million as of December 31, 2022, for impairment, at the reporting unit level, at December 31 of each fiscal year, or more frequently if events or changes in circumstances indicate the asset might be impaired. To test goodwill for impairment, management compares the estimated fair value of each reporting unit with the carrying amount of each reporting unit, including the recorded goodwill. In estimating the fair value of each reporting unit, management uses a methodology which combines an income approach, using a discounted cash flows method, with a market approach, using a peer-based guideline company method based on the average of published multiples of earnings of comparable entities with similar operations and economic characteristics.

We identified the annual goodwill impairment assessment for one of the Company's reporting units as a critical audit matter because of the significant estimates and assumptions used by management when estimating the fair value of this reporting unit, including management's forecasts of revenue and expense growth rates, management's selection of the discount rate for the income approach and management's estimates of the multiples of earnings of comparable entities with similar operations and economic characteristics for the market approach. Auditing management's estimates and assumptions involved a high degree of auditor judgment and increased audit effort, including the use of our valuation specialists, due to the impact these assumptions have on the goodwill impairment assessment.

Our audit procedures related to the assessment of goodwill impairment included the following, among others:

- We obtained an understanding of the relevant controls relating to management's goodwill impairment assessment and tested such controls for design and operating effectiveness, including controls over management's review of the significant assumptions used in the estimate of fair value, including forecasted revenue and expense growth rates, the selected discount rates, and the selected multiples of earnings.
- We evaluated the reasonableness of management's forecasts of revenue and expense growth rates by comparing the projections to historical results and testing certain contracts contributing to the revenue forecast..
- We tested the underlying data used by management in their development of forecasts of revenue and expense growth rates for accuracy and completeness.
- We evaluated the reasonableness of management's selection of comparable entities with similar operations and economic characteristics.
- With the assistance of our valuation specialists, we evaluated the reasonableness of management's valuation methodology and significant assumptions by:
    - Evaluating the reasonableness of the discount rate and multiples of earnings by comparing the underlying source information to publicly available market data and verifying the accuracy of the calculations.
    - Developing an independent expectation of the discount rate and compared against the discount rate selected by management.
    - Evaluating the appropriateness of the valuation methods used by management and testing their mathematical accuracy.

Revenue from Contracts with Customers – Project Revenue

As described in Notes 2 and 3 to the financial statements, the Company's projects line of business, which relates to the construction of energy efficiency projects, including the design, engineering and installation of technologies and techniques to improve energy efficiency and control the operation of a building's energy- and-water-consuming systems, recognized revenue of $1.48 billion during the year ended December 31, 2022. Typically, the Company provides a service of integrating a complex set of tasks and components such as design, engineering, construction management, and equipment procurement for a project contract. The Company's project revenues are generated from long-term contracts whereby revenue is recognized over time using the cost-based input method. The Company uses total costs incurred on the project relative to the total expected costs to estimate progression towards the satisfaction of the performance obligation.

Estimating the amount of project revenue to record from the Company's long-term contracts requires management's judgment in estimating final construction contract profits, which are driven by the total estimated consideration payable by the customer and total estimated contract costs. The Company estimates the total consideration payable by the customer when the contracts contain variable consideration provisions, which can include liquidated damages and/or penalties, based on the most likely amount anticipated to be recognized for transferring the promised goods or services. As a result, the Company may constrain revenue to the extent that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Anticipated contract costs can be incurred over several years and are largely determined based on negotiated or estimated purchase contract terms and consider factors such as historical performance, seasonal and construction schedule risks, estimated subcontractor costs and contingency costs.

We identified the Company's accounting for revenue recognition from the project line of business to be a critical audit matter due to the significant judgments used by management related to the estimation of final construction profits. Estimating the final construction profit on these long-term contracts requires management to develop estimates of the total consideration payable by the customer, when contracts contain variable consideration provisions, as well as total expected contract costs, including costs associated with labor, materials, equipment, subcontracting and outside engineering cost. Auditing management's estimates and assumptions involved a high degree of auditor judgment and increased audit effort due to the impact these assumptions have on the revenue recognized.

Our audit procedures related to project revenue included the following, among others:

- We obtained an understanding of the relevant controls related to the recognition of project revenue and tested such controls for design and operating effectiveness, including controls over the determination of the final estimated construction profit, which includes management's review of the assumptions and key inputs used to recognize revenue on project contracts using the cost-to-cost input method, including costs associated with labor, materials, equipment, subcontracting and outside engineering along with estimates of total consideration payable when contracts contain variable consideration provisions.
- We performed substantive analytical procedures on the Company's project revenue line of business, with a focus on significant changes in gross margin, contract budgets and contract pricing from the prior year, on contracts open in both the current year and prior year.
- We selected a sample of project contracts and evaluated the estimates of total costs for each of the project contracts by:
    - Evaluating management's judgments related to the Company's ability to achieve the estimates of final construction contract profit as well as achievement on project timelines by performing corroborating inquiries with Company personnel, including project managers, and comparing the estimates to documentation such as management's internal budgets and specified contract terms.
    - Confirmation of project progression with customers, including identification of any delays in project timeline.

/s/ RSM US LLP

We have served as the Company's auditor since 2010.

Boston, Massachusetts
February 28, 2023

AMERESCO, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share amounts)

	December 31,	
	2022	2021
ASSETS		
Current assets:		
Cash and cash equivalents [1]	$ 115,534	$ 50,450
Restricted cash [1]	20,782	24,267
Accounts receivable, net [1]	174,009	161,970
Accounts receivable retainage	38,057	43,067
Costs and estimated earnings in excess of billings [1]	576,363	306,172
Inventory, net	14,218	8,807
Prepaid expenses and other current assets [1]	38,617	25,377
Income tax receivable	7,746	5,261
Project development costs, net	16,025	13,214
Total current assets [1]	1,001,351	638,585
Federal ESPC receivable	509,507	557,669
Property and equipment, net [1]	15,707	13,117
Energy assets, net [1]	1,181,525	856,531
Goodwill, net	70,633	71,157
Intangible assets, net	4,693	6,961
Operating lease assets [1]	38,224	41,982
Restricted cash, non-current portion	13,572	12,337
Deferred income tax assets, net	3,045	3,703
Other assets [1]	38,564	22,779
Total assets [1]	$ 2,876,821	$ 2,224,821
LIABILITIES, REDEEMABLE NON-CONTROLLING INTERESTS AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt and financing lease liabilities [1]	$ 331,479	$ 78,934
Accounts payable [1]	349,126	308,963
Accrued expenses and other current liabilities [1]	89,166	43,311
Current portion of operating lease liabilities [1]	5,829	6,276
Billings in excess of cost and estimated earnings	34,796	35,918
Income taxes payable	1,672	822
Total current liabilities [1]	812,068	474,224
Long-term debt and financing lease liabilities, net of current portion, unamortized discount, and debt issuance costs [1]	568,635	377,184
Federal ESPC liabilities	478,497	532,287
Deferred income tax liabilities, net	9,181	3,871
Deferred grant income	7,590	8,498
Long-term operating lease liabilities, net of current portion [1]	31,703	35,135
Other liabilities [1]	49,493	43,176
Commitments and contingencies:		
Redeemable non-controlling interests, net	46,623	46,182

[1] Includes restricted assets of consolidated variable interest entities ("VIEs") of $213,913 as of December 31, 2022 and $124,454 as of December 31, 2021. Includes non-recourse liabilities of consolidated VIEs of $50,729 as of December 31, 2022 and $31,125 as of December 31, 2021. See Note 11.

AMERESCO, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share amounts) (Continued)

	December 31,	
	2022	2021
Stockholders' equity:		
Preferred stock, $0.0001 par value, 5,000,000 shares authorized, no shares issued and outstanding at December 31, 2022 and 2021	$ —	$ —
Class A common stock, $0.0001 par value, 500,000,000 shares authorized, 36,050,157 shares issued and 33,948,362 shares outstanding at December 31, 2022, 35,818,104 shares issued and 33,716,309 shares outstanding at December 31, 2021	3	3
Class B common stock, $0.0001 par value, 144,000,000 shares authorized, 18,000,000 shares issued and outstanding at December 31, 2022 and 2021	2	2
Additional paid-in capital	306,314	283,982
Retained earnings	533,549	438,732
Accumulated other comprehensive loss, net	(4,051)	(6,667)
Treasury stock, at cost, 2,101,795 shares at December 31, 2022 and 2021	(11,788)	(11,788)
Stockholders' equity before non-controlling interest	824,029	704,264
Non-controlling interests	49,002	—
Total stockholders' equity	873,031	704,264
Total liabilities, redeemable non-controlling interests and stockholders' equity	$ 2,876,821	$ 2,224,821

See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share amounts)

	Year Ended December 31,		
	2022	2021	2020
Revenues	$ 1,824,422	$ 1,215,697	$ 1,032,275
Cost of revenues	1,533,589	985,340	844,726
Gross profit	290,833	230,357	187,549
Selling, general and administrative expenses	157,841	134,923	116,050
Operating income	132,992	95,434	71,499
Other expenses, net	27,273	17,290	15,071
Income before income taxes	105,719	78,144	56,428
Income tax expense (benefit)	7,170	(2,047)	(494)
Net income	98,549	80,191	56,922
Net income attributable to non-controlling interest and redeemable non-controlling interest	(3,623)	(9,733)	(2,870)
Net income attributable to common shareholders	$ 94,926	$ 70,458	$ 54,052
Net income per share attributable to common shareholders:			
Basic	$ 1.83	$ 1.38	$ 1.13
Diluted	$ 1.78	$ 1.35	$ 1.10
Weighted average common shares outstanding:			
Basic	51,841	50,855	47,702
Diluted	53,278	52,268	49,006

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See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)

	Year Ended December 31,		
	2022	2021	2020
Net income	$ 98,549	$ 80,191	$ 56,922
Other comprehensive income (loss):			
Unrealized gain (loss) from interest rate hedges, net of tax effect of $2,039, $662, and $(1,014), respectively	6,017	2,793	(2,784)
Foreign currency translation adjustment	(3,401)	(170)	1,008
Total other comprehensive income (loss)	2,616	2,623	(1,776)
Comprehensive income	101,165	82,814	55,146
Comprehensive income attributable to redeemable non-controlling interests	(3,623)	(9,733)	(2,870)
Comprehensive income attributable to common shareholders	$ 97,542	$ 73,081	$ 52,276

See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN REDEEMABLE NON-CONTROLLING INTERESTS AND STOCKHOLDERS' EQUITY
(In thousands, except share amounts)

	Redeemable Non-controlling Interests	Class A Common Stock		Class B Common Stock		Additional Paid-in Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Loss	Non-controlling Interest	Total Stockholders' Equity
		Shares	Amount	Shares	Amount			Shares	Amount			
Balance, December 31, 2019	$ 31,616	29,230,005	$ 3	18,000,000	$ 2	133,688	$314,459	2,101,340	$(11,782)	$ (7,514)	$ —	$ 428,856
Exercise of stock options, net	—	946,139	—	—	—	8,995	—	—	—	—	—	8,995
Stock-based compensation expense	—	—	—	—	—	1,933	—	—	—	—	—	1,933
Employee stock purchase plan	—	48,965	—	—	—	880	—	—	—	—	—	880
Open market purchase of common shares	—	(455)	—	—	—	—	—	455	(6)	—	—	(6)
Unrealized loss from interest rate hedges, net	—	—	—	—	—	—	—	—	—	(2,784)	—	(2,784)
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	1,008	—	1,008
Contributions from redeemable non-controlling interests, net of tax equity financing fees of $622	5,777	—	—	—	—	—	—	—	—	—	—	—
Distributions to redeemable non-controlling interests	(1,534)	—	—	—	—	—	—	—	—	—	—	—
Accretion of tax equity financing fees	121	—	—	—	—	—	(121)	—	—	—	—	(121)
Net income	2,870	—	—	—	—	—	54,052	—	—	—	—	54,052
Balance, December 31, 2020	38,850	30,224,654	3	18,000,000	2	145,496	368,390	2,101,795	(11,788)	(9,290)	—	492,813
Equity offering of common stock, net of offering costs of $6,416	—	2,875,000	—	—	—	120,084	—	—	—	—	—	120,084
Exercise of stock options, net	—	587,775	—	—	—	5,563	—	—	—	—	—	5,563
Stock-based compensation expense	—	—	—	—	—	8,716	—	—	—	—	—	8,716
Employee stock purchase plan	—	28,880	—	—	—	1,364	—	—	—	—	—	1,364
Unrealized gain from interest rate hedges, net	—	—	—	—	—	—	—	—	—	2,793	—	2,793
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	(170)	—	(170)
Contributions from redeemable non-controlling interests, net of tax equity financing fees of $65	2,251	—	—	—	—	—	—	—	—	—	—	—
Distributions to redeemable non-controlling interests	(1,009)	—	—	—	—	—	—	—	—	—	—	—
Accretion of tax equity financing fees	116	—	—	—	—	—	(116)	—	—	—	—	(116)
Investment fund call option exercise	(3,759)	—	—	—	—	2,759	—	—	—	—	—	2,759
Net income	9,733	—	—	—	—	—	70,458	—	—	—	—	70,458
Balance, December 31, 2021	46,182	33,716,309	3	18,000,000	2	283,982	438,732	2,101,795	(11,788)	(6,667)	—	704,264
Exercise of stock options, net	—	195,888	—	—	—	3,954	—	—	—	—	—	3,954
Stock-based compensation expense	—	—	—	—	—	15,046	—	—	—	—	—	15,046
Employee stock purchase plan	—	36,165	—	—	—	2,009	—	—	—	—	—	2,009
Unrealized gain from interest rate hedges, net	—	—	—	—	—	—	—	—	—	6,017	—	6,017
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	(3,401)	—	(3,401)
Distributions to redeemable non-controlling interests	(1,039)	—	—	—	—	—	—	—	—	—	—	—
Accretion of tax equity financing fees	109	—	—	—	—	—	(109)	—	—	—	—	(109)
Investment fund call option exercise	(2,162)	—	—	—	—	1,323	—	—	—	—	—	1,323
Contributions from non-controlling interest	—	—	—	—	—	—	—	—	—	—	48,912	48,912
Net income	3,533	—	—	—	—	—	94,926	—	—	—	90	95,016
Balance, December 31, 2022	$ 46,623	33,948,362	$ 3	18,000,000	$ 2	$ 306,314	$533,549	2,101,795	$(11,788)	$ (4,051)	$ 49,002	$ 873,031

See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income	$ 98,549	$ 80,191	$ 56,922
Adjustments to reconcile net income to net cash flows from operating activities:			
Depreciation of energy assets, net	49,755	43,113	38,039
Depreciation of property and equipment	2,665	3,143	3,317
Amortization of debt discount and debt issuance costs	4,211	2,849	2,686
Amortization of intangible assets	1,858	321	685
Net increase in fair value of contingent consideration	1,614	—	—
Accretion of ARO	146	123	93
(Recoveries of) provision for bad debts	(382)	187	282
Impairment of long-lived assets / loss on disposal	937	1,901	2,696
Gain on sale of equity investments	—	(575)	—
(Earnings) loss of unconsolidated entities	(1,647)	118	225
Net (gain) loss from derivatives	(212)	240	(705)
Stock-based compensation expense	15,046	8,716	1,933
Deferred income taxes, net	3,918	(4,760)	3,401
Unrealized foreign exchange (gain) loss	(123)	142	(306)
Changes in operating assets and liabilities:			
Accounts receivable	3,477	(15,953)	(24,178)
Accounts receivable retainage	4,716	(12,882)	(13,113)
Federal ESPC receivable	(259,499)	(249,728)	(227,078)
Inventory, net	(5,411)	(232)	660
Costs and estimated earnings in excess of billings	(272,629)	(113,192)	19,474
Prepaid expenses and other current assets	(3,182)	1,770	517
Project development costs	(685)	1,949	(3,085)
Other assets	(11,327)	(1,870)	311
Accounts payable, accrued expenses, and other current liabilities	36,155	83,473	29,047
Billings in excess of cost and estimated earnings	449	(693)	8,042
Other liabilities	(5,074)	(5,036)	1,844
Income taxes payable, net	(1,613)	4,389	(4,292)
Cash flows from operating activities	(338,288)	(172,296)	(102,583)
Cash flows from investing activities:			
Purchases of property and equipment	(5,296)	(4,896)	(2,211)
Capital investment in energy assets	(304,596)	(170,277)	(175,650)
Capital investment in major maintenance of energy assets	(18,007)	(8,602)	(4,896)
Grant award proceeds for energy assets	—	774	1,874
Proceeds from sale of equity investment	—	1,672	—
Acquisitions, net of cash received	—	(14,928)	—
Contributions to equity investment	—	(9,000)	(132)
Loans to joint venture investments	(459)	—	—
Cash flows from investing activities	(328,358)	(205,257)	(181,015)

See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands) (Continued)

	Year Ended December 31,		
	2022	2021	2020
Cash flows from financing activities:			
Proceeds from equity offering, net of offering costs	$ —	$ 120,084	$ —
Payments of debt discount and debt issuance costs	(3,695)	(2,919)	(5,234)
Proceeds from exercises of options and ESPP	5,963	6,927	9,875
Repurchase of common stock	—	—	(6)
Proceeds from (payments on) senior secured revolving credit facility, net	137,900	(8,073)	3,000
Proceeds from long-term debt financings	468,476	185,994	116,067
Proceeds from Federal ESPC projects	238,360	159,216	248,917
Net proceeds for customer energy asset projects	14,341	2,033	1,378
Investment fund call option exercise	(839)	(1,000)	—
Contributions from non-controlling interest	32,706	—	—
(Distributions to) proceeds from redeemable non-controlling interests, net	(1,128)	1,399	4,805
Payments on long-term debt and financing leases	(161,857)	(98,200)	(73,633)
Cash flows from financing activities	730,227	365,461	305,169
Effect of exchange rate changes on cash	(747)	309	2
Net increase (decrease) in cash, cash equivalents, and restricted cash	62,834	(11,783)	21,573
Cash, cash equivalents, and restricted cash, beginning of year	87,054	98,837	77,264
Cash, cash equivalents, and restricted cash, end of year	$ 149,888	$ 87,054	$ 98,837
Supplemental disclosures of cash flow information:			
Cash paid for interest	$ 32,954	$ 18,782	$ 20,143
Cash paid for income taxes	$ 7,278	$ 2,670	$ 1,465
Non-cash Federal ESPC settlement	$ 293,427	$ 67,286	$ 54,139
Accrued purchases of energy assets	$ 88,793	$ 37,064	$ 43,807
Non-cash contributions from non-controlling interest	$ 16,206	$ —	$ —
Non-cash portion of investment fund call option exercise	$ 1,323	$ 2,759	$ —

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets to the total of the same such amounts shown above:

	Year Ended December 31,		
	2022	2021	2020
Cash and cash equivalents	$ 115,534	$ 50,450	$ 66,422
Short-term restricted cash	20,782	24,267	22,063
Long-term restricted cash	13,572	12,337	10,352
Total cash, cash equivalents, and restricted cash	$ 149,888	$ 87,054	$ 98,837

See accompanying notes to consolidated financial statements.

1. DESCRIPTION OF BUSINESS

Ameresco, Inc. (including its subsidiaries, the "Company," "Ameresco", "we," "our," or "us") was organized as a Delaware corporation on April 25, 2000. We are a leading cleantech integrator and renewable energy asset developer, owner and operator. Our comprehensive portfolio includes energy efficiency, infrastructure upgrades, asset sustainability and renewable energy solutions delivered to clients throughout North America, the United Kingdom, and Europe. We provide solutions, both services and products, that enable our customers to reduce their energy consumption, lower their operating and maintenance costs and realize environmental benefits. Our comprehensive set of solutions includes upgrades to a facility's energy infrastructure and the development, construction, and operation of distributed energy resources. We also sell certain solar photovoltaic ("solar PV") equipment worldwide and operate in the United States, Canada and Europe. We have successfully completed energy saving, environmentally responsible projects with Federal, state and local governments, healthcare and educational institutions, housing authorities, and commercial and industrial customers.

We are compensated through a variety of methods, including: 1) direct payments based on fee-for-services contracts (utilizing lump-sum or cost-plus pricing methodologies), 2) the sale of energy from our energy assets, and 3) direct payment for solar PV equipment and systems.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Ameresco, our subsidiaries, certain contracts in which we have a controlling financial interest and three investment funds formed to fund the purchase and operation of solar energy systems, which are consolidated with Ameresco as variable interest entities ("VIEs"). We use a qualitative approach in assessing the consolidation requirement for VIEs. This approach focuses on determining whether we have the power to direct the activities of the VIE that most significantly affect the VIE's economic performance and whether we have the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE. For all periods presented, we have determined that we are the primary beneficiary in all of our operational VIEs. We evaluate our relationships with the VIEs on an ongoing basis to ensure that we continue to be the primary beneficiary. All significant intercompany accounts and transactions have been eliminated. Gains and losses from the translation of all foreign currency financial statements are recorded in accumulated other comprehensive income, net, within stockholders' equity. We prepare our consolidated financial statements in conformity with the accounting principles generally accepted in the United States of America ("GAAP").

Reclassification

Certain prior period amounts were reclassified to conform to the presentation in the current period.

Use of Estimates

GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Changes in circumstances could cause actual results to differ materially from those estimates. The most significant estimates and assumptions used in these consolidated financial statements relate to management's estimates of final construction contract profit in accordance with accounting for long-term contracts, allowance for credit losses, realization of project development costs, leases, fair value of derivative financial instruments, accounting for business acquisitions, stock-based awards, impairment of goodwill and long-lived assets, income taxes, and potential liability in conjunction with contingent consideration.

Self-insured Health Insurance

We are self-insured for employee health insurance and the maximum exposure in fiscal year 2022 under the plan was $175 per covered participant, after which reinsurance takes effect. The liability for unpaid claims and associated expenses, including incurred but not reported claims, is determined by management and reflected in our consolidated balance sheets in accrued expenses and other current liabilities. The liability is calculated based on historical data, which considers both the frequency and settlement amount of claims. Our estimated accrual for this liability could be different than our ultimate obligation if variables such as the frequency or amount of future claims differ significantly from management's assumptions.

Significant Risks and Uncertainties

The COVID-19 pandemic and other global factors have continued to result in global supply chain disruptions, certain governmental travel and other restrictions, and inflationary pressures.

We have considered the impact of COVID-19 and general global economic conditions on the assumptions and estimates used, which may change in response to this evolving situation. Results of future operations and liquidity could be adversely impacted by a number of factors including supply chain disruptions, varying levels of inflation, payments of outstanding receivable amounts beyond normal payment terms, workforce disruptions, and uncertain demand. As of the date of issuance of these consolidated financial statements, we cannot reasonably estimate the extent to which the COVID-19 pandemic and macroeconomic conditions may impact our financial condition, liquidity, or results of operations in the foreseeable future. The ultimate impact of the pandemic and general global economic conditions on our business is highly uncertain and will depend on future developments, and such impacts could exist for an extended period of time, even after the pandemic subsides.

Cash and Cash Equivalents

Cash and cash equivalents include cash on deposit, overnight repurchase agreements and amounts invested in highly liquid money market funds. Cash equivalents consist of short-term investments with original maturities of three months or less. We maintain our accounts with financial institutions and the balances in such accounts, at times, exceed federally insured limits. This credit risk is divided among a number of financial institutions that management believes to be of high quality. The carrying amount of cash and cash equivalents approximates its fair value measured using level 1 inputs per the fair value hierarchy as defined in Note 18.

Restricted Cash

Restricted cash consists of cash and cash equivalents held in escrow accounts in association with operations and maintenance ("O&M") reserve accounts, cash collateralized letters of credit, as well as cash required under term loans to be maintained in reserve accounts until all obligations have been indefeasibly paid in full for energy assets. The carrying amount of the cash and cash equivalents in these accounts approximates its fair value measured using level 1 inputs per the fair value hierarchy as defined in Note 18. Restricted cash also includes funds held for clients, which represent assets that, based upon our intent, are restricted for use solely for the purposes of satisfying the obligations to remit funds to third parties, primarily utility service providers, relating to our enterprise energy management services.

Accounts Receivable

Accounts receivable are stated at the amount management expects to collect from outstanding balances. Our methodology to estimate the allowance for credit losses includes quarterly assessments of historical bad debt write-off experience, current economic and market conditions, management's evaluation of outstanding accounts receivable, anticipated recoveries and our forecasts. Due to the short-term nature of our receivables, the estimate of credit losses is primarily based on aged accounts receivable balances and the financial condition of our customers. In addition, specific allowance amounts are established to record the appropriate provision for customers that have a higher probability of default. Bad debts are written off against the allowance when identified. As part of our assessment, we also considered the current and expected future economic and market conditions due to the COVID-19 pandemic and determined that the estimate of credit losses was not significantly impacted as of December 31, 2022 and 2021.

Changes in the allowance for credit losses was as follows:

	Year Ended December 31,		
	2022	2021	2020
Allowance for credit loss, beginning of period	$ 2,263	$ 2,266	$ 2,260
(Recoveries of) charges to costs and expenses, net	(382)	187	282
Account write-offs and other	(970)	(190)	(276)
Allowance for credit loss, end of period	$ 911	$ 2,263	$ 2,266

Accounts Receivable Retainage

Accounts receivable retainage represents amounts due from customers, but where payments are withheld contractually until certain construction milestones are met. Amounts retained typically range from 5% to 10% of the total invoice. We classify retainages that are expected to be billed in the next twelve months as current assets. As of December 31, 2022 and 2021, no amounts were determined to be uncollectible.

Inventory

Inventories, which consist primarily of PV solar panels, batteries and related accessories, are stated at the lower of cost ("first-in, first-out" method) or net realizable value (determined as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation). Provisions have been made to reduce the carrying value of inventory to the net realizable value.

Federal ESPC Receivable

Federal ESPC receivable represents the amount to be paid by various federal government agencies for work performed and earned by Ameresco under specific ESPCs. We assign certain of our rights to receive those payments to third-parties that provide construction and permanent financing for such contracts. Upon completion and acceptance of the project by the government, typically within 24 to 36 months of construction commencement, the assigned ESPC receivable from the government and corresponding ESPC liability are eliminated from our consolidated financial statements.

Project Development Costs

We capitalize only those costs incurred in connection with the development of energy projects, primarily direct labor, interest costs, outside contractor services, consulting fees, legal fees, and travel, if incurred after a point in time where the realization of related revenue becomes probable. Project development costs incurred prior to the probable realization of revenue are expensed as incurred. We classify project development efforts that are expected to proceed to construction activity in the next twelve months as a current asset. We periodically review these balances and write off any amounts where the realization of the related revenue is no longer probable. Project development costs of $0 and $2,217 were included in other long-term assets as of December 31, 2022 and 2021, respectively.

Property and Equipment

Property and equipment consist primarily of office and computer equipment, and is recorded at cost. Major additions and improvements are capitalized as additions to the property and equipment accounts, while replacements, maintenance, and repairs that do not improve or extend the life of the respective assets, are expensed as incurred. Depreciation and amortization of property and equipment are computed on a straight-line basis over the following estimated useful lives:

Asset Classification	Estimated Useful Life
Furniture and office equipment	Five years
Computer equipment and software costs	Three to five years
Leasehold improvements	Lesser of term of lease or five years
Automobiles	Five years
Land	Unlimited

Gains or losses on disposal of property and equipment are reflected in selling, general, and administrative expenses in the consolidated statements of income.

Energy Assets

Energy assets consist of costs of materials, direct labor, interest costs, outside contract services, deposits, asset retirement obligations ("AROs"), and project development costs incurred in connection with the construction of small-scale renewable energy plants that we own. These amounts are capitalized and amortized to cost of revenues in our consolidated statements of income on a straight-line basis over the lives of the related assets or the terms of the related contracts.

Routine maintenance costs are expensed as incurred in our consolidated statements of income to the extent that they do not extend the life of the asset. Major maintenance includes upgrades and the refurbishment or replacing of components that are integral to

the energy assets operating. In these instances, the costs associated with major maintenance are capitalized and are depreciated over the shorter of the remaining life of the asset or the period up to the next required major maintenance.

Financing lease assets and accumulated depreciation of financing lease assets are included in energy assets. For additional information see the Sale-Leaseback section below and Notes 7 and 8.

Capitalized Interest

We capitalize interest costs relating to construction financing during the period of construction on energy assets we own. Capitalized interest is included in energy assets, net, in our consolidated balance sheets. Capitalized interest is amortized to cost of revenues in our consolidated statements of income on a straight-line basis over the useful life of the associated energy asset.

Long-lived Asset Impairment

We evaluate our long-lived assets, including operating lease right-of-use assets, for impairment as events or changes in circumstances indicate the carrying value of these assets may not be fully recoverable. Examples of such triggering events applicable to our assets include a significant decrease in the market price of a long-lived asset or asset group or a current-period operating or cash flow loss combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset or asset group.

We evaluate recoverability of long-lived assets to be held and used by estimating the undiscounted future cash flows before interest associated with the expected uses and eventual disposition of those assets. When these comparisons indicate that the carrying value of those assets is greater than the undiscounted cash flows, we recognize an impairment loss for the amount that the carrying value exceeds the fair value of the asset group. Impairment losses are reflected in selling, general, and administrative expenses in the consolidated statements of income.

Government Grants

From time to time, we have applied for and received cash grant awards from the U.S. Treasury Department (the "Treasury") under Section 1603 of the American Recovery and Reinvestment Act of 2009 (the "Act"). The Act authorized the Treasury to make payments to eligible persons who place in service qualifying renewable energy projects. The grants are paid in lieu of investment tax credits. All of the cash proceeds from the grants were used and recorded as a reduction in the cost basis of the applicable energy assets. For tax purposes, the Section 1603 payments are not included in federal and certain state taxable income and the basis of the property is reduced by 50% of the payment received.

We last received a Section 1603 grant during the year ended December 31, 2014. No further Section 1603 grant payments are expected to be received as the program has expired and no repayments will be required.

We received grant proceeds from the Canadian government in connection with the construction of our energy assets in Canada of $774 during the year ended December 31, 2021. We did not receive any grant proceeds during the year ended December 31, 2022. We have a contribution agreement in place with Natural Resources Canada to fund 50% of the construction costs on a specific pilot project in Ontario. Cash proceeds are recorded as a deferred grant liability. Following commercial operation, the grant is subject to repayment to the government for a five-year period.

Deferred grant income of $7,590 and $8,498 in the accompanying consolidated balance sheets as of December 31, 2022 and 2021, respectively, represents the benefit of the basis difference to be amortized to depreciation expense over the life of the related property.

Acquisitions

For acquisitions that meet the definition of a business combination, we apply the acquisition method of accounting in accordance with Accounting Standards Codification ("ASC") 805, Business Combinations, where assets acquired and liabilities assumed are recorded at fair value at the date of each acquisition. Any excess of the consideration we transferred over the amounts recognized for assets acquired and liabilities assumed is recorded as goodwill. Intangible assets, if identified, are also recorded.

Determining the fair value of certain assets and liabilities assumed is judgmental in nature, often involves the use of significant estimates and assumptions, and is calculated using level 3 inputs per the fair value hierarchy as defined in Note 18. We continue to evaluate acquisitions for a period not to exceed one year after the acquisition date of each transaction to determine whether any

additional adjustments are needed to the allocation of the purchase price. The results of the acquired companies are included in our consolidated statements of income, comprehensive income, and cash flows from the date of the respective acquisition.

The consideration for our acquisitions often includes future payments that are contingent upon the occurrence of a particular event. We record a contingent consideration obligation for such contingent consideration payments at fair value on the acquisition date. We estimate the fair value of contingent consideration obligations through valuation models that incorporate probability adjusted assumptions related to the achievement of the milestones and the likelihood of making related payments. Each reporting period we revalue the contingent consideration obligations associated with our acquisitions to fair value and record changes in the fair value within the selling, general, and administrative expenses in our consolidated statements of income. Increases or decreases in the fair value of the contingent consideration obligations can result from changes in assumed discount periods and rates, changes in the assumed timing and amount of revenue and expense estimates and changes in assumed probability with respect to the attainment of certain financial and operational metrics, among others. Significant judgment is employed in determining these assumptions as of the acquisition date and for each subsequent period. Accordingly, future business and economic conditions, as well as changes in any of the assumptions described above, can materially impact the fair value of contingent consideration recorded at each reporting period. Deferred consideration related to certain holdbacks and completion payments are considered short-term in nature. These amounts are recorded at full value and are only revalued if one of those underlying assumptions changes. See Note 4 for additional information about our acquisitions.

In October 2021, the FASB issued ASU 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers, which requires entities to apply Topic 606 to recognize and measure contract assets and contract liabilities in a business combination. ASU 2021-08 is effective for our fiscal year beginning after December 15, 2022, however, early adoption is permitted. We early adopted this new accounting standard as of January 1, 2021 and applied it to our December 2021 acquisition discussed in Note 4. We elected the practical expedient related to contract modifications made before the acquisition date and the adoption did not have a material impact on our consolidated financial statements.

In accordance with ASC 805, Business Combinations, our solar project acquisitions do not constitute a business as the assets acquired in each case could be considered a single asset or group of similar assets that made up substantially all of the fair market value of the acquisitions. See Note 7 for information on solar projects we have purchased or are under definitive agreement to purchase.

Goodwill

As noted in the Acquisitions section above, our goodwill is derived when we acquire another business. Goodwill is not amortized, but the potential impairment of goodwill is assessed at least annually (December 31st) and on an interim basis whenever events or changes in circumstances indicate that the carrying value may not be fully recoverable.

We estimate the fair value of our reporting units and compare it with the carrying value of the reporting unit, including goodwill. If the fair value is greater than the carrying value of the reporting unit, no impairment is recorded. Fair value is determined using both an income approach and a market approach. If the fair value is less than the carrying value, an impairment loss is recognized for the amount that the carrying amount of a reporting unit, including goodwill, exceeds its fair value, limited to the total amount of goodwill allocated to that reporting unit. The impairment charge would be recorded to earnings in the consolidated statements of income. Judgment is required in determining whether an event has occurred that may impair the value of goodwill or identifiable intangible assets.

Intangible Assets

Acquired intangible assets, other than goodwill, that are subject to amortization include customer contracts, customer relationships, technology, trade names and non-compete agreements. The intangible assets are amortized over periods ranging from one to fifteen years from their respective acquisition dates. We evaluate our intangible assets for impairment consistent with, and part of, our long-lived asset evaluation, as discussed in Energy Assets above. See Notes 4 and 5 for additional disclosures.

Leases

Operating lease right-of-use ("ROU") assets represent our right to use an underlying asset during the reasonably certain lease term and lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and lease liabilities for significant lease arrangements are recognized at commencement based on the present value of lease payments over the lease term. We use our incremental borrowing rate, which is updated annually or when a significant event occurs that would indicate a significant change in rates, to calculate the present value of lease payments. The operating lease ROU asset also includes any

lease payments related to initial direct cost and prepayments and excludes lease incentives. Lease expense is recognized on a straight-line basis over the lease term which may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Our ROU assets are evaluated for impairment using the same method as described above under the Long-lived Asset Impairment section.

We do not record ROU assets and corresponding lease liabilities for leases with an initial term of 12 months or less ("short-term leases") as we recognize lease expense for these leases as incurred over the lease term.

We elected the package of practical expedients and did not reassess lease classifications of existing contracts or leases at adoption or the initial direct costs associated with existing leases. Accordingly, our sale-leaseback arrangements entered into as of December 31, 2018 remain under the previous guidance. See the Sale-leasebacks and Financing Leases section below and Note 8 for additional information on these sale-leasebacks.

We have historical leases under ASC 840, Leases, which may have lease and non-lease components. Upon adoption of Topic 842, we elected to continue to account for these historical leases as a single component, as it relates to all prospective leases, we allocate consideration to lease and non-lease components based on pricing information in the respective lease agreement, or, if this information is not available, we make a good faith estimate based on the available pricing information at the time of the lease agreement. See Note 8 for additional information about our leases.

Other Assets

Other assets consist primarily of notes and contracts receivable due to Ameresco from various customers and also includes the fair value of derivatives determined to be assets, investments in unconsolidated joint ventures, the non-current portions of project development costs, accounts receivable retainages, sale-leaseback deferred loss and deferred contract costs.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist primarily of $47,041 in use and franchise tax payable, accrued payroll and payroll related expenses, sales tax payable, current portion of contingent consideration, and other accrued operating expenses.

Asset Retirement Obligations

We recognize a liability for the fair value of required AROs on a discounted basis when these obligations are incurred and can be reasonably estimated, which is typically at the time the assets are in development, installed or operating. Over time, the liabilities increase due to the change in present value, and initial capitalized costs are depreciated over the useful life of the related assets. Upon satisfaction of the ARO conditions, any difference between the recorded ARO liability and the actual retirement cost incurred is recognized as an operating gain or loss in the consolidated statements of income. See Note 7 for additional disclosures on our AROs.

Federal ESPC Liabilities

Federal ESPC liabilities, for both projects and energy assets, represent the advances received from third-parties under agreements to finance certain ESPC projects with various federal government agencies. For projects related to the construction or installation of certain energy savings equipment or facilities developed for the government customer, the ESPC receivable from the government and corresponding ESPC liability is eliminated from our consolidated balance sheets upon completion and acceptance of the project by the government, typically within 24 to 36 months of construction commencement. We remain the primary obligor for financing received until recourse to us ceases for the ESPC receivables transferred to the investor upon final acceptance of the work by the government customer.

For small-scale energy assets developed for a government customer that we own and operate, we remain the primary obligor for financing received until the liability is eliminated from our consolidated balance sheets as contract payments assigned by the customer are transferred to the investor upon final acceptance of the work by the government customer.

Sale-leasebacks and Financing Leases

We entered into sale-leaseback arrangements that provided for the sale of solar PV energy assets to third-party investors and the simultaneous leaseback of the energy assets, which we then operate and maintain, recognizing revenue through the sale of the electricity and solar renewable energy credits generated by these energy assets.

In sale-leaseback arrangements, we first determine whether the solar PV energy asset under the sale-leaseback arrangement is "integral equipment". A solar PV energy asset is determined to be integral equipment when the cost to remove the energy asset from its existing location, including the shipping and reinstallation costs of the solar PV energy asset at the new site, and any diminution in fair value, exceeds 10% of the fair value of the solar PV energy asset at the time of its original installation. When the leaseback arrangement expires, we have the option to purchase the solar PV energy asset for the then fair market value or, in certain circumstances, renew the lease for an extended term. We have determined that none of the solar PV energy assets sold to date under the sale-leaseback program have been considered integral equipment as the cost to remove the energy asset from its existing location would not exceed 10% of its original fair value.

In accordance with our adoption of Topic 842, sale-leaseback transactions are accounted for as financing liabilities on a prospective basis as we retain control of the underlying assets. As these transactions meet the criteria of a failed sale, the proceeds received in prospective transactions are accounted for as long-term financing liabilities with interest rates based upon the underlying details of each specific transaction.

We entered into sale-leaseback arrangements for solar PV energy assets prior to January 1, 2019, which remain under the previous guidance. We recorded a financing lease asset and financing lease obligation in our consolidated balance sheets equal to the lower of the present value of our future minimum leaseback payments or the fair value of the solar PV energy asset. We deferred any gain or loss, which represents the excess or shortfall of cash received from the investor compared to the net book value of the asset, at the time of the sale. We recorded the long-term portion of any deferred gain in other liabilities or deferred loss in other assets and the current portion in accrued expenses and other current liabilities or prepaid expenses and other current assets in our consolidated balance sheets. The deferred amounts are amortized over the lease term and are included in cost of revenues in our consolidated statements of income.

See Notes 8 and 9 for details of our sales-leaseback and financing lease transactions.

Debt Issuance Costs

Debt issuance costs include external costs incurred to obtain financing. Debt issuance costs are amortized over the respective term of the financing using the effective interest method, with the exception of our revolving credit facility and construction loans, as discussed in Note 9, which are amortized on a straight-line basis over the term of the agreement. Debt issuance costs are presented on the consolidated balance sheets along with unamortized debt discounts as a reduction to long-term debt and financing lease liabilities.

Other Liabilities

Other liabilities consist primarily of the long-term portion of deferred revenue related to multi-year operation and maintenance contracts which expire at various dates through 2050. Other liabilities also include the fair value of derivatives and the long-term portions of sale-leaseback deferred gains. See Note 19 for additional derivative disclosures.

Revenue Recognition

We are a provider of comprehensive energy services, including energy efficiency, infrastructure upgrades, energy security and resilience, asset sustainability, and renewable energy solutions for businesses and organizations. Our sustainability services include capital and operational upgrades to a facility's energy infrastructure and the development, construction, ownership, and operation of renewable energy plants. Our revenue is generated from the primary lines of business described below and is recognized in accordance with Revenue from Contracts with Customers (Topic 606).

Projects

Our Projects service relates to energy efficiency projects, which include the design, engineering, and installation of an array of innovative technologies and techniques to improve energy efficiency and control the operation of a building's energy- and water-consuming systems. Renewable energy products and services include, but are not limited to, the design and construction of a

central plant or cogeneration system providing power, heat and/or cooling to a building, or a small-scale plant that produces electricity, gas, heat or cooling from renewable sources of energy.

We recognize revenue from the installation or construction of projects over time using the cost-based input method. We use the total costs incurred on the project relative to the total expected costs to account for the satisfaction of the performance obligation. When the estimate on a contract indicates a loss, or reduces the likelihood of recoverability of such costs, we record the entire estimated loss in the period the loss becomes known. In addition, some contracts contain an element of variable consideration, including liquidated damages and/or penalties, which requires payment to the customer in the event that construction timelines or milestones are not met. We estimate the total consideration payable by the customer when the contracts contain variable consideration provisions, based on the most likely amount anticipated to be recognized for transferring the promised goods or services. As a result, we may constrain revenue to the extent that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

Contracts are often modified for a change in scope or other requirements. Contract modifications exist when the modification either creates new or changes the existing enforceable rights and obligations. Most of our contract modifications are for goods or services that are not distinct from the existing performance obligations. The effect of a contract modification on the transaction price, and the measure of progress for the performance obligation to which it relates, is recognized as an adjustment to revenue (either as an increase or decrease) on a cumulative catch-up basis.

O&M

After an energy efficiency or renewable energy project is completed, we often provide ongoing O&M services under a multi-year contract. These services include operating, maintaining and repairing facility energy systems such as boilers, chillers, and building controls, as well as central power and other small-scale plants. For larger projects, we frequently maintain staff on-site to perform these services.

Maintenance revenue is recognized using the input method. In most cases, O&M fees are fixed annual fees and we record the revenue on a straight-line basis because the on-site O&M services are typically a distinct series of promises and those services have the same pattern of transfer to the customer (i.e., evenly over time). Some O&M service contract fees are based on time expended and in those cases, revenue is recorded based on the time expended in that month.

Energy Assets

Our service offerings include the sale of electricity, heat, cooling, processed biogas, and renewable biomethane fuel from the portfolio of assets that we own and operate. We have constructed and are currently designing and constructing a wide range of renewable energy plants using biogas, solar, biomass, other bio-derived fuels, wind, and hydro sources of energy. Most of our renewable energy projects to date have involved the generation of electricity from solar PV and the sale of electricity, thermal, renewable fuel, or biomethane using biogas as a feedstock. We purchase the biogas that otherwise would be combusted or vented, process it, and either sell it or use it in our energy plants. We have also designed and built, own, operate and maintain plants that take biogas generated in the anaerobic digesters of wastewater treatment plants and turn it into renewable natural gas that is either used to generate energy on-site or that can be sold through the nation's natural gas pipeline grid. We typically enter into a long-term power purchase agreement ("PPA") for the sale of the energy where we own and operate energy producing assets. Many of our energy assets also produce environmental attributes, including renewable energy credits and RINs. In most cases, we sell these attributes under separate agreements with parties other than the PPA customer.

In accordance with specific PPA contract terms, we recognize revenues from the sale and delivery of the energy output from renewable energy plants over time as produced and delivered to the customer. Environmental attributes revenue is recognized at a point in time when the environmental attributes are transferred to the customer in accordance with the transfer protocols of the environmental attributes market that we operate in. In the cases where environmental attributes are sold to the same customer as the energy output, we record revenue monthly for both the energy output and the environmental attribute output, as generated and delivered to the customer. We have determined that certain PPAs contained a lease component in accordance with ASC 840, Leases, prior to the adoption of Topic 842. We recognized $10,904, $11,726 and $9,143 of operating lease revenue under these agreements during the years ended December 31, 2022, 2021, and 2020, respectively.

Other

Our service and product offerings also include integrated-PV, engineering, consulting, and enterprise energy management services, which we recognize over time as the services are provided. We recognize revenue from the sale of solar materials at a point in time when we have transferred physical control of the asset to the customer upon shipment or delivery.

Performance Obligations

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is the unit of account. Performance obligations are satisfied as of a point in time or over time and are supported by contracts with customers. For most of our contracts, there are multiple promises of goods or services. Typically, we provide a significant service of integrating a complex set of tasks and components such as design, engineering, construction management, and equipment procurement for a project contract. The bundle of goods and services are provided to deliver one output for which the customer has contracted. In these cases, we consider the bundle of goods and services to be a single performance obligation. We may also promise to provide distinct goods or services within a contract, such as a project contract for installation of energy conservation measures and post-installation O&M services. In these cases, we separate the contract into more than one performance obligation and allocate the total transaction price to each performance obligation in an amount based on the estimated relative standalone selling prices of the promised goods or services underlying each performance obligation.

Contract Acquisition Costs

We are required to account for certain acquisition costs over the life of the contract, consisting primarily of commissions. Commission costs are incurred commencing at contract signing. Commission costs are allocated across all performance obligations and deferred and amortized consistent with the pattern of revenue recognition.

Contract Assets and Contract Liabilities

Contract assets represent our rights to consideration in exchange for services transferred to a customer that have not been billed as of the reporting date. Our rights to consideration are generally unconditional at the time our performance obligations are satisfied. Unbilled revenue, presented as costs and estimated earnings in excess of billings, represent amounts earned and billable that were not invoiced at the end of the fiscal period.

When we receive consideration, or such consideration is unconditionally due, from a customer prior to transferring goods or services to the customer under the terms of a sales contract, we record deferred revenue, which represents a contract liability. Deferred revenue, presented as billings in excess of cost and estimated earnings, typically results from billings in excess of costs incurred and advance payments received on project contracts.

At the inception of a contract, we expect the period between when we satisfy our performance obligations, and when the customer pays for the services, will be one year or less. As such, we elected to apply the practical expedient which allows us not to adjust the promised amount of consideration for the effects of a significant financing component, when a financing component is present.

Cost of Revenues

Cost of revenues includes the cost of labor, materials, equipment, subcontracting and outside engineering that are required for the development and installation of projects, as well as preconstruction costs, sales incentives, associated travel, inventory obsolescence charges, amortization of intangible assets related to customer contracts, and, if applicable, costs of procuring financing. A majority of our contracts have fixed price terms, however, in some cases we negotiate protections, such as a cost-plus structure, to mitigate the risk of rising prices for materials, services, and equipment.

Cost of revenues also includes the costs of maintaining and operating the small-scale renewable energy plants that we own, including the cost of fuel (if any) and depreciation charges.

Income Taxes

We account for income taxes based on the liability method that requires the recognition of deferred income taxes based on expected future tax consequences of differences between the financial statement basis and the tax basis of assets and liabilities. We calculate deferred income taxes using the enacted tax rates in effect for the year in which the differences are expected to be reflected in the tax return.

We account for uncertain tax positions using a "more-likely-than-not" threshold for recognizing and resolving uncertain tax positions. The evaluation of uncertain tax positions is based on factors that include changes in tax law, the measurement of tax positions taken or expected to be taken in tax returns, the effective settlement of matters subject to audit, new audit activity and changes in facts or circumstances related to a tax position. We evaluate uncertain tax positions on a quarterly basis and adjust the level of the liability to reflect any subsequent changes in the relevant facts surrounding the uncertain positions.

Our liabilities for uncertain tax positions can be relieved only if the contingency becomes legally extinguished through either payment to the taxing authority or the expiration of the statute of limitations, the recognition of the benefits associated with the position meet the "more-likely-than-not" threshold or the liability becomes effectively settled through the examination process.

We consider matters to be effectively settled once the taxing authority has completed all of its required or expected examination procedures, including all appeals and administrative reviews; we have no plans to appeal or litigate any aspect of the tax position; and we believe that it is highly unlikely that the taxing authority would examine or re-examine the related tax position. We also accrue for potential interest and penalties related to unrecognized tax benefits as a component of income tax expense.

Under the guidance, we have recorded long term deferred tax assets and deferred tax liabilities based on the underlying jurisdiction in the consolidated balance sheets as of December 31, 2022 and 2021, respectively. See Note 10 for additional information on income taxes.

Foreign Currency

The local currency of our foreign operations is considered the functional currency of such operations. All assets and liabilities of these foreign operations are translated into U.S. dollars at year-end exchange rates. Income and expense items are translated at average exchange rates prevailing during the year. Translation adjustments are accumulated as a separate component of stockholders' equity. Foreign currency translation gains and losses are reported in the consolidated statements of comprehensive income. Foreign currency transaction gains and losses are reported within other expenses, net in the consolidated statements of income. See Note 17.

Fair Value Measurements

We follow the guidance related to fair value measurements for all of our non-financial assets and non-financial liabilities, except for those recognized at fair value in the financial statements at least annually. These assets include goodwill and long-lived assets measured at fair value for impairment assessments, and non-financial assets and liabilities initially measured at fair value in a business combination.

Financial instruments consist of cash and cash equivalents, restricted cash, accounts and notes receivable, long-term contract receivables, accounts payable, accrued expenses and other current liabilities, financing lease assets and liabilities, contingent consideration, short- and long-term borrowings, make-whole provisions, interest rate swaps, and commodity swaps. Because of their short maturity, the carrying amounts of cash and cash equivalents, restricted cash, accounts and notes receivable, accounts payable, accrued expenses and other current liabilities, and short-term borrowings approximate fair value.

The carrying value of long-term variable-rate debt approximates fair value. As of December 31, 2022, the carrying value of our long-term debt exceeds its fair value of $869,771 by approximately $14,283. Fair value of our debt is based on quoted market prices or on rates available to us for debt with similar terms and maturities, which are level two inputs of the fair value hierarchy, as defined in Note 18.

Stock-based Compensation Expense

We measure and record stock-based compensation expense for all stock-based payment awards based on estimated fair value. We may provide stock-based awards of shares of restricted common stock and grants of stock options to employees, directors, outside consultants, and others through various equity plans including our Employee Stock Purchase Plan (the "ESPP") for employees.

Stock-based compensation expense, net of actual forfeitures, is recognized based on the grant-date fair value on a straight-line basis over the requisite service period of the awards. Certain option grants have performance conditions that must be achieved prior to vesting and are expensed based on the expected achievement at each reporting period. We estimate the fair value of the stock-based awards, including stock options, using the Black-Scholes option-pricing model. Determining the fair value of stock-based awards requires the use of highly subjective assumptions, including the fair value of the common stock underlying the award, the expected term of the award and expected stock price volatility.

The assumptions used in determining the fair value of stock-based awards represent management's estimates, which involve inherent uncertainties and the application of management judgment. The risk-free interest rates are based on the U.S. Treasury yield curve in effect at the time of grant, with maturities approximating the expected life of the stock options.

We have no history of paying dividends. Additionally, as of each of the grant dates, there was no expectation that we would pay dividends over the expected life of the options. The expected life of the awards is estimated based upon the period stock option holders will retain their vested options before exercising them. We use historical volatility as the expected volatility assumption required in the Black-Scholes model.

We recognize compensation expense for only the portion of options that are expected to vest. If there are any modifications or cancellations of the underlying invested securities or the terms of the stock option, it may be necessary to accelerate, increase or cancel any remaining unamortized stock-based compensation expense.

Share Repurchase Program

In April 2016, our Board of Directors authorized the repurchase of up to $10,000 of our Class A common stock from time to time on the open market or in privately negotiated transactions. Our Board of Directors authorized an increase in the share repurchase to $15,000 of our Class A common stock in February 2017 and to $17,553 of our Class A common stock in August 2019. The timing and amount of any shares repurchased will be determined by management based on its evaluation of market conditions and other factors. Any repurchased shares will be available for use in connection with our stock plans and for other corporate purposes. The repurchase program has and will be funded using our working capital and borrowings under our revolving line of credit. We account for share repurchases using the cost method and the cost of the share repurchase is recorded entirely in treasury stock, a contra equity account. During the years ended December 31, 2022 and December 31, 2021, we repurchased no shares, and during the year ended December 31, 2020, we repurchased 0.5 shares of common stock in the amount of $6, net of fees of immaterial amounts.

Derivative Financial Instruments

In the normal course of business, we utilize derivatives contracts as part of our risk management strategy to manage exposure to market fluctuations in interest and commodity rates. These instruments are subject to various credit and market risks. Controls and monitoring procedures for these instruments have been established and are routinely reevaluated. Credit risk represents the potential loss that may occur because a party to a transaction fails to perform according to the terms of the contract. The measure of credit exposure is the replacement cost of contracts with a positive fair value. We seek to manage credit risk by entering into financial instrument transactions only through counterparties that we believe are creditworthy.

Market risk represents the potential loss due to the decrease in the value of a financial instrument caused primarily by changes in interest rates and commodity prices. We seek to manage market risk by establishing and monitoring limits on the types and degree of risk that may be undertaken. As a matter of policy, we do not use derivatives for speculative purposes and consider the use of derivatives with all financing transactions to mitigate risk.

We account for our interest rate and commodity swaps as derivative financial instruments in accordance with ASC Topic 815, Derivatives and Hedging. Under this guidance, derivatives are carried on our consolidated balance sheets at fair value which is determined based on observable market data in combination with expected cash flows for each instrument. Some of our debt agreements contain make-whole provisions which we account for as embedded derivatives in accordance with related guidance. Under this guidance, the derivative is bifurcated from its host contract and recorded on our consolidated balance sheets at fair value by either comparing it against the rates of similar debt instruments under similar terms without a make-whole provision obtained from various highly rated third-party pricing sources or evaluating the present value of the prepayment fee.

We recognize cash flows from derivative instruments not designated as hedges as operating activities in the consolidated statements of cash flows. We recognize all changes in fair value on interest rate swaps designated as effective cash flow hedges in our consolidated statements of comprehensive income. Changes in fair value on derivatives not designated as hedges are recognized in our consolidated statements of income. See Notes 18 and 19 for additional information on our derivative instruments.

Earnings Per Share

Basic earnings per share is calculated using our weighted-average outstanding common shares, including vested restricted shares. When the effects are not anti-dilutive, diluted earnings per share is calculated using the weighted-average outstanding common

shares; the dilutive effect of convertible preferred stock, under the "if converted" method; and the treasury stock method with regard to warrants and stock options; all as determined under the treasury stock method. See Note 13 for our computation of earnings per share.

Variable Interest Entities

Certain contracts are executed jointly through partnership and joint venture arrangements with unrelated third parties. The arrangements are often formed for the single business purpose of executing a specific project and allow us to share risks and/or secure specialty skills required for project execution.

We evaluate each partnership and joint venture at inception to determine if it qualifies as a VIE under ASC 810, Consolidation. A VIE is an entity used for business purposes that either (i) does not have equity investors with voting rights or (ii) has equity investors who are not required to provide sufficient financial resources for the entity to support its activities without additional subordinated financial support. Upon the occurrence of certain events outlined in ASC 810, we reassess our initial determination of whether the partnership or joint venture is a VIE.

We also evaluate whether we are the primary beneficiary of each VIE and consolidate the VIE if we have both (i) the power to direct the economically significant activities of the entity and (ii) the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to the VIE. We consider the contractual agreements that define the ownership structure, distribution of profits and losses, risks, responsibilities, indebtedness, voting rights and board representation of the respective parties in determining whether we qualify as the primary beneficiary. We also consider all parties that have direct or implicit variable interests when determining whether we are the primary beneficiary. As required by ASC 810, management's assessment of whether we are the primary beneficiary of a VIE is continuously performed.

We generally aggregate the disclosures of our VIEs based on certain qualitative and quantitative factors including the purpose and design of the underlying VIEs, the nature of the assets in the VIE, and the type of involvement we have with the VIE including our role and type of interest held in the VIE. As of December 31, 2022, all the VIEs that make up our investment funds (tax equity partnerships) are similar in purpose, design, and our involvement and are aggregated together. Our other consolidated VIEs are similar in purpose, design, and our involvement, and as such, are aggregated together. See Notes 11 and 12 for additional disclosures.

Equity Method Investments

We have entered into a number of joint ventures and using the methodology described above for VIEs, we determined that we are not the primary beneficiary. We do not consolidate the operations of these joint ventures and treat the joint ventures as equity method investments. See Note 11 for additional information on our equity method investments.

Non-Controlling Interests and Redeemable Non-Controlling Interests

Non-controlling interests represent the portion of equity (net assets) in a VIE not attributable, directly or indirectly, to us. For some of our VIEs we perform the attribution of income or loss and comprehensive income or loss on the basis of our relative ownership interests and the non-controlling interests. These non-controlling interests which do not contain redemption features are classified within equity on our consolidated balance sheets.

In September 2015, June 2017, June 2018, October 2018 and December 2019, we formed investment funds (tax equity partnerships) with different third-party investors which granted the applicable investor ownership interests in the net assets of certain of our renewable energy project subsidiaries. As of December 31, 2022, we had three such investment funds remaining, each with a different third-party investor.

We entered into these agreements in order to finance the costs of constructing energy assets which are under long-term customer contracts. We have determined that these entities qualify as VIEs and that we are the primary beneficiary in the operational partnerships for accounting purposes. Accordingly, we consolidate the assets and liabilities and operating results of the entities in our consolidated financial statements. We recognize the investors' share of the net assets of the subsidiaries as redeemable non-controlling interests in our consolidated balance sheets.

We have determined that the provisions in the contractual arrangements represent substantive profit-sharing arrangements and that the appropriate methodology for attributing income and loss to the redeemable non-controlling interests each period is a balance sheet approach referred to as the hypothetical liquidation at book value ("HLBV") method. Under the HLBV method, the amounts of income and loss attributed to the redeemable non-controlling interests in the consolidated statements of income reflect changes

in the amounts the investors would hypothetically receive at each balance sheet date under the liquidation provisions of the contractual agreements, assuming the net assets of this funding structure were liquidated at recorded amounts. The investors' non-controlling interest in the results of operations of this funding structure is determined as the difference in the non-controlling interest's claim under the HLBV method at the start and end of each reporting period, after taking into account any capital transactions, such as contributions or distributions, between our subsidiaries and the investors.

We classified the non-controlling interests with redemption features that are not solely within our control outside of permanent equity on our consolidated balance sheets. The redeemable non-controlling interests will be reported using the greater of their carrying value at each reporting date as determined by the HLBV method or the estimated redemption values in each reporting period. See Notes 11 and 12 for additional information.

Recent Accounting Pronouncements

Reference Rate Reform

In March 2020, the FASB issued ASU 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting. ASU 2020-04, as amended by ASU 2021-01 in January 2021, directly addressing the effects of reference rate reform on financial reporting as a results of the cessation of the publication of certain London interbank offered rate ("LIBOR") rates beginning December 31, 2021, with complete elimination of the publication of the LIBOR rates by June 30, 2023. The guidance provides optional expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform by virtue of referencing LIBOR or another reference rate expected to be discontinued. This guidance became effective on March 12, 2020, and then amended by ASU 2022-06 in December 2022, extending the adoption date to no later than December 31, 2024, with early adoption permitted. We are currently evaluating the impact that adopting this new accounting standard would have on our consolidated financial statements.

Government Assistance

In November 2021, the FASB issued ASU 2021-10, Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance, Accounting for Contract Assets and Contract Liabilities from Contracts with Customers, which requires annual disclosures about certain types of government assistance received. ASU 2021-10 is effective for our fiscal year beginning after December 15, 2021. We adopted this guidance as of January 1, 2022, and the adoption did not have an impact on our consolidated financial statements.

Derivatives and Hedging

In March 2022, the FASB issued ASU 2022-01, Derivatives and Hedging (Topic 815): Fair Value Hedging—Portfolio Layer Method, which expands the current single-layer method to allow multiple hedged layers of a single closed portfolio to be hedged under the method. ASU 2022-01 is effective for our fiscal year ending beginning after December 15, 2022. We are currently evaluating the impact that adopting this new accounting standard would have on our consolidated financial statements.

Fair Value Measurement

In June 2022, the FASB issued ASU 2022-03, Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions, which clarifies the measurement criteria for equity securities and refines the disclosure requirements for equity securities subject to contractual sale restrictions. ASU 2022-03 is effective for our fiscal year ending beginning after December 15, 2023. We are currently evaluating the impact that adopting this new accounting standard would have on our consolidated financial statements.

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

Our reportable segments for the year ended December 31, 2022 were U.S. Regions, U.S. Federal, Canada, Alternative Fuels (formerly Non-Solar Distributed Generation ("Non-Solar DG")), and All Other. On January 1, 2022, we changed the structure of our internal organization, and our "All Other" segment now includes our U.S.-based enterprise energy management services previously included in our U.S Regions segment and our U.S. Regions segment now includes U.S. project revenue and associated costs previously included in our former Non-Solar DG segment. As a result, previously reported amounts have been reclassified for comparative purposes.

The following table presents our revenue disaggregated by line of business and reportable segment for the year ended December 31, 2022:

	US Regions	U.S. Federal	Canada	Alternative Fuels	All Other	Total
Project revenue	$ 1,049,465	$ 333,846	$ 44,273	$ —	$ 53,680	$ 1,481,264
O&M revenue	22,217	51,857	42	10,377	472	84,965
Energy assets	47,372	5,822	4,447	104,082	368	162,091
Integrated-PV	—	—	—	—	49,696	49,696
Other	4,289	366	9,796	—	31,955	46,406
Total revenues	$ 1,123,343	$ 391,891	$ 58,558	$ 114,459	$ 136,171	$ 1,824,422

The following table presents our revenue disaggregated by line of business and reportable segment for the year ended December 31, 2021:

	US Regions	U.S. Federal	Canada	Alternative Fuels	All Other	Total
Project revenue	$ 488,507	$ 340,686	$ 36,776	$ —	$ 37,991	$ 903,960
O&M revenue	21,551	47,072	71	9,288	631	78,613
Energy assets	39,433	4,913	4,532	101,811	562	151,251
Integrated-PV	—	—	—	—	41,202	41,202
Other	1,627	277	8,104	124	30,539	40,671
Total revenues	$ 551,118	$ 392,948	$ 49,483	$ 111,223	$ 110,925	$ 1,215,697

The following table presents our revenue disaggregated by line of business and reportable segment for the year ended December 31, 2020:

	US Regions	U.S. Federal	Canada	Alternative Fuels	All Other	Total
Project revenue	$ 369,341	$ 327,626	$ 36,689	$ —	$ 30,950	$ 764,606
O&M revenue	18,633	45,423	169	7,848	289	72,362
Energy assets	33,792	4,358	4,069	75,168	810	118,197
Integrated-PV	—	—	—	—	39,112	39,112
Other	1,888	475	6,830	612	28,193	37,998
Total revenues	$ 423,654	$ 377,882	$ 47,757	$ 83,628	$ 99,354	$ 1,032,275

See Note 16 for our revenue disaggregated by geographical region.

The following table presents information related to our revenue recognized over time:

	Year Ended December 31,		
	2022	2021	2020
Percentage of revenue recognized over time	96 %	95 %	94 %

The remainder of our revenue is for products and services transferred at a point in time, at which point revenue is recognized.

Contract Balances

The following table provides information about receivables, contract assets, and contract liabilities from contracts with customers:

	December 31, 2022	December 31, 2021
Accounts receivable, net	$ 174,009	$ 161,970
Accounts receivable retainage	38,057	43,067
Contract Assets		
Costs and estimated earnings in excess of billings	576,363	306,172
Contract Liabilities		
Billings in excess of cost and estimated earnings	34,796	35,918
Billings in excess of cost and estimated earnings, non-current [1]	7,617	6,481
Total contract liabilities	$ 42,413	$ 42,399

(1) Performance obligations that are expected to be completed beyond the next twelve months and are included in other liabilities in the consolidated balance sheets.

The increase in contract assets for the year ended December 31, 2022 was primarily due to revenue recognized of $1,371,455, offset in part by billings of $1,103,926. Contract assets also increased due to reclassifications, primarily from contract liabilities as a result of timing of customer payments. The increase in contract liabilities was primarily driven by the receipt of advance payments from customers, and related billings, as well as reclassifications from contract assets as a result of timing of customer payments. The advance payments and reclassifications exceeded the recognition of revenue as performance obligations were satisfied. For the year ended December 31, 2022, we recognized revenue of $135,506 and billed $129,749 to customers that had balances which were included in contract liabilities at December 31, 2021.

The increase in contract assets for the year ended December 31, 2021 was primarily due to revenue recognized of $708,384, offset in part by billings of $618,041. The increase in contract liabilities was primarily driven by the receipt of advance payments from customers, and related billings, exceeding recognition of revenue as performance obligations were satisfied. For the year ended December 31, 2021, we recognized revenue of $207,746, and billed customers $181,284 to customers that had balances which were included in contract liabilities at December 31, 2020.

Backlog

Our remaining performance obligations ("fully-contracted backlog") represent the unrecognized revenue value of our contract commitments. Our backlog may vary significantly each reporting period based on the timing of major new contract commitments and the fully-contracted backlog may fluctuate with currency movements. In addition, our customers have the right, under some circumstances, to terminate contracts or defer the timing of our services and their payments to us. At December 31, 2022, we had fully-contracted backlog of $2,232,445 and approximately 31% of our fully-contracted backlog is anticipated to be recognized as revenue in the next twelve months. The remaining performance obligations primarily relate to the energy efficiency and renewable energy construction projects, including long-term O&M services related to these projects. The long-term services have varying initial contract terms, up to 25 years.

We applied the practical expedient for certain revenue streams to exclude the value of remaining performance obligations for (i) contracts with an original expected term of one year or less or (ii) contracts for which we recognize revenue in proportion to the amount we have the right to invoice for services performed.

Contract Acquisition Costs

As of December 31, 2022 and 2021, we had capitalized commission costs of $1,735, related to contracts that were not completed, which were included in other assets in the accompanying consolidated balance sheets. For contracts that have a duration of less than one year, we follow a practical expedient and expense these costs when incurred. During the years ended December 31, 2022 and 2021, the amortization of commission costs related to contracts was not material and have been included in the accompanying consolidated statements of income.

The following table presents information related to our project development costs recognized in the consolidated statements of income on projects that converted to customer contracts:

	Year Ended December 31,		
	2022	2021	2020
Project development costs recognized	$ 15,507	$ 12,737	$ 12,790

No impairment charges in connection with our commission costs or project development costs were recorded during the years ended December 31, 2022, 2021 and 2020.

4. BUSINESS ACQUISITIONS AND RELATED TRANSACTIONS

In November 2021, we entered into a stock purchase agreement to acquire all of the stock of Juice Technologies, Inc. (d/b/a Plug Smart), an Ohio-based energy services company that specializes in the development and implementation of budget neutral capital improvement projects including building controls and building automation systems. In December 2021, we completed the acquisition of Plug Smart, which allows us to expand our existing pipeline and solution offerings in the smart buildings sector. The adjusted purchase consideration was $21,240, of which $17,692 was paid as of December 31, 2021. The consideration also included a hold-back of $750 and other accruals related to possible adjustments to net working capital at the acquisition date and future claims about representations and warranties by the sellers, if any, and a potential contingent consideration earn-out that had a fair value of $2,160 on the date of acquisition. The earn-out includes contingent consideration of up to $5,000 based upon meeting certain future EBITDA targets over the next five years. Cash acquired was $2,771 and no debt was assumed. The transaction costs, pro-forma effects of this acquisition on our operations, and contribution to revenue and net income for the years ended December 31, 2021 presented in the consolidated statements of income were not material.

The estimated goodwill of $12,499 from the Plug Smart acquisition consists largely of expected benefits, including the combined entities experience, technical problem-solving capabilities, and the acquired workforce. This goodwill is not deductible for income tax purposes. The estimated fair value of tangible and intangible assets acquired and liabilities assumed are based on management's estimates and assumptions that are preliminary and subject to final working capital adjustments as of the acquisition date. During the year ended December 31, 2022, we made a final measurement period adjustment to working capital, goodwill, and intangible assets, and made a payment of $275 for the December 2021 earn-out. The fair value of the remaining contingent consideration increased to $3,800 as of December 31, 2022. See Note 18 for additional information on contingent consideration.

We did not complete any acquisitions during the year ended December 31, 2022.

A summary of the cumulative consideration paid, allocation of the purchase price, and adjustments made for the Plug Smart acquisition are presented in the table below:

	Preliminary December 31, 2021	Measurement Period Adjustment	As Adjusted December 31, 2022
Cash and cash equivalents	$ 2,771	$ —	$ 2,771
Accounts receivable	3,370	—	3,370
Costs and estimated earnings in excess of billings	1,663	—	1,663
Prepaid expenses and other current assets	1,499	—	1,499
Goodwill	12,499	389	12,888
Intangible assets	6,354	(409)	5,945
Operating lease assets	488	—	488
Accounts payable	(1,795)	—	(1,795)
Accrued expenses and other current liabilities	(964)	(127)	(1,091)
Current portion of operating lease liabilities	(145)		(145)
Billings in excess of cost and estimated earnings	(2,464)	—	(2,464)
Deferred income tax liabilities	(1,693)		(1,693)
Long-term operating lease liabilities, net of current portion	(343)	—	(343)
Purchase price	$ 21,240	$ (147)	$ 21,093
Purchase price, net of cash acquired	$ 18,469	$ (147)	$ 18,322
Total fair value of consideration	$ 21,240		$ 21,093
Cash paid to date	$ 17,692		$ 18,727
Hold-back	$ 750		$ 500

5. GOODWILL AND INTANGIBLE ASSETS, NET

Goodwill, Net

The changes in the goodwill balances by reportable segment are as follows:

	U.S. Regions	U.S. Federal	Canada	Other	Total
Carrying Value of Goodwill					
Balance, December 31, 2020	$ 26,705	$ 3,981	$ 3,441	$ 24,587	$ 58,714
Goodwill acquired during the year	12,499	—	—	—	12,499
Foreign currency translation	—	—	13	(69)	(56)
Balance, December 31, 2021	39,204	3,981	3,454	24,518	71,157
Remeasurement adjustments	389	—	—	—	389
Foreign currency translation	—	—	(218)	(695)	(913)
Balance, December 31, 2022	$ 39,593	$ 3,981	$ 3,236	$ 23,823	$ 70,633

Our annual goodwill impairment review was performed each year-end using a quantitative approach, and we determined that there was no goodwill impairment for the years ended December 31, 2022 and 2021. We tested goodwill for impairment at the reporting unit level utilizing the income approach which included a discounted cash flow method with a market approach. Based on our assessment, all our reporting units with goodwill had estimated fair values that exceeded their carrying values by at least 20% as of December 31, 2022 and 61% as of December 31, 2021.

Intangible Assets, Net

Definite-lived intangible assets, net consisted of the following:

	As of December 31,	
	2022	2021
Gross carrying amount		
Customer contracts	$ 8,288	$ 8,459
Customer relationships	17,755	18,723
Non-compete agreements	2,980	3,054
Technology	2,713	2,745
Tradenames	541	545
Total gross carrying amount	32,277	33,526
Accumulated Amortization		
Customer contracts	8,288	7,961
Customer relationships	13,066	12,268
Non-compete agreements	2,980	3,054
Technology	2,713	2,744
Tradenames	537	538
Total accumulated amortization	27,584	26,565
Intangible assets, net	$ 4,693	$ 6,961

Customer contracts are amortized ratably over the period of the acquired customer contracts ranging in periods from approximately one to eight years. All other intangible assets are amortized over periods ranging from approximately four to fifteen years, as defined by the nature of the respective intangible asset.

Separable intangible assets that are not deemed to have indefinite lives are amortized over their useful lives. We annually assess whether a change in the useful life is necessary, or more frequently if events or circumstances warrant. No changes to useful lives were made during the years ended December 31, 2022, 2021, and 2020.

The table below sets forth amortization expense:

		Year Ended December 31,		
	Location	2022	2021	2020
Customer contracts	Cost of revenues	$ 551	$ —	$ 59
Customer relationships	Selling, general and administrative expenses	1,303	310	604
Non-compete agreements	Selling, general and administrative expenses	—	—	—
Technology	Selling, general and administrative expenses	1	8	19
Tradenames	Selling, general and administrative expenses	3	3	3
Total amortization expense		$ 1,858	$ 321	$ 685

Amortization expense for our definite-lived intangible assets for the next five years to be included in cost of revenues or selling, general, and administrative expenses is as follows:

	Estimated Amortization Expense
2023	$ 1,303
2024	1,298
2025	1,296
2026	796
Total	$ 4,693

6. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consisted of the following:

	December 31,	
	2022	2021
Furniture and office equipment	$ 3,023	$ 3,008
Computer equipment and software costs	22,179	17,593
Leasehold improvements	2,483	2,472
Automobiles	1,896	1,419
Land	6,781	6,781
Property and equipment, gross	36,362	31,273
Less: accumulated depreciation	(20,655)	(18,156)
Property and equipment, net	$ 15,707	$ 13,117

The following table sets forth our depreciation expense on property and equipment:

	Year Ended December 31,		
Location	2022	2021	2020
Selling, general & administrative expenses	$ 2,665	$ 3,143	$ 3,317

7. ENERGY ASSETS, NET

Energy assets, net consisted of the following:

	December 31,	
	2022	2021
Energy assets [1]	$ 1,493,913	$ 1,120,712
Less: accumulated depreciation and amortization	(312,388)	(264,181)
Energy assets, net	$ 1,181,525	$ 856,531

(1) Includes financing lease assets (see Note 8), capitalized interest and ARO assets (see tables below).

The following table sets forth our depreciation and amortization expense on energy assets, net of deferred grant amortization:

	Year Ended December 31,		
Location	2022	2021	2020
Cost of revenues [1]	$ 49,755	$ 43,113	$ 38,039

(1) Includes depreciation and amortization expense on financing lease assets. See Note 8.

The following table presents the interest costs relating to construction financing during the period of construction, which were capitalized as part of energy assets, net:

	Year Ended December 31,		
	2022	2021	2020
Capitalized interest	$ 13,050	$ 2,814	$ 4,341

During September 2021, there was a triggering event which caused us to perform an impairment analysis on an energy asset group within the Alternative Fuels segment. This triggering event was related to a decision by the applicable state environmental agency to discontinue an environmental permit. This action materially modified the obligation of the landfill owner to continue maintaining the wellfield, therefore, we plan to decommission the impacted landfill gas plant. As a result, we recorded an impairment charge of $1,901, which fully impaired this asset group.

During August 2020, we performed an engine overhaul on one of our energy assets, however, the engine consistently failed to achieve emissions compliance and we considered the engine unsalvageable. As a result of this event, we performed an impairment analysis on this energy asset group within the Alternative Fuels segment and recorded an impairment charge of $1,028, which fully impaired this asset group.

The impairment charges are included in selling, general, and administrative expenses within the consolidated statements of income for the years ended December 31, 2021 and 2020.

We assessed the impact that the supply chain challenges, development of the COVID-19 pandemic, war in Ukraine, evolving relations between the U.S. and China, and other geopolitical tensions has or is expected to have on the business, and concluded that it was not a triggering event for impairment purposes and there was no indication of impairment of long-lived assets, except as indicated above, for the years ended December 31, 2022 and 2021.

We include certain customer energy asset projects in our energy assets, as we control and operate the assets as well as obtain financing during the construction and operating periods of the assets. We also carry a liability associated with these energy assets as we have an obligation to the customer for performance of the asset. Provided that performance criteria is met, the customer is responsible for repayment of the liability to the financing party. As of December 31, 2022 there were five energy asset projects which were included in energy assets and as of December 31, 2021, there were four.

The liabilities recognized in association with these customer energy assets were as follows:

	December 31,	
Location	2022	2021
Accrued expenses and other current liabilities	$ 261	$ 245
Other liabilities	27,168	12,827
Total customer energy asset projects liability	$ 27,429	$ 13,072

In order to expand our portfolio of energy assets, we have acquired energy projects, which did not constitute businesses under the guidance discussed in Note 2.

We acquired and closed on the following energy projects:

	December 31,	
	2022	2021
Number of projects	2	1
Purchase price [1]	$ 11,022	$ 3,461
Remaining deferred purchase consideration on previously closed projects [1]	$ —	$ 303

(1) In 2021 amounts were included in accrued expenses and other current liabilities.

Our ARO assets and ARO liabilities relate to the removal of equipment and pipelines at certain renewable gas projects and obligations related to the decommissioning of certain solar facilities.

The following tables sets forth information related to our ARO assets and ARO liabilities:

	Location	December 31, 2022	December 31, 2021
ARO assets, net	Energy assets, net	$ 2,359	$ 1,939
ARO liabilities, current	Accrued expenses and other current liabilities	$ —	$ 6
ARO liabilities, non-current	Other liabilities	3,052	2,342
		$ 3,052	$ 2,348

	Year Ended December 31, 2022	Year Ended December 31, 2021	Year Ended December 31, 2020
Depreciation expense of ARO assets	$ 146	$ 113	$ 78
Accretion expense of ARO liabilities	$ 146	$ 123	$ 93

8. LEASES

We enter into a variety of operating lease agreements through the normal course of business including certain administrative offices. The leases are long-term, non-cancelable real estate lease agreements, expiring at various dates through fiscal 2032. The agreements generally provide for fixed minimum rental payments and the payment of utilities, real estate taxes, insurance, and repairs. We also lease vehicles, IT equipment and certain land parcels related to our energy projects, expiring at various dates through fiscal 2050. The office and land leases make up a significant portion of our operating lease activity. Many of these leases have one or more renewal options that allow us, at our discretion, to renew the lease for six months to seven years. Only renewal options that we believed were likely to be exercised were included in our lease calculations. Many land leases include minimum lease payments that commence or increase when the related project becomes operational. In these cases, we estimated the commercial operation date used to calculate the ROU asset and minimum lease payments.

A portion of our real estate leases are generally subject to annual changes in the Consumer Price Index ("CPI"). We utilized each lease's minimum lease payments to calculate the lease balances upon transition. The subsequent increases in rent based on changes in CPI were excluded and will be excluded for future leases from the calculation of the lease balances, but will be recorded to the consolidated statements of income as part of our operating lease costs.

The discount rate was calculated using an incremental borrowing rate based on financing rates on secured comparable notes with comparable terms and a synthetic credit rating calculated by a third party. We elected to apply the discount rate using the remaining lease term at the date of adoption.

We also enter into leases for service agreements and other leases related to our construction projects such as equipment, mobile trailers, and other temporary structures. We utilize the portfolio approach for this class of lease, which are either short-term leases or are not material.

Rent and related expenses were as follows:

	Year Ended December 31, 2022	Year Ended December 31, 2021	Year Ended December 31, 2020
Rent and related expenses	$ 9,199	$ 9,740	$ 8,891

We have a number of leases that are classified as financing leases, which related to transactions that were considered sale-leasebacks under ASC 840. See the sale-leaseback section below for additional information on our financing leases.

The table below sets forth supplemental balance sheet information related to leases:

	December 31,	
	2022	2021
Operating Leases		
Operating lease assets	$ 38,224	$ 41,982
Current portion of operating lease liabilities	$ 5,829	$ 6,276
Long-term operating lease liabilities, net of current portion	31,703	35,135
Total Operating lease liabilities	$ 37,532	$ 41,411
Weighted-average remaining lease term	13 years	12 years
Weighted-average discount rate	6.0 %	5.7 %
Financing Leases (1)		
Energy assets, net	$ 29,365	$ 31,876
Current portions of financing lease liabilities	$ 1,992	$ 3,125
Long-term financing lease liabilities, net of current portion, unamortized discount and debt issuance costs	14,068	16,101
Total financing lease liabilities	$ 16,060	$ 19,226
Weighted-average remaining lease term	14 years	15 years
Weighted-average discount rate	12.1 %	12.1 %

(1) Includes sale-leaseback transactions entered into prior to January 1, 2019.

The costs related to our leases were as follows:

	Year Ended December 31,		
	2022	2021	2020
Operating Leases			
Operating lease costs	$ 8,372	$ 8,780	$ 7,970
Financing Leases			
Amortization expense	2,104	2,129	2,129
Interest on lease liabilities	2,147	2,541	3,019
Total financing lease costs	4,251	4,670	5,148
Total lease costs	$ 12,623	$ 13,450	$ 13,118

Supplemental cash flow information related to our leases was as follows:

	Year Ended December 31,	
	2022	2021
Cash paid for amounts included in the measurement of operating lease liabilities	$ 7,978	$ 11,385
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 4,872	$ 10,007

The table below sets forth our estimated minimum future lease obligations under our leases:

	Operating Leases	Financing Leases
Year ended December 31,		
2023	$ 7,769	$ 3,627
2024	6,585	2,565
2025	5,319	2,213
2026	3,233	2,054
2027	2,631	1,922
Thereafter	29,383	17,891
Total minimum lease payments	$ 54,920	$ 30,272
Less: interest	17,388	14,212
Present value of lease liabilities	$ 37,532	$ 16,060

We have future lease commitments for four leases, which do not yet meet the criteria for recording ROU assets or ROU liabilities as the leases have not commenced. The net present value of these commitments total $12,560 as of December 31, 2022 which relate to lease payments to be made over a range of five to 20 years.

Non-recourse Sale-leasebacks and Financing Leases

We entered into sale-leaseback arrangements for solar PV energy assets prior to January 1, 2019, which remain under the previous guidance.

The following table presents a summary of amounts related to these sale-leasebacks included in our consolidated balance sheets:

	December 31,	
	2022	2021
Deferred loss, short-term, net	115	115
Deferred loss, long-term, net	1,455	1,571
Total deferred loss	$ 1,570	$ 1,686
Deferred gain, short-term, net	345	345
Deferred gain, long-term, net	4,430	4,775
Total deferred gain	$ 4,775	$ 5,120

Net gains from amortization expense in cost of revenues related to deferred gains and losses were $383, $230 and $228 for the years ended December 31, 2022, 2021, and 2020, respectively.

August 2018 Master Sale-leaseback

We enter into amendments to our August 2018 master lease and participation agreement from to time to time, which may extend the maturity date, increase the availability, or modify other covenants.

During the year ended December 31, 2022, we entered into amendments to this facility which extended the current maturity date to June 30, 2023.

We sold and leased back four energy assets for $23,905 in cash proceeds under this facility during the year ended December 31, 2022. The agreements have low interest rates ranging from 0% to 1.17%, as a result of tax credits which were transferred to the counterparty. As of December 31, 2022, approximately $204,664 remained available under this lending commitment.

December 2020 Master Sale-leaseback

We enter into amendments to our December 2020 master lease and participation agreement from to time to time, which may extend the maturity date, increase the availability, or modify other covenants.

During the year ended December 31, 2022, we entered into amendments to increase our maximum commitment by $23,559 and the extended the current maturity date to December 31, 2022. We sold and leased back eight energy assets for $18,254 in cash proceeds under this facility during the year ended December 31, 2022. As of December 31, 2022, no funding is available under this lending commitment.

See Note 9 for additional information on these financing facilities.

9. DEBT AND FINANCING LEASE LIABILITIES

Long-term debt was comprised of the following:

	As of December 31,	
	2022	2021
Senior secured credit facility, 6.58%, due September 2023 to March 2025 [1] [8]	$ 477,900	$ 97,813
June 2020 construction revolver, 5.68%, due June 2023 [2] [8]	$ 39,536	$ 23,935
July 2020 construction revolver, 5.92%, due June 2023 [2] [8]	5,855	7,763
Subtotal non-recourse construction revolvers	$ 45,391	$ 31,698
Variable rate term loan, 7.02%, due June 2024 [2] [3]	$ 3,403	$ 4,264
Term loan, 6.11% due June 2028 [5]	2,348	2,933
Variable rate term loan, 7.02%, due May 2025 [4]	37,204	38,844
Variable rate term loan, 7.52%, due March 2023 [4]	14,084	14,442
Term loan, 4.95%, due July 2031 [4]	2,588	3,157
Term loan, 5.00%, due March 2028 [4]	2,258	2,688
Term loan, 4.50%, due April 2027 [5]	1,846	10,302
Term loan, 5.61%, due February 2034 [4]	1,437	2,423
Variable rate term loan, 7.22%, due December 2027 [4]	7,874	9,238
Variable rate term loan, due March 2026 [2] [4]	—	38,753
Fixed rate note, 6.50%, due October 2037	92,203	—
Term loan, 5.15%, due December 2038 [2] [4]	23,255	25,465
Variable rate term loan, 6.82%, due June 2033 [2] [3]	6,951	7,657
Variable rate term loan, 6.89%, due October 2029 [2] [5]	6,977	7,762
Fixed rate note, due April 2040	—	224
Fixed rate note, 3.58%, due December 2027 [4]	2,425	3,072
Fixed rate note, 4.92%, due June 2045 [4]	3,474	3,776
Fixed rate note, 3.25%, due March 2046 [4]	37,302	39,474
Variable rate term loan, 7.27%, due July 2030 [4] [8]	2,915	3,662
Fixed rate note, 5.45%, due March 2046	6,859	$ —
Subtotal non-recourse term loans	$ 255,403	$ 218,136
August 2018 master sale-leaseback, 0.00% to 1.17% , due July 2039 to July 2047 [3] [6]	$ 104,011	$ 99,654
December 2020 master sale-leaseback, 0.00%, due December 2040 to December 2042 [4] [6]	16,912	4,961
Subtotal non-recourse sale-leasebacks	$ 120,923	$ 104,615
Financing leases [7]	$ 16,060	$ 19,226
Total debt and financing leases	$ 915,677	$ 471,488
Less: current maturities	331,479	78,934
Less: unamortized discount and debt issuance costs	15,563	15,370
Long-term debt and financing lease liabilities, net of current portion, unamortized discount and debt issuance costs	$ 568,635	$ 377,184

(1) Facility has interest at varying rates monthly in arrears.

(2) These agreements have acceleration causes that, in the event of default, as defined, the payee has the option to accelerate payment terms and make the remaining principal and the required interest balance due according to the agreement.

(3) Facility is payable in semi-annual installments.

(4) Facility is payable in quarterly installments.

(5) Facility is payable in monthly installments.

(6) These agreements are sale-leaseback arrangements and are accounted for as failed sales under the guidance and are classified as financing liabilities. See Note 8.

(7) Financing leases are sale-leaseback arrangements under previous guidance and do not include approximately $14,212 in future interest payments as of December 31, 2022 and $16,272 as of December 31, 2021. See Note 8.

(8) These agreements are now using the Secured Overnight Financing Rate ("SOFR") as the primary reference rate used to calculate interest. See Note 8.

The following table presents the aggregate maturities of long-term debt and financing leases as of December 31, 2022:

2023	$ 331,479
2024	55,717
2025	332,495
2026	27,742
2027	17,253
Thereafter	150,991
Total maturities	$ 915,677

Senior Secured Credit Facility - Revolver and Term Loans

In March 2022, we entered into the fifth amended and restated senior secured credit facility with five banks, which included the following amendments:

- increased the aggregate amount of total commitments from $245,000 to $495,000,
- increased the aggregate amount of the revolving commitments from $180,000 to $200,000,
- increased the existing term loan A from $65,000 to $75,000,
- extended the maturity date of the revolving commitment and term loan A from June 28, 2024 to March 4, 2025,
- added a delayed draw term loan A for up to $220,000 through a September 4, 2023 maturity date,
- increased the total funded debt to EBITDA covenant ratio from a maximum of 3.50 to 4.50 for the quarter ended March 31, 2022; 4.25 for the quarter ending June 30, 2022, 4.00 for the quarters ending September 30, 2022 and December 31, 2022; and 3.50 thereafter,
- specified the debt service coverage ratio (the ratio of (a) cash flow of the core Ameresco companies, to (b) debt service of the core Ameresco companies as of the end of each fiscal quarter) to be less than 1.5, and
- increased our limit under an energy conversation project financing to $650,000, which provides us with flexibility to grow our federal business further.

We accounted for this amendment as a modification and at closing we incurred $2,048 in lenders fees which were reflected as debt discount and $352 in third party fees which were reflected as debt issuance costs. The unamortized debt discount and issuance costs of the previous agreement are being amortized over the remaining term of the amended agreement, with the exception of $96 of costs relating to a previous syndicated lender which did not participate in this amendment. These costs were expensed in other expenses, net during the year ended December 31, 2022.

In June 2022, we entered into the first amendment to the fifth amended and restated senior secured credit facility, which increased the maximum indebtedness incurred under an energy conservation project financing from $650,000 to $725,000 from and after April 1, 2022, to and including December 30, 2022. As of December 31, 2022, the maximum indebtedness incurred under an energy conservation project financing reverted back to $650,000.

The revolving credit facility may be increased up to an additional $100,000 in increments of at least $25,000 at the approval of lenders, subject to certain conditions. Up to $20,000 of the revolving credit facility may be borrowed in Canadian dollars, Euros, or pounds sterling. We are the sole borrower under the credit facility. The obligations under the credit facility are guaranteed by certain of our direct and indirect wholly owned domestic subsidiaries and are secured by a pledge of all of Ameresco's and such subsidiary guarantors' assets, other than the equity interests of certain subsidiaries and assets held in non-core subsidiaries (as defined in the agreement).

The table below sets forth amounts outstanding under the credit facility, net of unamortized debt discounts and debt issuance costs:

	Rate as of December 31, 2022	As of December 31, 2022	As of December 31, 2021
Term loan A	6.13 %	$ 75,000	$ 52,720
Delayed draw term loan	6.09 %	$ 220,000	$ —
Revolving credit facility	7.35 %	$ 182,900	$ 44,681
Total senior secured credit facility outstanding [1]		$ 477,900	$ 97,401

(1) Net of unamortized debt discount and debt issuance costs of $1,562 in 2022 and $412 in 2021.

As of December 31, 2022, funds of $345 were available for borrowing under the revolving credit facility and we had $16,755 in letters of credit outstanding. We expect to use the remaining funds available under the credit facility for general corporate purposes, including permitted acquisitions, refinancing of existing indebtedness and working capital.

The interest rate for borrowings under the credit facility is based on (i) each term loan shall bear interest at the term SOFR for such interest period plus the applicable rate for such facility; (ii) each base rate loan shall bear interest at a rate per annum equal to the base rate plus the applicable rate; (iii) each alternative currency daily rate loan shall bear at a rate per annum equal to the alternative currency daily rate plus the applicable rate; (iv) each alternative currency term rate loan shall bear interest at a rate per annum equal to the alternative currency term rate for such interest period plus the applicable rate; and (v) each swingline loan shall bear interest at a rate per annum equal to the base rate plus the applicable rate.

The revolving credit facility does not require amortization of principal. The term loan requires quarterly principal payments of $1,250 beginning in the first quarter of 2024, with the balance due at maturity. All borrowings may be paid before maturity in whole or in part at our option without penalty or premium, other than reimbursement of any breakage and deployment costs in the case of LIBOR borrowings.

The credit facility limits Ameresco's and our subsidiaries' ability to, among other things: incur additional indebtedness; incur liens or guarantee obligations; merge, liquidate or dispose of assets; make acquisitions or other investments; enter into hedging agreements; pay dividends and make other distributions and engage in transactions with affiliates, except in the ordinary course of business on an arms' length basis.

Under the credit facility, Ameresco and our core domestic subsidiaries may not invest cash or property in, or loan to, our non-core subsidiaries in aggregate amounts exceeding 49% of our consolidated stockholders' equity. In addition, we and our core subsidiaries must maintain a ratio of total funded debt to EBITDA as noted above, and a debt service coverage ratio (as defined in the agreement) of at least 1.5 to 1.0.

Any failure to comply with the financial or other covenants of the credit facility would not only prevent us from being able to borrow additional funds, but would constitute a default, permitting the lenders to, among other things, accelerate the amounts outstanding, including all accrued interest and unpaid fees, under the credit facility, to terminate the credit facility, and enforce liens against the collateral.

The credit facility also includes several other customary events of default, including a change in control of Ameresco, permitting the lenders to accelerate the indebtedness, terminate the credit facility, and enforce liens against the collateral.

For purposes of our senior secured facility, EBITDA, as defined, excludes the results of certain renewable energy projects that we own and for which financing from others remains outstanding; total funded debt, as defined, includes amounts outstanding under both the term loan and revolver portions of the senior secured credit facility plus other indebtedness, but excludes non-recourse indebtedness of project company subsidiaries; and debt service, as defined, includes principal and interest payments on the indebtedness included in total funded debt other than principal payments on the revolver portion of the facility.

Non-recourse Fixed Rate Note, 6.50%, due October 2037

In October 2022, one of our subsidiaries entered into a loan agreement with a new lender under a non-recourse credit facility, refinancing a previous non-recourse credit facility originally signed on October 23, 2020, which was scheduled to expire March 31, 2026.

The new loan is scheduled to mature on October 26, 2037, provides a principal amount of up to $125,000 and bears interest at a rate of 6.50% with a residual percentage of distributable cash flows payable after the maturity date of the loan, until the earlier of the lender achieving an 8.25% "IRR" on funds borrowed under the facility, or the facility discharge date on October 26, 2047. The principal and interest payments are due in quarterly installments based on an 5-year amortization schedule with the principal payments being adjusted based on the distributable cash flows from the three renewable natural gas projects owned and operated by the project companies. No up-front, commitment or structuring fees were payable on the credit facility. The obligations under the loan are guaranteed by all the related subsidiaries and are secured by the subsidiaries' assets as well as our equity interest in the signing subsidiary. Borrowings under the credit facility are otherwise non-recourse to Ameresco.

At the closing, we drew down $80,000 under this facility, approximately $26,530 of which was used to repay all amounts outstanding under the prior loan and the remainder was used to terminate swap obligations, pay transaction costs, make permitted distributions to Ameresco and for the project companies' working capital needs. Unamortized debt discount fees of $528 and debt issuance costs of $35 related to the prior loan were expensed in other expenses, net during the year ended December 31, 2022. In addition, we terminated an interest rate swap and a commodity swap related to the prior loan before their maturity dates. These swap terminations resulted in a settlement gain on undesignated derivatives of $694.

The new facility allows two additional draws, subject to certain conditions, up to the remaining principal amount, to be used to make distributions to Ameresco. On December 21, 2022, we drew down an additional $15,000 under this facility. As of December 31, 2022, $91,698 was outstanding under this facility, net of unamortized debt discount and issuance costs of $505.

Non-recourse Fixed Rate Note, 3.25%, due March 2046, Variable Rate Term Loan, 7.27%, due July 2030, and Fixed Rate Note, 5.45%, due March 31, 2042

In July 2021, we entered into a $44,748 non-recourse debt agreement with a group of lenders. The financing facility consists of gross proceeds of $40,683 in senior secured first lien term notes due March 2046 ("Senior Notes"), gross proceeds of $4,065 in floating rate senior secured second lien term notes due July 2030 ("Second Lien Notes"), and a shelf facility of up to $60,000 available until July 2024. The lenders, in their sole discretion, have the right to approve or deny our funding requests.

In June 2022, two senior secured notes ("Shelf Notes") due March 31, 2042 were issued under our shelf facility, with gross proceeds of $7,113. The Shelf Notes bear interest at a fixed rate of 5.45% per annum and are payable quarterly commencing September 30, 2022.

The Senior Notes bear interest at a fixed rate of 3.25% per annum, are payable quarterly commencing September 30, 2021, and require that the project's debt service coverage ratio for both the historical 12-month and projected 12-month periods at each payment date equal or exceed 1.2 to 1.0.

The Second Lien Notes bear a floating rate equal to the applicable SOFR plus 3.50% from July 27, 2021 to July 26, 2025 and on July 27, 2025 the rate increases to the applicable SOFR plus 3.75%. The Second Lien Notes are payable on each quarterly payment date commencing September 30, 2021, as specified in the debt agreement.

The agreement also requires us to maintain six months of scheduled payments of principal and interest as the minimum debt service reserve and to make additional principal prepayments based on project cash flows and certain other conditions through the earlier of maturity or when the principal balance is paid in full.

At closing, we incurred $103 in lender fees and debt issuance costs on the Shelf Notes. In connection with the Senior Notes, we recorded a derivative instrument for make-whole provisions with an initial value of $1,088, which was recorded as a debt discount. See Note 19 for additional information. The aggregate balance of the Senior Notes, and Second Lien Notes as of December 31, 2022 was $40,645, net of unamortized debt discount and issuance costs.

Non-recourse Construction Revolvers

June 2020 Construction Revolver, 5.68%, due June 2023

In June 2020, we entered into a revolving credit agreement with a bank, with an aggregate borrowing capacity of $100,000 for use in financing the construction cost of our owned projects.

We enter into amendments to our June 2020 construction revolver from to time to time, which may extend the maturity date, increase the availability, or modify other covenants.

During the year ended December 31, 2022, we entered into amendments to extend this revolver and the current maturity date is June 2023. All remaining unpaid amounts outstanding under the facility are due at that time. In December 2022, we entered into an amended and restated master construction loan agreement. which modified the reference rate from LIBOR to SOFR as a result of the expected cessation of LIBOR. Per the amendment, this instrument will bear interest at the applicable term SOFR rate plus an applicable margin of 1.61%.

During the year ended December 31, 2022, we drew down $29,204 under this revolver. As of December 31, 2022, $39,536 was outstanding and $60,464 was available for borrowing.

July 2020 Construction Revolver, 5.92%, due June 2023

We enter into amendments to our July 2020 construction revolver from to time to time, which may extend the maturity date, increase the availability, or modify other covenants.

During the year ended December 31, 2022, we entered into amendments to extend this revolver and the current maturity date is January 31, 2023. In January 2023, we signed an amendment which extended the maturity dates on two projects to June 2023, extended the maturity date of the loan agreement until July 2023, and reduced the revolving loan commitment to $5,855.

10. INCOME TAXES

The following table sets forth components of income before income taxes:

	Year Ended December 31,		
	2022	2021	2020
Domestic	$ 98,004	$ 74,256	$ 52,595
Foreign	7,715	3,888	3,833
Income before income taxes	$ 105,719	$ 78,144	$ 56,428

The components of the provision (benefit) for income taxes were as follows:

	Year Ended December 31,		
	2022	2021	2020
Current income tax provision (benefit):			
Federal	$ (722)	$ (779)	$ (4,566)
State	733	1,779	1,522
Foreign	1,202	844	298
Total current	1,213	1,844	(2,746)
Deferred income tax provision (benefit):			
Federal	2,528	(8,025)	3,655
State	2,300	3,561	2,207
Foreign	1,129	573	(3,610)
Total deferred	5,957	(3,891)	2,252
Total income tax provision (benefit)	$ 7,170	$ (2,047)	$ (494)

Our deferred tax assets and liabilities result primarily from temporary differences between financial reporting and tax recognition of depreciation, energy efficiency, sale-leasebacks and other accruals, and net operating loss carryforwards.

Deferred tax assets and liabilities consisted of the following:

	December 31,	
	2022	2021
Deferred income tax assets:		
Compensation accruals	$ 3,306	$ 2,570
Reserves	4,111	4,150
Sale-leasebacks and other accruals	32,945	27,806
Net operating losses	18,395	28,807
Interest rate swaps	—	1,928
Energy efficiency	71,433	59,618
Deferred revenue	2,132	2,181
Gross deferred income tax assets	132,322	127,060
Valuation allowance	(3,621)	(4,039)
Total deferred income tax assets	$ 128,701	$ 123,021
Deferred income tax liabilities:		
Depreciation	$ (122,762)	$ (112,896)
Deferred effect of derivative liability	(1,640)	(1,541)
Canadian capital cost, allowance and amortization	(3,098)	(984)
United Kingdom goodwill amortization	(952)	(718)
Outside basis difference	(5,038)	(7,050)
Interest rate swaps	(1,347)	—
Total deferred income tax liabilities	(134,837)	(123,189)
Deferred income tax liabilities, net	$ (6,136)	$ (168)

Our valuation allowance related to the following items:

	December 31,	
	2022	2021
Interest rate swaps [1]	$ 49	$ 50
Foreign net operating loss [2]	3,555	3,724
State net operating loss at one of our subsidiaries [3]	17	265
Total valuation allowance	$ 3,621	$ 4,039

(1) The deferred tax asset represents a future capital loss which can only be recognized for income tax purposes to the extent of capital gain income. Although we anticipate sufficient future taxable income, it is more likely than not that it will not be the appropriate character to allow for the recognition of the future capital loss.

(2) It is more likely than not that we will not generate sufficient taxable income at the foreign subsidiary level to utilize the net operating loss.

(3) It is more likely than not that we will not generate sufficient taxable income at the subsidiary level to utilize the net operating loss.

As of December 31, 2022, we had the following tax loss and credit carryforwards to offset taxable income in prior and future years:

	Amount	Expiration Period
Federal net operating loss carryforwards	$ 46,070	Indefinite
State net operating loss carryforwards	31,109	Various
Canadian net operating loss carryforwards	24,699	2028 through 2042
Ireland net operating loss carryforwards	754	Indefinite
Greece net operating loss carryforwards	136	2027
Spain net operating loss carryforwards	2,302	Indefinite
Total tax loss carryforwards	$ 105,070	
Federal Energy Investment and Production tax credit carryforward	$ 71,373	2030 through 2042

The provision for income taxes is based on the various rates set by federal and local authorities and is affected by permanent and temporary differences between financial accounting and tax reporting requirements.

The principal reasons for the difference between the statutory rate and the estimated annual effective rate for 2022 were the effects of investment tax credits we are entitled from solar plants which have been placed into service during 2022, the tax deductions related to the Section 179D Commercial Buildings Energy-Efficiency deduction, the benefit of disqualifying dispositions on certain employee stock options and favorable tax basis adjustments on certain partnership flip transactions.

The principal reasons for the difference between the statutory rate and the estimated annual effective rate for 2021 were the effects of investment tax credits we are entitled from solar plants which have been placed into service during 2021, the tax deductions related to the Section 179D Commercial Buildings Energy-Efficiency deduction, the benefit of disqualifying dispositions on certain employee stock options and favorable tax basis adjustments on certain partnership flip transactions.

The investment tax credits and production tax credits we may be entitled to fluctuate from year to year based on the cost of the renewable energy plants we place in service and production levels at facilities we own in that year.

On December 27, 2020 the President signed the Consolidated Appropriations Act, 2021 H.R. 133, which among other things made the Section 179D Energy Efficient Commercial Building Deduction permanent. The Section had previously been extended for years up to December 31, 2020. That Act also made changes to the way in which the deduction is calculated including adding an inflation adjustment and an update of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (“ASHRAE”) Standard by which energy improvements are measured. On December 23, 2022, the IRS issued Announcement 2023-1 which clarified the ASHRAE energy efficiency standards which will be applied to projects placed in service for 2021 and 2022.

The following is a reconciliation of the effective tax rates:

	Year Ended December 31,		
	2022	2021	2020
Income before provision (benefit) for income taxes	$ 105,719	$ 78,144	$ 56,428
Federal statutory tax expense	$ 22,201	$ 16,410	$ 11,850
State income taxes, net of federal benefit	3,844	2,648	2,257
Net state impact of deferred rate change	(575)	(502)	(29)
Nondeductible expenses	2,198	2,572	987
Impact of reserve for uncertain tax positions	59	286	(124)
Stock-based compensation expense	353	(4,618)	(2,922)
Energy efficiency preferences	(21,410)	(17,639)	(8,595)
Foreign items and rate differential	37	4	160
Redeemable non-controlling interests	(411)	(2,546)	(767)
Valuation allowance	(159)	337	(4,308)
Miscellaneous	1,033	1,001	997
Total income tax provision (benefit)	$ 7,170	$ (2,047)	$ (494)
Effective tax rate:			
Federal statutory rate expense	21.0 %	21.0 %	21.0 %
State income taxes, net of federal benefit	3.6 %	3.4 %	4.0 %
Net state impact of deferred rate change	(0.5)%	(0.6)%	(0.1)%
Nondeductible expenses	2.1 %	3.3 %	1.7 %
Impact of reserve for uncertain tax positions	0.1 %	0.4 %	(0.2)%
Stock-based compensation expense	0.3 %	(5.9)%	(5.2)%
Energy efficiency preferences	(20.3)%	(23.2)%	(15.2)%
Foreign items and rate differential	— %	— %	0.3 %
Redeemable non-controlling interests	(0.4)%	(3.3)%	(1.4)%
Valuation allowance	(0.2)%	0.4 %	(7.6)%
Miscellaneous	1.1 %	1.9 %	1.8 %
Effective tax rate	6.8 %	(2.6)%	(0.9)%

The following table provides a reconciliation of gross unrecognized tax benefits which are included in other liabilities within the consolidated balance sheets:

	Year Ended December 31,	
	2022	2021
Balance, beginning of year	$ 900	$ 600
Additions for current year tax positions	—	300
Balance, end of year	$ 900	$ 900

The amount of unrecognized tax benefits that, if recognized, would favorably affect the effective income tax rate in any future periods was $450 as of December 31, 2022 and $440 as of December 31, 2021 (both net of the federal benefit on state amounts).

We do not accrue U.S. tax for foreign earnings that we consider to be permanently reinvested outside the United States. Consequently, we have not provided any withholding tax on the unremitted earnings of our foreign subsidiaries. As of December 31, 2022 and 2021, we estimated that there were no earnings for which repatriation tax has not been provided.

The tax years 2018 through 2022 remain open to examination by major taxing jurisdictions. We recognize interest and penalties related to uncertain tax positions as components of our income tax provision (benefit) in our consolidated statements of income. We increased income tax expense for these items by $22 in 2022, $14 in 2021, and $0 in 2020.

11. VARIABLE INTEREST ENTITIES AND EQUITY METHOD INVESTMENTS

Investment Funds

Over a period of five years (2015 through 2019), we formed five investment funds (tax equity partnerships) with third party investors which granted the applicable investor ownership interests in the net assets of certain of our renewable energy project subsidiaries. As of December 31, 2022, we had three such investment funds each with a different third-party investor.

We consolidate the investment funds, and all inter-company balances and transactions between Ameresco and the investment funds are eliminated in our consolidated financial statements. We determined that the investment funds meet the definition of a VIE. We use a qualitative approach in assessing the consolidation requirement for VIEs that focuses on determining whether we have the power to direct the activities of the VIE that most significantly affect the VIE's economic performance and whether we have the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE.

We have considered the provisions within the contractual arrangements that grant us power to manage and make decisions that affect the operation of these VIEs, including determining the solar energy systems and associated long term customer contracts to be sold or contributed to the VIEs, and installation, operation, and maintenance of the solar energy systems. We considered the rights granted to the other investors under the contractual arrangements to be more protective in nature rather than participating rights. As such, we determined that we are the primary beneficiary of the VIEs for all periods presented. We evaluate our relationships with VIEs on an ongoing basis to ensure that we continue to be the primary beneficiary.

Under the related agreements, cash distributions of income and other receipts by the funds, net of agreed-upon expenses and estimated expenses, tax benefits and detriments of income and loss, and tax benefits of tax credits, are assigned to the funds' investor and our subsidiaries as specified in contractual arrangements. Certain of these arrangements have call and put options to acquire the investor's equity interest as specified in the contractual agreements. See Note 12 for additional information about these investment funds and the call and put options.

Other Variable Interest Entities

We execute certain contracts jointly with third parties through various forms of joint ventures. Although the joint ventures own and hold the contracts with the clients, the services required by the contracts are typically performed by us and our joint venture partners, or by other subcontractors under subcontracting agreements with the joint ventures. Many of these joint ventures are formed for a specific project. The assets of these joint ventures generally consist almost entirely of cash and land, and the liabilities of our joint ventures generally consist almost entirely of amounts due to the joint venture partners.

We follow guidance on the consolidation of VIEs that requires companies to utilize a qualitative approach to determine whether it is the primary beneficiary of a VIE. The process for identifying the primary beneficiary of a VIE requires consideration of the factors that indicate a party has the power to direct the activities that most significantly impact the joint ventures economic performance, including powers granted to the joint ventures program manager, powers contained in the joint venture governing board and, to a certain extent, a company's economic interest in the joint venture. We analyze our joint ventures and classify them as either:

- a VIE that must be consolidated because we are the primary beneficiary or the joint venture is not a VIE and we hold the majority voting interest with no significant participative rights available to the other partners, or
- a VIE that does not require consolidation and is treated as an equity method investment because we are not the primary beneficiary or the joint venture is not a VIE and we do not hold the majority voting interest.

Many of our joint ventures are deemed to be VIEs because they lack sufficient equity to finance the activities of the joint venture.

The table below presents a summary of amounts related to our VIEs reflected in Note 1 on our consolidated balance sheets:

	As of December 31,			
	2022			2021
	Investment Funds	Other VIEs	Total VIEs	Investment Funds
Cash and cash equivalents	$ 1,715	$ 8,392	$ 10,107	$ 4,915
Restricted cash	799	—	799	822
Accounts receivable, net	24	566	590	656
Costs and estimated earnings in excess of billings	951	1	952	1,421
Prepaid expenses and other current assets	35	14,287	14,322	151
Total VIE current assets	3,524	23,246	26,770	7,965
Property and equipment, net	89	—	89	1,266
Energy assets, net	84,081	97,969	182,050	108,498
Operating lease assets	4,901	—	4,901	6,271
Restricted cash, non-current portion	73	—	73	418
Other assets	30	—	30	36
Total VIE assets	$ 92,698	$ 121,215	$ 213,913	$ 124,454
Current portions of long-term debt and financing lease liabilities	$ 2,087	$ —	$ 2,087	$ 2,210
Accounts payable	48	8,007	8,055	47
Accrued expenses and other current liabilities	304	12,255	12,559	643
Current portions of operating lease liabilities	117	—	117	142
Total VIE current liabilities	2,556	20,262	22,818	3,042
Long-term debt and financing lease liabilities, net of current portion, unamortized discount and debt issuance costs	19,177	—	19,177	20,952
Long-term operating lease liabilities, net of current portion	5,159	—	5,159	6,558
Other liabilities	866	2,709	3,575	573
Total VIE liabilities	$ 27,758	$ 22,971	$ 50,729	$ 31,125

Equity Method Investments

Unconsolidated VIEs/joint ventures are accounted for under the equity method. During the year ended December 31, 2022, we entered into three unconsolidated joint ventures and during the year ended December 31, 2021 we invested $9,000 in one new joint venture. No other material investments were made.

Our investment balances for these equity method investments are included in other assets on the consolidated balance sheets and our pro rata share of net income or loss is included in operating income.

The following table provides information about our equity method investments in joint ventures:

	As of December 31,	
	2022	2021
Equity method investments	$ 10,855	$ 9,206
Earnings (loss) of unconsolidated entities	$ 1,647	$ (118)

12. REDEEMABLE NON-CONTROLLING INTERESTS

Our subsidiaries with membership interests in the investment funds we formed have the right to elect to require the non-controlling interest holder to sell all of its membership units to our subsidiaries, a call option. Our investment funds also include

rights for the non-controlling interest holder to elect to require our subsidiaries to purchase all of the non-controlling membership interests in the fund, a put option.

The following table sets forth information about the call and put options for our investment funds outstanding as of December 31, 2022:

		Call Option			Put Option		
Investment Fund Number	Formation Date	Start Date	End Date	Purchase Price	Start Date	End Date	Purchase Price
1	June 2018	April 2024	October 2024	(1)	October 2024	April 2025	(3)
2	October 2018	June 2024	December 2024	(1)	December 2024	June 2025	(3)
3	December 2019	March 2026	September 2026	(2)	September 2026	September 2027	(4)

(1) Purchase price is equal to the greater of (i) the fair market value of such interests at the time the option is exercised or (ii) 7% of the investors' contributed capital balance at the time the option is exercisable.

(2) Purchase price is equal to the greater of (i) the fair market value of such interests at the time the option is exercised or (ii) 5% of the investors' contributed capital balance at the time the option is exercisable. The call options are exercisable beginning on the date that specified conditions are met for each respective fund. These dates are estimate and subject to change based on last funding date.

(3) Purchase price is the sum of (i) the fair market value at the time the option is exercised, and (ii) the closing costs incurred by the investor in connection with the exercise of the put option.

(4) Purchase price is the lessor of fair market value at the time the option is exercised and the sum of (i) 5% of the investors' contributed capital balance at the time the option is exercisable, and (ii) the fair market value of any unpaid tax law change losses incurred by the investor in connection with the exercise of the put option.

The call options are exercisable beginning on the date that specified conditions are met for each respective fund. The following table presents our call option exercised during the:

	Year Ended December 31,	
	2022	2021
Start date of call option	December 2022	March 2021
Date purchase of investor's share was finalized	December 2022	September 2021
Cash paid	$ 839	$ 1,000

We reclassified the remaining redeemable non-controlling interest balance to paid-in capital to reflect the additional contribution from us to our wholly-owned subsidiaries.

Because the put options represent redemption features that are not solely within our control, the non-controlling interests in these funds are presented outside of permanent equity. Redeemable non-controlling interests are reported using the greater of their carrying value (which is impacted by attribution under the HLBV method) or their estimated redemption value at each reporting period. At both December 31, 2022 and 2021, redeemable non-controlling interests were reported in the accompanying consolidated balance sheets at their carrying values, as the carrying value at each reporting period was greater than the estimated redemption value.

13. EQUITY AND EARNINGS PER SHARE

Equity Offering

On March 9, 2021, we closed on an underwritten public offering of 2,500 shares of our Class A common stock at a public offering price of $44.00 per share. Net proceeds from the offering were $104,326, after deducting offering costs of $5,674. On March 15, 2021, we closed on the underwriters' option to purchase 375 additional shares of Class A common stock from us, resulting in net proceeds of $15,758 after deducting offering costs of $742. We used $80,000 of the net proceeds to repay in full the outstanding U.S. dollar balance under our senior secured revolving credit facility and used the remaining proceeds for general corporate purposes.

In the offering, selling shareholders sold 805 shares of our Class A Common Stock at a public offering price of $44.00 per share, less the underwriting discount. We did not receive any proceeds from the sale of the shares by the selling stockholders.

Common and Preferred Stock

The rights of the holders of our Class A common stock and Class B common stock are identical, except with respect to voting and conversion. Each share of our Class A common stock is entitled to one vote per share and is not convertible into any other shares of our capital stock. Each share of our Class B common stock is entitled to five votes per share, is convertible at any time into one share of Class A common stock at the option of the holder of such share and will automatically convert into one share of Class A common stock upon the occurrence of certain specified events, including a transfer of such shares (other than to such holder's family members, descendants or certain affiliated persons or entities). Our Board of Directors is authorized to fix the rights and terms for any series of preferred stock without additional shareholder approval.

Earnings Per Share

The following is a reconciliation of the numerator and denominator for the computation of basic and diluted earnings per share:

	Year Ended December 31,		
	2022	2021	2020
Numerator:			
Net income attributable to common shareholders	$ 94,926	$ 70,458	$ 54,052
Adjustment for accretion of tax equity financing fees	(116)	(116)	(121)
Income attributable to common shareholders	$ 94,810	$ 70,342	$ 53,931
Denominator:			
Basic weighted-average shares outstanding	51,841	50,855	47,702
Effect of dilutive securities:			
Stock options	1,437	1,413	1,304
Diluted weighted-average shares outstanding	53,278	52,268	49,006
Net income per share attributable to common shareholders:			
Basic	$ 1.83	$ 1.38	$ 1.13
Diluted	$ 1.78	$ 1.35	$ 1.10
Potentially dilutive shares [1]	1,108	1,443	1,199

(1) Potentially dilutive shares attributable to stock options were excluded from the computation of diluted earnings per share as the effect would have been anti-dilutive.

14. STOCK-BASED COMPENSATION AND OTHER EMPLOYEE BENEFITS

Our 2010 Stock Incentive Plan (the "2010 Plan") was adopted by our Board of Directors in May 2010 and approved by our stockholders in June 2010. The 2010 Plan provides for the grant of incentive stock options, non-statutory stock options, performance-based stock options, restricted stock units ("RSUs") and other stock-based awards. Upon its effectiveness, 10,000 shares of our Class A common stock were reserved for issuance under the 2010 Plan. As of December 31, 2020, there were no longer shares available for grant under the 2010 Plan.

Our 2020 Stock Incentive Plan (the "2020 Plan"), was adopted by our Board of Directors in February 2020 and approved by our stockholders in May 2020. The 2020 Plan provides for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, RSUs, and other stock-based awards. Upon its effectiveness, 5,000 shares of our Class A common stock were reserved for issuance under the 2020 Plan. As of December 31, 2022, we granted options and RSUs to purchase 3,170 shares of Class A common stock, of which 206 shares were forfeited or expired, leaving 2,036 shares available for grant under the 2020 Plan.

Stock Options

We did not grant awards to individuals who were not either an employee or director of ours during the years ended December 31, 2022, 2021, and 2020.

The following table summarizes the collective activity under the plans:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2021	3,532	30.336		
Granted	1,605	72.691		
Exercised	(196)	20.186		
Forfeited	(370)	19.503		
Expired	(38)	22.974		
Outstanding at December 31, 2022	4,533	$ 45.799	7.6 years	$ 88,164
Options exercisable at December 31, 2022	1,629	$ 17.511	5.7 years	$ 66,600
Expected to vest at December 31, 2022	2,904	$ 61.673	8.6 years	$ 21,564

The following table sets forth additional disclosures about our plans:

	Year Ended December 31,		
	2022	2021	2020
Aggregate intrinsic value of options exercised	$ 9,775	$ 33,494	$ 19,762
Cash received from stock option exercises	$ 3,954	$ 5,563	$ 8,995
Weighted-average fair value of stock options granted	$ 37.87	$ 28.94	$ 11.52
Stock-based compensation expense (1)	$ 15,046	$ 8,716	$ 1,933
Income tax benefit from stock-based compensation expense	$ 659	$ 4,932	$ 2,826

(1) Included in selling, general, and administrative expenses in the accompanying consolidated statements of income and includes expense in connection with our ESPP and RSUs.

Under the terms of our 2010 Plan and 2020 Plan, all options expire if not exercised within ten years after the grant date. During 2011, we began awarding options which typically vest over a five-year period on an annual ratable basis. From time to time, we award options providing for vesting over three years, with one-third vesting on each of the first three anniversaries of the grant date. During the year ended December 31, 2019, we granted 1,000 common stock options to certain employees and directors under our 2010 Stock Incentive Plan, which have a contractual life of ten years and vest based upon the achievement of specific performance goals over three years. If the employee ceases to be employed by us for any reason before vested options have been exercised, the employee has 90 days to exercise options that have vested as of the date of such employee's termination, or they are forfeited.

We use the Black-Scholes option pricing model to determine the weighted-average fair value of options granted. We recognize the compensation cost of stock-based awards on a straight-line basis over the requisite service period of the award.

The determination of the fair value of stock-based payment awards utilizing the Black-Scholes model is affected by the stock price and a number of assumptions, including expected volatility, expected life, risk-free interest rate and expected dividends.

The following table sets forth the significant assumptions used in the model:

	Year Ended December 31,		
	2022	2021	2020
Expected dividend yield	—%	—%	—%
Risk-free interest rate	1.69% -3.82%	0.92%-1.46%	0.35%-0.76%
Expected volatility	51%-53%	48%-50%	43%-48%
Expected life	6.5 years	6.5 years	6.5 years

We will continue to use judgment in evaluating the expected term and volatility related to stock-based compensation on a prospective basis and incorporate these factors into the Black-Scholes pricing model. We record forfeitures as they occur. Higher volatility and longer expected lives result in an increase to stock-based compensation expense determined at the date of grant.

As of December 31, 2022, there was approximately $46,747 of unrecognized compensation expense related to non-vested stock option awards that is expected to be recognized over a weighted-average period of 2.9 years.

Restricted Stock Units

During the year ended December 31, 2022, we granted awards of RSUs to our non-employee directors under our 2020 Plan. These RSUs represent a promise to deliver shares to participants at a future date after certain vesting conditions are met. RSUs do not have the voting rights of common stock and the shares underlying RSUs are not considered issued and outstanding upon grant. The fair value of RSUs is based on the closing stock price of our common stock on the grant-date and expensed over the requisite service period of the award.

The following table summarizes the activity under the plan:

	Number of Options	Weighted-Average Grant Date Fair Value Per Share
Outstanding at December 31, 2021	—	$ —
Granted	13	52.94
Outstanding at December 31, 2022	13	$ 52.94

Total stock-based compensation expense for the year ended December 31, 2022 related to RSUs was $202.

As of December 31, 2022, none of the RSUs were vested and there was $485 of unrecognized compensation expense related to RSUs that is expected to be recognized over a period of 0.4 years.

Employee Stock Purchase Plan

Our 2017 Employee Stock Purchase Plan permits eligible employees to purchase up to an aggregate of 200 shares of the Company's Class A common stock. In May 2020, we amended our ESPP, which permits eligible employees to purchase up to an aggregate of 350 shares of our Class A common stock. This plan commenced December 1, 2017 and was subsequently amended in August 2018. The ESPP allows participants to purchase shares of common stock at a 5% discount from the fair market value of the stock as determined on specific dates at six-month intervals.

During the years ended December 31, 2022 and 2021, we issued 36 and 29 shares, respectively, under the ESPP. As of December 31, 2022 and 2021, the amount that had been withheld from employees for future purchases under the ESPP was $179 and $164, respectively.

Other Employee Benefits

We maintain a qualified 401(k) plan covering eligible U.S. employees who have completed the minimum service requirement, as defined by the plans. The plans require us to contribute 100% of the first six percent of base compensation that a participant contributes to the plans.

In 2016, we established a Group Personal Pension Plan for employees in the United Kingdom, for eligible employees who may contribute a portion of their compensation, subject to their age and other limitations established by HM Revenue & Customs. The plan requires us to contribute 100% of the first six percent of base compensation that a participant contributes to the plans.

We also have a Registered Retirement Savings Plan for employees in Canada, for eligible employees who may contribute a portion of their compensation. The plan requires us to contribute 100% of the first six percent of base compensation that a participant contributes to the plans.

The following table sets forth our matching contributions under the plans:

	Year Ended December 31,		
	2022	2021	2020
401(k) plan	$ 6,974	$ 6,189	$ 5,650
Group Personal Pension Plan	290	252	202
Registered Retirement Savings Plan	406	405	348
Total matching contributions	$ 7,670	$ 6,846	$ 6,200

15. COMMITMENTS AND CONTINGENCIES

From time to time, we issue letters of credit and performance bonds with our third-party lenders, to provide collateral.

Legal Proceedings

On November 6, 2017, we were served with a complaint filed by a customer against nine contractors, including us, claiming both physical damages to the customer's tangible property and damages caused by various alleged defects in the design of the project through negligent acts and/or omissions, breaches of contract and breaches of the "implied warranty of good and workmanlike manner." During the year ended December 31, 2021, we accrued a reasonable estimate of the loss, which was included in accrued expenses and other current liabilities in our consolidated balance sheets and we accrued a loss recovery from insurance proceeds which was included in prepaid expenses and other current assets in our consolidated balance sheets. The estimated loss and the loss recovery were included in selling, general, and administrative expenses in our consolidated statements of income for the year ended December 31, 2021. During the year ended December 31, 2022, we entered into a settlement agreement and the net settlement was paid and the loss recovery from insurance proceeds was reversed during this same period.

We are involved in a variety of other claims and other legal proceedings generally incidental to our normal business activities. While the outcome of any of these proceedings cannot be accurately predicted, we do not believe the ultimate resolution of any of these existing matters would have a material adverse effect on our financial condition or results of operations.

Commitments as a Result of Acquisitions

In August 2018, we completed an acquisition of Chelsea Group Limited which provided for a revenue earn-out contingent upon the acquired business meeting certain cumulative revenue targets over five years from the acquisition date. We evaluated financial forecasts of the acquired business and concluded that the fair value of this earn-out was approximately $555 upon acquisition. The fair value was subsequently increased to $678 as of December 31, 2021, decreased to $358 as of December 31, 2022, and is included in other liabilities on the consolidated balance sheets. The contingent consideration will be paid annually in May, if any of the cumulative revenue targets are achieved. No payments have been made to date. The fair value of the earn-out will be re-evaluated at each reporting period and adjustments will be recorded as needed.

In December 2021, we completed an acquisition of Plug Smart which provided for an earn-out based on future EBITDA targets beginning with EBITDA performance for the month of December 2021 and each fiscal year thereafter, over a five-year period through December 31, 2026. The maximum cumulative earn-out is $5,000 and we evaluated financial forecasts of the acquired business and concluded that the fair value of this earn-out was approximately $2,160 upon acquisition and remained consistent as of December 31, 2021. During the year ended December 31, 2022, a payment of $275 was made for the month of December 2021 EBITDA target and the fair value of the remaining contingent consideration was increased to $3,800. An increase of $1,934 in the fair value of contingent consideration was included in selling, general and administrative expenses in our consolidated statements of income during the year ended December 31, 2022. The current portion of the contingent consideration is included in accrued expenses and other current liabilities and the non-current portion is included in other liabilities on the consolidated balance sheets.

See Notes 4 and 18 for additional information.

16. GEOGRAPHIC INFORMATION

The following table presents our long-lived assets related to our operations by geographic area:

	As of December 31,	
	2022	2021
Long-lived Assets		
United States	$ 1,162,705	$ 839,231
Canada	24,590	27,964
Other	9,937	2,453
Total long-lived assets	$ 1,197,232	$ 869,648

We attribute revenues to customers based on the location of the customer. The following table presents revenues by geographic region:

	Year Ended December 31,		
	2022	2021	2020
Revenues			
United States	$ 1,712,326	$ 1,126,141	$ 955,436
Canada	53,461	45,782	45,089
Other	58,635	43,774	31,750
Total revenues	$ 1,824,422	$ 1,215,697	$ 1,032,275

17. OTHER EXPENSES, NET

The following table presents the components of other expenses, net:

	Year Ended December 31,		
	2022	2021	2020
(Gain) loss on derivatives	$ (906)	$ 240	$ (705)
Interest expense, net of interest income	26,423	14,361	15,422
Amortization of debt discount and debt issuance costs	4,211	2,849	2,686
Foreign currency transaction loss (gain)	144	852	(481)
Government incentives	(2,599)	(1,012)	(1,851)
Other expenses, net	$ 27,273	$ 17,290	$ 15,071

Estimated amortization expense for existing debt discount and debt issuance costs for the next five succeeding fiscal years is as follows:

	Estimated Amortization
2023	$ 3,139
2024	$ 2,394
2025	$ 1,660
2026	$ 1,127
2027	$ 998

18. FAIR VALUE MEASUREMENT

We recognize certain financial assets and liabilities at fair value on a recurring basis (at least annually). Fair value is defined as the price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous

market for the asset or liability in an orderly transaction between market participants on the measurement date. Three levels of inputs that may be used to measure fair value are as follows:

Level 1: Inputs are based on unadjusted quoted prices for identical instruments traded in active markets.

Level 2: Inputs are based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Inputs are generally unobservable and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability. The fair values are therefore determined using model-based techniques that include option pricing models, discounted cash flow models, and similar techniques.

The following table presents the input level used to determine the fair values of our financial instruments measured at fair value on a recurring basis:

		Fair Value as of December 31,	
	Level	2022	2021
Assets			
Interest rate swap instruments	2	$ 5,202	$ 919
Liabilities			
Interest rate swap instruments	2	$ 9	$ 6,316
Commodity swap instruments	2	—	1,962
Make-whole provisions	2	5,348	4,800
Contingent consideration	3	4,158	2,838
Total liabilities		$ 9,515	$ 15,916

The fair value of our interest rate swaps was determined using cash flow analysis on the expected cash flow of the contract in combination with observable market-based inputs, including interest rate curves and implied volatility. As part of this valuation, we considered the credit ratings of the counterparties to the interest rate swaps to determine if a credit risk adjustment was required.

The fair value of our commodity swaps was determined using a cash flow analysis on the expected cash flow of the contract in combination with observable forward price inputs obtained from a third-party pricing source. As part of this valuation, we considered the credit ratings of the counterparties to the commodity swaps to determine if a credit risk adjustment was required.

The fair value of our make-whole provisions was determined by comparing them against the rates of similar debt instruments under similar terms without a make-whole provision obtained from various highly rated third-party pricing sources.

The fair value of our contingent consideration liabilities was determined by evaluating the acquired asset's future financial forecasts and evaluating which, if any, of the cumulative revenue targets, financial metrics and/or milestones are likely to be met. We classified contingent consideration related to certain acquisitions within level 3 of the fair value hierarchy because the fair value is derived using significant unobservable inputs, which include discount rates, probability-weighted cash flows, and volatility. We determined the fair value of our contingent consideration obligations based on a probability-weighted income approach derived from financial performance estimates and probability assessments of the attainment of certain targets for some acquisitions. For other acquisitions, we derived the fair value of contingent consideration using a Monte Carlo simulation in an option pricing framework. We established discount rates utilized in our valuation models based on the cost to borrow that would be required by a market participant for similar instruments. In determining the probability of attaining certain technical, financial and operational targets, we utilized data regarding similar milestone events from our own experience, while considering the inherent difficulties and uncertainties in developing a product. On a quarterly basis, we reassess the probability factors associated with the financial, operational, and technical targets for our contingent consideration obligations. Significant judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period.

We derived the fair value of the contingent consideration of $2,160 from the acquisition of Plug Smart in December 2021 using a Monte Carlo simulated model. The key assumptions used in the model include two scenarios of EBITDA projections, a base case

and a higher case, a risk-adjusted discount rate of 14.2%, and estimated EBITDA volatility of 80.0%. We derived the fair value of contingent consideration of $3,800 for the acquisition of Plug Smart as of December 31, 2022 using a Monte Carlo simulated model. The key assumptions used in the model include two scenarios of EBITDA projections, a base case and a higher case, a risk-adjusted discount rate of 16.9%, and estimated EBITDA volatility of 75.0%.

As of December 31, 2022, the key assumptions used in the model related to the contingent consideration from the acquisition of certain assets of Chelsea Group Limited include a discount rate of 18% for purposes of discounting the low and base case scenarios associated with achievement of the financial based earn-out. The probabilities assigned to these scenarios were 50% for both the low and base case scenarios. An increase or decrease in the probability of achievement of any scenario could result in a significant increase or decrease to the estimated fair value of the contingent consideration liability. The fair value of the contingent consideration from this acquisition was $678 as of December 31, 2021 and was decreased to $358 as of December 31, 2022.

The following table sets forth a summary of changes in the fair value of contingent consideration liabilities classified as level 3:

	Year Ended December 31,	
	2022	2021
Contingent consideration liabilities balance at the beginning of year	$ 2,838	$ 678
Contingent consideration issued in connection with acquisitions	—	2,160
Remeasurement period adjustment	(19)	—
Changes in fair value included in earnings	1,614	—
Payment of contingent consideration	(275)	—
Contingent consideration liabilities balance at the end of year	$ 4,158	$ 2,838

The fair value of financial instruments is determined by reference to observable market data and other valuation techniques, as appropriate. Long-term debt is the only category of financial instruments where the difference between fair value and recorded book value is notable. At December 31, 2022 and 2021, the fair value of our long-term debt was estimated using discounted cash flows analysis, based on our current incremental borrowing rates for similar types of borrowing arrangements which are considered to be level two inputs. There have been no transfers in or out of level two or three for the years ended December 31, 2022 and 2021.

The following table sets forth the fair value and the carrying value of our long-term debt, excluding financing leases:

	December 31, 2022		December 31, 2021	
	Fair Value	Carrying Value	Fair Value	Carrying Value
Long-term debt value (level 2)	$ 869,771	$ 884,054	$ 442,429	$ 436,892

We are also required to periodically measure certain other assets at fair value on a nonrecurring basis, including long-lived assets, goodwill, and other intangible assets. We calculated the fair value used in our annual goodwill impairment analysis utilizing a discounted cash flow analysis and determined that the inputs used were level 3 inputs. Other than intangible assets acquired from the Plug Smart acquisition, as noted in Note 4, there were no other assets recorded at fair value on a non-recurring basis as of December 31, 2022 or 2021.

19. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

The following table presents information about the fair value amounts of our derivative instruments:

		Derivatives as of December 31,	
		2022	2021
	Balance Sheet Location	Fair Value	Fair Value
Derivatives Designated as Hedging Instruments			
Interest rate swap contracts	Other assets	$ 1,748	$ —
Interest rate swap contracts	Other liabilities	$ 9	$ 6,316
Derivatives Not Designated as Hedging Instruments			
Interest rate swap contracts	Other assets	$ 3,454	$ 919
Commodity swap contracts	Other liabilities	$ —	$ 1,962
Make-whole provisions	Other liabilities	$ 5,348	$ 4,800

As of December 31, 2022, all but two of our freestanding derivatives were designated as hedging instruments and as of December 31, 2021, all but four of our derivatives were designated as hedging instruments.

The following tables present information about the effects of our derivative instruments on the consolidated statements of income and consolidated statements of comprehensive income:

	Location of (Gain) Loss Recognized in Net Income	Amount of (Gain) Loss Recognized in Net Income for the Year Ended December 31,		
		2022	2021	2020
Derivatives Designated as Hedging Instruments				
Interest rate swap contracts	Other expenses, net	$ 1,037	$ 2,086	$ 1,455
Derivatives Not Designated as Hedging Instruments				
Interest rate swap contracts	Other expenses, net	$ (2,738)	$ (996)	$ 51
Commodity swap contracts	Other expenses, net	$ 2,338	$ 2,325	$ (165)
Make-whole provisions	Other expenses, net	$ (506)	$ (1,089)	$ (591)

The following table presents the changes in AOCI, net of taxes, from our hedging instruments:

	Year Ended December 31, 2022
Derivatives Designated as Hedging Instruments:	
Accumulated loss in AOCI at the beginning of the year	$ (4,733)
Unrealized gain recognized in AOCI	4,980
Loss reclassified from AOCI to other expenses, net	1,037
Net gain on derivatives	6,017
AOCI at the end of the year	$ 1,284

The following tables present all of our active derivative instruments as of December 31, 2022:

Active Interest Rate Swaps	Effective Date	Expiration Date	Initial Notional Amount ($)	Status
11-Year, 5.77% Fixed	October 2018	October 2029	$ 9,200	Designated
15-Year, 5.24% Fixed	June 2018	June 2033	$ 10,000	Designated
10-Year, 4.74% Fixed	June 2017	December 2027	$ 14,100	Designated
15-Year, 3.26% Fixed	February 2023	December 2038	$ 14,084	Designated
7-Year, 2.19% Fixed	February 2016	February 2023	$ 20,746	Designated
8-Year, 3.70% Fixed	March 2020	June 2028	$ 14,643	Designated
8-Year, 3.70% Fixed	March 2020	June 2028	$ 10,734	Designated
13-Year, 0.93% Fixed	May 2020	March 2033	$ 9,505	Not Designated
13-Year, 0.93% Fixed	May 2020	March 2033	$ 6,968	Not Designated
15.5-Year, 5.40% Fixed	September 2008	March 2024	$ 13,081	Designated

Other Derivatives	Classification	Effective Date	Expiration Date	Fair Value ($)
Make-whole provisions	Liability	June/August 2018	December 2038	$ 697
Make-whole provisions	Liability	August 2016	April 2031	$ 55
Make-whole provisions	Liability	April 2017	February 2034	$ 46
Make-whole provisions	Liability	November 2020	December 2027	$ 48
Make-whole provisions	Liability	October 2011	May 2028	$ 14
Make-whole provisions	Liability	May 2021	April 2045	$ 129
Make-whole provisions	Liability	July 2021	March 2046	$ 3,204
Make-whole provisions	Liability	June 2022	March 2042	$ 1,155

20. BUSINESS SEGMENT INFORMATION

Our reportable segments for the year ended December 31, 2022 were U.S. Regions, U.S. Federal, Canada, Alternative Fuels (formerly Non-Solar Distributed Generation ("Non-Solar DG")), and All Other. On January 1, 2022, we changed the structure of our internal organization, and our "All Other" segment now includes our U.S.-based enterprise energy management services previously included in our U.S Regions segment and our U.S. Regions segment now includes U.S. project revenue and associated costs previously included in our former Non-Solar DG segment. As a result, previously reported amounts have been reclassified for comparative purposes.

Our U.S. Regions, U.S. Federal and Canada segments offer energy efficiency products and services which include the design, engineering, and installation of equipment and other measures to improve the efficiency and control the operation of a facility's energy infrastructure, renewable energy solutions, and services which include the construction of small-scale plants that Ameresco owns or develops for customers that produce electricity, gas, heat, or cooling from renewable sources of energy and O&M services.

Our Alternative Fuels segment sells electricity, processed renewable gas fuel, heat or cooling, produced from renewable sources of energy, other than solar, and generated by small-scale plants that we own and O&M services for customer owned small-scale plants. Our U.S. Regions segment also includes certain small-scale solar grid-tie plants developed for customers. The "All Other" category offers enterprise energy management services, consulting services, and the sale of solar PV energy products and systems which we refer to as integrated-PV. These segments do not include results of other activities, such as corporate operating expenses not specifically allocated to the segments. Certain reportable segments are an aggregation of operating segments.

For the years ended December 31, 2022, 2021, and 2020, 46.0%, 67.0%, and 71.5%, respectively, of our revenues have been derived from federal, state, provincial, or local government entities, including public housing authorities, public universities and municipal utilities. The U.S. federal government, which is considered a single customer for reporting purposes, constituted 21.5%, 32.3%, and 36.6% of our consolidated revenues for the years ended December 31, 2022, 2021, and 2020, respectively. Revenues from the U.S. federal government are included in our U.S. Federal segment. Other than the U.S. federal government, one

customer represented 39.6% and 10.2% of our revenues during the years ended December 31, 2022 and 2021, respectively. Revenues from this customer is included in our U.S. Regions segment.

The reports of our chief operating decision maker do not include assets at the operating segment level.

The table below presents our business segment information and reconciliation to our consolidated financial statements:

	US Regions	U.S. Federal	Canada	Alternative Fuels	All Other	Total
2022						
Revenues	$ 1,123,343	$ 391,891	$ 58,558	$ 114,459	$ 136,171	$ 1,824,422
(Gain) loss on derivatives	(354)	—	(152)	294	—	(212)
Net interest expense	6,948	1,231	917	8,657	22	17,775
Depreciation and intangible asset amortization	21,463	4,905	1,702	23,354	1,008	52,432
Unallocated corporate activity	—	—	—	—	—	(71,180)
Income before taxes, excluding unallocated corporate activity	88,531	50,866	2,554	22,989	11,959	176,899
2021						
Revenues	551,118	392,948	49,483	111,223	110,925	1,215,697
(Gain) loss on derivatives	(1,017)	—	(73)	1,330	—	240
Net interest expense	6,255	1,294	879	5,793	378	14,599
Depreciation and intangible asset amortization	15,699	4,666	1,872	21,080	1,440	44,757
Unallocated corporate activity	—	—	—	—	—	(47,361)
Income before taxes, excluding unallocated corporate activity	38,285	52,388	1,581	27,774	5,477	125,505
2020						
Revenues	423,654	377,882	47,757	83,628	99,354	1,032,275
(Gain) loss on derivatives	(744)	—	153	(114)	—	(705)
Net interest expense	6,392	1,694	699	4,467	184	13,436
Depreciation and intangible asset amortization	12,230	3,945	1,584	20,722	1,656	40,137
Unallocated corporate activity	—	—	—	—	—	(39,308)
Income before taxes, excluding unallocated corporate activity	26,227	44,571	1,758	14,509	8,671	95,736

See Note 3 for additional information about our revenues by product line.

21. SUBSEQUENT EVENTS

On February 24, 2023, we signed a definitive purchase and sale agreement to acquire Enerqos Energy Solutions S.r.l., a renewable energy and energy efficiency company headquartered in Milan, Italy. With this acquisition, we expect to expand our portfolio of clean energy projects and solutions throughout Italy. The acquisition is expected to close in March 2023.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of the end of the period covered by this annual report, or the evaluation date. Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our management, after evaluating the effectiveness of our disclosure controls and procedures as of the evaluation date, concluded that as of the evaluation date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

Our management, with the participation of our principal executive officer and principal financial officer, is responsible for establishing and maintaining adequate internal control over our financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act as a process designed by, or under the supervision of, a company's principal executive and principal financial officers and effected by our board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets,
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors, and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2022. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control - Integrated Framework (2013).

Based on this assessment and those criteria, our management concluded that, as of December 31, 2022, our internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by RSM US LLP, an independent registered public accounting firm, as stated in their report, which appears under Item 8.

Changes in Internal Control over Financial Reporting

During the year ended December 31, 2022**,** we implemented a new Enterprise Resource Planning ("ERP") system. In connection with this ERP implementation, we updated and will continue to update our internal control over financial reporting, as necessary, to accommodate modifications to our business processes and accounting procedures. We do not believe this implementation has had or will have a material adverse effect on our internal control over financial reporting.

Except as disclosed above, there were no changes in our internal control over financial reporting during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers, and Corporate Governance

The complete response to this Item regarding the backgrounds of our executive officers and directors and other information required by Items 401, 405 and 407 of Regulation S-K will be contained in our definitive proxy statement for our 2023 annual meeting of stockholders

Code of Business Conduct and Ethics: We have adopted a code of business conduct and ethics that is applicable to all of our employees, officers and directors including our chief executive officer and senior financial officers, which is available under the Investor Relations section of our website located at www.ameresco.com. In addition, we intend to post on our website all disclosures that are required by law or applicable NYSE listing standards concerning any amendments to, or waivers from, any provision of the code. We include our website address in this report only as an inactive textual reference and do not intend it to be an active link to our website. None of the material on our website is part of this Form 10-K.

Item 11. Executive Compensation

The response to this item is incorporated by reference from the discussion contained in the definitive proxy statement for our 2023 annual meeting of stockholders.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The response to this item is incorporated by reference from the discussion contained in the definitive proxy statement for our 2023 annual meeting of stockholders.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The response to this item is incorporated by reference from the discussion contained in the definitive proxy statement for our 2023 annual meeting of stockholders.

Item 14. Principal Accountant Fees and Services

The response to this item is incorporated by reference from the discussion contained in the definitive proxy statement for our 2023 annual meeting of stockholders.

PART IV

Item 15. Exhibits and Financial Statement Schedules

		Page
(a)(1)	***Financial Statements:*** See "Index to Consolidated Financial Statements"	40

(a)(2) ***Financial Statement Schedules:*** None

Schedules are omitted because they are not applicable, or are not required, or because the information is included in the consolidated financial statements and notes thereto.

(a)(3) ***Exhibits:***

Exhibit Number	Exhibit Description
3.1	Restated Certificate of Incorporation of Ameresco, Inc. Filed as Exhibit 3.1 to our Current Report on Form 8-K dated July 27, 2010 and filed with the Commission on July 30, 2010 (file no. 001-34811) and incorporated herein by reference.
3.2	Amended and Restated By-Laws of Ameresco, Inc. (as further amended May 22, 2014). Filed as Exhibit 3.1 to our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2014 and filed with the Commission on July 31, 2014 (file no. 001-34811) and incorporated herein by reference. Filed as Exhibit 3.1 to our Registration Statement on Form S-1 (pre-effective amendment no. 4; reg. no. 333-165821) and incorporated herein by reference.
4.1	Specimen Certificate evidencing shares of Class A common stock. Filed as Exhibit 4.1 to our Registration Statement on Form S-1 (pre-effective amendment no. 4; reg. no. 333-165821) and incorporated herein by reference.
4.16	Description of Ameresco, Inc. Securities Registered under Section 12 of the Exchange Act. Filed as Exhibit 4.16 to our Annual Report on Form 10-K for the year ended December 31, 2019 and filed with the Commission on March 4, 2020 (file no. 001-34811) and incorporated herein by reference.
10.1.1	Fourth Amended and Restated Credit and Security Agreement dated as of June 28, 2019 among Ameresco, Inc., certain guarantors party thereto, certain lenders party thereto from time to time and Bank of America, N.A. as Administrative Agent. Filed as Exhibit 10.1 to our Current Report on Form 8-k filed with the Commission on July 1, 2019 (file no. 001-34811) and incorporated herein by reference.
10.1.2	Amendment No. 1 to Fourth Amended and Restated Credit and Security Agreement dated March 31, 2020 among Ameresco, Inc., certain guarantors party thereto, certain lenders party thereto from time to time and Bank of America, N.A. as Administrative Agent. Filed as Exhibit 10.1.2 to our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2020 and incorporated herein by reference.
10.3.1+	Ameresco, Inc. 2010 Stock Incentive Plan. Filed as Exhibit 10.10 to our Registration Statement on Form S-1 (pre-effective amendment no. 4; reg. no. 333-165821) and incorporated herein by reference.
10.3.2+	Form of Incentive Stock Option Agreement granted under Ameresco, Inc. 2010 Stock Incentive Plan. Filed as Exhibit 10.11 to our Registration Statement on Form S-1 (pre-effective amendment no. 4; reg. no. 333-165821) and incorporated herein by reference.

Exhibit Number	Description
10.3.3+	Form of Director Stock Option Agreement granted under Ameresco, Inc. 2010 Stock Incentive Plan. Filed as Exhibit 10.12 to our Registration Statement on Form S-1 (pre-effective amendment no. 4; reg. no. 333-165821) and incorporated herein by reference.
10.4.1+	Ameresco, Inc. 2020 Stock Incentive Plan. Filed as Exhibit 99.2 Ameresco, Inc. 2020 Stock Incentive Plan. Filed as Exhibit 99.2 to our Registration Statement on Form S-8 (reg. no. 333-238792) and incorporated herein by reference.
10.4.2+	Form of Incentive Stock Option Agreement granted under Ameresco, Inc. 2020 Stock Incentive Plan. Filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2020.
10.4.3+	Form of Director Stock Option Agreement granted under Ameresco, Inc. 2020 Stock Incentive Plan. Filed as Exhibit 10.3 to our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2020.
10.5.1+	Form of Indemnification Agreement entered into between Ameresco, Inc. and each non-employee director. Filed as Exhibit 10.6.1 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2010 and filed with the Commission on March 31, 2011 (file no. 001-34811) and incorporated herein by reference.
10.5.2+	Form of Indemnification Agreement entered into between Ameresco, Inc. and each employee director. Filed as Exhibit 10.6.2 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2010 and filed with the Commission on March 31, 2011 (file no. 001-34811) and incorporated herein by reference.
10.6+	Ameresco, Inc. 2017 Employee Stock Purchase Plan, as amended. Filed as Exhibit 10.8 to our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2020 and filed with the Commission on August 4, 2020 (file no. 001-34811) and incorporated herein by reference.
10.7+	Ameresco, Inc. Executive Management Team Additional Annual Incentive Performance Program. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2019 and filed with the Commission on August 8, 2019 (file no. 001-34811) and incorporated herein by reference.
10.8+	Executive Officer Stock Ownership Guidelines. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2020 filed with the Commission on November 3, 2020 (file no. 001-34811) and incorporated herein by reference.
10.9+	Offer Letter between the Company and Doran Hole dated June 26, 2019. Filed as Exhibit 10.1 to our Current Report on Form 8-k filed with the Commission on July 1, 2019 (file no. 001-34811) and incorporated herein by reference.
10.10#	Turnkey Engineering, Procurement, Construction and Maintenance Agreement dated as of October 21, 2021, by and between Ameresco, Inc. and Southern California Edison Company.
10.11**	Form of Non-Employee Director Restricted Stock Unit Agreement
10.12**	Non-Employee Director Compensation Policy
21.1*	Subsidiaries of Ameresco, Inc.
23.1*	Consent of RSM US LLP.
31.1*	Principal Executive Officer Certification required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Principal Financial Officer Certification required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certifications pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following consolidated financial statements from Ameresco, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022, formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Balance Sheets (ii) Consolidated Statements of Income, (iii) Consolidated Statements of Comprehensive Income, (iv) Consolidated Statement of Changes in Redeemable Non-Controlling Interests and Stockholders' Equity, (v) Consolidated Statements of Cash Flows, and (vi) Notes to Consolidated Financial Statements.
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

*	Filed herewith.
**	Furnished herewith.
+	Identifies a management contract or compensatory plan or arrangement in which an executive officer or director of Ameresco participates.
#	Certain portions of this exhibit are considered confidential and have been omitted as permitted under SEC rules and regulations. Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K.

SIGNATURE

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AMERESCO, INC.

Date: February 28, 2023

By: /s/ George P. Sakellaris
George P. Sakellaris
President and Chief Executive Officer

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ George P. Sakellaris George P. Sakellaris	Chairman of the Board of Directors, President and Chief Executive Officer (Principal Executive Officer)	February 28, 2023
/s/ Spencer Doran Hole Spencer Doran Hole	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 28, 2023
/s/ Mark Chiplock Mark Chiplock	Senior President and Chief Accounting Officer (Principal Accounting Officer)	February 28, 2023
/s/ David J. Corrsin David J. Corrsin	Director	February 28, 2023
/s/ Claire Hughes Johnson Claire Hughes Johnson	Director	February 28, 2023
/s/ Nickolas Stavropoulos Nickolas Stavropoulos	Director	February 28, 2023
/s/ Jennifer L. Miller Jennifer L. Miller	Director	February 28, 2023
/s/ Joseph W. Sutton Joseph W. Sutton	Director	February 28, 2023
/s/ Frank V. Wisneski Frank V. Wisneski	Director	February 28, 2023

Directors

George Sakellaris
Chairman, President and CEO, Ameresco

David Corrsin
Executive Vice President, General Counsel, Secretary, Ameresco

Claire Hughes Johnson
Corporate Officer and Advisor, Stripe

Jennifer L. Miller
Chief Business Sustainability Officer (Retired), Sappi North America
Chair of Nominating and Governance Committee

Nickolas Stavropoulos
President and Chief Operating Officer (Retired),
Pacific Gas and Electric Company

Joseph W. Sutton
Chief Executive Officer, Sutton Ventures Group;
Chair of Compensation Committee

Frank V. Wisneski
Partner (Retired), Wellington Management Company;
Chair of Audit Committee

Corporate Headquarters

Ameresco Inc.
111 Speen Street
Suite 410
Framingham, MA 01701
508.661.2200
ameresco.com

Stock Listing

Our common stock is traded on the New York Stock Exchange under the symbol AMRC.

Transfer Agent
American Stock Transfer and Trust
New York, NY

Shareholder Information

Copies of all SEC filings, including our 10-K, are available on our website under the Investor Relations section.

Executive Officers & Management

George Sakellaris
President and Chief Executive Officer

Michael Bakas
Executive Vice President, Distributed Energy Systems

Nicole Bulgarino
Executive Vice President and General Manager, Federal Solutions

Mark Chiplock
Senior Vice President and Chief Accounting Officer

Peter Christakis
Senior Vice President, East Region

David Corrsin
Executive Vice President, General Counsel,
Corporate Secretary and Director

Leila Dillon
Senior Vice President, Corporate Marketing and Communications

Robert Georgeoff
Executive Vice President, South Region

Doran Hole
Executive Vice President and Chief Financial Officer

Britta MacIntosh
Senior Vice President, Western Region and Europe Operations

Louis Maltezos
Executive Vice President, Central Region and Canada

Lenka Patten
Senior Vice President and Chief Human Resources Officer

General Information

Ameresco Inc.
866.AMERESCO
info@ameresco.com

AMERESCO®

Green • Clean • Sustainable

Printed on recycled paper.

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About Ameresco

Leading the Clean Energy Transition as a Full-Service Energy Partner

Ameresco, Inc. (NYSE:AMRC) is a leading cleantech integrator and renewable energy asset developer, owner and operator. Our comprehensive portfolio includes solutions that help customers decarbonize to net zero and build energy resiliency while leveraging smart, connected technologies to drive cost savings.

From implementing energy efficiency and infrastructure upgrades to developing, constructing, and operating distributed energy resources – we are a trusted sustainability partner. Technical independence coupled with our advanced technology portfolio allows us to integrate best-in-class solutions for the unique needs of each customer, paired with practical financial solutions. We design solutions that deliver:

- **Cost Savings & Resource Efficiency:** Integrating trusted, dynamic, and cost-saving technologies to improve operations and the built environment – our portfolio of smart and efficient solutions power the needs of today and possibilities of tomorrow.
- **Resiliency & Energy Security**: Firm, renewable energy supply to ensure mission continuity – enhanced with microgrids, battery energy storage systems, and beyond to provide grid stability and address peak demand.
- **Decarbonize to Net Zero:** Make meaningful progress on climate action – from energy efficiency and demand reduction, to electrification and renewable generation. Develop a clean energy supply and leverage carbon reporting and sustainability advisory services.

Drawing from more than 20 years of experience, Ameresco has successfully completed energy saving, environmentally responsible projects with Federal, state and local governments, utilities, healthcare and educational institutions, housing authorities, and commercial and industrial customers. With its corporate headquarters in Framingham, MA, USA, Ameresco has more than 1,500 employees providing local expertise across North America and Europe.

Use of Non-GAAP Financial Measures: This summary and CEO message include references to adjusted EBITDA, which is a Non-GAAP financial measure. As non-GAAP financial measures are not intended to be considered in isolation or as a substitute for GAAP financial measures, you should carefully read the Form 10-K included in this Annual Report, which includes our consolidated financial statements prepared in accordance with GAAP. For a description of the NonGAAP financial measures, including the reasons management uses these measures and a reconciliation of the Non-GAAP financial measures to the most directly comparable financial measures prepared in accordance with GAAP, please see the section in the back of Ameresco's earnings release issued on February 28, 2024, available at https://ir.ameresco.com/news-events/press-releases/detail/612/ameresco-reports-fourth-quarter-and-full-year-2023

Caution concerning forward-looking statements: Additionally, the CEO message includes statements that, to the extent they are not recitations of historical fact, constitute forward-looking statements within the meaning of the federal securities laws, and are based on Ameresco's current expectations and assumptions. For a discussion identifying important factors that could cause actual results to differ materially from those anticipated in the forward-looking statements, see the company's filings with the Securities and Exchange Commission, including "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors" in the Form 10-K portion of this Annual Report.

$163M
2023 Adjusted EBITDA

$1.4B
2023 Revenue

$3.9B
Awarded & Contracted Project Backlog

508 MWe
Operating Energy Assets

669 MWe
Energy Assets in Development

$1.2B
Operations & Maintenance Backlog

16M MT
2023 Carbon Emission Reduction

110M+ MT
Cumulative Carbon Emission Reduction Since 2010

$14B+
Energy Solutions Delivered

Fellow Shareholders,

2023 marked a challenging year for both the renewables industry and for Ameresco. We exited the year with a strong fourth quarter including a record backlog and asset development metrics.

These metrics, together with our intense focus on execution, point to 2024 being a year of considerable growth.

The company's total project backlog was a record $3.9 billion at the end of 2023, up approximately 50% versus 2022 with new awards for the year of $2.2 billion. Our focus on conversion helped drive a 32% year-over-year increase in our contracted backlog which ended the year at $1.3 billion. Our project backlog represents a very well-balanced mix of performance contracts and design-build work with particular strength from the federal government sector.

We continue to make great strides in growing our UK and European footprint as well. We experienced a year of strong organic and acquisitive growth, including our successful Enerqos acquisition in Italy, and momentum with our partner Sunel Group for construction of 300 MW design-build solar parks across the UK for Sonnedix, a global renewable energy producer.

In parallel, we are growing our energy assets portfolio at a strong pace, contributing to our excellent long-term visibility. Our diversified mix of solar, battery, renewable natural gas (RNG), and biofuel assets supports growth of this important recurring revenue stream.

Notably, our energy assets under development include innovative battery solutions such as the upcoming installation of a 50 MW / 200 MWh system with Silicon Valley Power, and plans to place three RNG plants in operation in 2024. During 2023 we placed 118 MWe of assets into operation, bringing our Operating Energy Assets to over 500 MWe. We ended the year with 669 MWe of Ameresco owned assets in development and construction.

We closed the year with over $7 billion in multi-year visibility of profitable revenue attributable to our project backlog and energy asset development – a record-high for Ameresco – despite the headwinds faced throughout 2023.

Elevated power prices, greater demand for electricity and grid resiliency combined with attractive incentives have created a very favorable backdrop for renewable energy and energy efficiency solutions. It has also strained some parts of the system. The industry continues to experience lengthening award conversions, interconnection and permitting delays, supply chain disruptions and shortages of critical equipment and skilled labor. With a focus on execution and cost efficiencies, Ameresco continues to take steps to adapt to this new environment.

Demand remains robust, and our ability to effectively compete and win new business demonstrates how well aligned Ameresco's capabilities and offerings are with our customers' priorities.

We are unwavering in our commitment to climate action as we energize a sustainable world and are proud that approximately 16 million metric tons of CO_2 was avoided during 2023 from our renewable energy assets and customer projects. We continue to witness our customers prioritizing near-term action towards energy resilience and decarbonization goals.

At the core, adoption of solutions across our cleantech portfolio are driven by economic returns and cost savings to our customers. I cannot emphasize enough the near-term benefits of energy efficiency projects, which offer immediate economic and environmental impact. Energy-efficient infrastructure upgrades can reduce consumption up to 30%, delivering a measurable impact on both the bottom line and decarbonization goals. It's a critical first step in the decarbonization journey, with tangible results.

I am proud that we ended the year on a high note, even in light of a difficult industry environment. We head into 2024 with positive momentum and an optimistic outlook. Our top focus for the next year is the execution of our tremendous project backlog and assets in development, the generation of cash flow, and investment in our team. Our short- and long-term success is undoubtedly driven by our people – the deep bench of technical experts who are transforming the industry and bringing our customer projects to fruition.

Ameresco is well positioned for 2024 and beyond. We are energized by the opportunity to make sustained and vital contributions to the clean energy transition. Thank you to our team, customers, and shareholders for your continued support.

Sincerely,

George Sakellaris
President & CEO

Customer Highlights

United Power
Colorado, USA

Ameresco partnered with United Power, an electric cooperative serving homes, farms, and businesses across Colorado's northern Front Range, to provide eight battery arrays – four 11.75 MW and four 7.84 MW – across eight different substation sites. With a total storage capacity of 313.34 MWh, these batteries will enable the cooperative to store and dispatch power efficiently during periods of high consumption while seamlessly integrating renewable resources into their operations. As the largest wholly-owned asset contract in Ameresco history, this project underscores the global need for energy storage to bolster clean and sustainable power sources.

City of Memphis | Memphis Light, Gas & Water
Tennessee, USA

In partnership with the City of Memphis and Memphis Light, Gas and Water (MLGW), Ameresco was chosen to lead a comprehensive LED streetlighting, controls and networking project designed to reduce energy costs citywide and enhance operations and maintenance capabilities with the upgrade of over 77,000 fixtures to LED. The smart lighting and controls provide a foundation for additional smart city applications. In addition to improving illumination, enhancing safety, and increasing reliability, the project supports workforce and community development through hiring local businesses to recycle and install LED lighting and sourcing electrical controls and materials – serving as a blueprint for how utilities can support sustainability for cities and improve the quality of life and safety for its citizens.

Joint Forces Training Base Los Alamitos
California, USA

Ameresco acquired a solar and storage microgrid asset at Joint Forces Training Base (JFTB) in Los Alamitos, CA from Bright Canyon Energy to provide the Army and California's National Guard with 100% backup power in the event of a grid emergency. The overall system includes 31 MW of solar generation, 20 MW / 40 MWh of battery energy storage, 3 MW of reciprocating engines, and microgrid controls. During normal grid conditions, the solar and battery export energy to the grid capable of powering more than 5,000 homes. By adding locally-generated carbon-free renewable electricity to the grid and integrating with backup reciprocating engines, the asset will allow JFTB to continue operating as Southern California's emergency response hub during a natural or man-made disaster.

Customer Highlights

Schaeffler Aerospace Canada Inc.
Ontario, Canada

In collaboration with Schaeffler Aerospace Canada Inc. – a sector of the motion technology company, The Schaeffler Group – Ameresco will launch a large-scale energy efficiency and decarbonization project at the company's Stratford, Ontario plant. The project will address the plant's cooling, heating, and air quality issues with high efficiency chiller and boiler system and an updated building automation system to integrate the new HVAC equipment. With an estimated generation of 1,180,000 kWh of electrical savings, the project is designed to reduce greenhouse gas (GHG) emissions by 15% and will advance The Schaeffler Group's environmental goals.

Benson Valley Landfill Gas to RNG Plant
Kentucky, USA

Ameresco was chosen by Republic Services to develop, construct, own and operate the Benson Valley Landfill Gas to Renewable Natural Gas (RNG) plant, a facility that supports the cities, counties, and businesses of Central Kentucky. Reaching commercial operation in August of 2023, the Benson Valley RNG plant is capable of processing over 2,000 standard cubic feet per minute of raw landfill gas and will provide clean energy resources to the regional economy. The plant is designed to significantly reduce GHG emissions and will contribute to Republic Services' longstanding sustainability goal to beneficially reuse 50% more of their biogas by 2030. With 12 projects currently online and another 10 in development, our 17-year collaboration with Republic Services continues to support the development of renewable energy facilities and reduce harmful emissions.

Delfini Solar Project
Drama, Greece

Ameresco Energy Hellas S.A. – a wholly-owned subsidiary of Ameresco and Sunel Group, an international developer and EPC contractor for energy projects – was selected by Cero Generation as the contractors for the Delfini Solar Project. The 100 MWp solar PV park located in Prosotsani Drama, Greece is the country's first renewable energy project to utilize a private power purchase agreement that does not benefit from government subsidies on electricity costs. In addition to expanding Cero Generation's Greek portfolio, the Delfini Solar Project is bringing cheaper, cleaner power to Greece and in support of the government's ambitious clean energy transition goals.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____.

Commission File Number: 001-34811

Ameresco, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**04-3512838**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
111 Speen Street, Suite 410 Framingham, Massachusetts	**01701**
(Address of Principal Executive Offices)	(Zip Code)

(508) 661-2200
(Registrant's Telephone Number, Including Area Code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Class A Common Stock, par value $0.0001 per share	AMRC	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☑ Accelerated Filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐
Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☑

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold on the New York Stock Exchange on June 30, 2023, the last business day of the registrant's most recently completed second fiscal quarter, was $1,550,437,708.

Indicate the number of shares outstanding of each of the registrant's classes of common stock as of the latest practicable date.

Class	Shares outstanding as of February 23, 2024
Class A Common Stock, $0.0001 par value per share	34,282,945
Class B Common Stock, $0.0001 par value per share	18,000,000

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement for our 2024 annual meeting of stockholders are incorporated by reference into Part III.

AMERESCO, INC.

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NOTE ABOUT FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K ("Form 10-K" or "Report") contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended ("the Exchange Act"). All statements, other than statements of historical fact, including statements regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans, objectives of management, expected market growth and other characterizations of future events or circumstances are forward-looking statements. These statements are often, but not exclusively, identified by the use of words such as "may," "will," "expect," "believe," "anticipate," "intend," "could," "estimate," "target," "project," "predict" or "continue," and similar expressions or variations. These forward-looking statements include, among other things, statements about:

- our expectations as to the future growth of our business and associated expenses,
- our expectations as to revenue generation,
- the future availability of borrowings under our revolving credit facility and other financing arrangements,
- the expected future growth of the market for energy efficiency and renewable energy solutions,
- our backlog, awarded projects and recurring revenue and the timing of such matters,
- our expectations as to acquisition activity,
- the impact of any restructuring,
- the uses of future earnings,
- the expected energy and cost savings of our projects,
- the expected energy production capacity of our renewable energy plants,
- the impact of the ongoing macroeconomic challenges and global unrest, including supply chain disruptions, and shortage of materials,
- the status of and our expectations related to the subordinated debt raise,
- our expectations related to our agreement with SCE including the impact of any delays,
- the impact of the U.S. Department of Commerce's solar panel import investigation, and
- the impact of regulation, including the Inflation Reduction Act ("IRA")

These forward-looking statements are based on current expectations and assumptions that are subject to risks, uncertainties, and other factors that could cause actual results and the timing of certain events to differ materially and adversely from the future results expressed or implied by such forward-looking statements. Risks, uncertainties, and factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section titled "Risk Factors," set forth in Item 1A of this Form 10-K and elsewhere in this Report. The forward-looking statements in this Form 10-K represent our views as of the date of this Report. Subsequent events and developments may cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so and undertake no obligation to do so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Form 10-K.

ADDITIONAL NOTES

The terms "Ameresco," "Company," "we," "our," "us," or "ourselves" included in this Report mean Ameresco, Inc. and its consolidated subsidiaries, collectively.

Rounding adjustments applied to individual numbers and percentages shown in this Report may result in these figures differing immaterially from their absolute values.

PART I

Item 1. Business

Company Overview

Ameresco is a leading clean technology integrator and renewable energy asset developer, owner, and operator. Our comprehensive portfolio includes energy efficiency, infrastructure upgrades, asset sustainability, and renewable energy solutions.

Our core offerings include the development, design, arrangement of financing, construction, and installation of solutions that deliver measurable cost and energy savings while enhancing the operations, energy security, infrastructure, and resiliency of a facility. These solutions range from upgrades to a facility's energy infrastructure to the development, construction, and operation of renewable energy plants. As a trusted sustainability partner, we are always on a mission to help customers lower their overall carbon footprint and reduce their environmental impact.

Our product independence coupled with our deep technical bench allows us to integrate best-in-class advanced technology solutions for the unique needs of each customer.

Drawing from decades of experience, we develop these tailored energy projects for federal, state, and local governments, educational and healthcare institutions, airports, public housing authorities, commercial/industrial customers, transportation and infrastructure, and utilities across the United States, Canada, and Europe.

We have sourced and raised approximately $5.5 billion in project financing while delivering $14.4 billion in energy solutions since our inception. Our growth is driven by staying ahead of the curve and at the leading edge of innovation taking place in the energy sector, offering new products and services to new and existing customers.

In addition to organic growth, strategic acquisitions of complementary businesses and assets, and entering into joint venture arrangements has been, and continues to be an important component to our growth strategy. These strategies enable us to broaden our service offerings and expand our geographical reach.

To best serve our expansive customer base, as of December 31, 2023, we have approximately 60 offices located throughout North America, and Europe and more than 1,500 dedicated energy and business professionals with years of proven experience and a strong commitment to customer satisfaction. We offer our customers the resources needed to successfully plan, finance, execute and operate energy programs to create sustained economic and operating benefits to fulfill their unique requirements.

Our Services

Our portfolio of service and product offerings aim to create value and provide energy efficient and renewable solutions to the organizations we serve in the pursuit of a sustainable future.

Energy Efficiency Measures & Upgrades

- Water management, efficiency and reclamation
- Renewable energy, storage & microgrids
- Heating, ventilation, cooling, building envelope
- Smart metering and controls
- Chillers and boilers

Renewable Energy, Storage & Microgrids

- Solar photovoltaic ("PV")
- Combined heat and power ("CHP") and co-generation plants
- Geothermal
- Renewable natural gas ("RNG")
- Wind power
- Microgrid
- Battery storage
- EV charging infrastructure
- Hydrogen

Energy Infrastructure

- Smart building modernization and retrofits
- Design-build new construction
- Utilize a full range of technologies related to building systems, facility infrastructure, energy- and water-consuming systems
- Integrated project design and implementation

Energy Analytics & Supply

- Enterprise energy management services
- Proprietary asset management software
- Energy procurement services

Operations & Maintenance ("O&M")

- End-to-end technical guidance
- Skilled technicians to operate and maintain renewable energy systems

Our core services are the development, design, engineering, and installation of projects designed to reduce the energy and O&M costs of our customers' facilities. These projects generally include a variety of measures that incorporate innovative technology and techniques, customized for the facility and designed to improve the efficiency of major building systems, such as heating, ventilation, cooling and lighting systems, while enhancing the comfort and usability of the buildings.

We also offer the ability to incorporate analytical tools designed to provide improved building energy management capabilities and enable customers to identify opportunities for energy cost savings. We typically commit to customers that our energy efficiency projects will satisfy agreed upon performance standards upon installation or achieve specified increases in energy efficiency. Generally, the forecasted lifetime energy and operating cost savings of the energy efficiency measures we install are designed to defray all or almost all of the cost of such measures. In many cases, we assist customers in obtaining private third-party financing, grants, or rebates for the cost of constructing the facility improvements, resulting in little or no upfront capital expenditure by the customer. After a project is complete, we may operate, maintain and repair the customer's energy systems under a multi-year O&M contract, designed to provide us with recurring revenue and visibility into the customer's evolving needs.

In addition, we serve certain customers by developing and building small-scale renewable energy plants located at or close to a customer's site. Depending on the customer's preference, we will either retain ownership of the completed plant or build it for the customer. Most of our small-scale renewable energy plants to date consist of solar PV installations and plants constructed adjacent to landfills, which use landfill gas ("LFG") to generate energy. We also design and build, and own, operate and maintain plants that utilize biogas from wastewater treatment processes. Our largest renewable energy project that we operate for a customer uses biomass as the primary source of energy. For information on how we finance the projects that we own and operate, please see the disclosures under Note 2, "Summary of Significant Accounting Policies", Note 9, "Debt and Financing Lease Liabilities" and Note 11, "Variable Interest Entities and Equity Method Investments" to our consolidated financial statements in Item 8 of this Report.

Our Lines of Business

Smart Energy Solutions Projects

Our Smart Energy Solutions Projects are primarily energy efficiency projects, which entail the design, engineering, and installation of an ever-increasing array of innovative technologies and techniques designed to improve the energy efficiency and control the operation, of a building's energy- and water-consuming systems. In certain projects, we design and construct a central plant or cogeneration system providing power, heat and/or cooling to a building, or a small-scale plant that produces electricity, gas, heat or cooling from renewable sources of energy for a customer, as well as battery energy storage. Our projects generally range in size and scope from a one-month project to design and retrofit a lighting system to a more complex 36-month project to design and install a central plant or cogeneration system or other small-scale plant. Projects we have constructed or are currently working on include designing, engineering and installing energy conservation and resiliency measures across school buildings,

large, complex energy conservation, and energy security projects for the federal government, and municipal-scale street lighting projects incorporating smart city controls.

O&M

After an energy efficiency or renewable energy project is completed, we often provide ongoing O&M services under multi-year contracts. These services offer end-to-end technical guidance and include operating, maintaining, and repairing facility energy systems, such as boilers, chillers, and building controls, as well as central power and small-scale plants. For larger projects, we frequently maintain staff on-site to perform these services. In addition to providing O&M services for our own projects, we also provide similar services on projects we did not construct for various customers.

Ameresco-owned Energy Assets

Ameresco-owned energy assets are small-scale power plants that we develop, design, construct, finance and own/operate and are included in our consolidated balance sheets. These assets may sell electricity, heat, cooling, processed biogas, or renewable biomethane fuel under short-or long-term contracts. We also offer Energy as a Service ("EaaS"), where we design, construct, finance and own/operate various energy conservation measures on a customer's site and sell them the output or availability of these items under a short-or long-term contract.

We have constructed and are currently developing, designing, and constructing a wide range of renewable energy plants using:

- biogas (generated from landfills, wastewater treatment plants, and the agricultural sector)
- advanced biofuels
- biomass and other bio-derived fuels
- solar PV
- wind and hydro sources of energy
- battery storage

Most of our renewable energy assets to date have involved the generation and sale of:

- electricity from solar PV or battery storage
- electricity, thermal, renewable fuel, or biomethane using biogas as a feedstock

In the case of our biogas-fueled projects, we purchase biogas that otherwise would be combusted or vented, process it, and either use it as a renewable fuel source in our energy plants to produce and sell electricity and/or thermal, or sell it as a renewable fuel source to a third party. We also design and build and operate and maintain facilities that process biogas into biomethane (or renewable natural gas) that can be transported, primarily through the nation's natural gas pipeline grid or in some cases through tanker trucks and sold to third parties. The rights to use the site for the plant and the purchase of raw feedstock fuel for the plant are also obtained by us under long-term agreements with terms at least as long as the associated output supply agreement. Our supply agreements typically provide for fixed prices or prices that escalate at a fixed rate or vary based on a market benchmark. See "We may assume responsibility under customer contracts for factors outside our control, including, in connection with some customer projects, the risk that fuel prices will increase" in Item 1A, Risk Factors.

As of December 31, 2023, we owned and operated 185 small-scale renewable energy plants including solar PV installations which generate electricity or deliver renewable gas fuel with a combined capacity of approximately 508 megawatt equivalents ("MWe") and have energy assets in development and construction with a combined capacity of approximately 717 MWe, which includes 48 MWe attributable to a non-controlling interest.

The table below shows the type and number of plants we owned and operated as of December 31, 2023:

Plants Owned and Operated	**Quantity**
Biogas: RNG	5
Biogas: non-RNG	22
Solar and battery assets	151
Other	7
Total plants owned and operated	185

Other

Our other lines of business include photovoltaic solar energy products and systems ("integrated-PV"), consulting, and enterprise energy management services.

Customer Arrangements

Energy Savings Performance Contracts ("ESPCs")

For our energy efficiency projects, we typically enter into ESPCs, under which we agree to develop, design, engineer and construct a project for a customer and also commit that the project will satisfy agreed upon performance standards that vary from project to project. These performance commitments are typically based on the design, capacity, efficiency, or operation of the specific equipment and systems we install. Our commitments generally fall into three categories:

- ***Pre-agreed energy reduction commitment:*** our customer reviews the project design in advance and agrees that, upon or shortly after completion of the installation of the specified equipment comprising the project, the commitment will have been met.
- ***Equipment-level commitment:*** we commit to a level of energy use reduction based on the difference in use measured first with the existing equipment and then with the replacement equipment.
- ***Whole building-level commitment:*** requires demonstration of energy usage reduction for a whole building, often based on readings of the utility meter where usage is measured. Depending on the project, the measurement and demonstration may be required only once, upon installation, based on an analysis of one or more sample installations, or may be required to be repeated at agreed upon intervals generally over periods of up to 25 years. We often assist these customers in identifying and obtaining financing through rebate programs, grant programs, third-party lenders, and other sources.

Under our contracts, we typically do not take responsibility for a wide variety of factors outside of our control and exclude or adjust for such factors in commitment calculations. These factors include, among others, variations in energy prices and utility rates, weather, facility occupancy schedules, the amount of energy-using equipment in a facility, and the failure of the customer to operate or maintain the project properly. Typically, our performance commitments apply to the aggregate overall performance of a project rather than to individual energy efficiency measures. Therefore, to the extent an individual measure underperforms, it may be offset by other measures that overperform during the same period. In the event that an energy efficiency project does not perform according to the agreed upon specifications, our agreements typically allow us to satisfy our obligation by adjusting or modifying the installed equipment, installing additional measures to provide substitute energy savings or paying the customer for lost energy savings based on the assumed conditions specified in the agreement. Many of our equipment supply, local design, and installation subcontracts contain provisions that enable us to seek recourse against our vendors or subcontractors if there is a deficiency in our energy reduction commitment. See "We may have liability to our customers under our ESPCs if our projects fail to deliver the energy use reductions to which we are committed under the contract" in Item 1A, Risk Factors.

The projects that we perform for governmental agencies are governed by particular qualification and contracting regimes. Certain states require qualification with an appropriate state agency as a precondition to performing work or appearing as a qualified energy service provider for state, county, and local agencies within the state. For example, the Commonwealth of Massachusetts and the states of Colorado and Washington pre-qualify energy service providers and provide contract documents that serve as the starting point for negotiations with potential governmental customers. Most of the work that we perform for the federal government is performed under Indefinite Delivery, Indefinite Quantity ("IDIQ") and Multiple Award Construction Contract agreements between government agencies and us. These agreements allow us to contract with the relevant agencies to implement energy and infrastructure projects, but no work may be performed unless we and the agency agree on a task order or delivery order governing the provision of a specific project. The government agencies enter into contracts for specific projects on a competitive basis. We and our affiliates are currently parties to an IDIQ agreement with the U.S. Department of Energy ("DOE") expiring in 2026. We are also party to agreements with other federal agencies, including the U.S. Army Corps of Engineers, the Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic, and the U.S. General Services Administration.

Payments by the federal government for energy efficiency measures are based on the services provided and the products installed but are limited to the savings derived from such measures, calculated in accordance with federal regulatory guidelines and the specific contract's terms. The savings are typically determined by comparing energy use and other costs before and after the installation of the energy efficiency measures, adjusted for changes that affect energy use and other costs but are not caused by the energy efficiency measures.

Energy Supply Contracts

For the energy assets that we own and operate, we generally enter into (i) long-term power purchase agreements ("PPAs") to supply electricity, (ii) long-term energy supply agreements ("ESAs") to supply medium British Thermal Unit ("BTU") biogas or thermal energy, (iii) gas purchase agreements ("GPAs") to supply RNG, or (iv) EaaS contracts where we sell the output or availability of various energy conservation measures to third parties.

The third parties we enter into PPAs, ESAs, or EaaS contracts with include but are not limited to municipalities, the Federal government, commercial and industrial customers, or utilities. The third parties we sell RNG to include, but are not limited to, brokers, traders, utilities, municipalities, industrial facilities, or other large purchasers of energy.

Our Business Segments

Our company is primarily organized by region, where each region may perform our key services under our various lines of business. Our reportable business segments largely follow our regional segmentation. For the year ended December 31, 2023, our reportable business segments were as follows:

- U.S. Regions
- U.S. Federal
- Canada
- Alternative Fuels
- Europe
- All Other

Europe was formerly included in "All Other". As a result, previously reported amounts have been reclassified for comparative purposes due to the growth in the segment in 2023.

Our U.S. Regions, U.S. Federal, Canada, and Europe segments offer energy efficiency products and services which include the design, engineering, and installation of equipment and other measures to improve the efficiency and control the operation of a facility's energy infrastructure, renewable energy solutions, and services and the development and construction of small-scale plants that we own or develop for customers that produce electricity, gas, heat, or cooling from renewable sources of energy and O&M services.

Our Alternative Fuels segment sells electricity and processed RNG derived from biomethane from small-scale plants that we own and operate and provides O&M services for customer owned small-scale RNG plants.

The "All Other" category offers consulting services and the sale of solar PV energy products and systems which we refer to as integrated-PV.

The table below shows the percentage of revenues by segment for the last three years:

	2023	2022	2021
% of Revenues by Segment [1]			
U.S. Regions	40.5 %	61.6 %	45.3 %
U.S. Federal	29.3 %	21.5 %	32.3 %
Canada	5.1 %	3.2 %	4.1 %
Alternative Fuels	8.5 %	6.3 %	9.1 %
Europe	11.1 %	3.4 %	3.8 %
All Other	5.5 %	4.0 %	5.4 %
Total revenues	100.0 %	100.0 %	100.0 %

(1) See Note 3 "Revenue from Contracts with Customers" for our disaggregated revenue and Note 20 "Business Segment Information" for additional information.

Sales and Marketing

Our sales and marketing approach is to offer customers customized and comprehensive energy efficiency solutions tailored to meet their economic, operational, and technical needs. We identify project opportunities through referrals, requests for proposals ("RFPs"), conferences and events, website, digital campaigns, telemarketing, and repeat business from existing customers. Our direct sales force develops and follows up on customer leads. As of December 31, 2023, we had 168 employees in direct sales.

In preparation for a proposal, our team typically conducts a preliminary audit of the customer's needs and requirements and identifies areas to enhance efficiencies and reduce costs. We collect and analyze the customer's utility bill and other data related

to energy use. If the bills are complex or numerous, we often utilize our proprietary enterprise energy management software tools to scan, compile and analyze the information. Our experienced engineers visit and assess the customer's current energy systems and infrastructure. Through our knowledge of the federal, state, and local governmental and utility environments, we assess the availability of energy, utility or environmental-based payments for usage reductions or renewable power generation, which helps us optimize the economic benefits of a proposed project for a customer. Once awarded a project, we perform a more detailed audit of the customer's facilities, which serves as the basis for the final specifications of the project and final contract terms.

For renewable energy plants that are not built or located on a customer's site or use sources of energy not within the customer's control, the sales process also involves the identification of sites with attractive sources of renewable energy and obtaining necessary rights and governmental permits to develop a plant on that site. For example, for LFG projects, we start with gaining control of an LFG resource located close to the prospective customer. For solar and wind projects, we look for sites where utilities are interested in purchasing renewable energy power at rates that are sufficient to make a project feasible. Where governmental agencies control the site and resource, such as a landfill owned by a municipality, the customer may be required to issue an RFP to use the site or resource. Once we believe we are likely to obtain the rights to the site and the resource, we seek customers for the energy output of the potential project, with whom we can enter into a long-term PPA.

Customers

We strive to be a trusted sustainability partner creating valued, single-sourced, efficient energy solutions delivered with passion, expertise, teamwork, and a relentless focus on customer satisfaction.

Our customers choose to prioritize efficiency and the development of clean, green energy sources and our solutions are customized to serve the specific needs of each customer and meaningfully reduce or offset their carbon footprint. From energy conservation through a variety of measures to the generation of green, renewable power, our customers and their communities reap the benefits of reducing energy consumption, costs, and associated carbon emissions.

In 2023, we served customers throughout the United States, Canada, and Europe. Approximately 71.8% of our revenues were derived from federal, state, provincial, or local government entities, including public housing authorities, public universities, and municipal utilities. Our federal customers include various divisions of the U.S. federal government. The U.S. federal government is considered a single customer and segment for reporting purposes (see table above under "Our Business Segments"). For the year ended December 31, 2023, our largest 20 customers accounted for approximately 56.4% of our total revenues. Other than the U.S. federal government, no customers represented 10% or more of our revenues during this period.

See "Provisions in our government contracts may harm our business, financial condition and operating results" in Item 1A, Risk Factors for a discussion of special considerations applicable to government contracting and "The loss of one of our significant customers or our failure to perform on our contract with that customer in accordance with its terms could adversely affect us" in Item 1A, Risk Factors for further discussion.

Competition

While we face significant competition from a large number of companies, we believe that few offer the objective technical expertise and full range of services we do.

Our principal competitors include:

- ***Smart Energy Solutions*:** McKinstry, CM3 Building Solutions, CMTA, Inc. (a Legence company), SitelogIQ, ABM Industries, Inc., Southland Industries, Energy Systems Group, LLC, Honeywell, Johnson Controls, NORESCO (a unit of Carrier Global Corporation), Schneider Electric, Siemens Building Technologies, and Trane Technologies (an Ingersoll-Rand company). We compete primarily on the basis of our comprehensive, independent offering of energy efficiency and renewable energy services and the breadth and depth of our expertise.
- ***Energy Assets:*** In the LFG and RNG market our principal competitors primarily include large, national project developers and owners of landfills who self-develop projects using LFG from their own landfills, and other national renewable natural gas developers/owners such as Archaea Energy, Montauk Renewables, Vanguard Renewables, Opal Fuels, and divisions of large multi-national oil and gas conglomerates. In the Solar PV and Battery Storage market our principal competitors include NextEra Energy, Inc., Engie SA, Invenergy, EDF Renewables, and Clearway Energy Group LLC. We may also compete with many large independent power producers and utilities, as well as a large number of smaller developers of renewable energy projects. In EaaS, our competitors include Engie SA, Enel X, Schneider Electric SE, and Redaptive, Inc. We compete for renewable energy projects primarily on the basis of our experience, reputation, and ability to identify and complete high quality and cost-effective projects.
- ***O&M Services:*** EMCOR Energy Services, Comfort Systems USA, Honeywell, Johnson Controls, and Veolia. In this area, we compete primarily on the basis of our expertise and quality of service.

See “We operate in a highly competitive industry, and our current or future competitors may be able to compete more effectively than we do, which could have a material adverse effect on our business, revenues, growth rates, and market share” in Item 1A, Risk Factors for further discussion of competition.

Regulatory

Various regulations affect the conduct of our business. Federal and state legislation and regulations enable us to enter into ESPCs with government agencies in the United States. The applicable regulatory requirements for ESPCs differ in each state and between agencies of the federal government. We are also subject to local regulations in the international jurisdictions where we operate, including Canada, Italy, the United Kingdom, and Greece.

Our projects must conform to all applicable electric reliability, building and safety, and environmental regulations and codes, which vary from place to place and time to time. Various federal, state, provincial, and local permits are required to construct an energy efficiency project or renewable energy plant.

Renewable energy projects are also subject to specific governmental safety and economic regulation. States and the federal government typically do not regulate the transportation or sale of LFG unless it is combined with and distributed with natural gas, but this is not uniform among states and may change from time to time. States regulate the retail sale and distribution of natural gas to end-users, although regulatory exemptions from regulation are available in some states for limited gas delivery activities, such as sales only to a single customer. The sale and distribution of electricity at the retail level is subject to state and provincial regulation, and the sale and transmission of electricity at the wholesale level is subject to federal regulation. While we do not own or operate retail-level electric distribution systems or wholesale-level transmission systems, the prices for the products we offer can be affected by the tariffs, rules and regulations applicable to such systems, as well as the prices that the owners of such systems are able to charge. The construction of power generation projects typically is regulated at the state and provincial levels, and the operation of these projects also may be subject to state and provincial regulation as “utilities.” At the federal level, the ownership and operation of, and sale of power from, generation facilities may be subject to regulation under the Public Utility Holding Company Act of 2005 (“PUHCA”), the Federal Power Act (“FPA”), and Public Utility Regulatory Policies Act of 1978 (“PURPA”). Some of our renewable energy projects which are operating as exempt wholesale generators or operating under a special exemption from PUHCA are currently subject to rate regulation for wholesale power sales by the Federal Energy Regulatory Commission (“FERC”) under the FPA and must comply with certain FERC reporting requirements.

If we pursue projects employing different technologies or with a single project electrical capacity greater than 20 megawatts, we could become subject to some of the regulatory schemes which do not apply to our current projects. In addition, the State, provincial, and federal regulations that govern qualifying facilities and other power sellers frequently change, and the effect of these changes on our business cannot be predicted.

LFG power generation facilities require an air emissions permit, which may be difficult to obtain in certain jurisdictions. Renewable energy projects may also be eligible for certain governmental or government-related incentives from time to time, including tax credits, cash payments in lieu of tax credits, and the ability to sell associated environmental attributes, including carbon credits. Government incentives and mandates typically vary by jurisdiction.

Some of the demand reduction services we provide for utilities and institutional customers are subject to regulatory tariffs imposed under federal and state utility laws. In addition, the operation of, and electrical interconnection for, our renewable energy projects are subject to federal, state, or provincial interconnection and federal reliability standards also set forth in utility tariffs. These tariffs specify rules, business practices, and economic terms to which we are subject. The tariffs are drafted by the utilities and approved by the utilities’ state, provincial, or federal regulatory commissions.

See our section entitled “Risks related to Regulations or Governmental Actions” in Item 1A, Risk Factors.

Human Capital Management

We believe our employees are Ameresco’s greatest resource, as they come together to creatively integrate our advanced technology portfolio and develop innovative, transformative energy solutions for our customers.

The diversity of our team coupled with our deep bench of technical expertise enables us to tackle the most complex energy opportunities. Supporting our employees and the communities in which we serve is paramount to our success.

We focus on team-based employee philanthropy, wellness-focused employee benefits, and donating our time to our local communities through education and training.

As of December 31, 2023, we had a total of 1,503 employees based in 46 U.S. states, including the District of Columbia, eight Canadian provinces, seven office locations throughout the United Kingdom, and one office in Italy.

Philanthropic Activities

We actively participate in philanthropic activities that support our local communities and provide an opportunity for dynamic team building. During 2023, we hosted eight volunteer initiatives sponsored by eight members of our executive management team, our employees were encouraged to use paid community service days to donate time and creative energy to these events as well as organizations that touch them personally and to give back to the environment and their communities. As a result, we experienced increased participation in both the utilization of our volunteer hours and activities.

Diversity, Equity, Inclusion and Justice

We welcome, support, and celebrate unique ways of thinking. We believe innovation demands diversity of thought, and Ameresco has done well by welcoming and celebrating employees from diverse backgrounds. We are proud to be an equal opportunity workplace and an Affirmative Action employer.

To educate, support, and promote the culture of diversity, equity, inclusion and justice at Ameresco, diversity in the workplace is discussed at all levels in the organization. Annual diversity in the workplace training is rolled out to all Ameresco employees. This comprehensive training is critical to ensuring we are focused on educating our teams and fostering a culture that is all-inclusive.

Recruiting is a key element in our commitment to diversity, equity, inclusion, and justice. Our talent team focuses on attracting and recruiting a diverse workforce by partnering with organizations such as the STEM Like a Girl, New England Women in Energy and the Environment, Massachusetts Rehabilitation Commission, Recruit Military, Hiring Our Heroes, and the Society of Women Engineers (Portland, OR Chapter).

During the year ended December 31, 2023, our global workforce is made up of 23% female and 77% male. In addition, 33% of our executive management team are female and 21% of our managers are female.

Benefits with a Purpose

The health, safety, and well-being of our employees continues to be a top priority at Ameresco. In addition to competitive salaries, we are committed to regularly evaluating a competitive benefits portfolio, striving to provide resources to our employees that assist with work-life balance.

While employee healthcare costs and access to a wide variety of medical providers have always been at the top of our criteria list, we also continued to focus our 2023 benefit offerings on choice and specifically our mental health and well-being offerings. We wanted to ensure our employees have a variety of help and resources available, offered in platforms and services they felt comfortable using, should they need it.

In addition, we offered a comprehensive Employee Assistance Plan to all Ameresco employees and their family members should they need assistance with any life planning matters. Through several options of applications of corporate programs, we continued our partnership and memberships to Care.com, Gympass, and Headspace and Virgin Pulse mobile apps.

Career Advancement

Ameresco strives to implement creative ways for our employees to support career advancement. To facilitate our employees' career development with a focus on retention, we have improved on the frequency of career path discussions, training, and succession planning. During 2023 we have improved upon our performance management process and rolled out a formal mentorship program pairing employees with mentors within our leadership team focusing on established goals and guidance with various skills.

When it comes to the innovative solutions that we deliver to our customers, it is critical for the Ameresco team to be at the forefront. Every month our Corporate Marketing Team hosts a Center of Excellence in Advance Technology training session available to all employees. Each session features a different topic to cover various aspects of Ameresco's solution portfolio and is presented by our internal subject matter experts. All employees are encouraged to attend live and participate in the Q&A.

We provide a tuition reimbursement program to support career development within our organization. In addition, we support employee growth by investing in career advancing certification programs for our employees.

For more information on our initiatives noted above, please see our 2023 Environmental, Social and Governance Report to be published in 2024 which will be available at www.ameresco.com.

Seasonality

See "Our business is affected by seasonal trends and construction cycles, and these trends and cycles could have an adverse effect on our operating results" in Item 1A, Risk Factors and "Overview — Effects of Seasonality" in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations" for a discussion of seasonality in our business.

Geographic Information

Financial information about our domestic and international operations may be found in Note 16, "Geographic Information" of our consolidated financial statements included in Item 8 of this Form 10-K, which information is incorporated herein by reference.

Additional Information

Periodic reports, proxy statements, and other information are available to the public, free of charge, on our website, www.ameresco.com, as soon as reasonably practicable after they have been filed with the Securities and Exchange Commission ("SEC"), and through the SEC's website, www.sec.gov. We include our website address in this report only as an inactive textual reference and do not intend it to be an active link to our website. None of the material on our website is part of this Report.

Item 1A. Risk Factors

We face many risks. If any of the events or circumstances described below actually occur, we and our businesses, financial condition or results of operations could suffer, and the trading price of our Class A Common Stock could decline. Our current and potential investors should consider the following risks and the information contained under the heading "Cautionary Note Regarding Forward-Looking Statements" before deciding to invest in our securities.

Risks Related to Our Business

If demand for our energy efficiency and renewable energy solutions does not develop as we expect, our revenues will suffer, and our business will be harmed.

We believe, and our growth plans assume, that the market for energy efficiency and renewable energy solutions will continue to grow, that we will increase our penetration of this market and that our revenues from selling into this market will continue to increase over time. If our expectations as to the size of this market and our ability to sell our products and services in this market are not correct, our revenues will suffer, and our business will be harmed.

In order to secure contracts for new projects, we typically face a long and variable selling cycle that requires significant resource commitments and requires a long lead time before we realize revenues.

The sales cycle for energy efficiency and renewable energy projects in general take from 18 to 42 months, with sales to federal government and housing authority customers tending to require the longest sales processes. Our sales cycle has been further lengthened as a result of macroeconomic conditions and we cannot predict the timeline for our selling cycle in the current conditions. Our existing and potential customers generally follow extended budgeting and procurement processes, and sometimes must engage in regulatory approval processes related to our services. Our customers often use outside consultants and advisors, which contributes to a longer sales cycle. Most of our potential customers issue an RFP, as part of their consideration of alternatives for their proposed project. In preparation for responding to an RFP, we typically conduct a preliminary audit of the customer's needs and the opportunity to reduce its energy costs. For projects involving a renewable energy plant that is not located on a customer's site or that uses sources of energy not within the customer's control, the sales process also involves the identification of sites with attractive sources of renewable energy, such as a landfill or a favorable site for solar PV, and it may involve obtaining necessary rights and governmental permits to develop a project on that site. If we are awarded a project, we then perform a more detailed audit of the customer's facilities, which serves as the basis for the final specifications of the project. We then must negotiate and execute a contract with the customer. In addition, we or the customer typically need to obtain financing for the project.

This extended sales process requires the dedication of significant time by our sales and management personnel and our use of significant financial resources, with no certainty of success or recovery of our related expenses. A potential customer may go through the entire sales process and not accept our proposal. All of these factors can contribute to fluctuations in our quarterly financial performance and increase the likelihood that our operating results in a particular quarter will fall below investor expectations. These factors could also adversely affect our business, financial condition and operating results due to increased spending by us that is not offset by increased revenues.

We may not recognize all revenues from our backlog or receive all payments anticipated under awarded projects and customer contracts.

As of December 31, 2023 and 2022, we had backlog of approximately $1.3 billion and $1.0 billion, respectively, in expected future revenues under signed customer contracts for the installation or construction of projects, which we sometimes refer to as

fully-contracted backlog; and we also had been awarded projects for which we do not yet have signed customer contracts with estimated total future revenues of an additional $2.6 billion and $1.6 billion, respectively. As of December 31, 2023 and 2022, we had O&M backlog of approximately $1.2 billion. Our O&M backlog represents expected future revenues under signed, multi-year customer contracts for the delivery of O&M services, primarily for energy efficiency and renewable energy construction projects completed by us for our customers.

Our customers have the right under some circumstances to terminate contracts or defer the timing of our services and their payments to us. In addition, our government contracts are subject to the risks described below under "Provisions in government contracts may harm our business, financial condition and operating results." The payment estimates for projects that have been awarded to us but for which we have not yet signed contracts have been prepared by management and are based upon a number of assumptions, including that the size and scope of the awarded projects will not change prior to the signing of customer contracts, that we or our customers will be able to obtain any necessary third-party financing for the awarded projects, and that we and our customers will reach agreement on and execute contracts for the awarded projects. We are not always able to enter into a contract for an awarded project on the terms proposed. As a result, we may not receive all of the revenues that we include in the awarded projects component of our backlog or that we estimate we will receive under awarded projects. If we do not receive all of the revenue we currently expect to receive, our future operating results will be adversely affected. In addition, a delay in the receipt of revenues, even if such revenues are eventually received, may cause our operating results for a particular quarter to fall below our expectations.

If we are not able to complete, perform or operate our projects on a profitable basis or as we have committed to our customers, we could become subject to liquidated damages, and our reputation and our results of operations could be adversely impacted. Development, installation, and construction of our energy efficiency and renewable energy projects, and operation of our renewable energy projects, entails many risks, including:

- failure or delays in receiving components and equipment that meet our requirements,
- failure or delays in obtaining all necessary rights to land access and use,
- failure or delays in receiving quality performance of contractors and other third-party service providers,
- increases (including as a result of inflation) in the cost of labor, equipment, and commodities needed to construct or operate projects,
- failure or delays in obtaining permitting and addressing other regulatory issues, license revocation, and changes in legal requirements,
- failure or delays in obtaining other governmental support or approvals, or in overcoming objections from members of the public or adjoining landowners,
- shortages of equipment or skilled labor,
- unforeseen engineering problems,
- failure of a customer to accept or pay for renewable energy that we supply,
- weather interferences, catastrophic events including fires, explosions, earthquakes, droughts, and acts of terrorism; and accidents involving personal injury or the loss of life,
- environmental, archaeological or geological conditions
- health or similar issues, a pandemic, or epidemic, such as COVID-19,
- labor disputes and work stoppages,
- mishandling of hazardous substances and waste, and other events outside of our control.

Any of these factors could give rise to construction delays, costs in excess of our expectations or cause us not to meet commitments given to our customers. We have, for example, experienced disruptions in development, installation and construction as a result of continued supply chain and logistics challenges, facility closures, and we may continue to experience such disruptions. In addition, the impacts of climate change have caused us to experience more frequent and severe weather interferences which has impacted our construction timelines, and this trend may continue. Furthermore, while the passage of the IRA may increase the demand for our service and project offerings, it has also increased demand and cost for labor, equipment and commodities needed for our projects. These factors and events could prevent us from completing construction of our projects, cause defaults under our financing agreements or under contracts that require completion of project construction by a certain time, give rise to liquidated damages or penalties, cause projects to be unprofitable for us, or otherwise impair our business, financial condition, and operating results.

For example, our Turnkey Engineering, Procurement, Construction and Maintenance Agreement and the underlying purchase orders dated as of October 21, 2021 (the "SCE Agreement") with SCE obligated us to achieve certain substantial completion milestone dates for the facilities no later than August 1, 2022, and for at least two years thereafter meet specified availability and capacity guarantees. As previously disclosed, due to supply chain delays, weather and other events, we were unable to complete the projects by the guaranteed completion date of August 1, 2022 and made force majeure claims related to such delays. We have been working with SCE to analyze the applicability of force majeure relief to the project delays and SCE has notified us that they

intend to withhold liquidated damages for at least one of the three projects. If we fail to satisfy certain milestone obligations, fail come to an agreement with SCE or otherwise resolve matters related to substantial completion or related force majeure relief, or fail to meet the availability and capacity guarantees, we may be subject to liquidated damages and under certain circumstances SCE may have a right to terminate the agreement. This could have a material adverse effect on our reputation, business or results of operations.

A significant decline in the fiscal health of federal, state, provincial, and local governments could reduce demand for our energy efficiency and renewable energy projects.
Historically, including for the years ended December 31, 2023 and 2022, 72% and 46%, respectively, of our revenues have been derived from sales to federal, state, provincial, or local governmental entities, including public housing authorities, public universities, and municipal utilities. We expect revenues from this market sector to continue to comprise a significant percentage of our revenues for the foreseeable future. A significant decline in the fiscal health of these existing and potential customers may make it difficult for them to enter into contracts for our services, to obtain financing necessary to fund such contracts, or may cause them to seek to renegotiate or terminate existing agreements with us. In addition, if there is a partial or full shutdown of any federal, state, provincial or local governing body this may adversely impact our financial performance.

Provisions in our government contracts may harm our business, financial condition and operating results.
A significant majority of our fully-contracted backlog and awarded projects is attributable to customers that are governmental entities. Our contracts with the federal government and its agencies, and with state, provincial, and local governments, customarily contain provisions that give the government substantial rights and remedies, many of which are not typically found in commercial contracts, including provisions that allow the government to:

- terminate existing contracts, in whole or in part, for any reason or no reason,
- reduce or modify contracts or subcontracts,
- decline to award future contracts if actual or apparent organizational conflicts of interest are discovered, or to impose organizational conflict mitigation measures as a condition of eligibility for an award,
- suspend or debar the contractor from doing business with the government or a specific government agency, and
- pursue criminal or civil remedies under the False Claims Act, False Statements Act, and similar remedy provisions unique to government contracting.

Under general principles of government contracting law, if the government terminates a contract for convenience, the terminated company may recover only its incurred or committed costs, settlement expenses, and profit on work completed prior to the termination. If the government terminates a contract for default, the defaulting company is entitled to recover costs incurred and associated profits on accepted items only and may be liable for excess costs incurred by the government in procuring undelivered items from another source. In most of our contracts with the federal government, the government has agreed to make a payment to us in the event that it terminates the agreement early. The termination payment is designed to compensate us for the cost of construction plus financing costs and profit on the work completed.

In ESPCs for governmental entities, the methodologies for computing energy savings may be less favorable than for non-governmental customers and may be modified during the contract period. We may be liable for price reductions if the projected savings cannot be substantiated. In addition to the right of the federal government to terminate its contracts with us, federal government contracts are conditioned upon the continuing approval by Congress of the necessary spending to honor such contracts. Congress often appropriates funds for a program on a September 30 fiscal-year basis even though contract performance may take more than one year. Consequently, at the beginning of many major Governmental programs, contracts often may not be fully funded, and additional monies are then committed to the contract only if, as and when appropriations are made by Congress for future fiscal years. Similar practices are likely to also affect the availability of funding for our contracts with Canadian, as well as state, provincial, and local government entities. If one or more of our government contracts were terminated or reduced, or if appropriations for the funding of one or more of our contracts is delayed or terminated, our business, financial condition and operating results could be adversely affected.

The projects we undertake for our customers generally require significant capital, which our customers or we may finance through third parties, and such financing may not be available to our customers or to us on favorable terms, if at all.
Our projects for customers are typically financed by third parties. For small-scale renewable energy plants that we own, as well as certain larger projects for customers, such as the battery storage project with SCE, we typically rely on a combination of our working capital and debt to finance construction costs. If we or our customers are unable to raise funds on acceptable terms when needed or if we do not have sufficient working capital or availability under our existing financing arrangements, we may be unable to secure customer contracts, the size of contracts we do obtain may be smaller or we could be required to delay the development and construction of projects, reduce the scope of those projects or otherwise restrict our operations. Delays in customer projects could also subject us to claims by customers. Furthermore, the terms of financing arrangements that we may enter into, including increases in interest rates as compared to historical rates, have in the past and could in the future impact the

profitability of our projects. In addition, any inability by us or our customers to raise the funds necessary to finance our projects or construction costs could materially harm our business, financial condition, and operating results.

Project development or construction activities may require us to make significant investments without first obtaining project financing or having final customer contracts, which could increase our costs and impair our ability to recover our investments.

We are at times required to spend significant sums for preliminary engineering, permitting, legal and other expenses before we can determine whether a project is feasible, economically attractive, or capable of being built or financed. We will often choose to bear the costs of such efforts prior to obtaining project financing, prior to getting final regulatory approval and prior to our final sale to a customer, if any. We have for example in the past commenced, and may in the future commence, development of certain projects, such as battery and solar projects, prior to having entered into final binding contracts with the customer or financing party.

We expect to invest a significant amount of capital to develop projects whether owned by us or by third parties. If we are unable to complete the development of a project or enter into contracts with the customer, we may write-down or write-off some or all of these capitalized investments, which would have an adverse impact on our net income in the period in which the loss is recognized and could have an adverse impact our ability to finance our operations.

We are exposed to the credit risk of some of our customers.

Most of our revenues are derived under multi-year or long-term contracts with our customers, and our revenues are therefore dependent to a large extent on the creditworthiness of our customers. For example, some of our large projects are with subsidiaries of Hawaiian Electric Industries and the impact of the August 2023 wildfires on Hawaiian Electric Industries financial condition could have a negative impact on these projects and our financial condition and ability to complete such projects. During periods of economic downturn, our exposure to credit risks from our customers' increases, and our efforts to monitor and mitigate the associated risks may not be effective in reducing our credit risks. Our reliance on one or a few customers for a material portion of our revenue further exacerbates this risk. In the event of non-payment by one or more of our customers, our business, financial condition and operating results could be adversely affected.

Our business is affected by seasonal trends and construction cycles, and these trends and cycles could have an adverse effect on our operating results.

We are subject to seasonal fluctuations and construction cycles, particularly in climates that experience colder weather during the winter months, such as the northern United States and Canada, and climates that experience extreme weather events, such as wildfires, storms, or flooding, or at educational institutions, where large projects are typically carried out during summer months when their facilities are unoccupied. In addition, government customers, many of which have fiscal years that do not coincide with ours, typically follow annual procurement cycles and appropriate funds on a fiscal-year basis even though contract performance may take more than one year. Further, government contracting cycles can be affected by the timing of, and delays in, the legislative process related to government programs and incentives that help drive demand for energy efficiency and renewable energy projects. As a result, our revenues and operating income in the third and fourth quarter are typically higher, and our revenues and operating income in the first quarter are typically lower, than in other quarters of the year. As a result of such fluctuations, we may occasionally experience declines in revenue or earnings as compared to the immediately preceding quarter, and comparisons of our operating results on a period-to-period basis may not be meaningful.

Failure of third parties to manufacture quality products or provide reliable services in a timely manner or at prices that are acceptable to us could cause delays in the delivery of our services and completion of our projects, which could damage our reputation, have a negative impact on our relationships with our customers and adversely affect our growth.

Our success depends on our ability to provide services and complete projects in a timely manner, which in part depends on the ability of third parties to provide us with timely and reliable products and services at acceptable prices. In providing our services and completing our projects, we rely on products that meet our design specifications and components manufactured and supplied by third parties, as well as on services performed by subcontractors. We also rely on subcontractors to perform substantially all of the construction and installation work related to our projects; and we often need to engage subcontractors with whom we have no experience for our projects. We, our subcontractors and other third parties have been impacted by the global supply chain delays and challenges. This has resulted in and may continue to result in delays in our ability to provide our services and complete our projects in a timely manner. In addition, some of the third parties we engage for our design, construction and operation projects operate internationally and our reliance on their products and services may be impacted by economic, political, and labor conditions in those regions as well as the uncertainty caused by the evolving relations between the United States and these regions, including China and the Middle East.

If any of our subcontractors are unable to provide services that meet or exceed our customers' expectations or satisfy our contractual commitments, our reputation, business and operating results could be harmed. In addition, if we are unable to avail

ourselves of warranty and other contractual protections with providers of products and services, we may incur liability to our customers or additional costs related to the affected products and components, which could have a material adverse effect on our business, financial condition, and operating results. Moreover, any delays, malfunctions, inefficiencies, or interruptions in these products or services could adversely affect the quality and performance of our solutions and require considerable expense to establish alternate sources for such products and services. This could cause us to experience difficulty retaining current customers and attracting new customers, and could harm our brand, reputation, growth, and operating results.

We may have liability to our customers under our ESPCs if our projects fail to deliver the energy use reductions to which we are committed under the contract.

For our energy efficiency projects, we typically enter into ESPCs under which we commit that the projects will satisfy agreed-upon performance standards appropriate to the project. These commitments are typically structured as guarantees of increased energy efficiency that are based on the design, capacity, efficiency, or operation of the specific equipment and systems we install. Our commitments generally fall into three categories: pre-agreed, equipment-level and whole building-level. Under a pre-agreed efficiency commitment, our customer reviews the project design in advance and agrees that, upon or shortly after completion of installation of the specified equipment comprising the project, the pre-agreed increase in energy efficiency will have been met. Under an equipment-level commitment, we commit to a level of increased energy efficiency based on the difference in use measured first with the existing equipment and then with the replacement equipment upon completion of installation. A whole building-level commitment requires future measurement and verification of increased energy efficiency for a whole building, often based on readings of the utility meter where usage is measured. Depending on the project, the measurement and verification may be required only once, upon installation, based on an analysis of one or more sample installations, or may be required to be repeated at agreed upon intervals generally over periods of up to 25 years.

Under our contracts, we typically do not take responsibility for a wide variety of factors outside our control and exclude or adjust for such factors in commitment calculations. These factors include variations in energy prices and utility rates, weather, facility occupancy schedules, the amount of energy-using equipment in a facility, and failure of the customer to operate or maintain the project properly. We rely in part on warranties from our equipment suppliers and subcontractors to back-stop the warranties we provide to our customers and, where appropriate, pass on the warranties to our customers. However, the warranties we provide to our customers are sometimes broader in scope or longer in duration than the corresponding warranties we receive from our suppliers and subcontractors, and we bear the risk for any differences, as well as the risk of warranty default by our suppliers and subcontractors.

Typically, our performance commitments apply to the aggregate overall performance of a project rather than to individual energy efficiency measures. Therefore, to the extent an individual measure underperforms, it may be offset by other measures that overperform during the same period. In the event that an energy efficiency project does not perform according to the agreed-upon specifications, our agreements typically allow us to satisfy our obligation by adjusting or modifying the installed equipment, installing additional measures to provide substitute energy savings, or paying the customer for lost energy savings based on the assumed conditions specified in the agreement. However, we may incur additional or increased liabilities or expenses under our ESPCs in the future. Such liabilities or expenses could be substantial, and they could materially harm our business, financial condition, or operating results. In addition, any disputes with a customer over the extent to which we bear responsibility to improve performance or make payments to the customer may diminish our prospects for future business from that customer or damage our reputation in the marketplace.

We may assume responsibility under customer contracts for factors outside our control, including, in connection with some customer projects, the risk that fuel prices will increase.

We typically do not take responsibility under our contracts for a wide variety of factors outside our control. We have, however, in a limited number of contracts assumed some level of risk and responsibility for certain factors — sometimes only to the extent that variations exceed specified thresholds — and may also do so under certain contracts in the future, particularly in our contracts for renewable energy projects. For example, under a contract for the construction and operation of a cogeneration facility at the U.S. Department of Energy Savannah River Site in South Carolina, a subsidiary of ours is exposed to the risk that the price of the biomass that will be used to fuel the cogeneration facility may rise during the remainder of the 19-year performance period of the contract. Several provisions in that contract mitigate the price risk. In addition, although we typically structure our contracts so that our obligation to supply a customer with biogas, electricity or steam, for example, does not exceed the quantity produced by the production facility, in some circumstances we commit to supply a customer with specified minimum quantities based on our projections of the facility's production capacity. In such circumstances, if we are unable to meet such commitments, we may be required to incur additional costs or face penalties. Despite the steps we have taken to mitigate risks under these and other contracts, such steps may not be sufficient to avoid the need to incur increased costs to satisfy our commitments, and such costs could be material. Increased costs that we are unable to pass through to our customers could have a material adverse effect on our operating results.

Our business depends on experienced and skilled personnel and substantial specialty subcontractor resources, and if we lose key personnel or if we are unable to attract and integrate additional skilled personnel, it will be more difficult for us to manage our business and complete projects.
The success of our business and construction projects depends in large part on the skill of our personnel and on trade labor resources, including with certain specialty subcontractor skills. Competition for personnel, particularly those with expertise in the energy services and renewable energy industries, is high and may intensify with the IRA driving more demand for clean energy product and service offerings and as such demand for skilled personnel in the industry. In the event we are unable to attract, hire and retain the requisite personnel and subcontractors, we may experience delays in completing projects in accordance with project schedules and budgets. Further, any increase in demand for personnel and specialty subcontractors may result in higher costs, causing us to exceed the budget on a project. Either of these circumstances may have an adverse effect on our business, financial condition, and operating results, harm our reputation among and relationships with our customers and cause us to curtail our pursuit of new projects.

Our future success is particularly dependent on the vision, skills, experience, and effort of our senior management team, including our executive officers and our founder, principal stockholder, president, and chief executive officer, George P. Sakellaris. If we were to lose the services of any of our executive officers or key employees, our ability to effectively manage our operations and implement our strategy could be harmed and our business may suffer.

We have been and may continue to be impacted by macroeconomic conditions such as supply chain challenges, a shortfall of certain products needed for our business, and inflationary pressures.
Global trade challenges including supply chain delays continue to persist and have been exacerbated by global unrest and wars. These conditions may have long-lasting adverse impact on us and our industries. These conditions, combined with an increased demand for certain products needed for our business, such as lithium-ion battery cells and solar panels has created a shortfall of and increased costs for these products and has caused challenges and delays in our projects and may impact the profitability of our projects. We cannot predict the duration of these global challenges or their impact on our business. If we experience unfavorable global market conditions, our business, prospects, financial condition, and operating results may be harmed.

For example, we are dependent on the continued supply of lithium-ion battery cells for our energy storage products, and we will require substantially more cells to grow our battery storage business based on our current plans. Currently, we rely on limited number of suppliers for these cells. Any disruption in the supply of battery cells from our suppliers could limit our growth for projects involving battery energy storage. In addition, the cost and mass production of battery cells, depends in part upon the prices and availability of raw materials such as lithium, nickel, cobalt and/or other metals. The prices for these materials fluctuate and their available supply may be unstable, depending on market conditions, regulation and global demand for these materials. As a result of increased global production of energy storage products and electric vehicles, suppliers of these raw materials may be unable to meet our volume or timing needs. Any reduced availability of these materials may adversely impact our access to battery cells and our growth, and any increases in their prices may reduce our profitability if we cannot recoup such costs in our project pricing. Moreover, our inability to meet demand may harm our brand, growth, prospects and operating results.

Extreme weather events and other natural disasters, particularly those exacerbated by climate change, could materially affect our ability to complete our projects and develop our assets.
Extreme weather-related incidents and other natural disasters, including wildfires, mudslides, hurricanes, and other storms, can interfere with our ability to complete our projects and develop our assets. Furthermore, such events can impact the operation of assets we own or have provided energy and other performance commitments for. These risks are increasing, as climate change has exacerbated some of the conditions that lead to these extreme weather events and natural disasters. Such an event can result in lost revenue and increased expense thereby having a negative effect on our financial condition and business operations.

A failure of our information technology ("IT") and data security infrastructure or cyber or other security incidents, vulnerabilities or other deficiencies, could adversely impact our business, reputation or results of operation or could cause us to default under our contractual obligations.
We rely upon the capacity, reliability, and security of our IT and data security infrastructure and our ability to expand and continually update this infrastructure in response to the changing needs of our business. Our existing systems or any new ones we implement may not perform as expected face the challenge of supporting our older systems and implementing necessary upgrades. If we experience a problem with the functioning or a security breach of our IT systems, the resulting disruptions could have an adverse effect on our business. We receive and store personal information in connection with our human resources operations and other aspects of our business. Despite our implementation of security measures, our IT systems are vulnerable to damages from computer viruses, natural disasters, unauthorized access, cyber-attacks, and other similar disruptions, and we have experienced such incidents in the past. Any system failure, accident, or security breach could result in disruptions to our operations. A material network breach in the security of our IT systems could include the theft of our intellectual property, trade secrets, customer information, human resources information, or other confidential matter.

We have been subject to and may in the future experience cybersecurity threats, including advanced and persistent cyberattacks, phishing and social engineering schemes, particularly on internet applications. Such cyber and other security threats could compromise the assets we own and operate or data in our systems. In addition, cybersecurity incidents at our vendors, customers and partners may have similar negative impact on our business operations. For example, we engage third-party vendors who receive and store personal and sensitive information in connection with our operations, including our human resources functions such as background checks. We do not have control over or access to the IT infrastructure of these vendors. Our vendors have and may in the future experience network breaches and other cyberattacks. In such instances, we may not be able to fully investigate the incidents and may not be able to implement measures to defend such attacks. Furthermore, third-party vendors may not notify us of such incidents timely or at all, making it more difficult for us to identify and mitigate cybersecurity risks. Although we devote resources to our cybersecurity programs and have implemented security measures to protect our assets, systems and data, there can be no assurance that our efforts will prevent these threats. Because the techniques used to obtain unauthorized access, to disable or degrade systems, and to generate cyberattacks change frequently, have become increasingly more sophisticated, and may be difficult to detect for periods of time, we may not anticipate these acts or respond adequately or timely.

As these threats continue to evolve and increase, we may be required to devote significant additional resources in order to protect against these attacks and to identify and remediate any security vulnerabilities. To the extent that any attacks, disruptions or security breach results in a loss or damage to our data, or an inappropriate disclosure of information, or adversely impact the assets we own or operate, it could cause significant damage to our reputation, affect our relationships with our customers and employees, lead to claims against us and ultimately harm our business and operating results.

If we cannot obtain surety bonds and letters of credit, our ability to operate may be restricted.
Federal and state laws require us to secure the performance of certain long-term obligations through surety bonds and letters of credit. In addition, we are occasionally required to provide bid bonds or performance bonds to secure our performance under energy efficiency contracts. In the future, we may have difficulty procuring or maintaining surety bonds or letters of credit, and obtaining them may become more expensive, require us to post cash collateral or otherwise involve unfavorable terms. Because we are sometimes required to have performance bonds or letters of credit in place before projects can commence or continue, our failure to obtain or maintain those bonds and letters of credit would adversely affect our ability to begin and complete projects, and thus could have a material adverse effect on our business, financial condition and operating results.

We operate in a highly competitive industry, and our current or future competitors may be able to compete more effectively than we do, which could have a material adverse effect on our business, revenues, growth rates, and market share.
Our industry is highly competitive, with many companies of varying size and business models, many of which have their own proprietary technologies, competing for the same business as we do. Many of our competitors have longer operating histories and greater resources than us and could focus their substantial financial resources to develop a competitive advantage, others may be smaller and able to adapt to the constantly changing demand of the market more quickly. The passage of the IRA and the opportunities it brings could intensify competition in our industry. Our competitors may also offer energy solutions at prices below cost, devote significant sales forces to competing with us or attempt to recruit our key personnel by increasing compensation, any of which could improve their competitive positions. Any of these competitive factors could make it more difficult for us to attract and retain customers, cause us to lower our prices in order to compete, and reduce our market share and revenues, any of which could have a material adverse effect on our financial condition and operating results. We can provide no assurance that we will continue to effectively compete against our current competitors or additional companies that may enter our markets. In addition, we may also face competition based on technological developments that reduce demand for electricity, increase power supplies through existing infrastructure or otherwise compete with our products and services. We also encounter competition in the form of potential customers electing to develop solutions or perform services internally rather than engaging an outside provider such as us.

Our small-scale renewable energy plants may not generate expected levels of output.
The small-scale renewable energy plants that we construct and own are subject to various operating risks that may cause them to generate less than expected amounts of processed biogas, electricity, or thermal energy. These risks include a failure or degradation of our, our customers' or utilities' equipment; an inability to find suitable replacement equipment or parts; less than expected supply of the plant's source of renewable energy, downtime to our plants such as biogas or biomass; or a faster than expected diminishment of such supply. For example, in 2022 we had to undertake some unscheduled maintenance at some of our RNG plants impacting the energy output from such plants. Any extended interruption in the plant's operation, or failure of the plant for any reason to generate the expected amount of output, could have a material adverse effect on our business and operating results. In addition, we have in the past and, could in the future, incur material asset impairment charges if any of our renewable energy plants incur operational issues that indicate that our expected future cash flows from the plant are less than its carrying value. Any such impairment charge could have a material adverse effect on our operating results in the period in which the charge is recorded.

We have not entered into long-term offtake agreements for a portion of the output from our small-scale renewable energy plants and a portion of the related renewable identification numbers ("RINs") are not subject to long term contracts.
We have not entered into long-term offtake agreements for a portion of the output from our small-scale renewable energy plants, particularly RNG and non-RNG plants, and we may sell portions of the processed RNG, medium-BTU gas or electricity produced by the facility at wholesale prices, which are exposed to market fluctuations and risks. Similarly, we have not entered into long-term agreements with respect to the RINs for which the production and sale of such biofuel may qualify. The failure to sell such processed RNG, medium-BTU gas, electricity, or the related RINs at a favorable price, or at all could have a material adverse effect on our business and operating results.

We may not be able to replace expiring offtake agreements with contracts on similar terms. If we are unable to replace an expired offtake agreement with an acceptable new contract, we may be required to remove the small-scale renewable energy plant from the site or, alternatively, we may sell the assets to the customer.
We may not be able to replace an expiring offtake agreement with a contract on equivalent terms and conditions, including at prices that permit operation of the related facility on a profitable basis. If we are unable to replace an expiring offtake agreement with an acceptable new revenue contract, the affected site may temporarily or permanently cease operations, or we may be required to sell the power produced by the facility at wholesale prices which are exposed to market fluctuations and risks. In the case of a solar photovoltaic installation that ceases operations, the offtake agreement terms generally require that we remove the assets, including fixing or reimbursing the site owner for any damages caused by the assets or the removal of such assets. Alternatively, we may agree to sell the assets to the site owner, but the terms and conditions, including price, that we would receive in any sale, and the sale price may not be sufficient to replace the revenue previously generated by the small-scale renewable energy plant.

Operation of energy assets involves significant risks and hazards customary to the energy industry and may be further impacted by the effects of climate change. We may not have adequate insurance to cover these risks and hazards, or other risks beyond our control.
Hazards such as fire, explosion, structural collapse and machinery failure are inherent risks in our operations. These and other hazards can cause significant personal injury or loss of life, severe damage to and destruction of property, plant and equipment and contamination of, or damage to, the environment. The occurrence of any one of these events may result in curtailment of our operations or liability to third parties for damages, environmental cleanup costs, personal injury, property damage and fines and/or penalties, any of which could be substantial. Strategic targets, such as energy-related facilities, may also be at greater risk of hostile cyber intrusions or other security attacks, including those targeting information systems as well as electronic control systems. Such events could severely disrupt business operations and result in loss of service to customers, as well as create significant expense to repair security breaches or system damage.

Furthermore, certain of our facilities, projects and suppliers are located in or operate operations in locations that are susceptible to natural disasters. The frequency of weather-related natural disasters may be increasing due to climate change. The occurrence of a natural disaster, such as tornados, earthquakes, droughts, floods, wildfires or localized extended outages of critical utilities or transportation systems, or any critical resource shortages, affecting us could cause a significant interruption in our business or damage or destroy our facilities. While we maintain insurance to protect against these and other risks, some of these events may be excluded from insurance coverage or our coverage may not be sufficient against all hazards or liabilities to which we may be subject. Insurance may also not continue to be available at all or at rates or on terms similar to those presently available. Any losses not covered by insurance could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We plan to expand our business in part through future acquisitions and joint ventures, but we may not be able to identify or complete suitable acquisitions.
Historically, acquisitions have been a significant part of our growth strategy. We plan to continue to use acquisitions of companies or assets and co-investments with third parties using joint ventures to expand our project skill-sets and capabilities, expand our geographic markets, add experienced management, increase our product and service offerings and add to our energy producing asset portfolio. However, we may be unable to implement this growth strategy if we cannot identify suitable acquisition or joint venture candidates or partners, reach agreement with targets on acceptable terms or arrange required financing for acquisitions or joint ventures on acceptable terms. In addition, the time and effort involved in identifying acquisition or joint venture candidates and consummate transactions may divert the attention and efforts of members of our management from the operations of our company.

We may be required to write-off or impair capitalized costs or intangible assets in the future, or we may incur restructuring costs or other charges, each of which could harm our earnings.

In accordance with generally accepted accounting principles in the United States, we capitalize certain expenditures and advances relating to our new acquisitions, pending acquisitions, project development costs, interest costs related to project financing and certain energy assets. In addition, we have considerable unamortized assets. From time to time in future periods, we may be required to incur a charge against earnings in an amount equal to any unamortized capitalized expenditures and advances, net of any portion thereof that we estimate will be recoverable, through sale or otherwise, relating to: (i) any operation or other asset that is being sold, permanently shut down, impaired or has not generated or is not expected to generate sufficient cash flow; (ii) any pending acquisition that is not consummated; (iii) any project that is not expected to be successfully completed; and (iv) any goodwill or other intangible assets that are determined to be impaired.

In response to such charges and costs and other market factors, we may be required to implement restructuring plans in an effort to reduce the size and cost of our operations and to better match our resources with our market opportunities. As a result of such actions, we would expect to incur restructuring expenses and accounting charges which may be material. Several factors could cause a restructuring to adversely affect our business, financial condition, and results of operations. These include potential disruption of our operations, the development of our small-scale renewable energy projects and other aspects of our business. Employee morale and productivity could also suffer and result in unintended employee attrition. Any restructuring would require substantial management time and attention and may divert management from other important work. Moreover, we could encounter delays in executing any restructuring plans, which could cause further disruption and additional unanticipated expense. See also Note 2, “Summary of Significant Accounting Policies” and Note 5, “Goodwill and Intangible Assets, Net”, to our consolidated financial statements appearing in Item 8 of this Report.

Any future acquisitions that we may make could disrupt our business, cause dilution to our stockholders and harm our business, financial condition or operating results, and our use of joint ventures could expose us to additional risks and liabilities.

If we are successful in consummating acquisitions, those acquisitions could subject us to a number of risks, including:

- the purchase price we pay could significantly deplete our cash reserves or result in dilution to our existing stockholders,
- we may find that the acquired company or assets do not improve our customer offerings or market position as planned,
- we may have difficulty integrating the operations and personnel of the acquired company,
- key personnel and customers of the acquired company may terminate their relationships with the acquired company as a result of the acquisition,
- we may experience additional financial and accounting challenges and complexities in areas such as tax planning and financial reporting,
- we may incur additional costs and expenses related to complying with additional laws, rules or regulations in new jurisdictions,
- we may assume or be held liable for risks and liabilities (including for environmental-related costs) as a result of our acquisitions, some of which we may not discover during our due diligence or adequately adjust for in our acquisition arrangements,
- our ongoing business and management’s attention may be disrupted or diverted by transition or integration issues and the complexity of managing geographically or culturally diverse enterprises,
- we may incur one-time write-offs or restructuring charges in connection with the acquisition,
- we may acquire goodwill and other intangible assets that are subject to amortization or impairment tests, which could result in future charges to earnings, and
- we may not be able to realize the cost savings or other financial benefits we anticipated.

We own, and in the future may acquire or establish, operating or development projects in joint ventures. Joint ventures inherently involve a lesser degree of control over business operations. Our joint venture partners may have economic and business interests that are inconsistent with ours, we may lack sole decision-making authority, and disputes between us and our joint venture partners could subject us to delays, litigation and increased expenses. Some of our joint venture projects may be capital intensive and if our joint venture partner does not contribute capital they are required to, this could result in delays in our development projects and increased our capital expenditures. These factors could have a material adverse effect on our business, financial condition, and operating results.

International expansion is one of our growth strategies, and international operations will expose us to additional risks that we do not face in the United States, which could have an adverse effect on our operating results.

We generate a portion of our revenues from operations outside of the United States, mainly in Canada and Europe. International expansion is one of our growth strategies, and we expect our revenues and operations outside of the United States will expand in the future. These operations will be subject to a variety of risks that we do not face in the United States, and that we may face only to a limited degree in Canada and Europe, including:

- building and managing a highly experienced foreign workforce and overseeing and ensuring the performance of foreign subcontractors,
- increased travel, infrastructure and legal and compliance costs associated with multiple international locations,

- additional withholding taxes or other taxes on our foreign income, and tariffs or other restrictions on foreign trade or investment,
- imposition of, or unexpected adverse changes in, foreign laws or regulatory requirements, many of which differ from those in the United States,
- increased exposure to foreign currency exchange rate risk,
- longer payment cycles for sales in some foreign countries and potential difficulties in enforcing contracts and collecting accounts receivable,
- difficulties in repatriating overseas earnings,
- international and regional economic, political and labor conditions in the countries in which we operate; and
- political unrest, war, incidents of terrorism, pandemics, or responses to such events.

Our overall success in international markets will depend, in part, on our ability to succeed in differing legal, regulatory, economic, social, and political conditions. We may not be successful in developing and implementing policies and strategies that will be effective in managing these risks in each country where we do business. Our failure to manage these risks successfully could harm our international operations, reduce our international sales, and increase our costs, thus adversely affecting our business, financial condition and operating results. Some of our third-party business partners have international operations and are also subject to these risks and if our third-party business partners are unable to appropriately manage these risks, our business may be harmed.

Risks related to Regulations or Governmental Actions

Our business depends in part on federal, state, provincial and local government support for energy efficiency and renewable energy, and a decline in such support or the imposition of additional taxes, tariffs, duties, or other assessments on renewable energy or the equipment necessary to generate or deliver it, could harm our business.
We depend in part on legislation and government policies that support energy efficiency and renewable energy projects that enhance the economic feasibility of our energy efficiency services and small-scale renewable energy projects. This support includes legislation and regulations that authorize and regulate the manner in which certain governmental entities do business with us; encourage or subsidize governmental procurement of our services; encourage or in some cases require other customers to procure power from renewable or low-emission sources, to reduce their electricity use or otherwise to procure our services; and provide us with tax and other incentives that reduce our costs or increase our revenues. In addition, the U.S. government generally has not taken action to materially burden the international supply chain, which has been important to the development of renewable energy facilities at acceptable prices. Any reductions or modifications to, or the elimination of, governmental incentives or policies that support renewable energy or the imposition of additional taxes, tariffs, duties or other assessments on renewable energy or the equipment necessary to generate or deliver it, could result in, among other things, the lack of a satisfactory market for the development and/or financing of renewable energy projects, or adversely impact our ability to complete projects for existing customers and obtain project commitments from new customers. If the U.S. Supreme Court restricts federal agencies' ability to interpret vague or broad legislation this could also negatively impact the market for the projects and services we provide and our ability to finance them.

For example, recent guidance issued by the Treasury Department and the IRS specified certain types of RNG equipment that is ineligible for the ITC could negatively impact the profitability of our RNG business and our ability to finance our RNG projects. Additionally, import duties or other import restrictions could restrict the global supply of, and raise prices for, supplies needed for our business, such as polysilicon and solar products, batteries, and semiconductors. Such duties or restrictions could increase the overall cost of our product offerings and reduce our ability to offer competitive pricing in certain markets. For example, in August 2023, the U.S. Department of Commerce issued a final ruling in the Auxin Solar trade case that will lead to higher tariffs on certain imported solar products from Malaysia, Vietnam, Thailand, and Cambodia beginning in June 2024. Similarly, other changes in trade regulations or the enforcement of the Uyghur Forced Labor Prevention Act could increase demand and thereby increase prices for compliant products needed for project development. Failure to comply with trade restrictions and other governmental restrictions could subject us to fines and penalties. This could have a negative impact on our business and results of operation. Due to the uncertainty in the regulatory and legislative processes, we cannot determine the effect any such legislation and regulation may have on our products and operations.

A substantial portion of our earnings are derived from the sale of renewable energy certificates ("RECs") and other environmental attributes, and our failure to be able to sell such attributes could materially adversely affect our business, financial condition and results of operation.
A substantial portion of our earnings are attributable to our sale of renewable energy certificates ("RECs") and other environmental attributes generated by our energy assets. These attributes are used as compliance purposes for state-specific or U.S. federal policy. We own and operate solar PV installations which derive a significant portion of their revenues from the sale of solar renewable energy certificates ("SRECs"), which are produced as a result of generating electricity. The value of these

SRECs is determined by the supply and demand of SRECs in the states in which the solar PV installations are installed. Supply is driven by the number of installations and demand is driven by state-specific laws relating to renewable portfolio standards.

We also own and operate renewable natural gas plants that may deliver biofuels into to the nation's natural gas pipeline grid. Such biofuel may qualify for certain environmental attribute mechanisms, such as RINs which are used for compliance purposes under the Renewable Fuel Standard ("RFS") program. The RFS is a U.S. federal policy that requires transportation fuel to contain a minimum volume of renewable fuel. The U.S. Environmental Protection Agency ("EPA") administers the RFS program and may periodically undertake regulatory action involving the RFS, including annual volume standards for renewable fuel. Some of our biofuel may also qualify for various state incentives, such as the Low Carbon Fuel Standard ("LCFS"), the pricing or availability of which may fluctuate.

We sometimes seek to sell forward a portion of our SRECs and other environmental attributes under contracts to fix the revenues from those attributes for financing purposes or hedge against future declines in prices of such environmental attributes. If our renewable energy facilities do not generate the amount of renewable energy attributes sold under such forward contracts or if for any reason the renewable energy we generate does not produce SRECs or other environmental attributes for a particular state, we may be required to make up the shortfall of SRECs or other environmental attributes under such forward contracts through purchases on the open market or make payments of liquidated damages. RECs are created through state law requirements for utilities to purchase a portion of their energy from renewable energy sources and changes in state laws or regulation relating to RECs may adversely affect the availability of RECs or other environmental attributes and the future prices for RECs or other environmental attributes, which could have an adverse effect on our business, financial condition, and results of operations.

We may have exposure to additional tax liabilities and our effective tax rate may increase or fluctuate, which could increase our income tax expense and reduce our net income and we may not be able to utilize the full value of tax credits and incentives available under the IRA or may become subject to penalties if we fail to meet requirements for these credits and incentives. This may have an adverse effect on our business and operating results.

Our provision for income taxes is subject to volatility and could be adversely affected by changes in tax laws or regulations, particularly changes in tax incentives in support of energy efficiency. The IRA contains extended and expanded clean energy tax credits such as the Investment Tax Credit ("ITC"), the Production Tax Credit ("PTC"), and created other financial incentives designed to promote the development of certain domestic clean energy projects. In order to receive the full value of such credits and incentives, our projects must satisfy a number of requirements including prevailing wage and apprenticeship requirements. If we fail to comply with these requirements, the value of the credits may be limited, and we may become subject to financial penalties. Uncertainty remains under the IRA on which types of projects are eligible for the tax credits and incentives and how projects can demonstrate compliance with the requirements, we may not receive full value of the tax credits and incentives, which could increase our income tax expense, reduce our net income and adversely impact the profitability of our projects or our ability to finance our projects. There is also uncertainly if IRA incentives may be reduced or repealed in the future, especially following the 2024 elections. In addition, the timing of when assets are placed in service has in the past and could in the future impact our tax rate. If we experience unexpected delays in this timing, we may not be able to take advantage of the ITC as expected. If we are not able to utilize the ITC as expected this could have an adverse effect of our financial results.

Our tax rate has historically been significantly impacted by the IRC Section 179D deduction. This deduction is related to energy efficient improvements we provide under government contracts. The Consolidated Appropriations Act, 2021 made permanent the Section 179D Energy Efficient Commercial Building Deduction. That Act, along with the IRA, also made changes to the way the deduction is calculated. If those changes or clarifying guidance issued by the IRS result in lower levels of energy efficiency improvements, it could impact the deduction available and the tax rate.

In addition, like other companies, we may be subject to examination of our income tax returns by the U.S. Internal Revenue Service and other tax authorities; our U.S. federal tax returns for 2020 through 2023 are subject to audit by federal, state, and foreign tax authorities. Though we regularly assess the likelihood of adverse outcomes from such examinations and the adequacy of our provision for income taxes and tax reserves, there can be no assurance that such provision is sufficient and that a determination by a tax authority will not have an adverse effect on our net income.

Furthermore, the Organization for Economic Cooperation and Development (OECD) Inclusive Framework of 137 jurisdictions have joined a two-pillar plan to reform international taxation rules. The first pillar is focused on the allocation of taxing rights between countries for in-scope multinational enterprises that sell goods and services into countries with little or no local physical presence and is intended to apply to multinational enterprises with global turnover above 20 billion euros. The second pillar is focused on developing a global minimum tax rate of at least 15 percent applicable to in-scope multinational enterprises and is intended to apply to multinational enterprises with annual consolidated group revenue in excess of 750 million euro. While substantial work remains to be completed by the OECD and national governments on the implementation of these proposals, future tax reform resulting from these developments may result in changes to long-standing tax principles, which could adversely affect our effective tax rate or result in higher cash tax liabilities.

Changes in the laws and regulations governing the public procurement of ESPCs could have a material impact on our business.

We derive a significant amount of our revenue from ESPCs with our government customers. While federal, state and local government rules governing such contracts vary, such rules may, for example, permit the funding of such projects through long-term financing arrangements; permit long-term payback periods from the savings realized through such contracts; allow units of government to exclude debt related to such projects from the calculation of their statutory debt limitation; allow for award of contracts on a "best value" instead of "lowest cost" basis; and allow for the use of sole source providers. To the extent these rules become more restrictive in the future, our business could be harmed.

We need governmental approvals and permits, and we typically must meet specified qualifications, in order to undertake our energy efficiency projects and construct, own and operate our small-scale renewable energy projects, and any failure to do so would harm our business.

The design, construction, and operation of our energy efficiency and small-scale renewable energy projects require various governmental approvals and permits and may be subject to the imposition of related conditions that vary by jurisdiction. In some cases, these approvals and permits require periodic renewal. We cannot predict whether all permits required for a given project will be granted or whether the conditions associated with the permits will be achievable. The denial of a permit essential to a project or the imposition of impractical conditions would impair our ability to develop the project. In addition, we cannot predict whether the permits will attract significant opposition or whether the permitting process will be lengthened due to complexities and appeals. We have over the past few years experienced longer lead times in the permitting process for projects and such delays have and may further impair or delay our ability to develop projects. Delays could also increase the cost so substantially that the projects are no longer attractive to us. If we were to commence construction in anticipation of obtaining the final, non-appealable permits needed for a project, we would be subject to the risk of being unable to complete the project if all the permits were not obtained. If this were to occur, we would likely lose a significant portion of our investment in the project and could incur a loss as a result. Further, the continued operations of our projects require continuous compliance with permit conditions. This compliance may require capital commitments or result in reduced operations. Any failure to procure, maintain and comply with necessary permits would adversely affect ongoing development, construction and continuing operation of our projects.

In addition, the projects we perform for governmental agencies are governed by particular qualification and contracting regimes. Certain states require qualification with an appropriate state agency as a precondition to performing work or appearing as a qualified energy service provider for state, county, and local agencies within the state. For example, the Commonwealth of Massachusetts and the states of Colorado and Washington pre-qualify energy service providers and provide contract documents that serve as the starting point for negotiations with potential governmental clients. Most of the work that we perform for the federal government is performed under IDIQ agreements between a government agency and us or one of our subsidiaries. These IDIQ agreements allow us to contract with the relevant agencies to implement energy projects, but no work may be performed unless we and the agency agree on a task order or delivery order governing the provision of a specific project. The government agencies enter into contracts for specific projects on a competitive basis. We and our subsidiaries are currently party to an IDIQ agreement with the U.S. Department of Energy expiring in 2028. We are also party to similar agreements with other federal agencies, including the U.S. Army Corps of Engineers and the U.S. General Services Administration. If we are unable to maintain or renew our IDIQ qualification or similar federal or state qualification regimes, our business could be materially harmed.

Many of our small-scale renewable energy projects are, and other future projects may be, subject to or affected by U.S. federal energy regulation or other regulations that govern the operation, ownership, and sale of the facility, or the sale of electricity from the facility.

PUHCA and the FPA regulate public utility holding companies and their subsidiaries and place constraints on the conduct of their business. The FPA regulates wholesale sales of electricity and the transmission of electricity in interstate commerce by public utilities. Under PURPA, most of our current small-scale renewable energy projects are small power "qualifying facilities" (facilities meeting statutory size, fuel, and filing requirements) that are exempt from regulations under PUHCA, most provisions of the FPA and state rate and financial regulation. Some of our renewable energy projects which are operating as exempt wholesale generators or operating under a special exemption from PUHCA are currently subject to rate regulation for wholesale power sales by the Federal Energy Regulatory Commission ("FERC") under the FPA and must comply with certain FERC reporting requirements. Also, we may acquire interests in or develop additional generating projects that are not qualifying facilities. Non-qualifying facility projects would be fully subject to FERC corporate and rate regulation and would be required to obtain FERC acceptance of their rate schedules for wholesale sales of energy, capacity, and ancillary services, which requires substantial disclosures to and discretionary approvals from FERC. FERC may revoke or revise an entity's authorization to make wholesale sales at negotiated, or market-based, rates if FERC determines that we can exercise market power in transmission or generation, create barriers to entry or engage in abusive affiliate transactions or market manipulation. In addition, many public utilities (including any non-qualifying facility generator in which we may invest) are subject to FERC reporting requirements that impose administrative burdens and that, if violated, can expose the company to civil penalties or other risks.

All of our wholesale electric power sales are subject to certain market behavior rules. These rules change from time to time, by virtue of FERC rulemaking proceedings and FERC-ordered amendments to utilities' or power pools' FERC tariffs. If we are

deemed to have violated these rules, we will be subject to potential disgorgement of profits associated with the violation and/or suspension or revocation of our market-based rate authority, as well as potential criminal and civil penalties. If we were to lose market-based rate authority for any non-qualifying facility project we may acquire or develop in the future, we would be required to obtain FERC's acceptance of a cost-based rate schedule and could become subject to, among other things, the burdensome accounting, record keeping and reporting requirements that are imposed on public utilities with cost-based rate schedules. This could have an adverse effect on the rates we charge for power from our projects and our cost of regulatory compliance. Wholesale electric power sales are subject to increasing regulation. The terms and conditions for power sales, and the right to enter and remain in the wholesale electric sector, are subject to FERC oversight. Due to major regulatory restructuring initiatives at the federal and state levels, the U.S. electric industry has undergone substantial changes over the past decade. We cannot predict the future design of wholesale power markets, or the ultimate effect ongoing regulatory changes will have on our business. Other proposals to further regulate the sector may be made and legislative or other attention to the electric power market restructuring process may delay or reverse the movement towards competitive markets.

If we become subject to additional regulation under PUHCA, FPA, or other regulatory frameworks, if existing regulatory requirements become more onerous, or if other material changes to the regulation of the electric power markets take place, our business, financial condition, and operating results could be adversely affected.

Changes in utility regulation and tariffs could adversely affect our business.
Our business is affected by regulations and tariffs that govern the activities and rates of utilities. For example, utility companies are commonly allowed by regulatory authorities to charge fees to some business customers for disconnecting from the electric grid or for having the capacity to use power from the electric grid for back-up purposes. These fees could increase the cost to our customers of taking advantage of our services and make them less desirable, thereby harming our business, financial condition, and operating results. Many of our current generating projects are operated as qualifying facilities. FERC regulations under the FPA confer upon these facilities' key rights to interconnection with local utilities and can entitle qualifying facilities to enter into power purchase agreements with local utilities, from which the qualifying facilities benefit. Changes to these federal laws and regulations could increase our regulatory burdens and costs and could reduce our revenues. State regulatory agencies could award renewable energy certificates or credits that our electric generation facilities produce to our power purchasers, thereby reducing the power sales revenues we otherwise would earn. In addition, modifications to the pricing policies of utilities could require renewable energy systems to charge lower prices in order to compete with the price of electricity from the electric grid and may reduce the economic attractiveness of certain energy efficiency measures.

Some of the demand-reduction services we provide for utilities and institutional clients are subject to regulatory tariffs imposed under federal and state utility laws. In addition, the operation of, and electrical interconnection for, our renewable energy projects are subject to federal, state, or provincial interconnection and federal reliability standards that are also set forth in utility tariffs. These tariffs specify rules, business practices, and economic terms to which we are subject. The tariffs are drafted by the utilities and approved by the utilities' state and federal regulatory commissions. These tariffs change frequently, and it is possible that future changes will increase our administrative burden or adversely affect the terms and conditions under which we render service to our customers.

Compliance with environmental laws could adversely affect our operating results.
Costs of compliance with federal, state, provincial, local and other foreign existing and future environmental regulations could adversely affect our cash flow and profitability. We are required to comply with numerous environmental laws and regulations and to obtain numerous governmental permits in connection with energy efficiency and renewable energy projects. In addition, we may become subject to additional legislation and regulation regarding climate change, and we may incur significant additional costs to comply with existing and new requirements. If we fail to comply with these requirements, we could be subject to civil or criminal liability, damages, and fines. Existing environmental regulations could be revised or reinterpreted, and new laws and regulations could be adopted or become applicable to us or our projects, and future changes in environmental laws and regulations, including those intended to combat climate change, could occur. These factors may materially increase the amount we must invest to bring our projects into compliance and impose additional expense on our operations. In addition, private lawsuits or enforcement actions by federal, state, provincial, and/or foreign regulatory agencies may materially increase our costs. Certain environmental laws make us potentially liable on a joint and several basis for the remediation of contamination at or emanating from properties or facilities we currently or formerly owned or operated or properties to which we arranged for the disposal of hazardous substances. Such liability is not limited to the cleanup of contamination we actually caused. Although we seek to obtain indemnities against liabilities relating to historical contamination at the facilities we own or operate, we cannot provide any assurance that we will not incur liability relating to the remediation of contamination, including contamination we did not cause. We may not be able to obtain or maintain, from time to time, all required environmental regulatory approvals. A delay in obtaining any required environmental regulatory approvals or failure to obtain and comply with them could adversely affect our business and operating results.

Our activities and operations are subject to numerous health and safety laws and regulations, and if we violate such regulations, we could face penalties and fines.
We are subject to numerous health and safety laws and regulations in each of the jurisdictions in which we operate. These laws and regulations require us to obtain and maintain permits and approvals and implement health and safety programs and procedures to control risks associated with our projects. Compliance with those laws and regulations can require us to incur substantial costs. Moreover, if our compliance programs are not successful, we could be subject to penalties or to revocation of our permits, which may require us to curtail or cease operations of the affected projects. Violations of laws, regulations and permit requirements may also result in criminal sanctions or injunctions. Health and safety laws, regulations and permit requirements may change or become more stringent. Any such changes could require us to incur materially higher costs than we currently have. Our costs of complying with current and future health and safety laws, regulations and permit requirements, and any liabilities, fines or other sanctions resulting from violations of them, could adversely affect our business, financial condition, and operating results.

We are subject to various privacy and consumer protection laws.
Our privacy policy is posted on our website, and any failure by us or our vendor or other business partners to comply with it or with federal, state, or international privacy, data protection or security laws or regulations could result in regulatory or litigation-related actions against us, legal liability, fines, damages and other costs. We may also incur substantial expenses and costs in connection with maintaining compliance with such laws. Globally, laws such as the General Data Protection Regulation ("GDPR") in Europe and new and emerging state laws in the United States on privacy, data, and related technologies, have created new compliance obligations and significantly increases fines for noncompliance. Although we take steps to protect the security of our customers' personal information, we may be required to expend significant resources to comply with data breach requirements if third parties improperly obtain and use the personal information of our customers or we otherwise experience a data loss with respect to customers' personal information. A major breach of our network security and systems could have negative consequences for our business and future prospects, including possible fines, penalties and damages, reduced customer demand for our services, and harm to our reputation and brand.

Risks Related to our Indebtedness

Our senior credit facility, energy asset financing term loans and construction loans contain financial and operating restrictions that may limit our business activities and our access to credit, and they may not be sufficient to fund our capital needs and growth.
Provisions in our senior credit facility and term loan, project financing term loans and construction loans impose customary restrictions on our and certain of our subsidiaries' business activities and uses of cash and other collateral. These agreements also contain other customary covenants, including covenants that require us to meet specified financial ratios and financial tests.

We have a $200 million revolving senior secured credit facility and $75 million term loan that mature March 2025 as well as a $220 million delayed draw term loan that matures April 15, 2024 (collectively, the "Senior Credit Facilities"). As of December 31, 2023, the balance of our Senior Credit Facilities was $279.9 million, $65.0 million of which was outstanding under the delayed draw term loan. These Senior Credit Facilities may not be sufficient to meet our needs as our business grows, and we may be unable to extend or replace them on acceptable terms, or at all. The Senior Credit Facilities are subject to quarter end ratio covenants, including a maximum ratio of total funded debt to EBITDA and a debt service coverage ratio (each as defined in the agreement and described in more detail in this Form 10-K) as well as certain other customary operational covenants. EBITDA for purposes of the facilities excludes the results of certain renewable energy projects that we own and which we finance in separate subsidiaries through project financing and the results of our joint ventures. In addition, our project financing term loans and construction loans require us to comply with a variety of financial and operational covenants. Our failure to comply with the covenants under our project financing debt or our Senior Credit Facilities may result in the declaration of an event of default and cause us to be unable to borrow under our Senior Credit Facilities. In addition to preventing additional borrowings under these facilities, an event of default, if not cured or waived, may result in the acceleration of the maturity of indebtedness outstanding under it or the applicable project financing term loan, which would require us to pay all amounts outstanding. If an event of default occurs under our project financing debt or our Senior Credit Facilities, we may not be able to cure it within any applicable cure period, if at all. Certain of our debt agreements, including our Senior Credit Facilities, also contain subjective acceleration clauses based on a lender deeming that a "material adverse change" in our business has occurred. If these clauses are implicated, and the lender declares that an event of default has occurred, the outstanding indebtedness would likely be immediately due and owing. If the maturity of our indebtedness is accelerated, we may not have sufficient funds available for repayment or we may not have the ability to borrow or obtain sufficient funds to replace the accelerated indebtedness on terms acceptable to us or at all.

If our subsidiaries default on their obligations under their debt instruments, we may need to make payments to lenders or to prevent foreclosure on the collateral securing the debt.

We typically set up subsidiaries to own and finance our renewable energy projects. These subsidiaries incur various types of debt which can be used to finance one or more projects. This debt is typically structured as non-recourse or limited recourse debt, which means it is repayable solely from the revenues from the projects financed by the debt and is secured by such projects' physical assets, major contracts and cash accounts and a pledge of our equity interests in the subsidiaries involved in the projects. Although our subsidiary debt is typically non-recourse to Ameresco, if a subsidiary of ours defaults on such obligations, or if one project financed by a particular subsidiary's indebtedness encounters difficulties or is terminated, then we may from time to time determine to provide financial support to the subsidiary in order to maintain rights to the project or otherwise avoid the adverse consequences of a default. In the event a subsidiary defaults on its indebtedness, its creditors may foreclose on the collateral securing the indebtedness, which may result in our losing our ownership interest in some or all of the subsidiary's assets. Furthermore, our $300 million construction and development loan, which we use to finance a number of our early stage development and construction projects, requires us, in the case of default under the facility, a default under our Senior Credit Facilities or a change in control of Ameresco, to make required capital contributions to the borrower entity who then would be required to use the proceeds from the capital contributions to repay the construction and development loan. The loss of our ownership interest in a subsidiary or some or all of a subsidiary's assets or the requirement to make capital contributions under our construction and development loan could have a material adverse effect on our business, financial condition and operating results.

If we fail to comply with the obligation in our Senior Credit Facilities to use commercially reasonable efforts to raise a minimum of $100 million equity or subordinated debt financing, we could be in default under the Senor Credit Facilities or if the terms of such financing are not favorable to us our financial condition may be adversely impacted

Our Senior Credit Facilities require us to use commercially reasonable efforts (assuming normal market conditions) to raise a minimum of $100 million equity or subordinated debt financing by April 15, 2024. We are currently pursuing a subordinated debt financing but there are no assurances that we will be able to complete such financing on favorable terms or at all. If we fail to comply with the obligation, our lenders could declare that an event of default has occurred and accelerate our indebtedness and we may not have sufficient funds available for repayment.

Risks Related to Ownership of Our Class A Common Stock

The trading price of our Class A common stock is volatile.

The trading price of our Class A common stock is volatile and could be subject to wide fluctuations, some of which are beyond our control. During the year ended December 31, 2023, our Class A common stock has traded at a low of $18.40 and a high of $65.86. The stock market in general has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of publicly traded companies. If the stock market in general experiences a significant decline, the trading price of our Class A common stock could decline for reasons unrelated to our business, financial condition, or operating results. As a result of this volatility, you may not be able to sell your Class A common stock at or above the price you paid for it, and you may lose some or all of your investment. Additionally, although historically there has not been a large short position in our Class A common stock, securities of certain companies have recently experienced extreme and significant volatility as a result of a large aggregate short position driving up the stock price over a short period of time, which is known as a "short squeeze." Furthermore, some companies that have had volatile market prices for their securities have had securities class actions filed against them. If a suit were filed against us, regardless of its merits or outcome, it would likely result in substantial costs and divert management's attention and resources. This could have a material adverse effect on our business, operating results, and financial condition.

Holders of our Class A common stock are entitled to one vote per share, and holders of our Class B common stock are entitled to five votes per share. The lower voting power of our Class A common stock may negatively affect the attractiveness of our Class A common stock to investors and, as a result, its market value.

We have two classes of common stock: Class A common stock, which is listed on the NYSE, and which is entitled to one vote per share, and Class B common stock, which is not listed on any security exchange and is entitled to five votes per share. The difference in the voting power of our Class A and Class B common stock could diminish the market value of our Class A common stock because of the superior voting rights of our Class B common stock and the power those rights confer.

For the foreseeable future, Mr. Sakellaris or his affiliates will be able to control the selection of all members of our board of directors, as well as virtually every other matter that requires stockholder approval, which will severely limit the ability of other stockholders to influence corporate matters.

Except in certain limited circumstances required by applicable law, holders of Class A and Class B common stock vote together as a single class on all matters to be voted on by our stockholders. Mr. Sakellaris, our founder, principal stockholder, president, and chief executive officer, and certain of his family members own all of our Class B common stock, which, together with their Class A common stock, represents approximately 74.5% of the combined voting power of our outstanding Class A and Class B

common stock. Under our restated certificate of incorporation, holders of shares of Class B common stock may generally transfer those shares to family members, including spouses and descendants or the spouses of such descendants, as well as to affiliated entities, without having the shares automatically convert into shares of Class A common stock. Therefore, Mr. Sakellaris, his affiliates, and his family members and descendants will, for the foreseeable future, be able to control the outcome of the voting on virtually all matters requiring stockholder approval, including the election of directors and significant corporate transactions such as an acquisition of our company, even if they come to own, in the aggregate, as little as 20% of the economic interest of the outstanding shares of our Class A and Class B common stock. Moreover, these persons may take actions in their own interests that you or our other stockholders do not view as beneficial.

Though we may repurchase shares of our Class A common stock pursuant to our share repurchase program, we are not obligated to do so and if we do, we may purchase only a limited number of shares of Class A common stock.
In 2016, we announced a stock repurchase program under which the Company is authorized to repurchase, in the aggregate, up to $17.6 million of our Class A common stock. We are not obligated to acquire any shares of our Class A common stock, and holders of our Class A common stock should not rely on the share repurchase program to increase their liquidity. Our utilization of the share repurchase program depends upon a variety of factors, including the trading price of our Class A common stock, liquidity, securities laws restrictions, tax and other regulatory restrictions, alternative uses of capital, and market and economic conditions. Any stock repurchase would be through open market transactions or in privately negotiated transactions, in accordance with applicable securities laws and regulatory limitations. We may reduce or eliminate our share repurchase program in the future. The reduction or elimination of our share repurchase program, particularly if we do not repurchase the full number of shares authorized under the program, could adversely affect the market price of our common stock.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Information Technology and Cybersecurity Risk Management

As is the case for all large companies, we are regularly subject to cyberattacks and other cyber incidents and, therefore, cybersecurity occupies a pivotal role within our risk management process. We adhere to a risk-based, multi-layered “defense in depth” approach that is dedicated to the identification, protection, detection, response, and recovery from cyber threats and incidents. We understand that a single technology, process, or business control cannot wholly prevent or mitigate all potential risks. Therefore, we employ a multitude of technologies, processes, and controls, each functioning independently but collectively forming a cohesive strategy aimed at minimizing risk. This strategy is evaluated through various means, such as frequent research and industry security briefings among our information technology group, internal and external audits, independent program assessments, control attestation reports, penetration testing, and other exercises that gauge its effectiveness. Threats and incidents connected with third party service providers are considered and managed under this process as well.

We engage external parties, including consultants, independent privacy assessors, computer security firms and risk management and governance experts, to enhance our cybersecurity oversight. For example, we have engaged an outside consulting firm with expertise in the field to help us assess our systems, monitor risk and implement best practices and to support the internal audit of our cyber security programs and we regularly consults with industry groups on emerging industry trends. In addition, as part of our overall risk mitigation strategy, we also maintain cyber insurance coverage. Our cybersecurity policies, standards and procedures include cyber and data breach response plans, which are periodically assessed against the National Institute of Standards and Technology Cybersecurity Framework.

We do not believe that there are currently any risks from cybersecurity threats that are reasonably likely to materially affect us or our business strategy, results of operations or financial condition.

Cybersecurity Governance and Oversight

The Audit Committee of our Board of Directors provides direct oversight over cybersecurity risk. The Audit Committee receives and provides feedback on periodic updates from management regarding cybersecurity. Agendas for quarterly updates are developed and adjusted throughout the year to adapt to any emerging risks or key topics and include, a wide range of information, including the prevailing cybersecurity threat landscape, investments in infrastructure, trainings programs and opportunities for bolstering the security of our company's systems and the protection of our products and operations. The full Board of Directors receives regular reports from the Audit Committee and our management on our cyber security program and the emerging threat landscape.

We have a Senior Vice President of Information Technology whose team is responsible for leading company-wide cybersecurity strategy, policy, standards and processes and works across relevant units of Ameresco. Our Senior Vice President of Information Technology has more than thirty years of experience in cybersecurity and information technology and based on his long career with Ameresco he has a deep understanding of our information technology and business needs and the cyber security opportunities and risks we face.

In actioning our cyber security strategy, our management together with our Senior Vice President of Information Technology evaluate the materiality of any cybersecurity threats and incidents utilizing both qualitative and quantitative considerations. Our internal audit team also provides independent testing on aspects of the operations of our cybersecurity program and the supporting control framework.

Our cybersecurity program is designed to ensure the confidentiality, integrity, and availability of data and systems as well as to ensure timely identification of and response to any incidents. This design is geared toward supporting our business objectives and the needs of our valued customers, employees, and other stakeholders. We firmly believe that cybersecurity is a collective responsibility that extends to every employee, and we prioritize it as an ongoing objective. To increase our employees' awareness of cyber threats, we provide education and share best practices through a security awareness training program. This includes receiving regular exercises, cyber-event simulations, training programs and an annual attestation to our Technology Acceptable Use Policy.

See “A failure of our information technology (“IT”) and data security infrastructure or cyber or other security incidents, vulnerabilities or other deficiencies, could adversely impact our business, reputation or results of operation or could cause us to default under our contractual obligations.” in Item 1A, Risk Factors.

Item 2. Properties

Our corporate headquarters is located in Framingham, Massachusetts, where we occupy approximately 23,000 square feet under a lease expiring on June 30, 2025. We occupy regional offices in Phoenix, Arizona; Oak Brook, Illinois; Portland, Maine; Columbia, Maryland; Charlotte, North Carolina; Knoxville, Tennessee; Renton, Washington, Richmond Hill, Ontario; London, England; and Milan, Italy each less than 20,000 square feet, under lease agreements. In addition, we lease space, typically of lesser size, for 49 field offices throughout North America and Europe. We also own 183 small-scale renewable energy plants throughout North America and two in Ireland, which are located on sites we own or lease, or sites provided by customers. We expect to add new facilities and expand existing facilities as we continue to add employees and expand our business into new geographic areas.

Item 3. Legal Proceedings

In the ordinary conduct of our business, we are subject to periodic lawsuits, investigations, and claims. Although we cannot predict with certainty the ultimate resolution of such lawsuits, investigations, and claims against us, we do not believe that any currently pending or threatened legal proceedings to which we are a party will have a material adverse effect on our business, results of operations, or financial condition.

For additional information about certain proceedings, please refer to Note 15, “Commitments and Contingencies”, to our consolidated financial statements included in this Report, which is incorporated into this item by reference.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

Our Class A common stock trades on the New York Stock Exchange under the symbol "AMRC".

As of February 23, 2024, and according to the records of our transfer agent, there were 11 shareholders of record of our Class A common stock. A substantially greater number of holders of our Class A common stock are "street name" or beneficial holders, whose shares are held of record by banks, brokers, and other financial institutions.

Our Class B common stock is not publicly traded and is held of record by George P. Sakellaris, our founder, principal stockholder, president, and chief executive officer, and a trust which Mr. Sakellaris's immediate family members are trustee and beneficiaries.

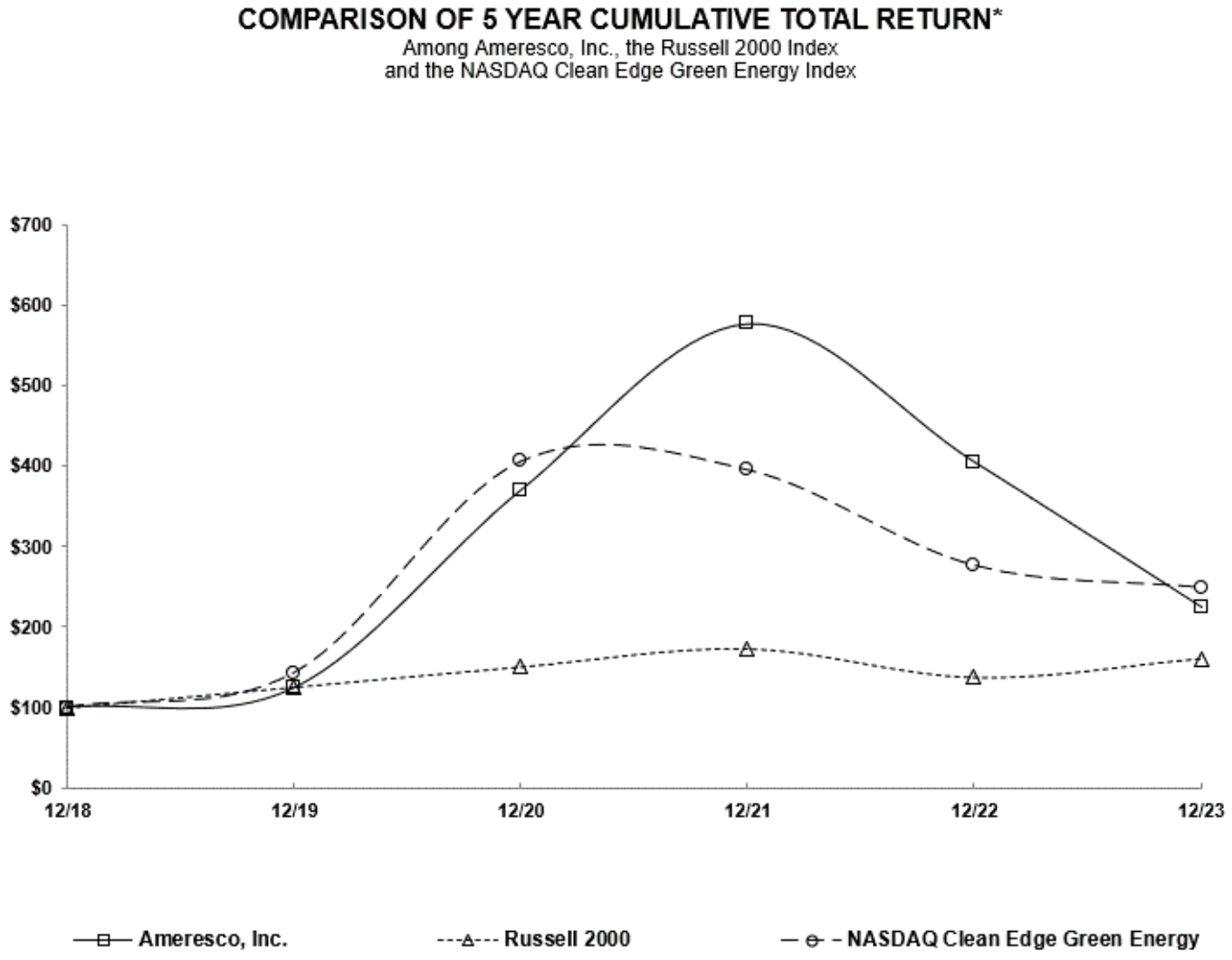
Dividend Policy

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain earnings, if any, to finance the growth and development of our business and do not expect to pay any cash dividends for the foreseeable future. Our revolving senior secured credit facility contains provisions that limit our ability to declare and pay cash dividends during the term of that agreement. Payment of future dividends, if any, will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in current or future financing instruments, provisions of applicable law and other factors our board of directors deems relevant.

Stock Performance Graph

The following performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 (the "Securities Act") or the Exchange Act, except to the extent that we specifically incorporate it by reference into such filing.

The following graph compares the cumulative total return attained by our Class A common shareholders with the Russell 2000 index and the NASDAQ Clean Edge Green Energy index. The information presented assumes an investment of $100 on December 31, 2018 and that all dividends were reinvested. The graph shows the value that each of these investments would have had at the end of each year.



	12/31/2018	12/31/2019	12/30/2020	12/30/2021	12/30/2022	12/31/2023
Ameresco, Inc.	$100.00	$124.11	$370.50	$577.59	$405.25	$224.61
Russell 2000 Index	$100.00	$125.52	$150.58	$172.90	$137.56	$160.85
NASDAQ Clean Edge Green Energy Index	$100.00	$142.67	$406.35	$395.62	$276.35	$248.97

Shareholder returns over the indicated period should not be considered indicative of future shareholder returns.

Issuer Purchases of Equity Securities

We did not repurchase any shares of our common stock under our stock repurchase program authorized by the Board of Directors on April 27, 2016 (the "Repurchase Program") during the year ended December 31, 2023. As of December 31, 2023, there were shares having a dollar value of approximately $5.9 million that may yet be purchased under the Repurchase Program.

Under the Repurchase Program, we are authorized to repurchase up to $17.6 million of our Class A common stock. Stock repurchases may be made from time to time through the open market and privately negotiated transactions. The amount and timing of any share repurchases will depend upon a variety of factors, including the trading price of our Class A common stock,

liquidity, securities laws restrictions, other regulatory restrictions, potential alternative uses of capital, and market and economic conditions. The Repurchase Program may be suspended or terminated at any time without prior notice and has no expiration date.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes and other financial information included in Item 8 of this Report. Some of the information contained in this discussion and analysis are set forth elsewhere in this Report, including information with respect to our plans and strategy for our business and related financing, and includes forward-looking statements that involve risks and uncertainties. You should review the "Risk Factors" included in Item 1A of this Report for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

Ameresco is a leading clean technology integrator with a comprehensive portfolio of energy efficiency and renewable energy supply solutions. We help organizations meet energy saving and energy management challenges with an integrated, comprehensive approach to energy efficiency and renewable energy. Leveraging budget neutral solutions, including ESPCs and PPAs, we aim to eliminate the financial barriers that traditionally hamper energy efficiency and renewable energy projects.

Drawing from decades of experience, Ameresco develops tailored energy management projects for its customers in the commercial, industrial, local, state and federal government, K-12 education, higher education, healthcare, public housing sectors, and utilities.

We provide solutions primarily throughout the U.S., Canada, and Europe, and our revenues are derived principally from energy efficiency projects, which entail the design, engineering, and installation of equipment and other measures that incorporate a range of innovative technology and techniques to improve the efficiency and control the operation of a facility's energy infrastructure; this can include designing and constructing a central plant or cogeneration system for a customer providing power, heat and/or cooling to a building, or other small-scale plant that produces electricity, gas, heat or cooling from renewable sources of energy. We also derive revenue from long-term O&M contracts, energy supply contracts for renewable energy operating assets that we own, integrated-PV, and consulting and enterprise energy management services.

In addition to organic growth, strategic acquisitions of complementary businesses and assets, and joint venture arrangements have been an important part of our growth enabling us to broaden our service offerings and expand our geographical reach. During 2022, we entered into joint venture arrangements in Greece and California and acquired an operating wind farm in Ireland. During 2023, we acquired Enerqos Energy Solutions S.r.l. ("Enerqos") a renewable energy and energy efficiency company headquartered in Milan, Italy and entered into a joint venture agreement with Bristol City, U.K. to transform the way the city generates, distributes, stores and uses energy.

On August 4, 2023, we entered into a purchase and sale agreement to acquire an energy asset project and the ability to acquire 100% of the stock of Bright Canyon Energy Corporation ("BCE") in a two-phased transaction, exclusive of each other. Phase 1, the purchase of the energy asset project, closed on August 4, 2023. In the second phase, which closed on January 12, 2024, we acquired BCE, including its interest in one of our consolidated joint ventures and its interests in project subsidiaries developing or with rights to develop solar, battery, and microgrid assets.

Key Factors and Trends

The Inflation Reduction Act

The IRA was signed into law on August 16, 2022. The bill invests nearly $369 billion in energy and climate policies. The provisions of the IRA are intended to, among other things, incentivize domestic clean energy investment, manufacturing, and deployment. The IRA incentivizes the deployment of clean energy technologies by extending and expanding federal incentives such as the ITC and the Production Tax Credit ("PTC"). We view the enactment of the IRA as favorable for the overall business climate for the renewable energy industry. However, there is uncertainty related to the applicability of the IRA to our current and planned projects and the scope of the IRA and its interpretations may change if there is a change in the U.S. administration or if government agencies' authority to interpret federal law is restricted as a result of the Supreme Court's review of the Chevron doctrine under which federal government agencies have been awarded board authority to interpret broad or ambiguous legislation. We may also continue to experience a delay in our sales cycles and new award activity as our customers consider the applicability

of the IRA and as financing projects may take longer as result of this uncertainty. The IRA may increase the competition in our industry and as such increase the demand and cost for labor, equipment and commodities needed for our projects.

Supply Chain Disruptions and Other Global Factors

We continue to monitor the impact of global economic conditions on our operations, financial results, and liquidity, including the result of supply chain challenges, war in Ukraine and the Middle East, evolving relations between the U.S. and China, and other geopolitical tensions. The impact to our future operations and results of operations as a result of these global trends remains uncertain and the challenges we face, including increases in costs for logistics and supply chains, intermittent supplier delays, and shortages of certain components needed for our business, such as lithium-ion battery cells, semiconductors, and other components required for our clean energy solutions may continue or become more pronounced.

During the year ended December 31, 2023, we were impacted by supply chain disruptions and varying levels of inflation, as a result macroeconomic conditions, causing delays in the timely delivery of material to customer sites and delays and disruptions in the completion of certain projects, including those pursuant to the SCE Agreement, and increased shipping and transportation costs, as well as increased component and labor costs. This negatively impacted our results of operations during the year ended December 31, 2023. We expect the trends of supply chain challenges to continue beyond this year. We continue to monitor macroeconomic conditions to remain flexible and to optimize and evolve our business as appropriate to address the challenges presented from these conditions.

In August 2023, the U.S. Department of Commerce issued a final ruling in the Auxin Solar trade case related to solar tariff imports that will lead to higher tariffs on certain imported solar products from Malaysia, Vietnam, Thailand, and Cambodia beginning in June 2024. Similarly, other changes in trade regulations and the enforcement of the Uyghur Forced Labor Prevention Act, could disrupt the solar panel supply chain, increase the cost for solar cells and panels, and ultimately impact the demand for clean energy solutions. We are closely monitoring the investigation and any regulations issued in connection with it.

Climate Change and Effects of Seasonality

The global emphasis on climate change and reducing carbon emissions has created opportunities for our industry. Sustainability has been at the forefront of our business since its inception and we are committed to staying at the leading edge of innovation taking place in the energy sector. We believe the next decade will be marked by dramatic changes in the power infrastructure with resources shifting to more distributed assets, storage, and microgrids to increase overall reliability and resiliency. The sustainability efforts are impacted by regulations, and changes in the regulatory climate may impact the demand for our products and offerings. See “Our business depends in part on federal, state, provincial and local government support or the imposition of additional taxes, tariffs, duties, or other assessments on renewable energy or the equipment necessary to generate or deliver it, for energy efficiency and renewable energy, and a decline in such support could harm our business” and “Compliance with environmental laws could adversely affect our operating results” in Item 1A, Risk Factors.

Climate change also brings risks, as the impacts have caused us to experience more frequent and severe weather interferences, and this trend is expected to continue. We are subject to seasonal fluctuations and construction cycles, particularly in climates that experience colder weather during the winter months, such as the northern United States and Canada, and climates that experience extreme weather events, such as wildfires, storms or flooding, hurricanes, or at educational institutions, where large projects are typically carried out during summer months when their facilities are unoccupied. In addition, government customers, many of which have fiscal years that do not coincide with ours, typically follow annual procurement cycles and appropriate funds on a fiscal-year basis even though contract performance may take more than one year. Further, government contracting cycles can be affected by the timing of, and delays in, the legislative process related to government programs and incentives that help drive demand for energy efficiency and renewable energy projects. As a result, our revenues and operating income in the third and fourth quarter are typically higher, and our revenues and operating income in the first quarter are typically lower, than in other quarters of the year, however, this may become harder to predict with the potential effects of climate change. As a result of such fluctuations, we may occasionally experience declines in revenues or earnings as compared to the immediately preceding quarter, and comparisons of our operating results on a period-to-period basis may not be meaningful.

Our annual and quarterly financial results are also subject to significant fluctuations as a result of other factors, many of which are outside our control. See “Our business is affected by seasonal trends and construction cycles, and these trends and cycles could have an adverse effect on our operating results” and “Extreme weather events and other natural disasters, particularly those exacerbated by climate change, could materially affect our ability to complete our projects and develop our assets” in Item 1A, Risk Factors.

The Southern California Edison ("SCE") Agreement

In October 2021, we entered into a contract with SCE to design and build three grid scale BESS at three sites near existing substation parcels throughout SCE's service territory in California with an aggregate capacity of 537.5 MW ("the SCE Agreement"). The engineering, procurement and construction price is approximately $892.0 million, in the aggregate, including two years of O&M revenues, subject to customary potential adjustments for changes in the work. As previously disclosed, due to supply chain delays, weather and other events, we were unable to complete the projects by August 1, 2022 (the "Guaranteed Completion Date") and made related force majeure claims. In late 2022, SCE also instructed us to adjust the completion of the sites into 2023. Under the SCE Agreement, a failure to reach the Guaranteed Completion Date could, under certain circumstances, result in liquidated damages up to a maximum amount of $89 million being applied. We have been working with SCE to analyze the applicability and scope of force majeure relief based on our force majeure claims. In February 2024, in response to us issuing an invoice to SCE for one of the sites, SCE notified us that they intend to withhold liquidated damages for that project. Our view is that liquidated damages should not be applied. If we fail to come to an agreement with SCE about the applicability and scope of force majeure relief and liquidated damages, we may be required to pay liquidated damages up to an aggregate maximum of $89 million and may not be able to recover costs associated with the force majeure events.

We are working closely with SCE on the final steps toward substantial completion for two of the three projects. Construction activities and preparation for commissioning have begun for the third project, which was significantly impacted by the heavy rainfall in California in 2023. This last site is expected to reach substantial completion in the summer of 2024.

A majority of our revenues under this contract were recognized in 2022 based upon costs incurred in 2022 relative to total expected costs on this project.

Stock-based Compensation

During the year ended December 31, 2023, we granted 170,000 common stock options to certain employees and 66,247 restricted stock units to our employees and non-employee directors under our 2020 Stock Incentive Plan. Our stock-based compensation expense decreased from $15.0 million for the year ended December 31, 2022 to $10.3 million for the year ended December 31, 2023. Stock-based compensation decreased in 2023, primarily due to the reversal of previously recognized expense of approximately $5.1 million related to performance-based option grants as the estimated probability of such awards vesting was reduced to zero based on the expected attainment of certain performance targets due to revised results in 2023.

In addition, our unrecognized stock-based compensation expense decreased from $46.7 million at December 31, 2022 to $30.1 million at December 31, 2023, and is expected to be recognized over a weighted-average period of two years. See Note 14 "Stock-based Compensation and Other Employee Benefits" for additional information.

Backlog and Awarded Projects

Backlog is an important metric for us because we believe strong order backlogs indicate growing demand and a healthy business over the medium to long term, conversely, a declining backlog could imply lower demand.

The following table presents our backlog:

	As of December 31,	
(In Thousands)	**2023**	**2022**
Project Backlog [1]		
Fully-contracted backlog	$ 1,323,742	$ 1,001,325
Awarded, not yet signed customer contracts	2,555,197	1,638,640
Total project backlog	$ 3,878,939	$ 2,639,965
12-month project backlog	$ 718,577	$ 595,020

(1) Project backlog net of minority interests

O&M Backlog		
Fully-contracted backlog	$ 1,221,661	$ 1,231,120
12-month O&M backlog	$ 88,930	$ 89,520

Total project backlog represents energy efficiency projects that are active within our sales cycle. Our sales cycle begins with the initial contact with the customer and ends, when successful, with a signed contract, also referred to as fully-contracted backlog. Our sales cycle recently has been averaging 18 to 42 months. Awarded backlog is created when a potential customer awards a project to Ameresco following a request for proposal. Once a project is awarded but not yet contracted, we typically conduct a detailed energy audit to determine the scope of the project as well as identify the savings that may be expected to be generated from upgrading the customer's energy infrastructure. At this point, we also determine the subcontractor, what equipment will be used, and assist in arranging for third party financing, as applicable. Recently, awarded projects have been taking an average of 12 to 24 months to result in a signed contract and convert to fully-contracted backlog. It may take longer, as it depends on the size and complexity of the project. Historically, approximately 90% of our awarded backlog projects have resulted in a signed contract. After the customer and Ameresco agree to the terms of the contract and the contract becomes executed, the project moves to fully-contracted backlog. The contracts reflected in our fully-contracted backlog typically have a construction period of 12 to 36 months and we typically expect to recognize revenue for such contracts over the same period.

Our O&M backlog represents expected future revenues under signed, multi-year customer contracts for the delivery of O&M services, primarily for energy efficiency and renewable energy construction projects completed by us for our customers.

We define our 12-month backlog as the estimated amount of revenues that we expect to recognize in the next twelve months from our fully-contracted backlog. See Note 2 "Summary of Significant Accounting Policies" for our revenue recognition policies. See "We may not recognize all revenues from our backlog or receive all payments anticipated under awarded projects and customer contracts" and "In order to secure contracts for new projects, we typically face a long and variable selling cycle that requires significant resource commitments and requires a long lead time before we realize revenues" in Item 1A, Risk Factors.

Assets in Development

Assets in development, which represents the potential design/build project value of small-scale renewable energy plants that have been awarded or for which we have secured development rights, were estimated at $2,445.9 million as of December 31, 2023, including $89.8 million attributable to a non-controlling interest, and $1,625.7 million as of December 31, 2022. The portion related to spending for EaaS assets was approximately $399.8 million and $36.4 million at December 31, 2023 and 2022, respectively. These are also important metrics because they help us gauge our future capacity to generate electricity or deliver renewable gas fuel which contributes to our recurring revenue stream.

Results of Operations

The following table sets forth certain financial data from the consolidated statements of income for the periods indicated [1]:

	Year Ended December 31,					
	2023		2022		Year-Over-Year Change	
(In Thousands)	Dollar Amount	% of Revenues	Dollar Amount	% of Revenues	Dollar Change	% Change
Revenues	$1,374,633	100.0 %	$1,824,422	100.0 %	$ (449,789)	(24.7)%
Cost of revenues	1,128,204	82.1 %	1,533,589	84.1 %	(405,385)	(26.4)%
Gross profit	246,429	17.9 %	290,833	15.9 %	(44,404)	(15.3)%
Earnings from unconsolidated entities	1,758	0.1 %	1,647	0.1 %	111	6.7 %
Selling, general and administrative expenses	162,138	11.8 %	159,488	8.7 %	2,650	1.7 %
Asset impairments	3,831	0.3 %	—	— %	3,831	100.0 %
Operating income	82,218	6.0 %	132,992	7.3 %	(50,774)	(38.2)%
Other expenses, net	43,949	3.2 %	27,273	1.5 %	16,676	61.1 %
Income before income taxes	38,269	2.8 %	105,719	5.8 %	(67,450)	(63.8)%
Income tax (benefit) provision	(25,635)	(1.9)%	7,170	0.4 %	(32,805)	457.5 %
Net income	$ 63,904	4.6 %	$ 98,549	5.4 %	$ (34,645)	(35.2)%
Net income attributable to non-controlling interest and redeemable non-controlling interest	$ (1,434)	(0.1)%	$ (3,623)	(0.2)%	$ (2,189)	(60.4)%
Net income attributable to common shareholders	$ 62,470	4.5 %	$ 94,926	5.2 %	$ (32,456)	(34.2)%

(1) A comparison of our 2022 and 2021 results can be found in Item 7 of our 2022 Form 10-K filed with the SEC.

Our results of operations for the year-ended December 31, 2023 reflect a year-over-year decline in terms of revenues, operating income, and net income attributable to common shareholders. All financial result comparisons are against the prior year period.

- ***Revenue:*** total revenues decreased primarily due to a $480.0 million, or 32%, decrease in our project revenue attributed to the timing of revenue recognized based upon costs incurred to date relative to total expected costs on active projects, including our SCE battery storage project.
- ***Cost of Revenues and Gross Profit:*** the decrease in cost of revenues is primarily due to the decrease in project revenues described above, however, our gross profit as a percent of revenues increased due to the lower revenue contribution from our lower margin, design-build SCE battery storage project.
- ***Selling, General and Administrative Expenses:*** the increase is primarily due to higher professional fees of $2.5 million, higher project development fees of $2.1 million, partially offset by lower net salaries and benefits of $4.6 million as a result of a decrease in non-cash stock-based compensation expense.
- ***Asset Impairments:*** This year includes impairment charges of $1.6 million recorded in 2023 related to two of our landfill gas to energy assets, and a goodwill impairment charge of $2.2 million related to one of our reporting units.
- ***Other Expenses, Net:*** Other expenses, net, includes gains and losses from derivatives transactions, foreign currency transactions, interest expense, interest income, amortization of financing costs and certain government incentives. Other expenses, net increased primarily due to higher interest expenses, net of interest income of $9.7 million related to increased levels of project debt, a higher average balance on our senior secured debt facility, factoring fees in Italy of $5.8 million, and a decrease in government incentives received of $2.0 million.
- ***Income before Income Taxes:*** the decrease is due to reasons described above.
- ***Income Tax Expense (Benefit):*** the provision for income taxes is based on various rates set by federal, state, provincial, and local authorities and is affected by permanent and temporary differences between financial accounting and tax reporting requirements. The effective tax rate was lower in 2023 as compared to 2022 primarily due to higher deductions under the Section 179D Energy Efficient Commercial Buildings Deduction for both 2023 under the IRA and for prior periods which were documented and claimed on amended tax returns during 2023, deferred state tax benefits resulting from reduced state tax rates in future periods. The tax benefit rate for 2022 was favorable, primarily due to increases in the benefits associated with energy efficiency tax incentives, including Section 48 Solar Investment Tax Credits, deductions associated with the Section 179D Commercial Buildings Energy Efficiency Tax Deduction, and compensation deductions resulting from employee stock option disqualifying dispositions.
- ***Net Income and Earnings Per Share:*** Net income attributable to common shareholders decreased due to the reasons described above. Basic earnings per share for 2023 was $1.20, a decrease of $0.63 per share compared to 2022. Diluted earnings per share for 2023 was $1.17, a decrease of $0.61 per share, compared to 2022.

Business Segment Analysis

Our reportable segments for the year ended December 31, 2023 were U.S. Regions, U.S. Federal, Canada, Alternative Fuels, and Europe. The remaining amounts are included in “All Other”. Europe was formerly included in “All Other” but was disaggregated due to growth in the segment in 2023. As a result, previously reported amounts have been reclassified for comparative purposes. See Note 20 “Business Segment Information” for additional information about our segments.

Revenues

	Year Ended December 31,		Year-Over-Year Change	
(In Thousands)	2023	2022	Dollar Change	% Change
U.S. Regions	$ 557,122	$ 1,123,343	$ (566,221)	(50.4)%
U.S. Federal	402,884	391,891	10,993	2.8
Canada	70,110	58,558	11,552	19.7
Alternative Fuels	117,075	114,459	2,616	2.3
Europe	152,842	61,645	91,197	147.9
All Other	74,600	74,526	74	0.1
Total revenues	$ 1,374,633	$ 1,824,422	$ (449,789)	(24.7)%

- ***U.S. Regions:*** the decrease is primarily due to a $584.1 million, or 56%, decrease in project revenues attributable to the timing of revenue recognized based upon costs incurred to date relative to total expected costs on active projects, including our SCE battery storage project, versus the prior year partially offset by a $13.1 million, or 28%, increase in revenue from the growth of our energy assets in operation.

- ***U.S. Federal:*** the increase is primarily due to a $8.4 million, or 3%, increase in project revenue attributable to the timing of revenue recognized as a result of the phase of active projects compared to the prior year and a $1.6 million, or 3%, increase in O&M revenue.
- ***Canada:*** the increase is primarily due to higher project revenues which were partially offset by unfavorable foreign exchange rates.
- ***Alternative Fuels:*** the increase is primarily due to a $2.3 million, or 2%, increase in energy asset revenues resulting from the continued growth of our operating portfolio, increased production levels and more favorable pricing on renewable identification numbers ("RIN's") generated from our renewable natural gas facilities.
- ***Europe:*** revenues increased year-over-year primarily due to higher project revenue of $85.1 million, or 158%, resulting from increased overall activity which included revenues of $52.2 million related to the acquisition of Enerqos earlier in 2023 and increased revenues in Greece of $28.3 million.
- ***All Other:*** All other revenues is consistent with the prior year.

Income before Income Taxes and Unallocated Corporate Activity

	Year Ended December 31,		Year-Over-Year Change	
(In Thousands)	2023	2022	Dollar Change	% Change
U.S. Regions	$ 38,746	$ 88,531	$ (49,785)	(56.2)%
U.S. Federal	49,237	50,866	(1,629)	(3.2)
Canada	3,813	2,554	1,259	49.3
Alternative Fuels	6,215	22,989	(16,774)	(73.0)
Europe	4,188	5,589	(1,401)	(25.1)
All Other	4,442	6,370	(1,928)	(30.3)
Unallocated corporate activity	(68,372)	(71,180)	2,808	3.9
Income before income taxes	$ 38,269	$ 105,719	$ (67,450)	(63.8)%

- ***U.S. Regions:*** the decrease is primarily due to the lower revenues described above, partially offset by lower salaries and benefit costs and lower project development costs.
- ***U.S. Federal:*** the decrease is due primarily to higher interest expense.
- ***Canada:*** the increase is primarily due to the increase in project revenues described above partially offset by higher project development costs.
- ***Alternative Fuels:*** the decrease is primarily due to higher direct costs related to unplanned downtime, higher interest expense, higher depreciation expense related to the timing of assets placed in operations and impairment charges recorded in 2023 related to two of our landfill gas to energy assets.
- ***Europe:*** the decrease is primarily due to factoring fees of $5.8 million, increased salaries and benefits, net, and depreciation and amortization as a result of the acquisition of Enerqos, partially offset by the increased revenues noted above.
- ***All Other:*** the decrease is primarily due to increased salaries and benefits, net.
- Unallocated corporate activity includes all corporate level selling, general and administrative expenses and other expenses not allocated to the reportable segments. We do not allocate any indirect expenses to the segments. Corporate activity improved primarily due to lower net salaries and benefit costs of $4.7 million, related to a decrease in non-cash stock-based compensation expense, and higher interest income partially offset by higher interest expense of $3.2 million.

Liquidity and Capital Resources

Overview

Since inception, we have funded operations primarily through cash flow from operations, advances from Federal ESPC projects, our senior secured credit facility, and various forms of other debt (see "Project Financing" below). In addition, in March 2021, we completed an underwritten public offering of 2,875,000 shares of our Class A Common Stock, for total net proceeds of $120.1 million. See Note 13 "Equity and Earnings per Share" for additional information.

Working capital requirements can be susceptible to fluctuations during the year due to timing differences between costs incurred, the timing of milestone-based customer invoices and actual cash collections. Working capital may also be affected by seasonality,

growth rate of revenue, long lead-time equipment purchase patterns, advances from Federal ESPC projects, and payment terms for payables relative to customer receivables.

We expect to incur additional expenditures in connection with the following activities:

- equity investments, energy project asset acquisitions and business acquisitions that we may fund from time to time
- capital investment in current and future energy assets
- material, equipment, and other expenditures for large projects

We regularly monitor and assess our ability to meet funding requirements. We believe that cash and cash equivalents, working capital and availability under our revolving senior secured credit facility, combined with our right (subject to lender consent) to increase our revolving credit facility by $100.0 million, plus develop and sell transactions, tax equity transfers, and our general access to credit and equity markets, will be sufficient to fund our operations through at least February 2025. With the adjustments to the anticipated timeline for completing the SCE battery storage projects, we requested an additional extension to the maturity date for the remaining principal amount of the delayed draw term loan A under our senior secured credit facility, which is scheduled to mature April 15, 2024.

We continue to evaluate and take action, as necessary, to preserve adequate liquidity and ensure that our business can continue to operate and that we can meet our capital and debt service requirements. This may include limiting discretionary spending across the organization and re-prioritizing our capital projects amid times of political unrest, the duration of supply challenges, and the rate and duration of the inflationary pressures. For example, recent increases in inflation and interest rates have impacted overall market returns on assets. We have therefore been particularly prudent in our capital commitments over the past few quarters, ensuring that our assets in development continue to align with our hurdle rates.

August 2023 Purchase and Sale Agreement

On August 4, 2023, we entered into a purchase and sale agreement to acquire an energy asset project and the right to acquire 100% of the stock of BCE in a two-phased transaction, exclusive of each other. Phase 1, the purchase of the energy asset project, closed on August 4, 2023 and did not constitute a business in accordance with ASC 805-50, Business Combinations.

The adjusted purchase price for phase 1 was $88.0 million, of which $5.0 million was paid in cash, $46.7 million was financed through a seller's note, and we assumed a construction loan on the energy asset project for $36.3 million. We are in process of converting the construction loan to a term loan. We also received cash of $11.2 million. During the year ended December 31, 2023, we paid $18.4 million in principal on the seller's note, the balance of which was paid in January 2024. We also agreed to sell back to the seller investment tax credits for the project acquired as part of this transaction for the fair market value of these credits and we received $21.0 million in January 2024 for the transfer of these credits. In addition, we assumed a land lease for the energy asset project. See Note 8 Leases for additional information on the lease.

In the second phase, which closed on January 12, 2024, we acquired BCE, including its interest in one of our consolidated joint venture and its interests in project subsidiaries developing or with rights to develop solar, battery, and microgrid assets for a purchase price of $39.1 million, of which $6.6 million was paid at the closing. The remaining $32.5 million was financed by a seller's note accruing interest of 5.0% and is payable in August 2024. We may be required to make additional contingent payments for this acquisition based on certain projects achieving commercial operation and if the projects qualify for higher energy tax credits than expected.

Senior Secured Credit Facility — Revolver and Term Loans

During the year ended December 31, 2023, we entered into three amendments to our fifth amended and restated senior secured credit facility, which extended the maturity date of our delayed draw term loan A, resulted in $155.0 million paid for the year ended December 31, 2023, $10.0 million due and paid on January 31, 2024 and February 14, 2024, and $10.0 million due on March 31, 2024. The remaining principal amount of our delayed draw term loan is $35.0 million which is due on April 15, 2024. The overall rate table for all loans under the current agreement was also increased by 0.25%. The amendment increased the total funded debt to EBITDA covenant ratio from a maximum of 3.50 to 3.75 for the quarter ending December 31, 2023, and 3.50 thereafter.

As of December 31, 2023, the balance on the senior secured credit facility was $279.9 million and we had funds available of $37.5 million.

After the end of the year, we announced that we had engaged an investment bank to raise subordinated debt as required by the December 2023 amendment to our senior secured credit facility. The debt raise, if successful, would be used to repay outstanding amounts on the senior secured credit facility.

Energy Asset Financing

Energy Asset Construction Facilities, Financing Facilities, and Term Loans

We have entered into a number of construction and term loan agreements for the purpose of constructing and owning certain renewable energy plants. The physical assets and the operating agreements related to the renewable energy plants are generally owned by wholly owned, single member "special purpose" subsidiaries of Ameresco. These construction and term loans are structured as project financings made directly to a subsidiary, and upon commercial operation and achieving certain milestones in the credit agreement, the related construction loan converts into a term loan. While we are required under generally accepted accounting principles ("GAAP") to reflect these loans as liabilities on our consolidated balance sheets, they are generally non-recourse and not direct obligations of Ameresco, Inc., except to the extent of completion guarantees and EPC contracts and certain equity contribution obligations under our August 2023 Construction Credit Facility as described in more detail below.

Our project financing facilities contain various financial and other covenant requirements which include debt service coverage ratios and total funded debt to EBITDA, as defined. Any failure to comply with the financial or other covenants of our project financings would result in inability to distribute funds from the wholly-owned subsidiary to Ameresco, Inc. or constitute an event of default in which the lenders may have the ability to accelerate the amounts outstanding, including all accrued interest and unpaid fees.

Material energy asset construction and term loan financings during the year ended December 31, 2023 were as follows:

- March 2023 Construction Credit Facility, 2.00% - we entered into a credit agreement for a construction facility with a total commitment of CAD$100.0 million and as of December 31, 2023, no funds were drawn under this facility.
- April 2023 Construction Credit Facility, 6.82%, due July 1, 2024 - one of our consolidated joint venture subsidiaries ("JV") entered into a construction loan agreement with two lenders for a principal amount of up to $140.8 million under an energy asset credit facility. At the closing, the JV drew down $90.9 million for construction of an energy asset and subsequently drew down an additional $43.5 million. The loan will be repaid after the energy asset project achieves provisional acceptance, through a sale-leaseback financing under lease agreements entered into between the same parties, as part of the closing documents. We acquired the remaining interest in this JV in January 2024 when we closed on the acquisition of BCE.
- August 2023 Construction Credit Facility, 9.34%, due August 31, 2026 - we entered into a construction and development loan agreement which provides a loan in a principal amount of up to $300.0 million. At the closing, we drew down $200.0 million under this facility, of which approximately $187.0 million was used to reimburse Ameresco for development and construction costs. Subsequent to closing, we drew down an additional $78.9 million. The loan contains a one-year extension option that can be exercised if certain circumstances are met, including payment of a $3.0 million extension fee. The obligations under the loan are guaranteed by all the related subsidiaries and are secured by the subsidiaries' assets as well as our equity interest in the borrower entity and in the case of default under the facility, a default under our Senior Secured Credit Facility or a change in control of Ameresco, Inc., we are required to make capital contributions to the borrower entity who then would be required to use the proceeds from the capital contributions to repay the construction and development loan.
- October 2022 Financing Facility, 6.70%, due August 31, 2039 - during 2023, we entered into an amendment and an amended and restated loan agreement that increased the original commitment of $125.0 million to $500.0 million, increased the interest rate to 6.70% and changed the maturity date to August 31, 2039. The loan also provides for a residual percentage of distributable cash flows payable after the maturity date of the loan, until the earlier of the lender achieving an 8.51% internal rate of return ("IRR") on funds borrowed under the facility, or the facility discharge date which was extended to August 31, 2049. During 2023, we drew down a total of $276.7 million under this facility.

As of December 31, 2023, our total construction and term loans outstanding was $1.0 billion. See Note 9 "Debt and Financing Lease Liabilities" for additional information about these loans.

Sale-leasebacks and Financing Leases

We have entered into sale-leaseback arrangements for solar PV energy assets with multiple investors and in accordance with Topic 842, Leases, all sale-leaseback transactions that occurred after December 31, 2018, were accounted for as failed sales and the proceeds received from the transactions were recorded as long-term financing facilities.

As of December 31, 2023, our total sale-leasebacks classified as long-term financing facilities outstanding was $185.7 million.

As of December 31, 2023, our total financing leases outstanding was $13.9 million. These are our sale-leaseback arrangements entered into as of December 31, 2018 which remain under the previous guidance.

See Notes 8 “Leases” and 9 “Debt and Financing Lease Liabilities” for additional information on these financing facilities.

While we are required under GAAP to reflect these lease payments as liabilities on our consolidated balance sheets, they are generally non-recourse and not direct obligations of Ameresco Inc., except that we have guaranteed certain obligations relating to taxes and project warranties, operation, and maintenance.

Federal ESPC Liabilities

We have arrangements with certain third-parties to provide advances to us during the construction or installation of projects for certain customers, typically federal governmental entities, in exchange for our assignment to the lenders of our rights to the long-term receivables arising from the ESPCs related to such projects. These financings totaled $533.1 million in principal amounts as of December 31, 2023 and $478.5 million as of December 31, 2022. Under the terms of these financing arrangements, we are required to complete the construction or installation of the project in accordance with the contract with our customer, and the liability remains on our consolidated balance sheets until the completed project is accepted by the customer.

We are the primary obligor for financing received, but only until final acceptance of the work by the customer. At this point recourse to us ceases and the ESPC receivables are transferred to the investor. The transfers of receivables under these agreements do not qualify for sales accounting until final customer acceptance of the work, so the advances from the investors are not classified as operating cash flows. Cash draws that we received under these ESPC agreements were $154.3 million during the year ended December 31, 2023 and are recorded as financing cash inflows. The use of the cash received under these arrangements is to pay project costs classified as operating cash flows and totaled $260.4 million during the year ended December 31, 2023. Due to the manner in which the ESPC contracts with the third-party investors are structured, our reported operating cash flows are materially impacted by the fact that operating cash flows only reflect the ESPC contract expenditure outflows and do not reflect any inflows from the corresponding contract revenues. Upon acceptance of the project by the federal customer the ESPC receivable and corresponding ESPC liability are removed from our consolidated balance sheets as a non-cash settlement. See Note 2, “Summary of Significant Accounting Policies”, to our consolidated financial statements in this Report.

Other

We issue letters of credit and performance bonds, from time to time, with our third-party lenders, to provide collateral.

Selected Measures of Liquidity and Capital Resources

	December 31,	
(In Thousands)	**2023**	**2022**
Cash and cash equivalents	$ 79,271	$ 115,534
Working capital	$ 227,000	$ 189,283
Availability under revolving credit facility	$ 37,489	$ 345

Cash Flows

The following table summarizes our changes in cash, cash equivalents, and restricted cash:

	Year Ended December 31,	
(In Thousands)	**2023**	**2022**
Cash flows used in operating activities	$ (69,991)	$ (338,288)
Cash flows used in investing activities	(566,943)	(328,358)
Cash flows provided by financing activities	640,803	730,227
Effect of exchange rate changes on cash	(81)	(747)
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ 3,788	$ 62,834

Our service offering also includes the development, construction, and operation of small-scale renewable energy plants. Small-scale renewable energy projects, or energy assets, can either be developed for the portfolio of assets that we own and operate or designed and built for customers. Expenditures related to projects that we own are recorded as cash outflows from investing activities. Expenditures related to projects that we build for customers are recorded as cash outflows from operating activities as cost of revenues.

Cash Flows from Operating Activities

Our cash flow from operating activities in 2023 improved over 2022 primarily due to a $259.4 million and $49.2 million increase in cash flows from unbilled revenue (costs and estimated earnings in excess of billings) and accounts receivable, respectively, due to the timing of when certain projects are invoiced, including our SCE battery storage project, partially offset by a decrease of $34.6 million in net income.

Cash Flows from Investing Activities

During 2023, we made capital investments of $538.4 million in new energy assets and $7.6 million in major maintenance of energy assets, compared to $304.6 million and $18.0 million, respectively, in 2022. This year we paid $9.2 million, net of cash received, for an acquisition and also contributed $6.0 million to joint venture investments.

We currently plan to invest approximately $350.0 million to $400.0 million in capital investments in 2024, principally for the construction or acquisition of new renewable energy plants.

Cash Flows from Financing Activities

Our primary sources of financing during 2023 were proceeds of $843.5 million from long-term debt financings and construction revolvers, $168.9 million from advances on Federal ESPC projects and energy assets, partially offset by repayments of long-term debt totaling $303.1 million, net payments on our senior secured revolving credit facility of $43.0 million, and distributions to non-controlling interests of $21.8 million.

During 2022, we received net proceeds of $468.5 million from long-term debt financings, $252.7 million from advances on Federal ESPC projects and energy assets, partially offset by repayments of long-term debt totaling $161.9 million.

We currently plan additional financings of $300.0 million to $350.0 million in 2024 to fund the construction or acquisition of new renewable energy plants as discussed above.

We may also, from time to time, finance our operations through issuance or offering of equity or debt securities.

Critical Accounting Policies and Estimates

Preparing our consolidated financial statements in accordance with GAAP involves us making estimates and assumptions that affect reported amounts of assets and liabilities, net sales, and expenses, and related disclosures in the accompanying notes at the date of our financial statements. We base our estimates on historical experience, industry and market trends, and on various other assumptions that we believe to be reasonable under the circumstances. However, by their nature, estimates are subject to various assumptions and uncertainties, and changes in circumstances could cause actual results to differ from these estimates, sometimes materially.

We believe that our policies and estimates that require our most significant judgments are considered our critical accounting policies and are discussed below. In addition, refer to Note 2 “Summary of Significant Accounting Policies” for further details.

Revenue Recognition

As described in Note 2, we recognize revenue from the installation or construction of projects over time using the cost-based input method. We use the total costs incurred on the project relative to the total expected costs to satisfy the performance obligation. When the estimate on a contract indicates a loss or claims against costs incurred reduce the likelihood of recoverability of such costs, we record the entire estimated loss in the period the loss becomes known. In addition, some contracts contain an element of variable consideration, including liquidated damages and/or penalties, which requires payment to the customer in the event that construction timelines or milestones are not met. We estimate the total consideration payable by the customer when the contracts contain variable consideration provisions, based on the most likely amount anticipated to be recognized for transferring the promised goods or services. As a result, we may constrain revenue to the extent that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

To the extent a contract is deemed to have multiple performance obligations, we allocate the transaction price of the contract to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract.

Significant judgement is required to estimate the total expected costs and variable consideration for projects that typically have a construction period of 12 to 36 months. Any increase or decrease in estimated costs to complete a performance obligation without a corresponding change to the contract price could impact the calculation of cumulative revenue to date and gross profit on the

project. Similarly, if we recognize revenue based upon our current estimate of variable consideration, and our estimate is later adjusted, we may be required to increase or decrease cumulative revenue to date and gross profit on the project. Factors that may result in a change to our estimates include unforeseen engineering problems, construction delays, the performance of contractors and major material suppliers, and unusual weather conditions, among others.

We have a long history of working with multiple types of projects and preparing cost estimates, and we rely on the expertise of key personnel to prepare what we believe are reasonable best estimates given available facts and circumstances. Due to the nature of the work involved, however, judgment is involved to estimate the costs to complete and the amounts estimated could have a material impact on the revenue we recognize in each accounting period. We cannot estimate unforeseen events and circumstances which may result in actual results being materially different from previous estimates.

Impairment Assessments

We evaluate our long-lived assets, including goodwill and intangible assets, for impairment as events or changes in circumstances indicate the carrying value of these assets may not be fully recoverable, and at least annually (fourth quarter) for goodwill and intangible assets that have indefinite lives. In 2023, we changed the assessment date from December 31, 2023 to October 31, 2023. Examples of such triggering events applicable to our assets include a significant decrease in the market price of a long-lived asset or asset group, a current-period operating or cash flow loss combined with a history of operating or cash flow losses, a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset or asset group, or adverse industry or economic trends.

We evaluate recoverability of long-lived assets and definite-lived intangible assets by estimating the undiscounted future cash flows associated with the expected uses and eventual disposition of those assets. When these comparisons indicate that the carrying value of those assets is greater than the undiscounted cash flows, we recognize an impairment loss for the amount that the carrying value exceeds the fair value.

The process of evaluating the potential impairment of long-lived assets, goodwill and intangible assets requires significant judgment. For goodwill, we estimate the reporting unit's fair value and compare it with the carrying value of the reporting unit, including goodwill. If the fair value is greater than the carrying value of its reporting unit, no impairment is recorded. Fair value is determined using both an income approach and a market approach. The estimates and assumptions used in our calculations include revenue growth rates, expense growth rates, expected capital expenditures to determine projected cash flows, expected tax rates and an estimated discount rate to determine present value of expected cash flows. These estimates are based on historical experiences, our projections of future operating activity and our weighted-average cost of capital. Unforeseen events and changes in circumstances or market conditions could adversely affect these estimates, which could result in an impairment charge.

Based on our assessment during the year ended December 31, 2023, one reporting unit had a fair value that was 2% less than the carrying value and we recorded a $1,644 goodwill impairment, which was $2,222 net of tax and was primarily driven by a decline in projected cash flows, including revenues and profitability. One reporting unit with goodwill had an estimated fair value that exceeded its carrying value by 16%. All other reporting units with goodwill had estimated fair values that exceeded their carrying values by at least 65% as of December 31, 2023.

Income Taxes

We are subject to income taxes in the U.S. and five foreign jurisdictions. Significant judgment is required in determining income tax expense, deferred tax assets and liabilities and uncertain tax positions. The underlying assumptions are also highly susceptible to change from period to period. We took advantage of the Safe Harbor commence-construction provisions contained in IRS Notice 2018-59 by pre-purchasing solar equipment in 2019 thereby preserving the ability to take 30% ITC for projects placed in service before 2024. However, the IRA signed by the President on August 16, 2022 increased the ITC rate back to 30% for projects placed in service after January 1, 2022 and before January 1, 2033. If these or other deductions and credits expire without being extended, or otherwise are reduced or eliminated, our effective tax rate would increase, which could increase our income tax expense and reduce our net income. In addition, our tax rate has historically been significantly impacted by the IRC Section 179D deduction. This deduction is related to energy-efficient improvements we provide under government contracts. The Consolidated Appropriations Act, 2021 made permanent the Section 179D Energy Efficient Commercial Building Deduction. That Act made changes to the way the deduction is calculated. On December 23, 2022, the IRS issued Announcement 2023-1 which clarified the energy efficiency standards which will be applied to projects placed in service for 2021 and 2022. If those changes result in lower levels of energy efficiency improvements, it could impact the deduction available and the tax rate.

We accrue for the estimated additional tax and interest that may result from tax authorities disputing uncertain tax positions. We believe we have made adequate provisions for income taxes for all years that are subject to audit based upon the latest information available. We operate within multiple taxing jurisdictions and are subject to tax audits in these jurisdictions. These audits can

involve complex issues and may require an extended period of time to resolve. We recognize tax benefits from uncertain tax positions only if we believe that it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. Although we believe that we have adequately reserved for our uncertain tax positions, we can provide no assurance that the final tax outcome of these matters will not be materially different. We adjust these reserves when facts and circumstances change, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences may affect the provision for income taxes in the period in which such determination is made and could have an impact on our results of operations.

On a quarterly basis, we assess our current and projected earnings by jurisdiction to determine whether or not our earnings during the periods when the temporary differences become deductible will be sufficient to realize the related future tax benefits. Should we determine that we would not be able to realize all or part of our net deferred tax asset in a particular jurisdiction in the future, a valuation allowance to the deferred tax asset would be charged to income in the period such determination was made. This valuation allowance is maintained for deferred tax assets that we estimate are more likely than not to be unrealizable based on available evidence at the time the estimate is made. The determination of whether a valuation allowance for deferred tax assets is appropriate is subject to considerable judgment and requires an evaluation of all positive and negative evidence, including our historical financial results, the source and consistency of those results, whether they should be adjusted for certain one-time or nonrecurring items, whether losses cumulatively exceed income over a reasonable period of time, the availability of tax planning strategies, availability of carryback and carryforward periods, and other factors, including our expectations of future taxable income. Adjustments to income tax expense to the extent we establish a valuation allowance or adjust this allowance in a period could have a material impact on our financial condition and results of operations.

Recent Accounting Pronouncements

See Note 2 of the “Notes to Consolidated Financial Statements” for a discussion of recent accounting standards.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to changes in interest rates and foreign currency exchange rates because we finance certain operations through fixed and variable rate debt instruments and denominate our transactions in U.S. dollars, Canadian dollars, British pounds sterling (“GBP”), and Euros. Changes in these rates may have an impact on future cash flows and earnings. We manage these risks through normal operating and financing activities and, when deemed appropriate, through the use of derivative financial instruments.

Interest Rate Risk

We had cash and cash equivalents totaling $79.3 million as of December 31, 2023 and $115.5 million as of December 31, 2022. Our exposure to interest rate risk primarily relates to the interest expense paid on our senior secured credit facility.

Derivative Instruments

We do not enter into derivative instruments for trading or speculative purposes. However, through our subsidiaries we do enter into derivative instruments for purposes other than trading purposes. Certain of the term loans that we use to finance our renewable energy projects bear variable interest rates that are indexed to short-term market rates. We have entered into interest rate swaps in connection with these term loans in order to seek to hedge our exposure to adverse changes in the applicable short-term market rate. In some instances, the conditions of our renewable energy project term loans require us to enter into interest rate swap agreements in order to mitigate our exposure to adverse movements in market interest rates. All but three of the interest rate swaps that we have entered into qualify and have been designated as cash flow hedges. In the past, we entered into commodity swap contracts in order to hedge our exposure to adverse changes in the short-term market rates of natural gas, which have not been designated for hedge accounting, and may do so in the future.

We have also entered into term loan agreements that contain make-whole provisions that qualify as embedded derivatives and are required to be bifurcated from their host term loan agreement and valued separately. These derivatives cannot be hedged.

By using derivative instruments, we are subject to credit and market risk. The fair market value of the interest rate and commodity swaps are determined by using valuation models whose inputs are derived using market observable inputs, including interest rate yield curves, and reflects the asset or liability position as of the end of each reporting period. When the fair value of a derivative contract is positive, the counterparty owes us, thus creating a receivable risk for us. We are exposed to counterparty credit risk in the event of non-performance by counterparties to our derivative agreements. We minimize counterparty credit (or repayment) risk by entering into transactions with major financial institutions of investment grade credit rating. The fair value of these make-whole provisions was determined based on available market data and a with and without model.

Our exposure to market interest rate risk is not hedged in a manner that completely eliminates the effects of changing market conditions on earnings or cash flow. See Notes 2 “Summary of Significant Accounting Policies”, 18 “Fair Value Measurement”, and 19 “Derivative Instruments and Hedging Activities” included in Item 8 of this Report for additional information about our derivative instruments.

Foreign Currency Risk

We have revenues, expenses, assets, and liabilities that are denominated in foreign currencies, principally the Canadian dollar, GBP, and Euro. Also, a significant number of employees are located in Canada and Europe, and our subsidiaries in those countries transact business in those respective currencies. As a result, we have designated the Canadian dollar as the functional currency for Canadian operations. Similarly, the GBP has been designated as the functional currency for our operations in the United Kingdom. The Euro has been designated as the functional currency for our operations in Europe. When we consolidate the operations of these foreign subsidiaries into our financial results, because we report our results in U.S. dollars, we are required to translate the financial results and position of our foreign subsidiaries from their respective functional currencies into U.S. dollars. We translate the revenues, expenses, gains, and losses from our Canadian, United Kingdom, and European subsidiaries into U.S. dollars using a weighted average exchange rate for the applicable fiscal period. We translate the assets and liabilities of these subsidiaries into U.S. dollars at the exchange rate in effect at the applicable balance sheet date. Translation adjustments are not included in determining net income for the period but are disclosed and accumulated in a separate component of consolidated equity until sale or until a complete or substantially complete liquidation of the net investment in our foreign subsidiary takes place. Changes in the values of these items from one period to the next which result from exchange rate fluctuations are recorded in our consolidated statements of changes in stockholders’ equity as accumulated other comprehensive income (loss). For the year ended December 31, 2023, due to the weakening of the Canadian dollar and GBP versus the U.S. dollar, our foreign currency translation resulted in a gain of $1.6 million which we recorded as an increase in accumulated other comprehensive income, compared to a loss of $3.4 million for the year ended December 31, 2022. As a consequence, gross profit, operating results, profitability, and cash flows are impacted by relative changes in the value of the Canadian dollar and GBP. We have not repatriated earnings from our foreign subsidiaries but have elected to invest in new business opportunities there. See Note 10, “Income Taxes” to our consolidated financial statements in this Report. We do not hedge our exposure to foreign currency exchange risk.

Item 8. Financial Statements and Supplementary Data

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Ameresco, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Ameresco, Inc. (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of income, comprehensive income, changes in redeemable non-controlling interests and stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2023, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

Basis for Opinion

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Goodwill Impairment

As described in Notes 2 and 5 to the financial statements, management tests the Company's goodwill, which had a balance of $75.6 million as of December 31, 2023, for impairment, at the reporting unit level, at October 31 of each fiscal year, or more frequently if events or changes in circumstances indicate the asset might be impaired. To test goodwill for impairment, management compares the estimated fair value of each reporting unit with the carrying amount of each reporting unit, including the recorded goodwill. In estimating the fair value of each reporting unit, management uses a methodology which combines an income approach, using a discounted cash flows method, with a market approach, using a peer-based guideline company method based on the average of published multiples of earnings of comparable entities with similar operations and economic characteristics. During the year ended December 31, 2023, the Company recorded a goodwill impairment of $2,222 at one reporting unit.

We identified the annual goodwill impairment assessment for the Company's reporting unit where impairment was identified as a critical audit matter because of the significant estimates and assumptions used by management when estimating the fair value of the reporting unit, including management's forecasts of revenue and expense growth rates, management's selection of the discount rate for the income approach and management's estimates of the multiples of earnings of comparable entities with similar operations and economic characteristics for the market approach. Auditing management's estimates and assumptions involved a high degree of auditor judgment and increased audit effort, including the use of our valuation specialists, due to the impact these assumptions have on the goodwill impairment assessment.

Our audit procedures related to the assessment of goodwill impairment included the following, among others:

- We obtained an understanding of the relevant controls relating to management's goodwill impairment assessment and tested such controls for design and operating effectiveness, including controls over management's review of the significant assumptions used in the estimate of fair value, including forecasted revenue and expense growth rates, the selected discount rates, and the selected multiples of earnings.
- We evaluated the reasonableness of management's forecasts of revenue and expense growth rates by comparing the projections to historical results and testing certain contracts contributing to the revenue forecast.
- We tested the underlying data used by management in their development of forecasts of revenue and expense growth rates for accuracy and completeness by agreeing it to source data.
- We utilized valuation specialists to assist in the following procedures, among others:
    - Evaluating the reasonableness of the discount rate and multiples of earnings by comparing the underlying source information to publicly available market data and verifying the accuracy of the calculations.
    - Developing a market participant discount rate using publicly available market data and comparing that discount rate to the discount rate selected by management.
    - Evaluating the appropriateness of the valuation methods used by management and testing their mathematical accuracy.

Revenue from Contracts with Customers – Project Revenue

As described in Notes 2 and 3 to the financial statements, the Company's projects line of business, which relates to the construction of energy efficiency projects, including the design, engineering and installation of technologies and techniques to improve energy efficiency and control the operation of a building's energy-and-water-consuming systems, recognized revenue of $1.37 billion during the year ended December 31, 2023. Typically, the Company provides a service of integrating a complex set of tasks and components such as design, engineering, construction management, and equipment procurement for a project contract. The Company's project revenues are generated from long-term contracts whereby revenue is recognized over time using the cost-based input method. The Company uses total costs incurred on the project relative to the total expected costs to estimate progression towards the satisfaction of the performance obligation.

Estimating the amount of project revenue to record from the Company's long-term contracts requires management's judgment in estimating final construction contract profits, which are driven by the total estimated consideration payable by the customer and

total estimated contract costs. The Company estimates the total consideration payable by the customer when the contracts contain variable consideration provisions, which can include liquidated damages and/or penalties, based on the most likely amount anticipated to be recognized for transferring the promised goods or services. As a result, the Company may constrain revenue to the extent that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Anticipated contract costs can be incurred over several years and are largely determined based on negotiated or estimated purchase contract terms and consider factors such as historical performance, estimated subcontractor costs and contingency costs.

We identified the Company's accounting for revenue recognition from the project line of business to be a critical audit matter due to the significant judgments used by management related to the estimation of final construction profits. Estimating the final construction profit on these long-term contracts requires management to develop estimates of the total consideration payable by the customer, when contracts contain variable consideration provisions, as well as total expected contract costs, including costs associated with labor, materials, equipment, subcontracting and outside engineering cost. Auditing management's estimates and assumptions involved a high degree of auditor judgment and increased audit effort due to the impact these assumptions have on the revenue recognized.

Our audit procedures related to project revenue included the following, among others:

- We obtained an understanding of the relevant controls related to the recognition of project revenue and tested such controls for design and operating effectiveness, including controls over the determination of the final estimated construction profit, which includes management's review of the assumptions and key inputs used to recognize revenue on project contracts using the cost-to-cost input method, including costs associated with labor, materials, equipment, subcontracting and outside engineering along with estimates of total consideration payable when contracts contain variable consideration provisions.
- We performed substantive analytical procedures on the Company's project revenue line of business, with a focus on significant changes in gross margin, contract budgets and contract pricing from the prior year, on contracts open in both the current year and prior year.
- We selected a sample of project contracts and evaluated the estimates of total costs for each of the project contracts by:
    - Testing the initial project budget by the development of an independent margin expectation for the projects combined with inquiry with the project management team and/or comparing selected items from the underlying budget to the source information used to develop the project budget.
    - Evaluating management's judgments related to the Company's ability to achieve the estimates of final construction contract profit as well as achievement on project timelines by performing corroborating inquiries with Company personnel, including project managers, and comparing the estimates to documentation such as management's internal budgets and contract terms.
    - Confirmation of project progression with customers, including identification of any delays in project timeline.

/s/ RSM US LLP

We have served as the Company's auditor since 2010.

Boston, Massachusetts
February 29, 2024

AMERESCO, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share amounts)

	December 31,	
	2023	2022
ASSETS		
Current assets:		
Cash and cash equivalents [1]	$ 79,271	$ 115,534
Restricted cash [1]	62,311	20,782
Accounts receivable, net [1]	153,362	174,009
Accounts receivable retainage	33,826	38,057
Costs and estimated earnings in excess of billings [1]	636,163	576,363
Inventory, net	13,637	14,218
Prepaid expenses and other current assets [1]	123,391	38,617
Income tax receivable	5,775	7,746
Project development costs, net	20,735	16,025
Total current assets [1]	1,128,471	1,001,351
Federal ESPC receivable	609,265	509,507
Property and equipment, net [1]	17,395	15,707
Energy assets, net [1]	1,689,424	1,181,525
Goodwill, net	75,587	70,633
Intangible assets, net	6,808	4,693
Operating lease assets [1]	58,586	38,224
Restricted cash, non-current portion	12,094	13,572
Deferred income tax assets, net	26,411	3,045
Other assets [1]	89,735	38,564
Total assets [1]	$ 3,713,776	$ 2,876,821
LIABILITIES, REDEEMABLE NON-CONTROLLING INTERESTS AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portions of long-term debt and financing lease liabilities, net of unamortized discount [1]	$ 322,247	$ 331,479
Accounts payable [1]	402,752	349,126
Accrued expenses and other current liabilities [1]	108,831	89,166
Current portion of operating lease liabilities [1]	13,569	5,829
Billings in excess of cost and estimated earnings	52,903	34,796
Income taxes payable	1,169	1,672
Total current liabilities [1]	901,471	812,068
Long-term debt and financing lease liabilities, net of current portion, unamortized discount, and debt issuance costs [1]	1,170,075	568,635
Federal ESPC liabilities	533,054	478,497
Deferred income tax liabilities, net	4,479	9,181
Deferred grant income	6,974	7,590
Long-term operating lease liabilities, net of current portion [1]	42,258	31,703
Other liabilities [1]	82,714	49,493
Commitments and contingencies (Note 15)		
Redeemable non-controlling interests, net	46,865	46,623

[1] Includes restricted assets of consolidated variable interest entities ("VIEs") of $312,701 as of December 31, 2023 and $213,913 as of December 31, 2022. Includes liabilities of consolidated VIEs of $199,063 as of December 31, 2023 and $50,729 as of December 31, 2022. See Note 11.

AMERESCO, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share amounts) (Continued)

	December 31,	
	2023	2022
Stockholders' equity:		
Preferred stock, $0.0001 par value, 5,000,000 shares authorized, no shares issued and outstanding at December 31, 2023 and 2022	$ —	$ —
Class A common stock, $0.0001 par value, 500,000,000 shares authorized, 36,378,990 shares issued and 34,277,195 shares outstanding at December 31, 2023, 36,050,157 shares issued and 33,948,362 shares outstanding at December 31, 2022	3	3
Class B common stock, $0.0001 par value, 144,000,000 shares authorized, 18,000,000 shares issued and outstanding at December 31, 2023 and 2022	2	2
Additional paid-in capital	320,892	306,314
Retained earnings	595,911	533,549
Accumulated other comprehensive loss, net	(3,045)	(4,051)
Treasury stock, at cost, 2,101,795 shares at December 31, 2023 and 2022	(11,788)	(11,788)
Stockholders' equity before non-controlling interest	901,975	824,029
Non-controlling interests	23,911	49,002
Total stockholders' equity	925,886	873,031
Total liabilities, redeemable non-controlling interests and stockholders' equity	$ 3,713,776	$ 2,876,821

See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share amounts)

	Year Ended December 31,		
	2023	2022	2021
Revenues	$ 1,374,633	$ 1,824,422	$ 1,215,697
Cost of revenues	1,128,204	1,533,589	985,340
Gross profit	246,429	290,833	230,357
Earnings (loss) from unconsolidated entities	1,758	1,647	(118)
Selling, general and administrative expenses	162,138	159,488	132,904
Asset impairments	3,831	—	1,901
Operating income	82,218	132,992	95,434
Other expenses, net	43,949	27,273	17,290
Income before income taxes	38,269	105,719	78,144
Income tax (benefit) provision	(25,635)	7,170	(2,047)
Net income	63,904	98,549	80,191
Net income attributable to non-controlling interest and redeemable non-controlling interest	(1,434)	(3,623)	(9,733)
Net income attributable to common shareholders	$ 62,470	$ 94,926	$ 70,458
Net income per share attributable to common shareholders:			
Basic	$ 1.20	$ 1.83	$ 1.38
Diluted	$ 1.17	$ 1.78	$ 1.35
Weighted average common shares outstanding:			
Basic	52,140	51,841	50,855
Diluted	53,228	53,278	52,268

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See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)

	Year Ended December 31,		
	2023	2022	2021
Net income	$ 63,904	$ 98,549	$ 80,191
Other comprehensive income (loss):			
Unrealized (loss) gain from interest rate hedges, net of tax effect of $(190), $2,039, and $662, respectively	(538)	6,017	2,793
Foreign currency translation adjustment	1,574	(3,401)	(170)
Total other comprehensive income	1,036	2,616	2,623
Comprehensive income	64,940	101,165	82,814
Comprehensive income attributable to non-controlling interests and redeemable non-controlling interests:			
Net income	(1,434)	(3,623)	(9,733)
Foreign currency translation adjustments	$ (30)	$ —	$ —
Comprehensive income attributable to non-controlling interests and redeemable non-controlling interests	$ (1,464)	$ (3,623)	$ (9,733)
Comprehensive income attributable to common shareholders	$ 63,476	$ 97,542	$ 73,081

See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN REDEEMABLE NON-CONTROLLING INTERESTS AND STOCKHOLDERS' EQUITY
(In thousands, except share amounts)

	Redeemable Non-controlling Interests ("RNCI")	Class A Common Stock		Class B Common Stock		Additional Paid-in Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Loss	Non-controlling Interest ("NCI")	Total Stockholders' Equity
		Shares	Amount	Shares	Amount			Shares	Amount			
Balance, December 31, 2020	$ 38,850	30,224,654	$ 3	18,000,000	$ 2	145,496	$368,390	2,101,795	$(11,788)	$ (9,290)	$ —	$ 492,813
Equity offering of common stock, net of offering costs of $6,416	—	2,875,000	—	—	—	120,084	—	—	—	—	—	120,084
Exercise of stock options	—	587,775	—	—	—	5,563	—	—	—	—	—	5,563
Stock-based compensation expense	—	—	—	—	—	8,716	—	—	—	—	—	8,716
Employee stock purchase plan	—	28,880	—	—	—	1,364	—	—	—	—	—	1,364
Unrealized gain from interest rate hedges, net	—	—	—	—	—	—	—	—	—	2,793	—	2,793
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	(170)	—	(170)
Contributions from RNCI, net of tax equity financing fees	2,251	—	—	—	—	—	—	—	—	—	—	—
Distributions to RNCI	(1,009)	—	—	—	—	—	—	—	—	—	—	—
Accretion of tax equity financing fees	116	—	—	—	—	—	(116)	—	—	—	—	(116)
Investment fund call option exercise	(3,759)	—	—	—	—	2,759	—	—	—	—	—	2,759
Net income	9,733	—	—	—	—	—	70,458	—	—	—	—	70,458
Balance, December 31, 2021	46,182	33,716,309	3	18,000,000	2	283,982	438,732	2,101,795	(11,788)	(6,667)	—	704,264
Exercise of stock options	—	195,888	—	—	—	3,954	—	—	—	—	—	3,954
Stock-based compensation expense	—	—	—	—	—	15,046	—	—	—	—	—	15,046
Employee stock purchase plan	—	36,165	—	—	—	2,009	—	—	—	—	—	2,009
Unrealized gain from interest rate hedges, net	—	—	—	—	—	—	—	—	—	6,017	—	6,017
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	(3,401)	—	(3,401)
Distributions to RNCI	(1,039)	—	—	—	—	—	—	—	—	—	—	—
Accretion of tax equity financing fees	109	—	—	—	—	—	(109)	—	—	—	—	(109)
Investment fund call option exercise	(2,162)	—	—	—	—	1,323	—	—	—	—	—	1,323
Contributions from NCI	—	—	—	—	—	—	—	—	—	—	48,912	48,912
Net income	3,533	—	—	—	—	—	94,926	—	—	—	90	95,016
Balance, December 31, 2022	46,623	33,948,362	3	18,000,000	2	306,314	533,549	2,101,795	(11,788)	(4,051)	49,002	873,031
Exercise of stock options	—	246,250	—	—	—	2,438	—	—	—	—	—	2,438
Stock-based compensation expense	—	—	—	—	—	10,318	—	—	—	—	—	10,318
Employee stock purchase plan	—	60,003	—	—	—	2,017	—	—	—	—	—	2,017
Restricted stock units released	—	22,580	—	—	—	—	—	—	—	—	—	—
Unrealized loss from interest rate hedges, net	—	—	—	—	—	—	—	—	—	(538)	—	(538)
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	1,544	30	1,574
Distributions to RNCI	(632)	—	—	—	—	—	—	—	—	—	—	—
Accretion of tax equity financing fees	108	—	—	—	—	—	(108)	—	—	—	—	(108)
Adjustment to investment fund call option exercise	195	—	—	—	—	(195)	—	—	—	—	—	(195)
Contributions from NCI	—	—	—	—	—	—	—	—	—	—	4,203	4,203
Distributions to NCI	—	—	—	—	—	—	—	—	—	—	(30,187)	(30,187)
Net income	571	—	—	—	—	—	62,470	—	—	—	863	63,333
Balance, December 31, 2023	$ 46,865	34,277,195	$ 3	18,000,000	$ 2	$ 320,892	$595,911	2,101,795	$(11,788)	$ (3,045)	$ 23,911	$ 925,886

See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2023	2022	2021
Cash flows from operating activities:			
Net income	$ 63,904	$ 98,549	$ 80,191
Adjustments to reconcile net income to net cash flows from operating activities:			
Depreciation of energy assets, net	59,390	49,755	43,113
Depreciation of property and equipment	4,155	2,665	3,143
Amortization of debt discount and debt issuance costs	4,201	4,211	2,849
Amortization of intangible assets	2,366	1,858	321
Net increase in fair value of contingent consideration	347	1,614	—
Accretion of ARO liabilities	258	146	123
Impairment of goodwill	2,222	—	—
Provision (recoveries of) for bad debts	356	(382)	187
Impairment of long-lived assets / loss on write-off	1,710	937	1,901
In-kind lease expenses, net	(3,164)	—	—
Gain on sale of equity investments	—	—	(575)
(Earnings) loss from unconsolidated entities	(1,758)	(1,647)	118
Net (gain) loss from derivatives	(1,108)	(212)	240
Stock-based compensation expense	10,318	15,046	8,716
Deferred income taxes, net	(27,602)	3,918	(4,760)
Unrealized foreign exchange (gain) loss	(368)	(123)	142
Changes in operating assets and liabilities:			
Accounts receivable	52,647	3,477	(15,953)
Accounts receivable retainage	4,337	4,716	(12,882)
Federal ESPC receivable	(260,378)	(259,499)	(249,728)
Inventory, net	581	(5,411)	(232)
Costs and estimated earnings in excess of billings	(13,211)	(272,629)	(113,192)
Prepaid expenses and other current assets	(41,125)	(3,182)	1,770
Project development costs	(5,486)	(685)	1,949
Other assets	(6,896)	(11,327)	(1,870)
Accounts payable, accrued expenses, and other current liabilities	53,238	36,155	83,473
Billings in excess of cost and estimated earnings	26,202	449	(693)
Other liabilities	3,559	(5,074)	(5,036)
Income taxes receivable (payable), net	1,314	(1,613)	4,389
Cash flows from operating activities	(69,991)	(338,288)	(172,296)
Cash flows from investing activities:			
Purchases of property and equipment	(5,713)	(5,296)	(4,896)
Capital investment in energy assets	(538,418)	(304,596)	(170,277)
Capital investment in major maintenance of energy assets	(7,636)	(18,007)	(8,602)
Grant award proceeds for energy assets	—	—	774
Proceeds from sale of equity investment	—	—	1,672
Acquisitions, net of cash received	(9,182)	—	(14,928)
Contributions to equity and other investments	(5,429)	—	(9,000)
Loans to joint venture investments	(565)	(459)	—
Cash flows from investing activities	(566,943)	(328,358)	(205,257)

See accompanying notes to consolidated financial statements.

AMERESCO, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands) (Continued)

	Year Ended December 31,		
	2023	2022	2021
Cash flows from financing activities:			
Proceeds from equity offering, net of offering costs	$ —	$ —	$ 120,084
Payments of debt discount and debt issuance costs	(9,315)	(3,695)	(2,919)
Proceeds from exercises of options and ESPP	4,455	5,963	6,927
Payment of contingent consideration	(1,866)	—	—
(Payments on) proceeds from senior secured revolving credit facility, net	(43,000)	137,900	(8,073)
Proceeds from long-term debt financings	843,498	468,476	185,994
Proceeds from Federal ESPC projects	154,338	238,360	159,216
Net proceeds from energy asset receivable financing arrangements	14,512	14,341	2,033
Investment fund call option exercise	—	(839)	(1,000)
Contributions from non-controlling interest	3,738	32,706	—
Distributions to non-controlling interest	(21,842)	—	—
(Distributions to) proceeds from redeemable non-controlling interests, net	(658)	(1,128)	1,399
Payments on long-term debt and financing leases	(303,057)	(161,857)	(98,200)
Cash flows from financing activities	640,803	730,227	365,461
Effect of exchange rate changes on cash	(81)	(747)	309
Net increase (decrease) in cash, cash equivalents, and restricted cash	3,788	62,834	(11,783)
Cash, cash equivalents, and restricted cash, beginning of year	149,888	87,054	98,837
Cash, cash equivalents, and restricted cash, end of year	$ 153,676	$ 149,888	$ 87,054
Supplemental disclosures of cash flow information:			
Cash paid for interest	$ 80,251	$ 32,954	$ 18,782
Cash paid for income taxes	$ 3,834	$ 7,278	$ 2,670
Non-cash Federal ESPC settlement	$ 99,164	$ 293,427	$ 67,286
Accrued purchases of energy assets	$ 78,382	$ 88,793	$ 37,064
Non-cash contributions from non-controlling interest	$ 464	$ 16,206	$ —
Non-cash financing for energy asset project acquisition	$ 82,964	$ —	$ —
Non-cash portion of investment fund call option exercise	$ —	$ 1,323	$ 2,759

See accompanying notes to consolidated financial statements.

1. DESCRIPTION OF BUSINESS

Ameresco, Inc. (including its subsidiaries, the "Company," "Ameresco", "we," "our," or "us") was organized as a Delaware corporation on April 25, 2000. We are a leading cleantech integrator and renewable energy asset developer, owner and operator. Our comprehensive portfolio includes energy efficiency, infrastructure upgrades, asset sustainability, and renewable energy solutions delivered to clients throughout North America and Europe. We provide solutions, both services and products, which enable our customers to reduce their energy consumption, lower their operating and maintenance costs and realize environmental benefits. Our comprehensive set of solutions includes upgrades to a facility's energy infrastructure and the development, construction, and operation of distributed energy resources. We also sell certain solar photovoltaic ("solar PV") equipment worldwide and operate in the United States, Canada and Europe. We have successfully completed energy saving, environmentally responsible projects with Federal, state and local governments, healthcare and educational institutions, housing authorities, and commercial and industrial customers.

We are compensated through a variety of methods, including: 1) direct payments based on fee-for-services contracts (utilizing lump-sum or cost-plus pricing methodologies), 2) the sale of energy from our energy assets, and 3) direct payment for solar PV equipment and systems.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Ameresco, our subsidiaries, certain contracts in which we have a controlling financial interest and three investment funds formed to fund the purchase and operation of solar energy systems, which are consolidated with Ameresco as variable interest entities ("VIEs"). We use a qualitative approach in assessing the consolidation requirement for VIEs. This approach focuses on determining whether we have the power to direct the activities of the VIE that most significantly affect the VIE's economic performance and whether we have the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE. For all periods presented, we have determined that we are the primary beneficiary in a majority of our operational VIEs. When we have determined we are the primary beneficiary, we evaluate our relationships with the VIEs on an ongoing basis to ensure that we continue to be the primary beneficiary. All significant intercompany accounts and transactions have been eliminated. Gains and losses from the translation of all foreign currency financial statements are recorded in accumulated other comprehensive income, net, within stockholders' equity. We prepare our consolidated financial statements in conformity with the accounting principles generally accepted in the United States of America ("GAAP").

Reclassification and Rounding

Certain prior period amounts were reclassified to conform to the presentation in the current period. We round amounts in the consolidated financial statements to thousands and calculate all percentages and per-share data from the underlying whole-dollar amounts. Thus, certain amounts may not foot, crossfoot, or recalculate based on reported numbers due to rounding.

Use of Estimates

GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Changes in circumstances could cause actual results to differ materially from those estimates. The estimates and assumptions used in these consolidated financial statements relate to management's estimates of final construction contract profit in accordance with accounting for long-term contracts, allowance for credit losses, realization of project development costs, leases, fair value of derivative financial instruments, accounting for business acquisitions, stock-based awards, impairment of goodwill and long-lived assets, income taxes, and potential liability in conjunction with contingent consideration.

Self-insured Health Insurance

We are self-insured for employee health insurance and the maximum exposure in fiscal year 2023 under the plan was $200 per covered participant, after which reinsurance takes effect. The liability for unpaid claims and associated expenses, including incurred but not reported claims, is determined by management and reflected in our consolidated balance sheets in accrued

expenses and other current liabilities. The liability is calculated based on historical data, which considers both the frequency and settlement amount of claims. Our estimated accrual for this liability could be different than our ultimate obligation if variables such as the frequency or amount of future claims differ significantly from management's assumptions.

Significant Risks and Uncertainties

Global factors have continued to result in global supply chain disruptions, certain governmental travel and other restrictions, and inflationary pressures.

We have considered the impact of general global economic conditions on the assumptions and estimates used, which may change in response to this evolving situation. Results of future operations and liquidity could be adversely impacted by a number of factors including supply chain disruptions, varying levels of inflation, payments of outstanding receivable amounts beyond normal payment terms, workforce disruptions, and uncertain demand. As of the date of issuance of these consolidated financial statements, we cannot reasonably estimate the extent to which macroeconomic conditions may impact our financial condition, liquidity, or results of operations in the foreseeable future. The ultimate impact of the general global economic conditions on our business is highly uncertain and will depend on future developments, and such impacts could exist for an extended period of time.

Cash and Cash Equivalents

Cash and cash equivalents include cash on deposit, overnight repurchase agreements and amounts invested in highly liquid money market funds. Cash equivalents consist of short-term investments with original maturities of three months or less. We maintain our accounts with financial institutions and the balances in such accounts, at times, exceed federally insured limits. This credit risk is divided among a number of financial institutions that management believes to be of high quality. The carrying amount of cash and cash equivalents approximates its fair value measured using level 1 inputs per the fair value hierarchy as defined in Note 18.

Restricted Cash

Restricted cash consists of cash and cash equivalents held in escrow accounts in association with operations and maintenance ("O&M") reserve accounts, cash collateralized letters of credit, as well as cash required under term loans to be maintained in reserve accounts until all obligations have been indefeasibly paid in full for energy assets. The carrying amount of the cash and cash equivalents in these accounts approximates its fair value measured using level 1 inputs per the fair value hierarchy as defined in Note 18. Restricted cash also includes funds held for clients, which represent assets that, based upon our intent, are restricted for use solely for the purposes of satisfying the obligations to remit funds to third parties, primarily utility service providers, relating to our enterprise energy management services.

Accounts Receivable

Accounts receivable are stated at the amount management expects to collect from outstanding balances. Our methodology to estimate the allowance for credit losses includes quarterly assessments of historical bad debt write-off experience, current economic and market conditions, management's evaluation of outstanding accounts receivable, anticipated recoveries and our forecasts. Due to the short-term nature of our receivables, the estimate of credit losses is primarily based on aged accounts receivable balances and the financial condition of our customers. In addition, specific allowance amounts are established to record the appropriate provision for customers that have a higher probability of default. Bad debts are written off against the allowance when identified. As part of our assessment, we also considered the current and expected future economic and market conditions due to global factors and determined that the estimate of credit losses was not significantly impacted as of December 31, 2023 and 2022.

Changes in the allowance for credit losses was as follows:

	Year Ended December 31,		
	2023	2022	2021
Allowance for credit loss, beginning of period	$ 911	$ 2,263	$ 2,266
Charges to (recoveries of) costs and expenses, net	356	(382)	187
Account write-offs and other	(364)	(970)	(190)
Allowance for credit loss, end of period	$ 903	$ 911	$ 2,263

Accounts Receivable Retainage

Accounts receivable retainage represents amounts due from customers, but where payments are withheld contractually until certain construction milestones are met. Amounts retained typically range from 5% to 10% of the total invoice. We classify retainages that are expected to be billed in the next twelve months as current assets. As of December 31, 2023 and 2022, no amounts were determined to be uncollectible.

Inventory

Inventories, which consist primarily of PV solar panels, batteries and related accessories, are stated at the lower of cost ("first-in, first-out" method) or net realizable value (determined as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation). Provisions have been made to reduce the carrying value of inventory to the net realizable value.

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist primarily of other receivables, deferred project costs, and other short-term prepaid expenditures that will be expensed within one year.

Prepaid expenses and other current assets comprised of the following:

	Year Ended December 31,	
	2023	2022
Other receivables	$ 74,454	$ 16,877
Deferred project costs	38,240	13,556
Prepaid expenses	10,697	8,184
Prepaid expenses and other current assets	$ 123,391	$ 38,617

Other Receivables

Ameresco's wholly-owned subsidiary in Italy entered into factoring agreements to sell certain receivables to unrelated third-party financial institutions on a non-recourse basis. These transactions are accounted for in accordance with Accounting Standards Codification ("ASC") Topic 860, Transfers and Servicing, and result in a reduction in accounts receivable because the agreements transfer effective control over the receivables, and related risk, to the buyers. Our Italian subsidiary does not retain any interest in the underlying accounts receivable once sold. Trade accounts receivables balances sold are removed from the consolidated balance sheets, and cash received is reflected in operating activities in the consolidated statements of cash flows. Other receivables sold without recourse total $39,923 at December 31, 2023 and are included in other receivables in the table above. Factoring fees during the twelve months ended December 31, 2023 were $5,844 and are included in other expense, net in the consolidated statements of income. See Note 17. Other Expenses, Net.

Other receivables also include $20,970 which represents the fair value of the portion of investment tax credits that we are contractually required to transfer, which is related to the project we acquired on August 4, 2023. See the Government Grants paragraph below and Note 7. Energy Assets, Net for additional details.

Deferred Project Costs

Deferred project costs include costs incurred on active projects which will be reclassified to energy assets once a change order or other contract resolution is finalized.

Federal ESPC Receivable

Federal ESPC receivable represents the amount to be paid by various federal government agencies for work performed and earned by Ameresco under specific ESPCs. We assign certain of our rights to receive those payments to third-parties that provide construction and permanent financing for such contracts. Upon completion and acceptance of the project by the government, typically within 24 to 36 months of construction commencement, the assigned ESPC receivable from the government and corresponding ESPC liability are eliminated from our consolidated financial statements.

Project Development Costs

We capitalize only those costs incurred in connection with the development of energy projects, primarily direct labor, interest costs, outside contractor services, consulting fees, legal fees, and travel, if incurred after a point in time where the realization of related revenue becomes probable. Project development costs incurred prior to the probable realization of revenue are expensed as incurred. We classify project development efforts that are expected to proceed to construction activity in the next twelve months as a current asset. We periodically review these balances and write off any amounts where the realization of the related revenue is no longer probable.

Property and Equipment

Property and equipment consist primarily of office and computer equipment and is recorded at cost. Major additions and improvements are capitalized as additions to the property and equipment accounts, while replacements, maintenance, and repairs that do not improve or extend the life of the respective assets, are expensed as incurred. Depreciation and amortization of property and equipment are computed on a straight-line basis over the following estimated useful lives:

Asset Classification	Estimated Useful Life
Furniture and office equipment	Five years
Computer equipment and software costs	Three to five years
Leasehold improvements	Lesser of term of lease or five years
Automobiles	Five years
Land	Unlimited

Gains or losses on disposal of property and equipment are reflected in selling, general, and administrative expenses in the consolidated statements of income.

Energy Assets

Energy assets consist of costs of materials, direct labor, interest costs, outside contract services, deposits, asset retirement obligations (“AROs”), and project development costs incurred in connection with the construction of small-scale renewable energy plants that we own. These amounts are capitalized and amortized to cost of revenues in our consolidated statements of income on a straight-line basis over the lives of the related assets or the terms of the related contracts.

Routine maintenance costs are expensed as incurred in our consolidated statements of income to the extent that they do not extend the life of the asset. Major maintenance includes upgrades and the refurbishment or replacing of components that are integral to the energy assets operating. In these instances, the costs associated with major maintenance are capitalized and are depreciated over the shorter of the remaining life of the asset or the period up to the next required major maintenance.

Financing lease assets and accumulated depreciation of financing lease assets are included in energy assets. For additional information see the Sale-Leaseback section below and Notes 7 and 8.

Capitalized Interest

We capitalize interest costs relating to construction financing during the period of construction on energy assets we own. Capitalized interest is included in energy assets, net, in our consolidated balance sheets. Capitalized interest is amortized to cost of revenues in our consolidated statements of income on a straight-line basis over the useful life of the associated energy asset.

Long-lived Asset Impairment

We evaluate our long-lived assets, including operating lease right-of-use assets, for impairment as events or changes in circumstances indicate the carrying value of these assets may not be fully recoverable. Examples of such triggering events applicable to our assets include a significant decrease in the market price of a long-lived asset or asset group or a current-period operating or cash flow loss combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset or asset group.

We evaluate recoverability of long-lived assets to be held and used by estimating the undiscounted future cash flows before interest associated with the expected uses and eventual disposition of those assets. When these comparisons indicate that the carrying value of those assets is greater than the undiscounted cash flows, we recognize an impairment loss for the amount that

the carrying value exceeds the fair value of the asset group. Impairment losses are reflected in selling, general, and administrative expenses in the consolidated statements of income. See Note 7. for disclosure on our long-lived asset impairment during the year ended December 31, 2023.

Government Grants

From time to time, we have applied for and received cash grant awards from the U.S. Treasury Department (the "Treasury") under Section 1603 of the American Recovery and Reinvestment Act of 2009 (the "Act"). The Act authorized the Treasury to make payments to eligible persons who place in service qualifying renewable energy projects. The grants are paid in lieu of investment tax credits. All of the cash proceeds from the grants were used and recorded as a reduction in the cost basis of the applicable energy assets. For tax purposes, the Section 1603 payments are not included in federal and certain state taxable income and the basis of the property is reduced by 50% of the payment received.

We last received a Section 1603 grant during the year ended December 31, 2014. No further Section 1603 grant payments are expected to be received as the program has expired and no repayments will be required.

We received grant proceeds from the Canadian government in connection with the construction of our energy assets in Canada during the years ended December 31, 2019 and 2020. We have a contribution agreement in place with Natural Resources Canada to fund 50% of the construction costs on a specific pilot project in Ontario. Cash proceeds are recorded as a deferred grant liability. Following commercial operation, the grant is subject to repayment to the government for a five-year period.

Deferred grant income of $6,974 and $7,590 in the accompanying consolidated balance sheets as of December 31, 2023 and 2022, respectively, represents the benefit of the basis difference to be amortized to depreciation expense over the life of the related property.

Non-refundable Transferable Credits Policy Elections

We elect to apply government grant accounting, outside of income taxes, to the portion of the transferable Investment Tax Credit ("ITC") that we intend to sell. We have an existing policy to account for government grants by analogy to International Accounting Standard ("IAS") 20 and shall present the credit as a reduction in the cost of the related energy asset and shall measure the grant of the nonmonetary asset at fair value. Based on these policy elections, the benefit of the grant in the amount of $20,970 will be recognized in profit or loss as a reduction to depreciation expense over the life of the energy asset.

We elect to account for credits we intend to use to offset our tax liability under Topic 740. For the initial recognition of the ITC that was not sold in the amount of $8,618, we recognized a deferred tax asset for an allowable carryforward as we benefited in the year the credit was generated. Possible limitations on the carryforward were considered and it was determined that no valuation allowance was required. We also utilized the flow-through method regarding the presentation in the consolidated statements of income, which resulted in a reduction in the income tax provision.

Acquisitions

For acquisitions that meet the definition of a business combination, we apply the acquisition method of accounting in accordance with ASC 805, Business Combinations, where assets acquired and liabilities assumed are recorded at fair value at the date of each acquisition. Any excess of the consideration we transferred over the amounts recognized for assets acquired and liabilities assumed is recorded as goodwill. Intangible assets, if identified, are also recorded.

Determining the fair value of certain assets and liabilities assumed is judgmental in nature, often involves the use of significant estimates and assumptions, and is calculated using level 3 inputs per the fair value hierarchy as defined in Note 18. We continue to evaluate acquisitions for a period not to exceed one year after the acquisition date of each transaction to determine whether any additional adjustments are needed to the allocation of the purchase price. The results of the acquired companies are included in our consolidated statements of income, comprehensive income, and cash flows from the date of the respective acquisition.

The consideration for our acquisitions often includes future payments that are contingent upon the occurrence of a particular event. We record a contingent consideration obligation for such contingent consideration payments at fair value on the acquisition date. We estimate the fair value of contingent consideration obligations through valuation models that incorporate probability adjusted assumptions related to the achievement of the milestones and the likelihood of making related payments. Each reporting period we revalue the contingent consideration obligations associated with our acquisitions to fair value and record changes in the fair value within the selling, general, and administrative expenses in our consolidated statements of income. Increases or decreases in the fair value of the contingent consideration obligations can result from changes in assumed discount periods and

rates, changes in the assumed timing and amount of revenue and expense estimates and changes in assumed probability with respect to the attainment of certain financial and operational metrics, among others. Significant judgment is employed in determining these assumptions as of the acquisition date and for each subsequent period. Accordingly, future business and economic conditions, as well as changes in any of the assumptions described above, can materially impact the fair value of contingent consideration recorded at each reporting period. Deferred consideration related to certain holdbacks and completion payments are considered short-term in nature. These amounts are recorded at full value and are only revalued if one of those underlying assumptions changes. See Note 4 for additional information about our acquisitions.

In October 2021, the Financial Standards Accounting Board ("FASB") issued ASU 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers, which requires entities to apply Topic 606 to recognize and measure contract assets and contract liabilities in a business combination. ASU 2021-08 is effective for our fiscal year beginning after December 15, 2022, however, early adoption is permitted. We early adopted this new accounting standard as of January 1, 2021 and applied it to our December 2021 acquisition discussed in Note 4.

In accordance with ASC 805, Business Combinations, our solar project acquisitions do not constitute a business as the assets acquired in each case could be considered a single asset or group of similar assets that made up substantially all of the fair market value of the acquisitions. See Note 7 for information on solar projects we have purchased or are under definitive agreement to purchase.

Goodwill

As noted in the Acquisitions section above, our goodwill is derived when we acquire another business. Goodwill is not amortized, but the potential impairment of goodwill is assessed at least annually during the fourth quarter and on an interim basis whenever events or changes in circumstances indicate that the carrying value may not be fully recoverable. In 2023, we changed the assessment date from December 31, 2023 to October 31, 2023.

We estimate the fair value of our reporting units and compare it with the carrying value of the reporting unit, including goodwill. If the fair value is greater than the carrying value of the reporting unit, no impairment is recorded. Fair value is determined using both an income approach and a market approach. If the fair value is less than the carrying value, an impairment loss is recognized for the amount that the carrying amount of a reporting unit, including goodwill, exceeds its fair value, limited to the total amount of goodwill allocated to that reporting unit. The impairment charge would be recorded to earnings in the consolidated statements of income. Judgment is required in determining whether an event has occurred that may impair the value of goodwill or identifiable intangible assets. See Note 5 for discussion about our goodwill impairment during the year ended December 31, 2023.

Intangible Assets

Acquired intangible assets, other than goodwill, that are subject to amortization include customer contracts, customer relationships, technology, trade names and non-compete agreements. The intangible assets are amortized over periods ranging from one to fifteen years from their respective acquisition dates. We evaluate our intangible assets for impairment consistent with, and part of, our long-lived asset evaluation, as discussed in Energy Assets above. See Notes 4 and 5 for additional disclosures.

Leases

Operating lease right-of-use ("ROU") assets represent our right to use an underlying asset during the reasonably certain lease term and lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and lease liabilities for significant lease arrangements are recognized at commencement based on the present value of lease payments over the lease term. We use our incremental borrowing rate, which is updated annually or when a significant event occurs that would indicate a significant change in rates, to calculate the present value of lease payments. The operating lease ROU asset also includes any lease payments related to initial direct cost and prepayments and excludes lease incentives. Lease expense is recognized on a straight-line basis over the lease term which may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Our ROU assets are evaluated for impairment using the same method as described above under the Long-lived Asset Impairment section.

We do not record ROU assets and corresponding lease liabilities for leases with an initial term of 12 months or less ("short-term leases") as we recognize lease expense for these leases as incurred over the lease term.

We elected the package of practical expedients and did not reassess lease classifications of existing contracts or leases at adoption or the initial direct costs associated with existing leases. Accordingly, our sale-leaseback arrangements entered into as of

December 31, 2018 remain under the previous guidance. See the Sale-leasebacks and Financing Leases section below and Note 8 for additional information on these sale-leasebacks.

We have historical leases under ASC 840, Leases, which may have lease and non-lease components. Upon adoption of Topic 842, we elected to continue to account for these historical leases as a single component, as it relates to all prospective leases, we allocate consideration to lease and non-lease components based on pricing information in the respective lease agreement, or, if this information is not available, we make a good faith estimate based on the available pricing information at the time of the lease agreement. See Note 8 for additional information about our leases.

Other Assets

Other assets consist primarily of notes and contracts receivable due to Ameresco from various customers and also includes the fair value of derivatives determined to be assets, investments in unconsolidated joint ventures, the non-current portions of project development costs, accounts receivable retainages, sale-leaseback deferred loss, deferred contract costs, and assets held for sale. For additional information about assets held for sale, please see Note 21.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities includes use and franchise tax payable of $39,974 and $47,041 as of December 31, 2023 and 2022, respectively, as well as accrued payroll and payroll related expenses, sales tax payable, current portion of contingent consideration, and other accrued operating expenses.

Asset Retirement Obligations

We recognize a liability for the fair value of required AROs on a discounted basis when these obligations are incurred and can be reasonably estimated, which is typically at the time the assets are in development, installed or operating. Over time, the liabilities increase due to the change in present value, and initial capitalized costs are depreciated over the useful life of the related assets. Upon satisfaction of the ARO conditions, any difference between the recorded ARO liability and the actual retirement cost incurred is recognized as an operating gain or loss in the consolidated statements of income. See Note 7 for additional disclosures on our AROs.

Federal ESPC Liabilities

Federal ESPC liabilities, for both projects and energy assets, represent the advances received from third-parties under agreements to finance certain ESPC projects with various federal government agencies. For projects related to the construction or installation of certain energy savings equipment or facilities developed for the government customer, the ESPC receivable from the government and corresponding ESPC liability is eliminated from our consolidated balance sheets upon completion and acceptance of the project by the government, typically within 24 to 36 months of construction commencement. We remain the primary obligor for financing received until recourse to us ceases for the ESPC receivables transferred to the investor upon final acceptance of the work by the government customer.

For small-scale energy assets developed for a government customer that we own and operate, we remain the primary obligor for financing received until the liability is eliminated from our consolidated balance sheets as contract payments assigned by the customer are transferred to the investor upon final acceptance of the work by the government customer.

Sale-leasebacks and Financing Leases

We entered into sale-leaseback arrangements that provided for the sale of solar PV energy assets to third-party investors and the simultaneous leaseback of the energy assets, which we then operate and maintain, recognizing revenue through the sale of the electricity and solar renewable energy credits generated by these energy assets.

In sale-leaseback arrangements, we first determine whether the solar PV energy asset under the sale-leaseback arrangement is “integral equipment”. A solar PV energy asset is determined to be integral equipment when the cost to remove the energy asset from its existing location, including the shipping and reinstallation costs of the solar PV energy asset at the new site, and any diminution in fair value, exceeds 10% of the fair value of the solar PV energy asset at the time of its original installation. When the leaseback arrangement expires, we have the option to purchase the solar PV energy asset for the then fair market value or, in certain circumstances, renew the lease for an extended term. We have determined that none of the solar PV energy assets sold to date under the sale-leaseback program have been considered integral equipment as the cost to remove the energy asset from its existing location would not exceed 10% of its original fair value.

In accordance with our adoption of Topic 842, sale-leaseback transactions are accounted for as financing liabilities on a prospective basis as we retain control of the underlying assets. As these transactions meet the criteria of a failed sale, the proceeds received in prospective transactions are accounted for as long-term financing liabilities with interest rates based upon the underlying details of each specific transaction.

We entered into sale-leaseback arrangements for solar PV energy assets prior to January 1, 2019, which remain under the previous guidance. We recorded a financing lease asset and financing lease obligation in our consolidated balance sheets equal to the lower of the present value of our future minimum leaseback payments or the fair value of the solar PV energy asset. We deferred any gain or loss, which represents the excess or shortfall of cash received from the investor compared to the net book value of the asset, at the time of the sale. We recorded the long-term portion of any deferred gain in other liabilities or deferred loss in other assets and the current portion in accrued expenses and other current liabilities or prepaid expenses and other current assets in our consolidated balance sheets. The deferred amounts are amortized over the lease term and are included in cost of revenues in our consolidated statements of income.

See Notes 8 and 9 for details of our sales-leaseback and financing lease transactions.

Debt Issuance Costs

Debt issuance costs include external costs incurred to obtain financing. Debt issuance costs are amortized over the respective term of the financing using the effective interest method, with the exception of our revolving credit facility and construction loans, as discussed in Note 9, which are amortized on a straight-line basis over the term of the agreement. Debt issuance costs are presented on the consolidated balance sheets along with unamortized debt discounts as a reduction to long-term debt and financing lease liabilities.

Other Liabilities

Other liabilities consist primarily of the long-term portion of deferred revenue related to multi-year operations and maintenance ("O&M") contracts which expire at various dates through 2050. Other liabilities also include the fair value of derivatives and the long-term portions of sale-leaseback deferred gains. See Note 19 for additional derivative disclosures.

Revenue Recognition

We are a provider of comprehensive energy services, including energy efficiency, infrastructure upgrades, energy security and resilience, asset sustainability, and renewable energy solutions for businesses and organizations. Our sustainability services include capital and operational upgrades to a facility's energy infrastructure and the development, construction, ownership, and operation of renewable energy plants. Our revenue is generated from the primary lines of business described below and is recognized in accordance with Revenue from Contracts with Customers (Topic 606).

Projects

Our Projects service relates to energy efficiency projects, which include the design, engineering, and installation of an array of innovative technologies and techniques to improve energy efficiency and control the operation of a building's energy- and water-consuming systems. Renewable energy products and services include, but are not limited to, the design and construction of a central plant or cogeneration system providing power, heat and/or cooling to a building, or a small-scale plant that produces electricity, gas, heat or cooling from renewable sources of energy.

We recognize revenue from the installation or construction of projects over time using the cost-based input method. We use the total costs incurred on the project relative to the total expected costs to account for the satisfaction of the performance obligation. When the estimate on a contract indicates a loss, or reduces the likelihood of recoverability of such costs, we record the entire estimated loss in the period the loss becomes known. In addition, some contracts contain an element of variable consideration, including liquidated damages and/or penalties, which requires payment to the customer in the event that construction timelines or milestones are not met. We estimate the total consideration payable by the customer when the contracts contain variable consideration provisions, based on the most likely amount anticipated to be recognized for transferring the promised goods or services. As a result, we may constrain revenue to the extent that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

Contracts are often modified for a change in scope or other requirements. Contract modifications exist when the modification either creates new or changes the existing enforceable rights and obligations. Most of our contract modifications are for goods or services that are not distinct from the existing performance obligations. The effect of a contract modification on the transaction

price, and the measure of progress for the performance obligation to which it relates, is recognized as an adjustment to revenue (either as an increase or decrease) on a cumulative catch-up basis.

O&M

After an energy efficiency or renewable energy project is completed, we often provide ongoing O&M services under a multi-year contract. These services include operating, maintaining and repairing facility energy systems such as boilers, chillers, and building controls, as well as central power and other small-scale plants. For larger projects, we frequently maintain staff on-site to perform these services.

Maintenance revenue is recognized using the input method. In most cases, O&M fees are fixed annual fees and we record the revenue on a straight-line basis because the on-site O&M services are typically a distinct series of promises and those services have the same pattern of transfer to the customer (i.e., evenly over time). Some O&M service contract fees are based on time expended and, in those cases, revenue is recorded based on the time expended in that month.

Energy Assets

Our service offerings include the sale of electricity, heat, cooling, processed biogas, and renewable biomethane fuel from the portfolio of assets that we own and operate. We have constructed and are currently designing and constructing a wide range of renewable energy plants using biogas, solar, biomass, other bio-derived fuels, wind, and hydro sources of energy. Most of our renewable energy projects to date have involved the generation of electricity from solar PV and the sale of electricity, thermal, renewable fuel, or biomethane using biogas as a feedstock. We purchase the biogas that otherwise would be combusted or vented, process it, and either sell it or use it in our energy plants. We have also designed and built, own, operate and maintain plants that take biogas generated in the anaerobic digesters of wastewater treatment plants and turn it into renewable natural gas that is either used to generate energy on-site or that can be sold through the nation's natural gas pipeline grid. We typically enter into a long-term power purchase agreement ("PPA") for the sale of the energy where we own and operate energy producing assets. Many of our energy assets also produce environmental attributes, including renewable energy credits and RINs. In most cases, we sell these attributes under separate agreements with parties other than the PPA customer.

In accordance with specific PPA contract terms, we recognize revenues from the sale and delivery of the energy output from renewable energy plants over time as produced and delivered to the customer. Environmental attributes revenue is recognized at a point in time when the environmental attributes are transferred to the customer in accordance with the transfer protocols of the environmental attributes market that we operate in. In the cases where environmental attributes are sold to the same customer as the energy output, we record revenue monthly for both the energy output and the environmental attribute output, as generated and delivered to the customer. We have determined that certain PPAs contained a lease component in accordance with ASC 840, Leases, prior to the adoption of Topic 842. We recognized $10,687, $10,904 and $11,726 of operating lease revenue under these agreements during the years ended December 31, 2023, 2022, and 2021, respectively.

Other

Our service and product offerings also include integrated-PV, engineering, consulting, and enterprise energy management services, which we recognize over time as the services are provided. We recognize revenue from the sale of solar materials at a point in time when we have transferred physical control of the asset to the customer upon shipment or delivery.

Performance Obligations

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is the unit of account. Performance obligations are satisfied as of a point in time or over time and are supported by contracts with customers. For most of our contracts, there are multiple promises of goods or services. Typically, we provide a significant service of integrating a complex set of tasks and components such as design, engineering, construction management, and equipment procurement for a project contract. The bundle of goods and services are provided to deliver one output for which the customer has contracted. In these cases, we consider the bundle of goods and services to be a single performance obligation. We may also promise to provide distinct goods or services within a contract, such as a project contract for installation of energy conservation measures and post-installation O&M services. In these cases, we separate the contract into more than one performance obligation and allocate the total transaction price to each performance obligation in an amount based on the estimated relative standalone selling prices of the promised goods or services underlying each performance obligation.

Contract Acquisition Costs

We are required to account for certain acquisition costs over the life of the contract, consisting primarily of commissions. Commission costs are incurred commencing at contract signing. Commission costs are allocated across all performance obligations and deferred and amortized consistent with the pattern of revenue recognition.

Contract Assets and Contract Liabilities

Contract assets represent our rights to consideration in exchange for services transferred to a customer that have not been billed as of the reporting date. Our rights to consideration are generally unconditional at the time our performance obligations are satisfied. Unbilled revenue, presented as costs and estimated earnings in excess of billings, represent amounts earned and billable that were not invoiced at the end of the fiscal period.

When we receive consideration, or such consideration is unconditionally due, from a customer prior to transferring goods or services to the customer under the terms of a sales contract, we record deferred revenue, which represents a contract liability. Deferred revenue, presented as billings in excess of cost and estimated earnings, typically results from billings in excess of costs incurred and advance payments received on project contracts.

At the inception of a contract, we expect the period between when we satisfy our performance obligations, and when the customer pays for the services, will be one year or less. As such, we elected to apply the practical expedient which allows us not to adjust the promised amount of consideration for the effects of a significant financing component, when a financing component is present.

Cost of Revenues

Cost of revenues includes the cost of labor, materials, equipment, subcontracting and outside engineering that are required for the development and installation of projects, as well as preconstruction costs, sales incentives, associated travel, inventory obsolescence charges, amortization of intangible assets related to customer contracts, and, if applicable, costs of procuring financing. A majority of our contracts have fixed price terms, however, in some cases we negotiate protections, such as a cost-plus structure, to mitigate the risk of rising prices for materials, services, and equipment.

Cost of revenues also includes the costs of maintaining and operating the small-scale renewable energy plants that we own, including the cost of fuel (if any) and depreciation charges.

Income Taxes

We account for income taxes based on the liability method that requires the recognition of deferred income taxes based on expected future tax consequences of differences between the financial statement basis and the tax basis of assets and liabilities. We calculate deferred income taxes using the enacted tax rates in effect for the year in which the differences are expected to be reflected in the tax return.

We account for uncertain tax positions using a “more-likely-than-not” threshold for recognizing and resolving uncertain tax positions. The evaluation of uncertain tax positions is based on factors that include changes in tax law, the measurement of tax positions taken or expected to be taken in tax returns, the effective settlement of matters subject to audit, new audit activity and changes in facts or circumstances related to a tax position. We evaluate uncertain tax positions on a quarterly basis and adjust the level of the liability to reflect any subsequent changes in the relevant facts surrounding the uncertain positions.

Our liabilities for uncertain tax positions can be relieved only if the contingency becomes legally extinguished through either payment to the taxing authority or the expiration of the statute of limitations, the recognition of the benefits associated with the position meet the “more-likely-than-not” threshold or the liability becomes effectively settled through the examination process.

We consider matters to be effectively settled once the taxing authority has completed all of its required or expected examination procedures, including all appeals and administrative reviews; we have no plans to appeal or litigate any aspect of the tax position; and we believe that it is highly unlikely that the taxing authority would examine or re-examine the related tax position. We also accrue for potential interest and penalties related to unrecognized tax benefits as a component of income tax expense.

Under the guidance, we have recorded long term deferred tax assets and deferred tax liabilities based on the underlying jurisdiction in the consolidated balance sheets as of December 31, 2023 and 2022, respectively. See Note 10 for additional information on income taxes.

Foreign Currency

The local currency of our foreign operations is considered the functional currency of such operations. All assets and liabilities of these foreign operations are translated into U.S. dollars at year-end exchange rates. Income and expense items are translated at average exchange rates prevailing during the year. Translation adjustments are accumulated as a separate component of stockholders' equity. Foreign currency translation gains and losses are reported in the consolidated statements of comprehensive income. Foreign currency transaction gains and losses are reported within other expenses, net in the consolidated statements of income. See Note 17.

Fair Value Measurements

We follow the guidance related to fair value measurements for all of our non-financial assets and non-financial liabilities, except for those recognized at fair value in the financial statements at least annually. These assets include goodwill and long-lived assets measured at fair value for impairment assessments, and non-financial assets and liabilities initially measured at fair value in a business combination.

Financial instruments consist of cash and cash equivalents, restricted cash, accounts and notes receivable, accounts payable, accrued expenses and other current liabilities, financing lease assets and liabilities, contingent consideration, short- and long-term borrowings, make-whole provisions, interest rate swaps, and commodity swaps. Because of their short maturity, the carrying amounts of cash and cash equivalents, restricted cash, accounts and notes receivable, accounts payable, accrued expenses and other current liabilities, and short-term borrowings approximate fair value.

The carrying value of long-term variable-rate debt approximates fair value. Fair value of our debt is based on quoted market prices or on rates available to us for debt with similar terms and maturities, which are level two inputs of the fair value hierarchy, as defined in Note 18.

Stock-based Compensation Expense

We measure and record stock-based compensation expense for all stock-based payment awards based on estimated fair value. We may provide stock-based awards of shares of restricted common stock and grants of stock options to employees, directors, outside consultants, and others through various equity plans including our Employee Stock Purchase Plan (the "ESPP") for employees.

Stock-based compensation expense, net of actual forfeitures, is recognized based on the grant-date fair value on a straight-line basis over the requisite service period of the awards. Certain option grants have performance conditions that must be achieved prior to vesting and are expensed based on the expected achievement at each reporting period. We estimate the fair value of the stock-based awards, including stock options, using the Black-Scholes option-pricing model. Determining the fair value of stock-based awards requires the use of highly subjective assumptions, including the fair value of the common stock underlying the award, the expected term of the award and expected stock price volatility.

The assumptions used in determining the fair value of stock-based awards represent management's estimates, which involve inherent uncertainties and the application of management judgment. The risk-free interest rates are based on the U.S. Treasury yield curve in effect at the time of grant, with maturities approximating the expected life of the stock options.

We have no history of paying dividends. Additionally, as of each of the grant dates, there was no expectation that we would pay dividends over the expected life of the options. The expected life of the awards is estimated based upon the period stock option holders will retain their vested options before exercising them. We use historical volatility as the expected volatility assumption required in the Black-Scholes model.

We recognize compensation expense for only the portion of options that are expected to vest. If there are any modifications or cancellations of the underlying invested securities or the terms of the stock option, it may be necessary to accelerate, increase, decrease, or cancel any remaining unamortized stock-based compensation expense.

Share Repurchase Program

In April 2016, our Board of Directors authorized the repurchase of up to $10,000 of our Class A common stock from time to time on the open market or in privately negotiated transactions. Our Board of Directors authorized an increase in the share repurchase to $15,000 of our Class A common stock in February 2017 and to $17,553 of our Class A common stock in August 2019. The timing and amount of any shares repurchased will be determined by management based on its evaluation of market conditions and other factors. Any repurchased shares will be available for use in connection with our stock plans and for other corporate

purposes. The repurchase program has and will be funded using our working capital and borrowings under our revolving line of credit. We account for share repurchases using the cost method and the cost of the share repurchase is recorded entirely in treasury stock, a contra equity account. During the years ended December 31, 2023, December 31, 2022, and December 31, 2021 there were no shares repurchased.

Derivative Financial Instruments

In the normal course of business, we utilize derivatives contracts as part of our risk management strategy to manage exposure to market fluctuations in interest and commodity rates. These instruments are subject to various credit and market risks. Controls and monitoring procedures for these instruments have been established and are routinely reevaluated. Credit risk represents the potential loss that may occur because a party to a transaction fails to perform according to the terms of the contract. The measure of credit exposure is the replacement cost of contracts with a positive fair value. We seek to manage credit risk by entering into financial instrument transactions only through counterparties that we believe are creditworthy.

Market risk represents the potential loss due to the decrease in the value of a financial instrument caused primarily by changes in interest rates and commodity prices. We seek to manage market risk by establishing and monitoring limits on the types and degree of risk that may be undertaken. As a matter of policy, we do not use derivatives for speculative purposes and consider the use of derivatives with all financing transactions to mitigate risk.

We account for our interest rate and commodity swaps as derivative financial instruments in accordance with ASC Topic 815, Derivatives and Hedging. Under this guidance, derivatives are carried on our consolidated balance sheets at fair value which is determined based on observable market data in combination with expected cash flows for each instrument. Some of our debt agreements contain make-whole provisions which we account for as embedded derivatives in accordance with related guidance. Under this guidance, the derivative is bifurcated from its host contract and recorded on our consolidated balance sheets at fair value by either comparing it against the rates of similar debt instruments under similar terms without a make-whole provision obtained from various highly rated third-party pricing sources or evaluating the present value of the prepayment fee.

We recognize cash flows from derivative instruments not designated as hedges as operating activities in the consolidated statements of cash flows. We recognize all changes in fair value on interest rate swaps designated as effective cash flow hedges in our consolidated statements of comprehensive income. Changes in fair value on derivatives not designated as hedges are recognized in our consolidated statements of income. See Notes 18 and 19 for additional information on our derivative instruments.

Earnings Per Share

Basic earnings per share is calculated using our weighted-average outstanding common shares, including vested restricted shares. When the effects are not anti-dilutive, diluted earnings per share is calculated using the weighted-average outstanding common shares; the dilutive effect of convertible preferred stock, under the “if converted” method; and the treasury stock method with regard to warrants and stock options; all as determined under the treasury stock method. See Note 13 for our computation of earnings per share.

Variable Interest Entities

Certain contracts are executed jointly through partnership and joint venture arrangements with unrelated third parties. The arrangements are often formed for the single business purpose of executing a specific project and allow us to share risks and/or secure specialty skills required for project execution.

We evaluate each partnership and joint venture at inception to determine if it qualifies as a VIE under ASC 810, Consolidation. A VIE is an entity used for business purposes that either (i) does not have equity investors with voting rights or (ii) has equity investors who are not required to provide sufficient financial resources for the entity to support its activities without additional subordinated financial support. Upon the occurrence of certain events outlined in ASC 810, we reassess our initial determination of whether the partnership or joint venture is a VIE.

We also evaluate whether we are the primary beneficiary of each VIE and consolidate the VIE if we have both (i) the power to direct the economically significant activities of the entity and (ii) the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to the VIE. We consider the contractual agreements that define the ownership structure, distribution of profits and losses, risks, responsibilities, indebtedness, voting rights and board representation of the respective parties in determining whether we qualify as the primary beneficiary. We also consider all parties that have direct or

implicit variable interests when determining whether we are the primary beneficiary. As required by ASC 810, management's assessment of whether we are the primary beneficiary of a VIE is continuously performed.

We generally aggregate the disclosures of our VIEs based on certain qualitative and quantitative factors including the purpose and design of the underlying VIEs, the nature of the assets in the VIE, and the type of involvement we have with the VIE including our role and type of interest held in the VIE. As of December 31, 2023, all the VIEs that make up our investment funds (tax equity partnerships) are similar in purpose, design, and our involvement and are aggregated together. Our other consolidated VIEs are similar in purpose, design, and our involvement, and as such, are aggregated together. See Notes 11 and 12 for additional disclosures.

Equity and Cost Method Investments

We have entered into a number of joint ventures and using the methodology described above for VIEs, we determined that we are not the primary beneficiary. We do not consolidate the operations of these joint ventures and treat the joint ventures as equity and cost method investments. See Note 11 for additional information on our equity and cost method investments.

Non-Controlling Interests and Redeemable Non-Controlling Interests

Non-controlling interests represent the portion of equity (net assets) in a VIE not attributable, directly or indirectly, to us. For some of our VIEs we perform the attribution of income or loss and comprehensive income or loss on the basis of our relative ownership interests and the non-controlling interests. These non-controlling interests which do not contain redemption features are classified within equity on our consolidated balance sheets.

In June 2018, October 2018 and December 2019, we formed investment funds (tax equity partnerships) with different third-party investors which granted the applicable investor ownership interests in the net assets of certain of our renewable energy project subsidiaries. As of December 31, 2023, we had three such investment funds remaining, each with a different third-party investor.

We entered into these agreements in order to finance the costs of constructing energy assets which are under long-term customer contracts. We have determined that these entities qualify as VIEs and that we are the primary beneficiary in the operational partnerships for accounting purposes. Accordingly, we consolidate the assets and liabilities and operating results of the entities in our consolidated financial statements. We recognize the investors' share of the net assets of the subsidiaries as redeemable non-controlling interests in our consolidated balance sheets.

We have determined that the provisions in the contractual arrangements represent substantive profit-sharing arrangements and that the appropriate methodology for attributing income and loss to the redeemable non-controlling interests each period is a balance sheet approach referred to as the hypothetical liquidation at book value ("HLBV") method. Under the HLBV method, the amounts of income and loss attributed to the redeemable non-controlling interests in the consolidated statements of income reflect changes in the amounts the investors would hypothetically receive at each balance sheet date under the liquidation provisions of the contractual agreements, assuming the net assets of this funding structure were liquidated at recorded amounts. The investors' non-controlling interest in the results of operations of this funding structure is determined as the difference in the non-controlling interest's claim under the HLBV method at the start and end of each reporting period, after taking into account any capital transactions, such as contributions or distributions, between our subsidiaries and the investors.

We classified the non-controlling interests with redemption features that are not solely within our control outside of permanent equity on our consolidated balance sheets. The redeemable non-controlling interests will be reported using the greater of their carrying value at each reporting date as determined by the HLBV method or the estimated redemption values in each reporting period. See Notes 11 and 12 for additional information.

Recent Accounting Pronouncements

Reference Rate Reform

In March 2020, the FASB issued Accounting Standards Update ("ASU") 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting. ASU 2020-04, as amended by ASU 2021-01 in January 2021, directly addressing the effects of reference rate reform on financial reporting as a result of the cessation of the publication of certain London interbank offered rate ("LIBOR") rates beginning December 31, 2021, with complete elimination of the publication of the LIBOR rates by June 30, 2023. The guidance provides optional expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform by virtue of referencing LIBOR, or another reference rate expected to be discontinued. This guidance became effective on March 12, 2020, and then was

amended by ASU 2022-06 in December 2022, extending the adoption date to no later than December 31, 2024, with early adoption permitted. We adopted this guidance beginning January 1, 2023 upon entering amendments to credit agreements which introduced the secured overnight financing rate as administrated by the Federal Reserve Bank of New York to replace LIBOR as the benchmark. The adoption of this guidance did not have a material impact on our consolidated financial statements.

Derivatives and Hedging

In March 2022, the FASB issued ASU 2022-01, Derivatives and Hedging (Topic 815): Fair Value Hedging—Portfolio Layer Method, which expands the current single-layer method to allow multiple hedged layers of a single closed portfolio to be hedged under the method. ASU 2022-01 is effective for our fiscal year ending beginning after December 15, 2022. We adopted this accounting standard as of January 1, 2023 and the adoption did not have an impact on our consolidated financial statements.

Fair Value Measurement

In June 2022, the FASB issued ASU 2022-03, Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions, which clarifies the measurement criteria for equity securities and refines the disclosure requirements for equity securities subject to contractual sale restrictions. ASU 2022-03 is effective for our fiscal year beginning after December 15, 2023. We are currently evaluating the impact that adopting this new accounting standard would have on our consolidated financial statements.

Investments - Equity Method and Joint Ventures

In March 2023, the FASB issued ASU 2023-02, Investments - Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method, which defines consistent accounting for equity investments for the purpose of receiving income tax credits and other income tax benefits. ASU 2023-02 is effective for our fiscal year ending beginning after December 15, 2023. We are currently evaluating the impact that adopting this new accounting standard would have on our consolidated financial statements.

Business Combinations— Joint Venture Formations

In August 2023, the FASB issued ASU 2023-05, Business Combinations— Joint Venture Formations (Subtopic 805-60) Recognition and Initial Measurement, which addresses the accounting for contributions made to a joint venture, upon formation, in a joint venture's separate financial statements. ASU 2023-05 is effective prospectively for all joint venture formations with a formation date on or after January 1, 2025. We are currently evaluating the impact that adopting this new accounting standard would have on our consolidated financial statements.

Disclosure Improvements - Codification Amendments in Response to the SEC's Disclosure Update and Simplification Initiative

In October 2023, the FASB issued ASU 2023-06, Disclosure Improvements - Codification Amendments in Response to the SEC's Disclosure Update and Simplification Initiative, which updates the disclosure or presentation requirements for a variety of topics in the codification. ASU 2023-06 is effective from the date on which the SEC's removal of that related disclosure from Regulation S-X or Regulation S-K, with early adoption prohibited. We will monitor the removal of the requirements from the current regulations and adopt the related amendments, but we do not anticipate this new guidance will have a material impact on our consolidated financial statements as we are currently subject to SEC requirements.

Segment Reporting (Topic 820) - Improvements to Reportable Segment Disclosures

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 820) - Improvements to Reportable Segment Disclosures, which improves reportable segment disclosures by requiring enhanced disclosures for significant segment expenses and other segment items. ASU 2023-07 is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. We are currently evaluating the impact that adopting this new accounting standard would have on our consolidated financial statements.

Income Taxes (Topic 740) - Improvements to Income Tax Disclosures

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures, to enhance the income tax disclosures, including disaggregation of information in the rate reconciliation table and disaggregated information related to income taxes paid. ASU 2023-09 is effective for fiscal years beginning after December 15, 2024. We are currently evaluating the impact that adopting this new accounting standard would have on our consolidated financial statements.

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

Our reportable segments for the year ended December 31, 2023 were U.S. Regions, U.S. Federal, Canada, Alternative Fuels, and Europe. The remaining amounts are included in "All Other". Europe was formerly included in "All Other" but was disaggregated due to growth in the segment in 2023. As a result, previously reported amounts have been reclassified for comparative purposes.

The following table presents our revenue disaggregated by line of business and reportable segment for the year ended December 31, 2023:

	U.S. Regions	U.S. Federal	Canada	Alternative Fuels	Europe	All Other	Total
Project revenue	$ 465,342	$ 342,238	$ 53,737	$ —	$ 138,730	$ 1,250	$ 1,001,297
O&M revenue	26,210	53,496	100	10,697	1,980	—	92,483
Energy assets	60,450	6,326	4,223	106,359	1,531	—	178,889
Integrated-PV	4	—	—	—	—	45,739	45,743
Other	5,116	824	12,050	19	10,601	27,611	56,221
Total revenues	$ 557,122	$ 402,884	$ 70,110	$ 117,075	$ 152,842	$ 74,600	$ 1,374,633

The following table presents our revenue disaggregated by line of business and reportable segment for the year ended December 31, 2022:

	U.S. Regions	U.S. Federal	Canada	Alternative Fuels	Europe	All Other	Total
Project revenue	$ 1,049,465	$ 333,846	$ 44,273	$ —	$ 53,680	$ —	$ 1,481,264
O&M revenue	22,217	51,857	42	10,377	471	1	84,965
Energy assets	47,372	5,822	4,447	104,082	368	—	162,091
Integrated-PV	—	—	—	—	—	49,696	49,696
Other	4,289	366	9,796	—	7,126	24,829	46,406
Total revenues	$ 1,123,343	$ 391,891	$ 58,558	$ 114,459	$ 61,645	$ 74,526	$ 1,824,422

The following table presents our revenue disaggregated by line of business and reportable segment for the year ended December 31, 2021:

	U.S. Regions	U.S. Federal	Canada	Alternative Fuels	Europe	All Other	Total
Project revenue	$ 488,507	$ 340,686	$ 36,776	$ —	$ 37,970	$ 21	$ 903,960
O&M revenue	21,551	47,072	71	9,288	631	—	78,613
Energy assets	39,433	4,913	4,532	101,811	562	—	151,251
Integrated-PV	—	—	—	—	—	41,202	41,202
Other	1,627	277	8,104	124	7,001	23,538	40,671
Total revenues	$ 551,118	$ 392,948	$ 49,483	$ 111,223	$ 46,164	$ 64,761	$ 1,215,697

See Note 16 for our revenue disaggregated by geographical region.

The following table presents information related to our revenue recognized over time:

	Year Ended December 31,		
	2023	2022	2021
Percentage of revenue recognized over time	95 %	96 %	95 %

The remainder of our revenue is for products and services transferred at a point in time, at which point revenue is recognized.

Contract Balances

The following table provides information about receivables, contract assets, and contract liabilities from contracts with customers:

	December 31, 2023	December 31, 2022
Accounts receivable, net	$ 153,362	$ 174,009
Accounts receivable retainage	33,826	38,057
Contract Assets		
Costs and estimated earnings in excess of billings	636,163	576,363
Contract Liabilities		
Billings in excess of cost and estimated earnings	52,903	34,796
Billings in excess of cost and estimated earnings, non-current [1]	18,393	7,617
Total contract liabilities	$ 71,296	$ 42,413

(1) Performance obligations that are expected to be completed beyond the next twelve months and are included in other liabilities in the consolidated balance sheets.

The increase in contract assets for the year ended December 31, 2023 was primarily due to revenue recognized of $940,317, offset in part by billings of $886,788. Contract assets also increased due to reclassifications, primarily from contract liabilities as a result of timing of customer payments. The increase in contract liabilities was primarily driven by the receipt of advance payments from customers, and related billings, as well as reclassifications from contract assets as a result of timing of customer payments. The advance payments and reclassifications exceeded the recognition of revenue as performance obligations were satisfied. For the year ended December 31, 2023, we recognized revenue of $160,713 and billed $184,174 to customers that had balances which were included in contract liabilities at December 31, 2022.

The increase in contract assets for the year ended December 31, 2022 was primarily due to revenue recognized of $1,371,455, offset in part by billings of $1,103,926. Contract assets also increased due to reclassifications, primarily from contract liabilities as a result of timing of customer payments. The increase in contract liabilities was primarily driven by the receipt of advance payments from customers, and related billings, as well as reclassifications from contract assets as a result of timing of customer payments. The advance payments and reclassifications exceeded the recognition of revenue as performance obligations were satisfied. For the year ended December 31, 2022, we recognized revenue of $135,506, and billed $129,749 to customers that had balances which were included in contract liabilities at December 31, 2021.

Performance Obligations

Our remaining performance obligations ("fully-contracted backlog") represent the unrecognized revenue value of our contract commitments. Our backlog may vary significantly each reporting period based on the timing of major new contract commitments and the fully-contracted backlog may fluctuate with currency movements. In addition, our customers have the right, under some circumstances, to terminate contracts or defer the timing of our services and their payments to us. At December 31, 2023, we had fully-contracted backlog of $2,545,403 and approximately 32% of our fully-contracted backlog is anticipated to be recognized as revenue in the next twelve months. The remaining performance obligations primarily relate to the energy efficiency and renewable energy construction projects, including long-term O&M services related to these projects. The long-term services have varying initial contract terms, up to 25 years.

We applied the practical expedient for certain revenue streams to exclude the value of remaining performance obligations for (i) contracts with an original expected term of one year or less or (ii) contracts for which we recognize revenue in proportion to the amount we have the right to invoice for services performed.

Contract Acquisition Costs

As of December 31, 2023 and 2022, we had capitalized commission costs of $1,735, related to contracts that were not completed, which were included in other assets in the accompanying consolidated balance sheets. For contracts that have a duration of less than one year, we follow a practical expedient and expense these costs when incurred. During the years ended December 31, 2023 and 2022, the amortization of commission costs related to contracts was not material and have been included in the accompanying consolidated statements of income.

Project Development Costs

The following table presents information related to our project development costs recognized in the consolidated statements of income on projects that converted to customer contracts:

	Year Ended December 31,		
	2023	2022	2021
Project development costs recognized	$ 13,051	$ 15,507	$ 12,737

No impairment charges in connection with our commission costs or project development costs were recorded during the years ended December 31, 2023, 2022 and 2021.

4. BUSINESS ACQUISITIONS AND RELATED TRANSACTIONS

Enerqos Energy Solutions S.r.l. ("Enerqos")

On February 24, 2023, we signed a definitive purchase and sale agreement to acquire Enerqos, a renewable energy and energy efficiency company headquartered in Milan, Italy. The acquisition closed on March 30, 2023 and the total purchase consideration was $13,445, of which $9,535 has been paid. There is no contingent consideration related to this acquisition. Cash acquired was $353, debt assumed was $3,951, and a deferred tax liability, net of $931 was recorded. In accordance with the SEC's Regulation S-X and GAAP, we evaluated and determined that Enerqos is not deemed to be a significant subsidiary, therefore, we are not presenting the pro-forma effects of this acquisition on our operations.

The estimated goodwill of $6,855 from the Enerqos acquisition consists largely of expected benefits, including the combined entities experience and the acquired workforce. This goodwill is not deductible for income tax purposes. The estimated fair value of tangible and intangible assets acquired and liabilities assumed are based on management's estimates and assumptions that are preliminary and subject to adjustments. Any measurement period adjustments made within one year from acquisition date, are recorded as adjustments to goodwill. Any adjustments made beyond the measurement period will be included in our consolidated statements of income.

The results of the acquisition since the date of the acquisition have been included in our operations as presented in the accompanying consolidated statements of income, consolidated statements of comprehensive income and consolidated statements of cash flows. For the year ended December 31, 2023, we recognized $52,241 of revenue and $1,758 of net income relating to Enerqos since the acquisition closed.

A summary of the cumulative consideration paid, allocation of the purchase price, and adjustments made for the Enerqos acquisition are presented in the table below:

	Preliminary March 31, 2023	Measurement Period Adjustment	As Adjusted December 31, 2023
Cash	$ 9,535	$ —	$ 9,535
Long-term debt assumed, net of current portions	3,951	—	3,951
FX adjustment	(41)	—	(41)
Fair value of consideration transferred	$ 13,445	$ —	$ 13,445
Cash and cash equivalents	190	—	190
Accounts receivable	6,230	—	6,230
Costs and estimated earnings in excess of billings	8,985	—	8,985
Prepaid expenses and other current assets	16,504	—	16,504
Project development costs	5,140	—	5,140
Property and equipment and energy assets	1,234	—	1,234
Intangible assets	4,438	—	4,438
Long-term restricted cash	163	—	163
Accounts payable	(15,480)	—	(15,480)
Accrued expenses and other current liabilities	(4,510)	165	(4,345)
Current portions of long-term debt	(15,165)	—	(15,165)
Deferred income tax liabilities, net	(931)	—	(931)
Other liabilities	(208)	—	(208)
Recognized identifiable assets acquired and liabilities assumed	$ 6,590	$ 165	$ 6,755
Goodwill	$ 6,855	$ (165)	$ 6,690

Juice Technologies, Inc. (d/b/a Plug Smart)

In November 2021, we entered into a stock purchase agreement to acquire all of the stock of Plug Smart, an Ohio-based energy services company that specializes in the development and implementation of budget neutral capital improvement projects including building controls and building automation systems. In December 2021, we completed the acquisition of Plug Smart and as of December 31, 2023, we paid $21,767 in cash. See table below and Note 18 for additional information on contingent consideration.

A summary of the cumulative consideration paid, allocation of the purchase price, and adjustments made for the Plug Smart acquisition are presented in the table below:

	Preliminary December 31, 2021	Measurement Period Adjustment	As Adjusted December 31, 2022
Cash	$ 17,692	$ —	$ 17,692
Fair value of earn out	2,160	(19)	2,141
Hold-back	750	—	750
Working capital adjustment	638	(128)	510
Fair value of consideration transferred	$ 21,240	$ (147)	$ 21,093
Cash and cash equivalents	2,771	—	2,771
Accounts receivable	3,370	—	3,370
Costs and estimated earnings in excess of billings	1,663	—	1,663
Prepaid expenses and other current assets	1,499	—	1,499
Intangible assets	6,354	(409)	5,945
Operating lease assets	488	—	488
Accounts payable	(1,795)	—	(1,795)
Accrued expenses and other current liabilities	(964)	(127)	(1,091)
Current portion of operating lease liabilities	(145)	—	(145)
Billings in excess of cost and estimated earnings	(2,464)	—	(2,464)
Deferred income tax liabilities	(1,693)	—	(1,693)
Long-term operating lease liabilities, net of current portion	(343)	—	(343)
Recognized identifiable assets acquired and liabilities assumed	$ 8,741	$ (536)	$ 8,205
Goodwill	$ 12,499	$ 389	$ 12,888

5. GOODWILL AND INTANGIBLE ASSETS, NET

Goodwill, Net

Our annual goodwill impairment review is performed during the fourth quarter each year-end using a quantitative approach. We tested goodwill for impairment at the reporting unit level utilizing the income approach which included a discounted cash flow method with a market approach. Based on our assessment during the fourth quarter ended December 31, 2023, one reporting unit had a fair value that was 2% less than the carrying value and we recorded a $1,644 goodwill impairment, which was $2,222 after taking into account the effect of deferred income taxes. The impairment was primarily driven by a decline in projected cash flows, including revenues and profitability. The impairment charges are included in the asset impairments within the consolidated statements of income for the year ended December 31, 2023. All other reporting units with goodwill had estimated fair values that exceeded their carrying values by at least 16% as of December 31, 2023 and 20% as of December 31, 2022. There was no goodwill impairment for the years ended December 31, 2022 and 2021.

The changes in the goodwill balances by reportable segment are as follows:

	U.S. Regions	U.S. Federal	Canada	Alternative Fuels	Europe	Other	Total
Carrying Value of Goodwill							
Balance, December 31, 2021	$ 39,204	$ 3,981	$ 3,454	$ —	$ 6,627	$ 17,891	$ 71,157
Remeasurement adjustments	389	—	—	—		—	389
Foreign currency translation	—	—	(218)	—	(695)	—	(913)
Balance, December 31, 2022	39,593	3,981	3,236	—	5,932	17,891	70,633
Goodwill acquired during the year	—	—	—	—	6,855	—	6,855
Remeasurement adjustments	—	—	—	—	(165)	—	(165)
Impairment charges, net of tax	(2,222)	—	—	—	—	—	(2,222)
Foreign currency translation	—	—	73	—	413	—	486
Balance, December 31, 2023	$ 37,371	$ 3,981	$ 3,309	$ —	$ 13,035	$ 17,891	$ 75,587
Accumulated Goodwill Impairment							
Balance, December 31, 2022	$ —	$ —	$ (1,016)	$ —	$ —	$ —	$ (1,016)
Balance, December 31, 2023	$ (2,222)	$ —	$ (1,016)	$ —	$ —	$ —	$ (3,238)

Intangible Assets, Net

Definite-lived intangible assets, net consisted of the following:

	As of December 31,	
	2023	2022
Gross carrying amount		
Customer contracts	$ 8,859	$ 8,288
Customer relationships	21,182	17,755
Non-compete agreements	3,013	2,980
Technology	2,723	2,713
Tradenames	1,370	541
Total gross carrying amount	37,147	32,277
Accumulated Amortization		
Customer contracts	8,859	8,288
Customer relationships	14,979	13,066
Non-compete agreements	3,013	2,980
Technology	2,723	2,713
Tradenames	765	537
Total accumulated amortization	30,339	27,584
Intangible assets, net	$ 6,808	$ 4,693

Customer contracts are amortized ratably over the period of the acquired customer contracts ranging in periods from approximately one to eight years. All other intangible assets are amortized over periods ranging from approximately four to fifteen years, as defined by the nature of the respective intangible asset.

Separable intangible assets that are not deemed to have indefinite lives are amortized over their useful lives. We annually assess whether a change in the useful life is necessary, or more frequently if events or circumstances warrant. No changes to useful lives were made during the years ended December 31, 2023, 2022, and 2021.

The table below sets forth amortization expense:

		Year Ended December 31,		
	Location	2023	2022	2021
Customer contracts	Cost of revenues	$ —	$ 551	$ —
Customer relationships	Selling, general and administrative expenses	2,141	1,303	310
Technology	Selling, general and administrative expenses	—	1	8
Tradenames	Selling, general and administrative expenses	225	3	3
Total amortization expense		$ 2,366	$ 1,858	$ 321

Amortization expense for our definite-lived intangible assets for the next five years to be included in selling, general, and administrative expenses is as follows:

	Estimated Amortization Expense
2024	$ 2,147
2025	2,146
2026	1,714
2027	640
2028	161
Total	$ 6,808

6. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consisted of the following:

	December 31,	
	2023	2022
Furniture and office equipment	$ 4,207	$ 3,023
Computer equipment and software costs	27,199	22,179
Leasehold improvements	2,570	2,483
Automobiles	2,041	1,896
Land	6,943	6,781
Property and equipment, gross	42,960	36,362
Less: accumulated depreciation	(25,565)	(20,655)
Property and equipment, net	$ 17,395	$ 15,707

The following table sets forth our depreciation expense on property and equipment:

	Year Ended December 31,		
Location	2023	2022	2021
Selling, general & administrative expenses	$ 4,155	$ 2,665	$ 3,143

7. ENERGY ASSETS, NET

Energy assets, net consisted of the following:

	December 31,	
	2023	2022
Energy assets [1]	$ 2,054,145	$ 1,493,913
Less: accumulated depreciation and amortization	(364,721)	(312,388)
Energy assets, net	$ 1,689,424	$ 1,181,525

(1) Includes financing lease assets (see Note 8), capitalized interest and ARO assets (see tables below). Also includes the energy asset project acquired in August 2023. See section below for additional information.

Energy Asset Acquisitions

In order to expand our portfolio of energy assets, we have acquired energy projects, which did not constitute businesses under the guidance discussed in Note 2.

August 2023 Purchase and Sale Agreement

On August 4, 2023, we entered into a purchase and sale agreement to acquire an energy asset project and rights to acquire 100% of the stock of Bright Canyon Energy Corporation ("BCE") in a two-phased transaction exclusive of each other. Phase 1, the purchase of the energy asset project, closed on August 4, 2023 and did not constitute a business in accordance with ASC 805-50, Business Combinations.

The adjusted purchase price for phase 1 was $87,964, of which $5,000 was paid in cash, $46,694 was financed through a seller's note, and we assumed a construction loan on the energy asset project for $36,270. We also acquired cash of $11,206. During the year ended December 31, 2023, we paid $18,400 in principal on the sellers note and at December 31, 2023, the balance of the seller's note was $28,294. See Note 9 for additional information about these loans. We agreed to sell back to the seller investment tax credits for the project acquired as part of this transaction for the fair market value of these credits in early in 2024 and recorded $20,970 in other receivables which is included in prepaid expenses and other current assets in the consolidated balance sheets. This amount was collected in January 2024. We also assumed a land lease for the energy asset project. See Note 8. for additional information on the lease.

On December 28, 2023, we executed an amended and restated purchase and sale agreement, which primarily revised the timing of payments on phase 2. In the second phase, which closed on January 12, 2024, we acquired BCE, including its interest in a consolidated joint venture and its interests in project subsidiaries developing or with rights to develop solar, battery, and microgrid assets for a purchase price of $39,100.

November 2023 Purchase Agreement

On November 1, 2023, we purchased a solar asset project for $3,128, of which $1,251 has been paid to date. The remaining balance of $1,877 is included in accrued expenses and other current liabilities in the consolidated balance sheets at December 31, 2023. The payments are due when certain conditions as outlined in the agreement are met.

2022 Energy Asset Acquisitions

During the year ended December 31, 2022, we purchased two energy projects, one solar and one wind, for $11,022.

Depreciation and Amortization

The following table sets forth our depreciation and amortization expense on energy assets, net of deferred grant amortization:

	Year Ended December 31,		
Location	2023	2022	2021
Cost of revenues [1]	$ 59,390	$ 49,755	$ 43,113

(1) Includes depreciation and amortization expense on financing lease assets. See Note 8.

Capitalized Interest

The following table presents the interest costs relating to construction financing during the period of construction, which were capitalized as part of energy assets, net:

	Year Ended December 31,		
	2023	2022	2021
Capitalized interest	$ 43,561	$ 13,050	$ 2,814

Long-lived Asset Impairment

During December 2023, there was a triggering event which caused us to perform an impairment analysis on an energy asset group. The triggering event was related to the requirement to shut down the plant and replace transmission lines due to transfer

trip issues. We determined that the cost to overhaul the transfer trip line would be cost prohibitive, therefore, we made a decision to shut the plant down. As a result, we recorded an impairment charge of $1,298, which fully impaired this asset group. During December 2023, there was an additional energy asset group that had successive years of losses, the PPA expires in November 2024, and we expect losses to continue in 2024, therefore, we recorded an impairment charge of $311, which fully impaired this asset group. Both of these asset groups were within the Alternative Fuels segment.

During September 2021, there was a triggering event which caused us to perform an impairment analysis on an energy asset group within the Alternative Fuels segment. This triggering event was related to a decision by the applicable state environmental agency to discontinue an environmental permit. This action materially modified the obligation of the landfill owner to continue maintaining the wellfield, therefore, we plan to decommission the impacted landfill gas plant. As a result, we recorded an impairment charge of $1,901, which fully impaired this asset group.

The impairment charges are included in asset impairments within the consolidated statements of income for the years ended December 31, 2023 and 2021. There were no impairment charges for the year ended December 31, 2022.

Customer Energy Asset Projects

We include certain customer energy asset projects in our energy assets, as we control and operate the assets as well as obtain financing during the construction and operating periods of the assets. We also carry a liability associated with these energy assets as we have an obligation to the customer for performance of the asset. Provided that performance criteria are met, the customer is responsible for repayment of the liability to the financing party. As of December 31, 2023 there were six energy asset projects which were included in energy assets and as of December 31, 2022, there were five.

The liabilities recognized in association with these customer energy assets were as follows:

	December 31,	
Location	2023	2022
Accrued expenses and other current liabilities	$ 598	$ 261
Other liabilities	41,680	27,168
Total customer energy asset projects liability	$ 42,278	$ 27,429

ARO Assets and ARO Liabilities

Our ARO assets and ARO liabilities relate to the removal of equipment and pipelines at certain renewable gas projects and obligations related to the decommissioning of certain solar facilities.

The following tables sets forth information related to our ARO assets and ARO liabilities:

		December 31,	
	Location	2023	2022
ARO assets, net	Energy assets, net	$ 4,800	$ 2,359
ARO liabilities, non-current	Other liabilities	$ 5,960	$ 3,052

	Year Ended December 31,		
	2023	2022	2021
Depreciation expense of ARO assets	$ 215	$ 146	$ 113
Accretion expense of ARO liabilities	$ 258	$ 146	$ 123

8. LEASES

We enter into a variety of operating lease agreements through the normal course of business including certain administrative offices. The leases are long-term, non-cancelable real estate lease agreements, expiring at various dates through fiscal 2032. The agreements generally provide for fixed minimum rental payments and the payment of utilities, real estate taxes, insurance, and repairs. We also lease vehicles, IT equipment and certain land parcels related to our energy projects, expiring at various dates

through fiscal 2059. The office and land leases make up a significant portion of our operating lease activity. Many of these leases have one or more renewal options that allow us, at our discretion, to renew the lease for six months to seven years. Only renewal options that we believed were likely to be exercised were included in our lease calculations. Many land leases include minimum lease payments that commence or increase when the related project becomes operational. In these cases, we estimated the commercial operation date used to calculate the ROU asset and minimum lease payments.

A portion of our real estate leases are generally subject to annual changes in the Consumer Price Index ("CPI"). We utilized each lease's minimum lease payments to calculate the lease balances upon transition. The subsequent increases in rent based on changes in CPI were excluded and will be excluded for future leases from the calculation of the lease balances but will be recorded to the consolidated statements of income as part of our operating lease costs.

The discount rate was calculated using an incremental borrowing rate based on financing rates on secured comparable notes with comparable terms and a synthetic credit rating calculated by a third party. We elected to apply the discount rate using the remaining lease term at the date of adoption.

We also enter into leases for service agreements and other leases related to our construction projects such as equipment, mobile trailers, and other temporary structures. We utilize the portfolio approach for this class of lease, which are either short-term leases or are not material.

Rent and related expenses were as follows:

	Year Ended December 31,		
	2023	2022	2021
Rent and related expenses	$ 10,504	$ 9,199	$ 9,740

We have a number of leases that are classified as financing leases, which related to transactions that were considered sale-leasebacks under ASC 840. See the sale-leaseback section below for additional information on our financing leases.

The table below sets forth supplemental balance sheet information related to leases:

	December 31,	
	2023	2022
Operating Leases		
Operating lease assets	$ 58,586	$ 38,224
Current portion of operating lease liabilities	$ 13,569	$ 5,829
Long-term operating lease liabilities, net of current portion	42,258	31,703
Total Operating lease liabilities	$ 55,827	$ 37,532
Weighted-average remaining lease term	18 years	13 years
Weighted-average discount rate	6.6 %	6.0 %
Financing Leases (1)		
Energy assets, net	$ 27,262	$ 29,365
Current portions of financing lease liabilities	$ 871	$ 1,992
Long-term financing lease liabilities, net of current portion, unamortized discount and debt issuance costs	13,057	14,068
Total financing lease liabilities	$ 13,928	$ 16,060
Weighted-average remaining lease term	13 years	14 years
Weighted-average discount rate	12.05 %	12.1 %

(1) Includes sale-leaseback transactions entered into prior to January 1, 2019.

The costs related to our leases were as follows:

	Year Ended December 31,		
	2023	2022	2021
Operating Leases			
Operating lease costs	$ 9,416	$ 8,372	$ 8,780
Financing Leases			
Amortization expense	2,103	2,104	2,129
Interest on lease liabilities	1,804	2,147	2,541
Total financing lease costs	3,907	4,251	4,670
Total lease costs	$ 13,323	$ 12,623	$ 13,450

Supplemental cash flow information related to our leases was as follows:

	Year Ended December 31,	
	2023	2022
Cash paid for amounts included in the measurement of operating lease liabilities	$ 10,724	$ 7,978
Right-of-use assets obtained in exchange for new operating lease liabilities [1]	$ 25,225	$ 4,872

(1) Includes non-monetary lease transactions of $13,941. See disclosure below for additional information.

The table below sets forth our estimated minimum future lease obligations under our leases:

	Operating Leases	Financing Leases
Year ended December 31,		
2024	$ 16,390	$ 2,317
2025	11,068	2,213
2026	5,813	2,054
2027	4,781	1,922
2028	4,186	1,955
Thereafter	79,489	15,935
Total minimum lease payments	$ 121,727	$ 26,396
Less: interest	65,900	12,468
Present value of lease liabilities	$ 55,827	$ 13,928

We have a future lease commitment for a ground lease which does not yet meet the criteria for recording a ROU asset or ROU liability. The net present value of this commitment totals $10,500 as of December 31, 2023 which relate to lease payments to be made over a 20-year period. The energy asset project related to this lease was sold during the year ended December 31, 2023, and once the final closing takes place in 2024 this lease will be assigned to the buyer.

Non-monetary Lease Transactions

We have two lease liabilities consisting of payment obligations that will be settled with non-monetary consideration. The lease liabilities relating to non-monetary consideration were recorded during the twelve months ended December 31, 2023 based on the fair market value of the project services or back up power expected to be provided, as noted below.

In January 2023, a 37-year land lease commenced with the United States Navy ("Navy"), which expires in 2059. We are working to complete an In-Kind Consideration Project ("IKCP"), which the Navy will credit as consideration towards our lease obligation upon the Navy's final acceptance of the IKCP.

In August 2023, we acquired an energy asset project and assumed the related 30-year land lease agreement with the United States Army ("Army"), which commenced in 2022 and expires in 2052. We are providing backup power as a stand ready obligation as consideration towards our lease obligation. See Note 7 Energy Assets, Net for additional information.

Sale-leasebacks and Financing Leases

We entered into sale-leaseback arrangements for solar PV energy assets prior to January 1, 2019, which remain under the previous guidance.

The following table presents a summary of amounts related to these sale-leasebacks included in our consolidated balance sheets:

	December 31,	
	2023	2022
Deferred loss, short-term, net	115	115
Deferred loss, long-term, net	1,340	1,455
Total deferred loss	$ 1,455	$ 1,570
Deferred gain, short-term, net	345	345
Deferred gain, long-term, net	4,085	4,430
Total deferred gain	$ 4,430	$ 4,775

Net gains from amortization expense in cost of revenues related to deferred gains and losses were $230, $383 and $230 for the years ended December 31, 2023, 2022, and 2021, respectively.

August 2018 Master Sale-leaseback

We enter into amendments to our August 2018 master lease and participation agreement from to time to time, which may extend the maturity date, increase the availability, or modify other covenants.

During the year ended December 31, 2023, we entered into amendments to this facility which extended the current maturity date to March 31, 2024.

We sold and leased back six energy assets for $103,129 in cash proceeds under this facility during the year ended December 31, 2023. The agreements have low interest rates ranging from 0% to 1.17%, as a result of tax credits which were transferred to the counterparty. As of December 31, 2023, a majority of the total commitment of $350,000 remained available under this lending commitment.

December 2020 Master Sale-leaseback

We enter into amendments to our December 2020 master lease and participation agreement from to time to time, which may extend the maturity date, increase the availability, or modify other covenants.

During the year ended December 31, 2023, we sold and leased back three energy assets for $9,201 in cash proceeds under this facility. As of December 31, 2023, no funding is available under this lending commitment.

See Note 9 for additional information on these financing facilities.

9. DEBT AND FINANCING LEASE LIABILITIES

Debt was comprised of the following:

	As of December 31,	
	2023	2022
Senior secured credit facility, 9.12%, due January 2024 to March 2025 [1] [8]	$ 279,900	$ 477,900
June 2020 construction revolver, 6.96%, due March 2024 [2] [8]	$ 20,705	$ 39,536
July 2020 construction revolver, 5.92%, due June 2023 [2] [8]	—	5,855
April 2023 construction credit facility, 6.82%, due July 2024	134,415	—
August 2023 construction credit facility, 9.34%, due August 2026	278,858	—
August 2023 construction revolver, 6.85%, due April 2030	36,270	—
Subtotal energy asset construction facilities	$ 470,248	$ 45,391
January 2006 variable rate term loan, 0.00%, due June 2024 [2] [3]	$ —	$ 3,403
October 2011 term loan, 6.11% due June 2028 [5]	1,976	2,348
October 2012 variable rate term loan, 7.88%, due June 2025 [4] [8]	34,453	37,204
September 2015 variable rate term loan, 7.21%, due March 2028 [4] [8]	13,747	14,084
August 2016 term loan, 4.95%, due June 2031 [4]	2,253	2,588
March 2017 term loan, 5.00%, due March 2028 [4]	—	2,258
April 2017 term loan, 4.50%, due April 2027 [5]	—	1,846
April 2017 term loan, 5.61%, due February 2034 [4]	1,348	1,437
June 2017 variable rate term loan, 7.81%, due December 2027 [4] [8]	7,158	7,874
June 2018 term loan, 5.15%, due December 2038 [2] [4]	21,063	23,255
June 2018 variable rate term loan, 7.41%, due June 2033 [2] [8] [3]	6,592	6,951
October 2018 variable rate term loan, 7.86%, due October 2029 [2] [8] [5]	6,145	6,977
November 2020 fixed rate note, 3.58%, due December 2027 [4]	2,004	2,425
June 2021 fixed rate note, 4.92%, due June 2045 [4]	3,489	3,474
July 2021 fixed rate note, 3.25%, due March 2046 [2] [4]	35,090	37,302
July 2021 variable rate term loan, 9.01%, due July 2030 [2] [4] [8]	2,140	2,915
June 2022 fixed rate shelf note, 5.45%, due March 2042 [2] [4]	6,395	6,859
October 2022 fixed rate financing facility, 6.70%, due August 2039	349,093	92,203
March 2023 fixed rate shelf note 5.99%, due, December 2047 [2] [4]	21,984	—
August 2023 seller's promissory note, 5.00%, due January 2024	28,294	—
August 2023 fixed rate note, 5.70%, due April 2047 [2]	3,520	—
Various Enerqos financing facilities	17,786	—
Subtotal energy asset term loans	$ 564,530	$ 255,403
August 2018 master sale-leaseback, 0.00% to 1.86%, due July 2039 to July 2047 [3] [6]	$ 163,504	$ 104,011
December 2020 master sale-leaseback, 0.00%, due December 2040 to March 2043 [4] [6]	22,194	16,912
Subtotal sale-leasebacks	$ 185,698	$ 120,923
Financing leases [7]	$ 13,928	$ 16,060
Total debt and financing leases	$ 1,514,304	$ 915,677
Less: current maturities, net of unamortized discount	322,247	331,479
Less: unamortized discount and debt issuance costs	21,982	15,563
Long-term debt and financing lease liabilities, net of current portion, unamortized discount and debt issuance costs	$ 1,170,075	$ 568,635

(1) Facility has interest at varying rates monthly in arrears.

(2) These agreements have acceleration causes that, in the event of default, as defined, the payee has the option to accelerate payment terms and make the remaining principal and the required interest balance due according to the agreement.

(3) Facility is payable in semi-annual installments.

(4) Facility is payable in quarterly installments.

(5) Facility is payable in monthly installments.

(6) These agreements are sale-leaseback arrangements and are accounted for as failed sales under the guidance and are classified as financing liabilities. See Note 8.

(7) Financing leases are sale-leaseback arrangements under previous guidance and do not include approximately $12,468 in future interest payments as of December 31, 2023 and $14,212 as of December 31, 2022. See Note 8.

(8) These agreements are now using the Secured Overnight Financing Rate ("SOFR") as the primary reference rate used to calculate interest.

The following table presents the aggregate maturities of long-term debt and financing leases as of December 31, 2023:

2024	$ 324,423
2025	298,569
2026	340,080
2027	62,162
2028	59,250
Thereafter	429,820
Total maturities	$ 1,514,304

Senior Secured Credit Facility - Revolver and Term Loans

In March 2022, we entered into the fifth amended and restated senior secured credit facility with five banks, which included the following amendments:

- increased the aggregate amount of total commitments from $245,000 to $495,000,
- increased the aggregate amount of the revolving commitments from $180,000 to $200,000,
- increased the existing term loan A from $65,000 to $75,000,
- extended the maturity date of the revolving commitment and term loan A from June 28, 2024 to March 4, 2025,
- added a delayed draw term loan A for up to $220,000 through a September 4, 2023 maturity date,
- increased the total funded debt to EBITDA covenant ratio from a maximum of 3.50 to 4.50 for the quarter ended March 31, 2022; 4.25 for the quarter ending June 30, 2022, 4.00 for the quarters ending September 30, 2022 and December 31, 2022; and 3.50 thereafter,
- specified the debt service coverage ratio (the ratio of (a) cash flow of the core Ameresco companies, to (b) debt service of the core Ameresco companies as of the end of each fiscal quarter) to be less than 1.5, and
- increased our limit under an energy conversation project financing to $650,000, which provides us with flexibility to grow our federal business further.

We accounted for this amendment as a modification and at closing we incurred $2,048 in lenders fees which were reflected as debt discount and $352 in third party fees which were reflected as debt issuance costs. The unamortized debt discount and issuance costs of the previous agreement are being amortized over the remaining term of the amended agreement, with the exception of $96 of costs relating to a previous syndicated lender which did not participate in this amendment. These costs were expensed in other expenses, net during the year ended December 31, 2023.

In June 2022, we entered into the first amendment to the fifth amended and restated senior secured credit facility, which increased the maximum indebtedness incurred under an energy conservation project financing from $650,000 to $725,000 from and after April 1, 2022, to and including December 30, 2022. As of December 31, 2022, the maximum indebtedness incurred under an energy conservation project financing reverted back to $650,000.

On March 17, 2023, we entered into amendment number two to the fifth amended and restated senior secured credit facility with five banks to increase the total funded debt to EBITDA covenant ratio from a maximum of 3.50 to 4.00 for the quarters ending March 31, 2023 and June 30, 2023, and 3.50 thereafter.

On August 24, 2023, we entered into amendment number three to the fifth amended and restated senior secured credit facility to extend the maturity date of the delayed draw term loan A, such that after paying $55,000 in connection with the amendment in August 2023, $45,000 was due November 15, 2023, and the remaining principal amount was due December 15, 2023. The amendment also increased the total funded debt to EBITDA covenant ratio from a maximum of 3.50 to 4.25 for the quarter ending September 30, 2023, and 3.50 thereafter.

On December 11, 2023, we entered into amendment number four to the fifth amended and restated senior secured credit facility to extend the maturity date of the delayed draw term loan A where $10,000 was due and paid on both January 31, 2024 and February 14, 2024, and an additional $10,000 payment due is on March 31, 2024. The remaining principal amount of $35,000 is due on April 15, 2024. There is also an additional 0.125% fee on the delayed draw term loan A, with $81 due on January 31, 2024, $69 due on February 29, 2024, and $56 due on March 31, 2024. The overall rate table for all loans under the current agreement was also increased by 0.25%. The amendment also increased the total funded debt to EBITDA covenant ratio from a maximum of 3.50 to 3.75 for the quarter ending December 31, 2023, and 3.50 thereafter. We made principal payments on the delayed draw term loan A totaling $155,000 during the year ended December 31, 2023.

The amendment also added a covenant that requires Ameresco to use commercially reasonable efforts assuming normal market conditions to raise and, by April 15, 2024, close on a minimum of $100,000 equity or subordinated debt financing if the Cathode site under the Southern California Edison ("SCE") contract does not achieve substantial completion by January 31, 2024, which was not achieved. Net proceeds from such financing would be required to be used to repay outstanding amounts on the senior secured credit facility.

The revolving credit facility may be increased up to an additional $100,000 in increments of at least $25,000 at the approval of lenders, subject to certain conditions. Up to $20,000 of the revolving credit facility may be borrowed in Canadian dollars, Euros, or pounds sterling. We are the sole borrower under the credit facility. The obligations under the credit facility are guaranteed by certain of our direct and indirect wholly owned domestic subsidiaries and are secured by a pledge of all of Ameresco's and such subsidiary guarantors' assets, other than the equity interests of certain subsidiaries and assets held in non-core subsidiaries (as defined in the agreement).

The table below sets forth amounts outstanding under the senior credit facility:

	Rate as of December 31, 2023	As of December 31,	
		2023	2022
Term loan A	8.70 %	$ 75,000	$ 75,000
Delayed draw term loan A	8.70 %	$ 65,000	$ 220,000
Revolving credit facility	9.54 %	$ 139,900	$ 182,900
Total senior secured credit facility outstanding		$ 279,900	$ 477,900
Less: unamortized debt discount and debt issuance costs		$ (884)	$ (1,562)
Total senior secured credit facility outstanding, net		$ 279,016	$ 476,338

As of December 31, 2023, funds of $37,489 were available for borrowing under the revolving credit facility and we had $12,868 in letters of credit outstanding. We expect to use the remaining funds available under the credit facility for general corporate purposes, including permitted acquisitions, refinancing of existing indebtedness and working capital.

The interest rate for borrowings under the credit facility is based on (i) each term loan shall bear interest at the term SOFR for such interest period plus the applicable rate for such facility; (ii) each base rate loan shall bear interest at a rate per annum equal to the base rate plus the applicable rate; (iii) each alternative currency daily rate loan shall bear at a rate per annum equal to the alternative currency daily rate plus the applicable rate; (iv) each alternative currency term rate loan shall bear interest at a rate per annum equal to the alternative currency term rate for such interest period plus the applicable rate; and (v) each swingline loan shall bear interest at a rate per annum equal to the base rate plus the applicable rate.

The revolving credit facility does not require amortization of principal. The term loan requires quarterly principal payments of $1,250 beginning in the first quarter of 2024, with the balance due at maturity. All borrowings may be paid before maturity in whole or in part at our option without penalty or premium, other than reimbursement of any breakage and deployment costs in the case of LIBOR borrowings.

The credit facility limits Ameresco's and our subsidiaries' ability to, among other things: incur additional indebtedness; incur liens or guarantee obligations; merge, liquidate or dispose of assets; make acquisitions or other investments; enter into hedging agreements; pay dividends and make other distributions and engage in transactions with affiliates, except in the ordinary course of business on an arms' length basis.

Under the credit facility, Ameresco and our core domestic subsidiaries may not invest cash or property in, or loan to, our non-core subsidiaries in aggregate amounts exceeding 49% of our consolidated stockholders' equity. In addition, we and our core subsidiaries must maintain a ratio of total funded debt to EBITDA as noted above, and a debt service coverage ratio (as defined in the agreement) of at least 1.5 to 1.0.

Any failure to comply with the financial or other covenants of the credit facility would not only prevent us from being able to borrow additional funds, but would constitute a default, permitting the lenders to, among other things, accelerate the amounts outstanding, including all accrued interest and unpaid fees, under the credit facility, to terminate the credit facility, and enforce liens against the collateral.

The credit facility also includes several other customary events of default, including a change in control of Ameresco, permitting the lenders to accelerate the indebtedness, terminate the credit facility, and enforce liens against the collateral.

For purposes of our senior secured facility, EBITDA, as defined, excludes the results of certain renewable energy projects that we own and for which financing from others remains outstanding; total funded debt, as defined, includes amounts outstanding under both the term loan and revolver portions of the senior secured credit facility plus other indebtedness, but excludes limited recourse indebtedness of project company subsidiaries; and debt service, as defined, includes principal and interest payments on the indebtedness included in total funded debt other than principal payments on the revolver portion of the facility.

Energy Asset Construction Facilities

June 2020 Construction Revolver, 6.96%, due March 2024

In June 2020, we entered into a revolving construction loan agreement with a bank, with an aggregate borrowing capacity of $100,000 for use in financing the construction cost of our owned projects.

In December 2022, we amended and restated the June 2020 construction loan agreement which modified the reference rate from LIBOR to SOFR as a result of the expected cessation of LIBOR. Per the amendment, this instrument will bear interest at the applicable term SOFR rate plus an applicable margin of 1.61%.

During the year ended December 31, 2023, we entered into amendments to extend this revolver and the current maturity date is March 2024.

During the year ended December 31, 2023, we drew down $11,809 under this revolver. As of December 31, 2023, $20,705 was outstanding and $79,295 was available for borrowing.

March 2023 Construction Credit Facility, 2.00%

On March 31, 2023, we entered into a credit agreement for a construction facility with a total commitment of CAD$100,000 which has an availability period of five years. As of December 31, 2023, no funds were drawn under this facility. During the availability period the loans will bear interest at a fixed rate of 2.00% and during the operating period the rate will range from 1.00% to 3.00% as set forth in the agreement. The maturity date is the earlier of twenty years from project commencement date or one year prior to the termination date of the last remaining energy services agreements.

April 2023 Construction Credit Facility, 6.82%, due July 2024

On April 18, 2023, one of our consolidated joint venture subsidiaries ("JV") entered into a construction loan agreement with two lenders for a principal amount of up to $140,844 under an energy asset credit facility. At the closing, the JV drew down $90,921 for construction of an energy asset and subsequently drew down an additional $43,493 as of December 31, 2023.

Monthly payments of interest only on the loan will be due and payable in accordance with the provisions as set forth in the agreement. Any outstanding principal of the loan shall be paid in full no later than the maturity date (or in any event upon acceleration of the loan), together with all accrued and unpaid interest on such amount. The loan will be repaid after the energy

asset project achieves provisional acceptance, through a sale-leaseback financing under lease agreements entered into between the same parties, as part of the closing documents.

We acquired the remaining interest in this JV in January 2024 when we closed on the acquisition of BCE.

August 2023 Construction Credit Facility, 9.34%, due August 2026

On August 18, 2023, we entered into a construction and development loan agreement which provides a loan in a principal amount of up to $300,000. At the closing, we drew down $200,000 under this facility, of which approximately $187,000 was used to reimburse Ameresco for development and construction costs. Subsequent to closing, we drew down an additional $78,857.

The loan bears interest at a rate of 4.00% plus the greater of (i) Term SOFR for a one-month tenor and (ii) the 10-year United States treasury rate and a fee equal to 0.250% of any unused committed principal amount. The loan matures on August 31, 2026, with a one-year extension option that can be exercised if certain circumstances are met, including payment of a $3,000 extension fee. We plan to accrue the extension fee if the extension becomes probable.

The obligations under the loan are guaranteed by all the related subsidiaries and are secured by the subsidiaries' assets as well as our equity interest in the borrower entity and in the case of default under the facility, a default under our Senior Secured Credit Facility or a change in control of Ameresco, Inc., we are required to make capital contributions to the borrower entity who then would be required to use the proceeds from the capital contributions to repay the construction and development loan.

Energy Asset Financing Facilities and Term Loans

October 2022 Financing Facility, 6.70%, due August 2039

In October 2022, one of our subsidiaries entered into a loan agreement with a new lender under a credit facility, refinancing a previous credit facility originally signed on October 23, 2020, which was scheduled to expire March 31, 2026.

The new loan was scheduled to mature on October 26, 2037, provided a principal amount of up to $125,000 and bore interest at a rate of 6.50% with a residual percentage of distributable cash flows payable after the maturity date of the loan, until the earlier of the lender achieving an 8.25% "IRR" on funds borrowed under the facility, or the facility discharge date on October 26, 2047. The principal and interest payments are due in quarterly installments based on a five-year amortization schedule with the principal payments being adjusted based on the distributable cash flows from the three renewable natural gas projects owned and operated by the project companies. No up-front, commitment or structuring fees were payable on the credit facility. The obligations under the loan are guaranteed by all the related subsidiaries and are secured by the subsidiaries' assets as well as our equity interest in the signing subsidiary. Borrowings under the credit facility are otherwise non-recourse to Ameresco.

At the closing, we drew down $80,000 under this facility, approximately $26,530 of which was used to repay all amounts outstanding under the prior loan and the remainder was used to terminate swap obligations, pay transaction costs, make permitted distributions to Ameresco and for the project companies' working capital needs. In addition, we terminated an interest rate swap and a commodity swap related to the prior loan before their maturity dates. These swap terminations resulted in a settlement gain on undesignated derivatives of $694. On December 21, 2022, we drew down an additional $15,000 under this facility.

On March 31, 2023, we drew down $30,000 under this facility and on May 31, 2023, we entered into the first amendment to the loan agreement that increased the original commitment of $125,000 by an additional $90,000 to $215,000 and at closing we drew down the $90,000.

The first amendment also contained the following amended terms:

- The loan bears interest on the unpaid principal amount thereof from the date made through repayment at an interest rate of 6.38% per annum compared to the original rate of 6.50%.
- The loan maturity date was changed from October 26, 2037 to May 31, 2038

On September 28, 2023, we amended and restated this facility to increase the maximum commitment from $215,000 to $500,000, to continue existing loans to project companies, to add certain renewable natural gas project companies to the loan portfolio, and to provide that additional wholly- and majority-owned project companies may be added to the loan portfolio subject to certain conditions.

At the closing of the amendment and restatement, we drew down an additional $135,544 under the loan, which was used to pay transaction costs, reimburse project costs incurred by us, make other permitted distributions to Ameresco, and to fund the required

reserve accounts. Subject to certain conditions, the facility allows for additional draws to be made up to the remaining principal amount to fund the construction and operation of renewable natural gas projects owned and operated by the project companies.

The amendment and restatement also contained the following amended terms:

- The loan bears interest at a rate of 6.70% with a residual percentage of distributable cash flows payable after the maturity date of the loan, until the earlier of the lender achieving an 8.51% internal rate of return ("IRR") on funds borrowed under the facility, or the facility discharge date which was extended to August 31, 2049.
- The loan maturity date was changed from May 31, 2038 to August 31, 2039
- All borrowings may be paid before maturity in whole or in part at RNG Holdings' option after August 30, 2027 provided that the lender's IRR is achieved, and against a prepayment of 102% of par for prepayments between August 31, 2027 and August 31, 2029 and 101% of par for prepayments between September 1, 2029 and August 30, 2031. No call premium applies for payments after August 30, 2031.

At closing, we incurred lender's fees of $509, which was recorded as debt discount, and $305 in debt issuance costs which were expensed in other expenses, net during the year ended December 31, 2023.

In December 2023, we drew down an additional $21,176 under this facility and as of December 31, 2023, $348,020 was outstanding, net of unamortized debt discount and issuance costs of $1,073.

June 2022 Term Shelf Notes, 5.45%, due March 2042 under July 2021 Financing Facility

In June 2022, two senior secured notes ("Shelf Notes") due March 31, 2042 were issued under our shelf facility, with gross proceeds of $7,113. The Shelf Notes bear interest at a fixed rate of 5.45% per annum and are payable quarterly commencing September 30, 2022.

March 2023 Term Shelf Notes 5.99%, due December 2047 under July 2021 Financing Facility

On March 28, 2023, three senior secured notes ("Shelf Notes") due December 31, 2047 were issued under our shelf facility, with gross proceeds of $22,625. The Shelf Notes bear interest at a fixed rate of 5.99% per annum and are payable quarterly commencing June 30, 2023. At closing, we incurred $282 in lender fees and debt issuance costs. In connection with the Shelf Notes, we recorded a derivative instrument for make-whole provisions with an initial value of $3,123, which was recorded as a debt discount.

September 2015 Variable Rate Term Loan, 7.21%, due March 2028

On March 30, 2023, we entered into an amended and restated financing agreement ("Amended Agreement") with the existing bank that extended the maturity date of the loan from March 30, 2023 to March 28, 2028. The Amended Agreement consists of a term loan of $14,084, an incremental term loan of $359 and a letter of credit of $899. The term loan bears interest at a variable rate, with interest payments due in quarterly installments. The rate at December 31, 2023 was 7.21% per annum. The remaining principal balance and unpaid interest is due March 28, 2028. As a result of this refinancing, we entered into a new interest rate swap contract with an initial notional amount of $14,084 and termination date of December 31, 2040. See Note 19 Derivative Instruments and Hedging Activities for additional information on this new swap contract.

Debt Instruments - Energy Project Asset Acquisition

As discussed in Note 4, on August 4, 2023, we acquired an energy asset project. The adjusted purchase price for phase 1 was $87,964.

August 2023 Construction Revolver, 6.85%, due April 2030

In connection with the acquisition, we assumed a construction loan in the amount of $36,270. The construction loan bears interest at a monthly variable SOFR term rate, which was 6.85% per annum. Subject to the terms and conditions contained in the assumed credit agreement, the construction loan should have been converted into a term loan on or prior to July 31, 2023. On February 26, 2024, we received a waiver on this default and converted $36,270 of the construction loan into a term loan, which has a maturity date of April 2030. Therefore, the construction loan was classified as non-current at December 31, 2023.

August 2023 Seller's Promissory Note, 5.00%, due January 2024

We financed a portion of the purchase price for this acquisition through a seller's note in the amount of $46,694.

In September 2023, we paid $12,500 in principal on the seller's promissory note and paid interest at a rate of 5.00%. As of December 31, 2023, the balance of the seller's note was $28,294 after $5,900 was paid on December 27, 2023. The remaining balance was paid in January 2024, without bearing interest.

Various Enerqos Financing Facilities

Enerqos has several financing facilities with maturity dates from March 31, 2024 to June 30, 2028 with interest rates ranging from 5.1% to 8.0%.

10. INCOME TAXES

The following table sets forth components of income before income taxes:

	Year Ended December 31,		
	2023	2022	2021
Domestic	$ 30,211	$ 98,004	$ 74,256
Foreign	8,058	7,715	3,888
Income before income taxes	$ 38,269	$ 105,719	$ 78,144

The components of the provision (benefit) for income taxes were as follows:

	Year Ended December 31,		
	2023	2022	2021
Current income tax provision (benefit):			
Federal	$ 34	$ (722)	$ (779)
State	372	733	1,779
Foreign	1,255	1,202	844
Total current	1,661	1,213	1,844
Deferred income tax (benefit) provision:			
Federal	(22,677)	2,528	(8,025)
State	(5,657)	2,300	3,561
Foreign	1,038	1,129	573
Total deferred	(27,296)	5,957	(3,891)
Total income tax (benefit) provision	$ (25,635)	$ 7,170	$ (2,047)

Our deferred tax assets and liabilities result primarily from temporary differences between financial reporting and tax recognition of depreciation, energy efficiency, sale-leasebacks and other accruals, and net operating loss carryforwards.

Deferred tax assets and liabilities consisted of the following:

	December 31,	
	2023	2022
Deferred income tax assets:		
Compensation accruals	$ 4,137	$ 3,306
Reserves	5,906	4,111
Sale-leasebacks and other accruals	49,300	32,945
Net operating losses	28,565	18,395
Interest limitation	8,273	—
Energy efficiency	82,827	71,433
Deferred revenue	2,114	2,132
Gross deferred income tax assets	181,122	132,322
Valuation allowance	(3,704)	(3,621)
Total deferred income tax assets	$ 177,418	$ 128,701
Deferred income tax liabilities:		
Depreciation	$ (137,966)	$ (122,762)
Deferred effect of derivative liability	(2,166)	(1,640)
Canadian capital cost, allowance and amortization	(5,738)	(3,098)
Italy intangibles	(1,324)	—
United Kingdom goodwill amortization	(852)	(952)
Outside basis difference	(6,599)	(5,038)
Interest rate swaps	(841)	(1,347)
Total deferred income tax liabilities	(155,486)	(134,837)
Deferred income tax assets (liabilities), net	$ 21,932	$ (6,136)

Our valuation allowance related to the following items:

	December 31,	
	2023	2022
Interest rate swaps [1]	$ —	$ 49
Foreign net operating loss [2]	3,702	3,555
State net operating loss at one of our subsidiaries [3]	2	17
Total valuation allowance	$ 3,704	$ 3,621

(1) The deferred tax asset represents a future capital loss which can only be recognized for income tax purposes to the extent of capital gain income. Although we anticipate sufficient future taxable income, it is more likely than not that it will not be the appropriate character to allow for the recognition of the future capital loss.

(2) It is more likely than not that we will not generate sufficient taxable income at the foreign subsidiary level to utilize the net operating loss.

(3) It is more likely than not that we will not generate sufficient taxable income at the subsidiary level to utilize the net operating loss.

As of December 31, 2023, we had the following tax loss and credit carryforwards to offset taxable income in prior and future years:

	Amount	Expiration Period
Federal net operating loss carryforwards	$ 69,130	Indefinite
State net operating loss carryforwards	91,411	Various
Canadian net operating loss carryforwards	32,527	2028 through 2043
Ireland net operating loss carryforwards	324	Indefinite
Spain net operating loss carryforwards	2,302	Indefinite
Total tax loss carryforwards	$ 195,694	
Federal Energy Investment and Production tax credit carryforward	$ 82,768	2030 through 2043

The provision for income taxes is based on the various rates set by federal and local authorities and is affected by permanent and temporary differences between financial accounting and tax reporting requirements.

The principle reason for the difference between the statutory rate and the estimated annual effective rate for 2023 were the effects of tax deductions related to the Section 179D Commercial Buildings Energy-Efficiency deduction, investment tax credits we are entitled from solar plants which have been placed into service during 2023 and, the deferred benefit for a reduction in future state taxes. The Section 179D deduction available for 2023 was substantially higher compared to prior years because of enhancements to Section 179D in the IRA. In addition, we were able to identify and document a large Section 179D eligible from a prior year that had not previously been available. We also benefited from the deferred effect of a reduction in our future state tax rates resulting from apportionment changes in a major state.

The principal reasons for the difference between the statutory rate and the estimated annual effective rate for 2022 were the effects of investment tax credits we are entitled from solar plants which have been placed into service during 2022, the tax deductions related to the Section 179D Commercial Buildings Energy-Efficiency deduction, the benefit of disqualifying dispositions on certain employee stock options and favorable tax basis adjustments on certain partnership flip transactions.

The investment tax credits and production tax credits we may be entitled to fluctuate from year to year based on the cost of the renewable energy plants we place in service and production levels at facilities we own in that year.

On December 27, 2020 the President signed the Consolidated Appropriations Act, 2021 H.R. 133, which among other things made the Section 179D Energy Efficient Commercial Building Deduction permanent. The Section had previously been extended for years up to December 31, 2020. That Act also made changes to the way in which the deduction is calculated including adding an inflation adjustment and an update of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (“ASHRAE”) Standard by which energy improvements are measured. On December 23, 2022, the IRS issued Announcement 2023-1 which clarified the ASHRAE energy efficiency standards which will be applied to projects placed in service for 2021 and 2022.

The following is a reconciliation of the effective tax rates:

	Year Ended December 31,		
	2023	2022	2021
Income before (benefit) provision for income taxes	$ 38,269	$ 105,719	$ 78,144
Federal statutory tax expense	$ 8,036	$ 22,201	$ 16,410
State income taxes, net of federal benefit	(774)	3,844	2,648
Net state impact of deferred rate change	(3,213)	(575)	(502)
Nondeductible expenses	667	2,198	2,572
Impact of reserve for uncertain tax positions	(200)	59	286
Stock-based compensation expense	4	353	(4,618)
Energy efficiency preferences	(30,359)	(21,410)	(17,639)
Foreign items and rate differential	458	37	4
Adjustment State Taxes	(66)	—	—
Redeemable non-controlling interests	(227)	(411)	(2,546)
Valuation allowance	81	(159)	337
Miscellaneous	(42)	1,033	1,001
Total income tax (benefit) provision	$ (25,635)	$ 7,170	$ (2,047)
Effective tax rate:			
Federal statutory rate expense	21.0 %	21.0 %	21.0 %
State income taxes, net of federal benefit	(2.0)%	3.6 %	3.4 %
Net state impact of deferred rate change	(8.4)%	(0.5)%	(0.6)%
Nondeductible expenses	1.7 %	2.1 %	3.3 %
Impact of reserve for uncertain tax positions	(0.5)%	0.1 %	0.4 %
Stock-based compensation expense	— %	0.3 %	(5.9)%
Energy efficiency preferences	(79.3)%	(20.3)%	(23.2)%
Foreign items and rate differential	1.2 %	— %	— %
Adjustment State Taxes	(0.2)%	— %	— %
Redeemable non-controlling interests	(0.6)%	(0.4)%	(3.3)%
Valuation allowance	0.2 %	(0.2)%	0.4 %
Miscellaneous	(0.1)%	1.1 %	1.9 %
Effective tax rate	(67.0)%	6.8 %	(2.6)%

The following table provides a reconciliation of gross unrecognized tax benefits which are included in other liabilities within the consolidated balance sheets:

	Year Ended December 31,	
	2023	2022
Balance, beginning of year	$ 900	$ 900
Additions for current year tax positions	100	—
Reductions of prior year tax positions	(200)	—
Balance, end of year	$ 800	$ 900

The amount of unrecognized tax benefits that, if recognized, would favorably affect the effective income tax rate in any future periods was $310 as of December 31, 2023 and $450 as of December 31, 2022 (both net of the federal benefit on state amounts).

We do not accrue U.S. tax for foreign earnings that we consider to be permanently reinvested outside the United States. Consequently, we have not provided any withholding tax on the unremitted earnings of our foreign subsidiaries. As of December 31, 2023 and 2022, we estimated that there were no earnings for which repatriation tax has not been provided.

The tax years 2020 through 2023 remain open to examination by major taxing jurisdictions. We recognize interest and penalties related to uncertain tax positions as components of our income tax provision (benefit) in our consolidated statements of income. We increased income tax expense for these items by $22 in 2023, $22 in 2022, and $14 in 2021.

11. VARIABLE INTEREST ENTITIES AND EQUITY METHOD INVESTMENTS

Investment Funds

Over a period of five years (2015 through 2019), we formed five investment funds (tax equity partnerships) with third party investors which granted the applicable investor ownership interests in the net assets of certain of our renewable energy project subsidiaries. As of December 31, 2023, we had three such investment funds each with a different third-party investor.

We consolidate the investment funds, and all inter-company balances and transactions between Ameresco and the investment funds are eliminated in our consolidated financial statements. We determined that the investment funds meet the definition of a VIE. We use a qualitative approach in assessing the consolidation requirement for VIEs that focuses on determining whether we have the power to direct the activities of the VIE that most significantly affect the VIE's economic performance and whether we have the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE.

We have considered the provisions within the contractual arrangements that grant us power to manage and make decisions that affect the operation of these VIEs, including determining the solar energy systems and associated long term customer contracts to be sold or contributed to the VIEs, and installation, operation, and maintenance of the solar energy systems. We considered the rights granted to the other investors under the contractual arrangements to be more protective in nature rather than participating rights. As such, we determined that we are the primary beneficiary of the VIEs for all periods presented. We evaluate our relationships with VIEs on an ongoing basis to ensure that we continue to be the primary beneficiary.

Under the related agreements, cash distributions of income and other receipts by the funds, net of agreed-upon expenses and estimated expenses, tax benefits and detriments of income and loss, and tax benefits of tax credits, are assigned to the funds' investor and our subsidiaries as specified in contractual arrangements. Certain of these arrangements have call and put options to acquire the investor's equity interest as specified in the contractual agreements. See Note 12 for additional information about these investment funds and the call and put options.

Other Variable Interest Entities

We execute certain contracts jointly with third parties through various forms of joint ventures. Although the joint ventures own and hold the contracts with the clients, the services required by the contracts are typically performed by us and our joint venture partners, or by other subcontractors under subcontracting agreements with the joint ventures. Many of these joint ventures are formed for a specific project. The assets of these joint ventures generally consist almost entirely of cash and land, and the liabilities of our joint ventures generally consist almost entirely of amounts due to the joint venture partners.

We follow guidance on the consolidation of VIEs that requires companies to utilize a qualitative approach to determine whether it is the primary beneficiary of a VIE. The process for identifying the primary beneficiary of a VIE requires consideration of the factors that indicate a party has the power to direct the activities that most significantly impact the joint ventures economic performance, including powers granted to the joint ventures program manager, powers contained in the joint venture governing board and, to a certain extent, a company's economic interest in the joint venture. We analyze our joint ventures and classify them as either:

- a VIE that must be consolidated because we are the primary beneficiary or the joint venture is not a VIE and we hold the majority voting interest with no significant participative rights available to the other partners, or
- a VIE that does not require consolidation and is treated as an equity or cost method investment because we are not the primary beneficiary, or the joint venture is not a VIE and we do not hold the majority voting interest.

Many of our joint ventures are deemed to be VIEs because they lack sufficient equity to finance the activities of the joint venture.

The table below presents a summary of amounts related to our VIEs reflected in Note 1 on our consolidated balance sheets:

	As of December 31,					
	2023			2022		
	Investment Funds	Other VIEs	Total VIEs	Investment Funds	Other VIEs	Total VIEs
Cash and cash equivalents	$ 5,099	$ 16,780	$ 21,879	$ 1,715	$ 8,392	$ 10,107
Restricted cash	—	—	—	799	—	799
Accounts receivable, net	—	1,977	1,977	24	566	590
Costs and estimated earnings in excess of billings	662	13,409	14,071	951	1	952
Prepaid expenses and other current assets	33	3,749	3,782	35	14,287	14,322
Total VIE current assets	5,794	35,915	41,709	3,524	23,246	26,770
Property and equipment, net	—	267	267	89	—	89
Energy assets, net	79,104	173,808	252,912	84,081	97,969	182,050
Operating lease assets	4,748	12,908	17,656	4,901	—	4,901
Restricted cash, non-current portion	73	—	73	73	—	73
Other assets	10	74	84	30	—	30
Total VIE assets	$ 89,729	$ 222,972	$ 312,701	$ 92,698	$ 121,215	$ 213,913
Current portions of long-term debt and financing lease liabilities	$ 2,190	$ 132,427	$ 134,617	$ 2,087	$ —	$ 2,087
Accounts payable	1,440	6,490	7,930	48	8,007	8,055
Accrued expenses and other current liabilities	241	22,780	23,021	304	12,255	12,559
Current portions of operating lease liabilities	133	6,953	7,086	117	—	117
Total VIE current liabilities	4,004	168,650	172,654	2,556	20,262	22,818
Long-term debt and financing lease liabilities, net of current portion, unamortized discount and debt issuance costs	17,167	—	17,167	19,177	—	19,177
Long-term operating lease liabilities, net of current portion	5,063	3,823	8,886	5,159	—	5,159
Other liabilities	356	—	356	866	2,709	3,575
Total VIE liabilities	$ 26,590	$ 172,473	$ 199,063	$ 27,758	$ 22,971	$ 50,729

Equity and Cost Method Investments

Unconsolidated VIEs/joint ventures are accounted for under the equity or cost method. As of the years ended December 31, 2023 and December 31, 2022, we had seven and five unconsolidated joint ventures, respectively. During the year ended December 31, 2023, we invested $5,554 in two new joint ventures. No other material investments were made.

Our investment balances for these equity and cost method investments are included in other assets on the consolidated balance sheets and our pro rata share of net income or loss is included in operating income in the consolidated statements of income.

The following table sets forth the carrying value of our equity and cost method investments in joint ventures:

	As of December 31,	
	2023	2022
Equity and cost method investments	$ 18,709	$ 10,855

We are not aware of any situations where the maximum exposure to loss significantly exceeds the carrying value show above.

12. REDEEMABLE NON-CONTROLLING INTERESTS

Our subsidiaries with membership interests in the investment funds we formed have the right to elect to require the non-controlling interest holder to sell all of its membership units to our subsidiaries, a call option. Our investment funds also include rights for the non-controlling interest holder to elect to require our subsidiaries to purchase all of the non-controlling membership interests in the fund, a put option.

The following table sets forth information about the call and put options for our investment funds outstanding as of December 31, 2023:

		Call Option			Put Option		
Investment Fund Number	Formation Date	Start Date	End Date	Purchase Price	Start Date	End Date	Purchase Price
1	June 2018	April 2024	October 2024	(1)	October 2024	April 2025	(3)
2	October 2018	June 2024	December 2024	(1)	December 2024	June 2025	(3)
3	December 2019	March 2026	September 2026	(2)	September 2026	September 2027	(4)

(1) Purchase price is equal to the greater of (i) the fair market value of such interests at the time the option is exercised or (ii) 7% of the investors' contributed capital balance at the time the option is exercisable.

(2) Purchase price is equal to the greater of (i) the fair market value of such interests at the time the option is exercised or (ii) 5% of the investors' contributed capital balance at the time the option is exercisable. The call options are exercisable beginning on the date that specified conditions are met for each respective fund. These dates are estimate and subject to change based on last funding date.

(3) Purchase price is the sum of (i) the fair market value at the time the option is exercised, and (ii) the closing costs incurred by the investor in connection with the exercise of the put option.

(4) Purchase price is the lessor of fair market value at the time the option is exercised and the sum of (i) 5% of the investors' contributed capital balance at the time the option is exercisable, and (ii) the fair market value of any unpaid tax law change losses incurred by the investor in connection with the exercise of the put option.

The call options are exercisable beginning on the date that specified conditions are met for each respective fund. In December 2022 we finalized our purchase of an investor's membership interest for $839 in cash and reclassified the remaining redeemable non-controlling interest balance to paid-in capital to reflect the additional contribution from us to our wholly-owned subsidiary.

Because the put options represent redemption features that are not solely within our control, the non-controlling interests in these funds are presented outside of permanent equity. Redeemable non-controlling interests are reported using the greater of their carrying value (which is impacted by attribution under the HLBV method) or their estimated redemption value at each reporting period. At both December 31, 2023 and 2022, redeemable non-controlling interests were reported in the accompanying consolidated balance sheets at their carrying values, as the carrying value at each reporting period was greater than the estimated redemption value.

13. EQUITY AND EARNINGS PER SHARE

Equity Offering

On March 9, 2021, we closed on an underwritten public offering of 2,500 shares of our Class A common stock at a public offering price of $44.00 per share. Net proceeds from the offering were $104,326, after deducting offering costs of $5,674. On March 15, 2021, we closed on the underwriters' option to purchase 375 additional shares of Class A common stock from us, resulting in net proceeds of $15,758 after deducting offering costs of $742. We used $80,000 of the net proceeds to repay in full the outstanding U.S. dollar balance under our senior secured revolving credit facility and used the remaining proceeds for general corporate purposes.

In the offering, selling shareholders sold 805 shares of our Class A Common Stock at a public offering price of $44.00 per share, less the underwriting discount. We did not receive any proceeds from the sale of the shares by the selling stockholders.

Common and Preferred Stock

The rights of the holders of our Class A common stock and Class B common stock are identical, except with respect to voting and conversion. Each share of our Class A common stock is entitled to one vote per share and is not convertible into any other shares of our capital stock. Each share of our Class B common stock is entitled to five votes per share, is convertible at any time into one share of Class A common stock at the option of the holder of such share and will automatically convert into one share of Class A common stock upon the occurrence of certain specified events, including a transfer of such shares (other than to such holder's family members, descendants or certain affiliated persons or entities). Our Board of Directors is authorized to fix the rights and terms for any series of preferred stock without additional shareholder approval.

Earnings Per Share

The following is a reconciliation of the numerator and denominator for the computation of basic and diluted earnings per share:

	Year Ended December 31,		
	2023	2022	2021
Numerator:			
Net income attributable to common shareholders	$ 62,470	$ 94,926	$ 70,458
Adjustment for accretion of tax equity financing fees	(108)	(116)	(116)
Income attributable to common shareholders	$ 62,362	$ 94,810	$ 70,342
Denominator:			
Basic weighted-average shares outstanding	52,140	51,841	50,855
Effect of dilutive securities:			
Stock options	1,087	1,437	1,413
Diluted weighted-average shares outstanding	53,228	53,278	52,268
Net income per share attributable to common shareholders:			
Basic	$ 1.20	$ 1.83	$ 1.38
Diluted	$ 1.17	$ 1.78	$ 1.35
Potentially dilutive shares [1]	1,707	1,108	1,443

(1) Potentially dilutive shares attributable to stock options were excluded from the computation of diluted earnings per share as the effect would have been anti-dilutive.

14. STOCK-BASED COMPENSATION AND OTHER EMPLOYEE BENEFITS

Our 2020 Stock Incentive Plan (the "2020 Plan"), was adopted by our Board of Directors in February 2020 and approved by our stockholders in May 2020. The 2020 Plan provides for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, RSUs, and other stock-based awards. As of December 31, 2023, there were 1,991 shares available for grant under the 2020 Plan.

Stock Options

We did not grant awards to individuals who were not either an employee or director of ours during the years ended December 31, 2023, 2022, and 2021.

The following table summarizes the collective activity under the plan:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2022	4,533	45.799		
Granted	170	41.871		
Exercised	(246)	9.900		
Forfeited	(193)	62.365		
Expired	(9)	63.311		
Outstanding at December 31, 2023	4,255	$ 46.932	6.6 years	$ 27,539
Options exercisable at December 31, 2023	1,867	$ 25.241	5.3 years	$ 25,775
Expected to vest at December 31, 2023	2,387	$ 63.900	7.6 years	$ 1,764

The following table sets forth additional disclosures about our plan:

	Year Ended December 31,		
	2023	2022	2021
Aggregate intrinsic value of options exercised	$ 8,511	$ 9,775	$ 33,494
Cash received from stock option exercises	$ 2,438	$ 3,954	$ 5,563
Weighted-average fair value of stock options granted	$ 23.99	$ 37.87	$ 28.94
Stock-based compensation expense [1]	$ 10,318	$ 15,046	$ 8,716
Income tax benefit from stock-based compensation expense	$ 1,102	$ 659	$ 4,932

(1) Included in selling, general, and administrative expenses in the accompanying consolidated statements of income and includes expense in connection with our ESPP and RSUs.

Under the terms of our 2020 Plan, all options expire if not exercised within ten years after the grant date. We typically award options that vest over a five-year period on an annual ratable basis. From time to time, we award options providing for vesting over three years, with one-third vesting on each of the first three anniversaries of the grant date. If the employee ceases to be employed by us for any reason before vested options have been exercised, the employee has 90 days to exercise options that have vested as of the date of such employee's termination, or they are forfeited.

We use the Black-Scholes option pricing model to determine the weighted-average fair value of options granted. We recognize the compensation cost of stock-based awards on a straight-line basis over the requisite service period of the award.

The determination of the fair value of stock-based payment awards utilizing the Black-Scholes model is affected by the stock price and a number of assumptions, including expected volatility, expected life, risk-free interest rate and expected dividends.

The following table sets forth the significant assumptions used in the model:

	Year Ended December 31,		
	2023	2022	2021
Expected dividend yield	—%	—%	—%
Risk-free interest rate	3.35% -4.44%	1.69%-3.82%	0.92%-1.46%
Expected volatility	54%-56%	51%-53%	48%-50%
Expected life	6.5 years	6.5 years	6.5 years

We will continue to use judgment in evaluating the expected term and volatility related to stock-based compensation on a prospective basis and incorporate these factors into the Black-Scholes pricing model. We record forfeitures as they occur. Higher volatility and longer expected lives result in an increase to stock-based compensation expense determined at the date of grant.

As of December 31, 2023, there was approximately $30,075 of unrecognized compensation expense related to non-vested stock option awards and RSUs that is expected to be recognized over a weighted-average period of 2.0 years.

Restricted Stock Units

During the year ended December 31, 2023, we granted awards of RSUs to our employees and non-employee directors under our 2020 Plan. These RSUs represent a promise to deliver shares to participants at a future date after certain vesting conditions are met. RSUs do not have the voting rights of common stock and the shares underlying RSUs are not considered issued and outstanding upon grant. The fair value of RSUs is based on the closing stock price of our common stock on the grant-date and expensed over the requisite service period of the award.

The following table summarizes the activity under the plan:

	Number of Options	Weighted-Average Grant Date Fair Value Per Share
Outstanding at December 31, 2022	13	$ 52.94
Granted	66	45.33
Vested	(23)	47.83
Forfeited	(4)	48.39
Outstanding at December 31, 2023	52	$ 45.90

Total stock-based compensation expense for the year ended December 31, 2023 related to RSUs was $1,690.

As of December 31, 2023, 23 of the RSUs were vested and there was $1,604 of unrecognized compensation expense related to RSUs that is expected to be recognized over a period of approximately one year.

Employee Stock Purchase Plan

Our 2017 Employee Stock Purchase Plan permits eligible employees to purchase up to an aggregate of 200 shares of the Company's Class A common stock. In May 2020, we amended our ESPP, which permits eligible employees to purchase up to an aggregate of 350 shares of our Class A common stock. This plan commenced December 1, 2017 and was subsequently amended in August 2018. The ESPP allows participants to purchase shares of common stock at a 5% discount from the fair market value of the stock as determined on specific dates at six-month intervals.

During the years ended December 31, 2023 and 2022, we issued 60 and 36 shares, respectively, under the ESPP. As of December 31, 2023 and 2022, the amount that had been withheld from employees for future purchases under the ESPP was $182 and $179, respectively.

Other Employee Benefits

We maintain a qualified 401(k) plan covering eligible U.S. employees who have completed the minimum service requirement, as defined by the plans. The plans require us to contribute 100% of the first six percent of base compensation that a participant contributes to the plans.

In 2016, we established a Group Personal Pension Plan for employees in the United Kingdom, for eligible employees who may contribute a portion of their compensation, subject to their age and other limitations established by HM Revenue & Customs. The plan requires us to contribute 100% of the first six percent of base compensation that a participant contributes to the plans.

We also have a Registered Retirement Savings Plan for employees in Canada, for eligible employees who may contribute a portion of their compensation. The plan requires us to contribute 100% of the first six percent of base compensation that a participant contributes to the plans.

The following table sets forth our matching contributions under the plans:

	Year Ended December 31,		
	2023	2022	2021
401(k) plan	$ 7,561	$ 6,974	$ 6,189
Group Personal Pension Plan	652	290	252
Registered Retirement Savings Plan	429	406	405
Total matching contributions	$ 8,642	$ 7,670	$ 6,846

15. COMMITMENTS AND CONTINGENCIES

From time to time, we issue letters of credit and performance bonds with our third-party lenders, to provide collateral.

Legal Proceedings

We are involved in a variety of other claims and other legal proceedings generally incidental to our normal business activities. When we conclude that it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated, it is accrued through a charge to earnings and, if material, disclosed below. When only a range of amounts is reasonably estimable and no amount within the range is more likely than another, the low end of the range is recorded. While the ultimate amount of liability incurred in any of these matters is dependent on future developments, in our opinion, the recorded liability is adequate to cover the future payment of such liability and claims. However, the final outcome of any of these claims and legal proceedings cannot be predicted with certainty, and unfavorable or unexpected outcomes could result in additional accruals that could be significant to results of operations in a particular year or quarter. Any adjustments to the recorded liability will be reflected in earnings in the periods in which such adjustments become known. For any other claims where a loss may be reasonably possible, but not probable, or is probable but not reasonably estimable, no accrual is established, but the matter, if potentially material, is disclosed below. We routinely review relevant information with respect to our matters and update our accruals, disclosures and estimates of reasonably possible loss based on such reviews. While the outcome of any of these matters cannot be accurately predicted, we do not believe the ultimate resolution of any of these existing matters would have a material adverse effect on our financial condition or results of operations.

In October 2021, we entered into a contract with SCE to design and build three grid scale BESS at three sites near existing substation parcels throughout SCE's service territory in California with an aggregate capacity of 537.5 MW ("the SCE Agreement"). As previously disclosed, due to supply chain delays, weather and other events, we were unable to complete the projects by August 1, 2022 (the "Guaranteed Completion Date") and made related force majeure claims. In late 2022, SCE also instructed us to adjust the completion of the sites into 2023. Under the SCE Agreement, a failure to reach the Guaranteed Completion Date could, under certain circumstances, result in liquidated damages up to a maximum amount of $89 million being applied. We have been working with SCE to analyze the applicability and scope of force majeure relief based on our force majeure claims. In February 2024, in response to us issuing an invoice to SCE for one of the sites, SCE notified us that they intend to withhold liquidated damages for that project. Our view is that liquidated damages should not be applied. It is at least reasonably possible we may incur an obligation to pay liquidated damages up to the maximum amount.

On November 6, 2017, we were served with a complaint filed by a customer against nine contractors, including us, claiming both physical damages to the customer's tangible property and damages caused by various alleged defects in the design of the project through negligent acts and/or omissions, breaches of contract and breaches of the "implied warranty of good and workmanlike manner." During the year ended December 31, 2021, we accrued a reasonable estimate of the loss, which was included in accrued expenses and other current liabilities in our consolidated balance sheets, and we accrued a loss recovery from insurance proceeds which was included in prepaid expenses and other current assets in our consolidated balance sheets. The estimated loss and the loss recovery were included in selling, general, and administrative expenses in our consolidated statements of income for the year ended December 31, 2021. During the year ended December 31, 2022, we entered into a settlement agreement and the net settlement was paid and the loss recovery from insurance proceeds was reversed during this same period.

Commitments as a Result of Acquisitions

In August 2018, we completed an acquisition of Chelsea Group Limited which provided for a revenue earn-out contingent upon the acquired business meeting certain cumulative revenue targets over five years from the acquisition date. We evaluated financial forecasts of the acquired business and concluded that the fair value of this earn-out was approximately $555 upon acquisition. The fair value was re-evaluated each period and at December 31, 2023 it was determined that the cumulative revenue earn-out targets were not achieved, and the term expired. Therefore, we decreased the contingent consideration by $358 to $0, which was included in selling, general and administrative expenses in our consolidated statements of income during the year ended December 31, 2023

In December 2021, we completed an acquisition of Plug Smart which provided for an earn-out based on future EBITDA targets beginning with EBITDA performance for the month of December 2021 and each fiscal year thereafter, over a five-year period through December 31, 2026. The maximum cumulative earn-out is $5,000 and we evaluated financial forecasts of the acquired business and concluded that the fair value of this earn-out was approximately $2,160 upon acquisition and remained consistent as of December 31, 2022. During the year ended December 31, 2022, a payment of $275 was made for the month of December 2021 EBITDA target and during the year ended December 31, 2023, a payment of $3,040 was made for the fiscal year 2022

EBITDA target. The fair value of the remaining contingent consideration was $1,465 at December 31, 2023. An increase of $705 in the fair value of contingent consideration was included in selling, general and administrative expenses in our consolidated statements of income during the year ended December 31, 2023. The current portion of the contingent consideration is included in accrued expenses and other current liabilities and the non-current portion is included in other liabilities on the consolidated balance sheets.

See Notes 4 and 18 for additional information.

16. GEOGRAPHIC INFORMATION

The following table presents our long-lived assets related to our operations by geographic area:

	As of December 31,	
	2023	2022
Long-lived Tangible Assets		
United States	$ 1,670,322	$ 1,162,705
Canada	23,549	24,590
Europe	12,948	9,937
Total long-lived assets	$ 1,706,819	$ 1,197,232

We attribute revenues to customers based on the location of the customer. The following table presents revenues by geographic region:

	Year Ended December 31,		
	2023	2022	2021
Revenues			
United States	$ 1,161,775	$ 1,712,326	$ 1,126,141
Canada	63,367	53,461	45,782
Europe	149,491	58,635	43,774
Total revenues	$ 1,374,633	$ 1,824,422	$ 1,215,697

17. OTHER EXPENSES, NET

The following table presents the components of other expenses, net:

	Year Ended December 31,		
	2023	2022	2021
(Gain) loss on derivatives	$ (1,108)	$ (906)	$ 240
Interest expense, net of interest income	36,169	26,423	14,361
Amortization of debt discount and debt issuance costs	4,201	4,211	2,849
Foreign currency transaction (gain) loss	(581)	144	852
Government incentives	(576)	(2,599)	(1,012)
Factoring fees	5,844	—	—
Other expenses, net	$ 43,949	$ 27,273	$ 17,290

Estimated amortization expense for existing debt discount and debt issuance costs for the next five succeeding fiscal years is as follows:

	Estimated Amortization
2024	$ 5,801
2025	$ 3,158
2026	$ 2,363
2027	$ 1,378
2028	$ 1,245

18. FAIR VALUE MEASUREMENT

We recognize certain financial assets and liabilities at fair value on a recurring basis (at least annually). Fair value is defined as the price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Three levels of inputs that may be used to measure fair value are as follows:

Level 1: Inputs are based on unadjusted quoted prices for identical instruments traded in active markets.

Level 2: Inputs are based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Inputs are generally unobservable and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability. The fair values are therefore determined using model-based techniques that include option pricing models, discounted cash flow models, and similar techniques.

The following table presents the input level used to determine the fair values of our financial instruments measured at fair value on a recurring basis:

		Fair Value as of December 31,	
	Level	2023	2022
Assets			
Interest rate swap instruments	2	$ 3,970	$ 5,202
Liabilities			
Interest rate swap instruments	2	$ 629	$ 9
Make-whole provisions	2	6,012	5,348
Contingent consideration	3	1,465	4,158
Total liabilities		$ 8,106	$ 9,515

The fair value of our interest rate swaps was determined using cash flow analysis on the expected cash flow of the contract in combination with observable market-based inputs, including interest rate curves and implied volatility. As part of this valuation, we considered the credit ratings of the counterparties to the interest rate swaps to determine if a credit risk adjustment was required.

The fair value of our make-whole provisions was determined by comparing them against the rates of similar debt instruments under similar terms without a make-whole provision obtained from various highly rated third-party pricing sources.

The fair value of our contingent consideration liabilities was determined by evaluating the acquired asset's future financial forecasts and evaluating which, if any, of the cumulative revenue targets, financial metrics and/or milestones are likely to be met. We classified contingent consideration related to certain acquisitions within level 3 of the fair value hierarchy because the fair value is derived using significant unobservable inputs, which include discount rates, probability-weighted cash flows, and volatility. We determined the fair value of our contingent consideration obligations based on a probability-weighted income approach derived from financial performance estimates and probability assessments of the attainment of certain targets for some

acquisitions. For other acquisitions, we derived the fair value of contingent consideration using a Monte Carlo simulation in an option pricing framework. We established discount rates utilized in our valuation models based on the cost to borrow that would be required by a market participant for similar instruments. In determining the probability of attaining certain technical, financial and operational targets, we utilized data regarding similar milestone events from our own experience, while considering the inherent difficulties and uncertainties in developing a product. On a quarterly basis, we reassess the probability factors associated with the financial, operational, and technical targets for our contingent consideration obligations. Significant judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period.

We derived the fair value of the contingent consideration of $2,160 from the acquisition of Plug Smart in December 2021 using a Monte Carlo simulated model. The key assumptions used in the model include two scenarios of EBITDA projections, a base case and a higher case, a risk-adjusted discount rate of 16.9%, and estimated EBITDA volatility of 75.0%.

The balances and subsequent key assumptions used in the model were as follows:

	At December 31,	
	2023	2022
Balance of remaining contingent consideration	$ 1,465	$ 3,800
Risk-adjusted discount rate	16.9 %	16.9 %
Estimated EBITDA volatility	70.0 %	75.0 %

The balance of contingent consideration from the acquisition of certain assets of Chelsea Group Limited was decreased to $0 at December 31, 2023 from $358 at December 31, 2022 as the cumulative revenue earn-out targets were not achieved and the term expired

The following table sets forth a summary of changes in the fair value of contingent consideration liabilities classified as level 3:

	Year Ended December 31,	
	2023	2022
Contingent consideration liabilities balance at the beginning of year	$ 4,158	$ 2,838
Remeasurement period adjustment	—	(19)
Changes in fair value included in earnings	347	1,614
Payment of contingent consideration	(3,040)	(275)
Contingent consideration liabilities balance at the end of year	$ 1,465	$ 4,158

The fair value of financial instruments is determined by reference to observable market data and other valuation techniques, as appropriate. Long-term debt is the only category of financial instruments where the difference between fair value and recorded book value is notable. At December 31, 2023 and 2022, the fair value of our long-term debt was estimated using discounted cash flows analysis, based on our current incremental borrowing rates for similar types of borrowing arrangements which are considered to be level two inputs. There have been no transfers in or out of level two or three for the years ended December 31, 2023 and 2022.

The following table sets forth the fair value and the carrying value of our long-term debt, excluding financing leases:

	December 31, 2023		December 31, 2022	
	Fair Value	Carrying Value	Fair Value	Carrying Value
Long-term debt value (level 2)	$ 1,466,458	$ 1,478,394	$ 869,771	$ 884,054

We are also required to periodically measure certain other assets at fair value on a nonrecurring basis, including long-lived assets, goodwill, and other intangible assets. We calculated the fair value used in our annual goodwill impairment analysis utilizing a discounted cash flow analysis and determined that the inputs used were level 3 inputs. Other than intangible assets acquired from the Enerqos acquisition, as noted in Note 4, there were no other assets recorded at fair value on a non-recurring basis as of December 31, 2023 or 2022.

19. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

During the twelve months ended December 31, 2023, we adopted ASU 2020-04, Reference Rate Reform, for six interest rate swap contracts with the transition from LIBOR to SOFR as the reference rate. In March 2023, we dedesignated one interest rate swap contract for a previous loan facility and entered into a new interest rate swap contract to hedge $14,084 of the extended loan facility. The new interest rate swap was designated as a cash flow hedge. In June 2023, we prepaid one loan facility and terminated the related swap prior to its maturity date. In August 2023, we acquired one interest rate swap through an energy asset project acquisition. This interest rate swap was not designated as an effective hedge and we recorded the change in the valuation in other expenses, net in our consolidated statements of income. See Note 7 for additional information about this energy asset project acquisition.

The following table presents information about the fair value amounts of our derivative instruments:

		Derivatives as of December 31,	
		2023	2022
	Balance Sheet Location	Fair Value	Fair Value
Derivatives Designated as Hedging Instruments			
Interest rate swap contracts	Other assets	$ 1,023	$ 1,748
Interest rate swap contracts	Other liabilities	$ —	$ 9
Derivatives Not Designated as Hedging Instruments			
Interest rate swap contracts	Other assets	$ 2,947	$ 3,454
Interest rate swap contracts	Other liabilities	$ 629	$ —
Make-whole provisions	Other liabilities	$ 6,012	$ 5,348

As of December 31, 2023, all but three of our freestanding derivatives were designated as hedging instruments and as of December 31, 2022, all but two of our derivatives were designated as hedging instruments.

The following tables present information about the effects of our derivative instruments on the consolidated statements of income and consolidated statements of comprehensive income:

	Location of (Gain) Loss Recognized in Net Income	Amount of (Gain) Loss Recognized in Net Income for the Year Ended December 31,		
		2023	2022	2021
Derivatives Designated as Hedging Instruments				
Interest rate swap contracts	Other expenses, net	$ (770)	$ 1,037	$ 2,086
Derivatives Not Designated as Hedging Instruments				
Interest rate swap contracts	Other expenses, net	$ 1,354	$ (2,738)	$ (996)
Commodity swap contracts	Other expenses, net	$ —	$ 2,338	$ 2,325
Make-whole provisions	Other expenses, net	$ (2,462)	$ (506)	$ (1,089)

The following table presents the changes in AOCI, net of taxes, from our hedging instruments:

	Year Ended December 31, 2023
Derivatives Designated as Hedging Instruments:	
Accumulated gain in AOCI at the beginning of the year	$ 1,284
Unrealized gain recognized in AOCI	232
Gain reclassified from AOCI to other expenses, net	(770)
AOCI at the end of the year	$ 746

The following tables present all of our active derivative instruments as of December 31, 2023:

Active Interest Rate Swaps	Expiration Date	Initial Notional Amount ($)	Status
11-Year, 5.77% Fixed	October 2029	$ 9,200	Designated
15-Year, 5.24% Fixed	June 2033	$ 10,000	Designated
10-Year, 4.74% Fixed	December 2027	$ 14,100	Designated
8-Year, 3.49% Fixed	June 2028	$ 14,643	Designated
8-Year, 3.49% Fixed	June 2028	$ 10,734	Designated
13-Year, 0.72% Fixed	March 2033	$ 9,505	Not Designated
13-Year, 0.72% Fixed	March 2033	$ 6,968	Not Designated
17.75-Year, 3.16% Fixed	December 2040	$ 14,084	Designated
18-Year, 3.81% Fixed	July 2041	$ 32,021	Not Designated

Other Derivatives	Classification	Effective Date	Expiration Date	Fair Value ($)
Make-whole provisions	Liability	June/August 2018	December 2038	$ 223
Make-whole provisions	Liability	August 2016	April 2031	$ 49
Make-whole provisions	Liability	April 2017	February 2034	$ 35
Make-whole provisions	Liability	November 2020	December 2027	$ 33
Make-whole provisions	Liability	October 2011	May 2028	$ 6
Make-whole provisions	Liability	May 2021	April 2045	$ 37
Make-whole provisions	Liability	July 2021	March 2046	$ 2,334
Make-whole provisions	Liability	June 2022	March 2042	$ 997
Make-whole provisions	Liability	March 2023	December 2047	$ 2,298

20. BUSINESS SEGMENT INFORMATION

Our reportable segments for the year ended December 31, 2023 were U.S. Regions, U.S. Federal, Canada, Alternative Fuels, and Europe. The remaining amounts are included in “All Other”. Europe was formerly included in “All Other” but was disaggregated due to growth in the segment in 2023. As a result, previously reported amounts have been reclassified for comparative purposes.

Our U.S. Regions, U.S. Federal, Canada, and Europe segments offer energy efficiency products and services which include the design, engineering, and installation of equipment and other measures to improve the efficiency and control the operation of a facility’s energy infrastructure, renewable energy solutions, and services which include the construction of small-scale plants that Ameresco owns or develops for customers that produce electricity, gas, heat, or cooling from renewable sources of energy and O&M services.

Our Alternative Fuels segment sells electricity, processed renewable gas fuel, heat or cooling, produced from renewable sources of energy, other than solar, and generated by small-scale plants that we own and O&M services for customer owned small-scale plants. Our U.S. Regions segment also includes certain small-scale solar grid-tie plants developed for customers. The “All Other” category offers consulting services and the sale of solar PV energy products and systems which we refer to as integrated-PV. These segments do not include results of other activities, such as corporate operating expenses not specifically allocated to the segments. Certain reportable segments are an aggregation of operating segments.

For the years ended December 31, 2023, 2022, and 2021, 71.8%, 46.0%, and 67.0%, respectively, of our revenues have been derived from federal, state, provincial, or local government entities, including public housing authorities, public universities and municipal utilities. The U.S. federal government, which is considered a single customer for reporting purposes, constituted 29.3%, 21.5%, and 32.3% of our consolidated revenues for the years ended December 31, 2023, 2022, and 2021, respectively. Revenues from the U.S. federal government are included in our U.S. Federal segment. Other than the U.S. federal government, one customer represented 39.6% of our revenues during the year ended December 31, 2022. Revenues from this customer is included in our U.S. Regions segment.

The reports of our chief operating decision maker do not include assets at the operating segment level.

The table below presents our business segment information and reconciliation to our consolidated financial statements:

	U.S. Regions	U.S. Federal	Canada	Alternative Fuels	Europe	All Other	Total
2023							
Revenues	$ 557,122	$ 402,884	$ 70,110	$ 117,075	$ 152,842	$ 74,600	$1,374,633
Earnings from unconsolidated entities	—	1,758	—	—	—	—	1,758
(Gain) loss on derivatives	(2,326)	857	(136)	497	—	—	(1,108)
Net interest expense (income)	6,169	1,429	834	16,019	2,477	(6)	26,922
Depreciation and intangible asset amortization	27,060	5,343	1,626	26,160	2,290	1,650	64,129
Unallocated corporate activity	—	—	—	—	—	—	(68,372)
Income before taxes, excluding unallocated corporate activity	38,746	49,237	3,813	6,215	4,188	4,442	106,641
2022							
Revenues	1,123,343	391,891	58,558	114,459	61,645	74,526	1,824,422
Earnings from unconsolidated entities	—	1,647	—	—	—	—	1,647
(Gain) loss on derivatives	(354)	—	(152)	294	—	—	(212)
Net interest expense (income)	6,948	1,231	917	8,657	25	(3)	17,775
Depreciation and intangible asset amortization	21,463	4,905	1,702	23,354	575	433	52,432
Unallocated corporate activity	—	—	—	—	—	—	(71,180)
Income before taxes, excluding unallocated corporate activity	88,531	50,866	2,554	22,989	5,589	6,370	176,899
2021							
Revenues	551,118	392,948	49,483	111,223	46,164	64,761	1,215,697
Loss from unconsolidated entities	(56)	—	—	—	(62)	—	(118)
(Gain) loss on derivatives	(1,017)	—	(73)	1,330	—	—	240
Net interest expense	6,255	1,294	879	5,793	378	—	14,599
Depreciation and intangible asset amortization	15,699	4,666	1,872	21,080	716	724	44,757
Unallocated corporate activity	—	—	—	—	—	—	(47,361)
Income before taxes, excluding unallocated corporate activity	38,285	52,388	1,581	27,774	2,997	2,480	125,505

See Note 3 for additional information about our revenues by product line.

21. ASSETS HELD FOR SALE

During the year ended December 31, 2023, we determined that there were 5 energy asset projects under construction that were considered to be assets held for sale, since these assets were being marketed for sale and all the criteria to be classified as held for sale under ASC 360, Property, Plant and Equipment—Impairment or Disposal of Long-Lived Assets, had been met. The carrying value of these assets was $38,404, with liabilities directly associated with assets classified as held for sale of $8,351 as of December 31, 2023. Assets held for sale are measured at the lower of their carrying value or the fair value less cost to sell.

The table below reflects the assets and liabilities associated with assets held for sale by segment:

	December 31, 2023		
	U.S. Regions	U.S. Federal	Total
Other assets	$ 18,895	$ 18,253	$ 37,148
Operating lease assets	1,256	—	1,256
Assets classified as held for sale	$ 20,151	$ 18,253	$ 38,404
Accounts payable	(5,418)	(601)	(6,019)
Accrued expenses and other current liabilities	(14)	—	(14)
Billings in excess of cost and estimated earnings	—	(1,088)	(1,088)
Long-term operating lease liabilities, net of current portion	(1,230)	—	(1,230)
Liabilities directly associated with assets classified as held for sale	$ (6,662)	$ (1,689)	$ (8,351)

22. SUBSEQUENT EVENTS

On February 9, 2024, we signed an Equity Purchase Agreement to sell a 40% membership interest of Ameresco Roxana RNG LLC to Republic Services Renewable Energy, LLC for a purchase price of $28,864.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of the end of the period covered by this annual report, or the evaluation date. Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our management, after evaluating the effectiveness of our disclosure controls and procedures as of the evaluation date, concluded that as of the evaluation date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

Our management, with the participation of our principal executive officer and principal financial officer, is responsible for establishing and maintaining adequate internal control over our financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act as a process designed by, or under the supervision of, a company's principal executive and principal financial officers and effected by our board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets,
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors, and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2023. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control - Integrated Framework (2013).

Based on this assessment and those criteria, our management concluded that, as of December 31, 2023, our internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting as of December 31, 2023 has been audited by RSM US LLP, an independent registered public accounting firm, as stated in their report, which appears under Item 8.

Changes in Internal Control over Financial Reporting

During the year ended December 31, 2022**,** we implemented a new Enterprise Resource Planning ("ERP") system. In connection with this ERP implementation, we updated and will continue to update our internal control over financial reporting, as necessary, to accommodate modifications to our business processes and accounting procedures. We do not believe this implementation has had or will have a material adverse effect on our internal control over financial reporting.

During the year ended December 31, 2023, two leases commenced under lease agreements that contained in-kind consideration in the form of services. In connection with these complex lease agreements unique to Ameresco, we updated the design of existing lease controls to support modifications to our business processes and related accounting procedures.

Except as disclosed above, there were no changes in our internal control over financial reporting during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Director and Officer Trading Arrangements

A portion of the compensation of our directors and officers (as defined in Rule 16a-1(f) under the Exchange Act) is in the form of equity awards and, from time to time, directors and officers engage in open-market transactions with respect to the securities acquired pursuant to such equity awards or other shares of Class A common stock held by such individuals, including to satisfy tax withholding obligations when equity awards vest or are exercised, and for diversification or other personal reasons. Transactions in our securities by directors and officers are required to be made in accordance with our insider trading policy, which requires that the transactions be in accordance with applicable U.S. federal securities laws that prohibit trading while in possession of material nonpublic information. Rule 10b5-1 under the Exchange Act provides an affirmative defense that enables directors and officers to prearrange transactions in a company's securities in a manner that avoids concerns about initiating transactions while in possession of material nonpublic information.

The following table describes, for the fourth quarter of 2023, each trading arrangement for the sale or purchase of our securities adopted or terminated by our directors and officers that is either (1) a contract, instruction or written plan intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) (a "Rule 10b5-1 trading arrangement") or (2) a "non-Rule 10b5-1 trading arrangement" (as defined in Item 408(c) of Regulation S-K):

Name (Title)	Action Taken (Date of Action)	Type of Trading Arrangement	Nature of Trading Arrangement	Duration of Trading Arrangement	Aggregate Number of Securities
George Sakellaris, President, Chief Executive Officer and Director	Termination (November 13, 2023)	Durable Rule 10b5-1 trading arrangement for sell-to-cover transactions relating to all equity awards that have or may be granted (1)	Sale	(2)	(2)
Nicole Bulgarino, Executive Vice President and General Manager, Federal Solutions	Termination (November 20, 2023)	Durable Rule 10b5-1 trading arrangement for sell-to-cover transactions relating to all equity awards that have or may be granted (3)	Sale	(2)	(2)

(1) Adopted on March 8, 2023.
(2) This trading arrangement provided for the automatic sale of shares underlying RSUs in an amount sufficient to satisfy the applicable tax withholding obligation, with the proceeds of the sale delivered to us in satisfaction of the applicable tax withholding obligation. The number of shares subject to covered RSUs that could have been sold under this trading arrangement was unknown as the number would have varied based on the extent to which vesting conditions were satisfied, the market price of tour Class A common stock at the time of settlement and the potential future grant of additional RSUs subject to this arrangement.
(3) Adopted on March 9, 2023.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers, and Corporate Governance

The complete response to this Item regarding the backgrounds of our executive officers and directors and other information required by Items 401, 405 and 407 of Regulation S-K will be contained in our definitive proxy statement for our 2024 annual meeting of stockholders

Code of Business Conduct and Ethics: We have adopted a code of business conduct and ethics that is applicable to all of our employees, officers and directors including our chief executive officer and senior financial officers, which is available under the Investor Relations section of our website located at www.ameresco.com. In addition, we intend to post on our website all disclosures that are required by law or applicable NYSE listing standards concerning any amendments to, or waivers from, any provision of the code. We include our website address in this report only as an inactive textual reference and do not intend it to be an active link to our website. None of the material on our website is part of this Form 10-K.

Item 11. Executive Compensation

The response to this item is incorporated by reference from the discussion contained in the definitive proxy statement for our 2024 annual meeting of stockholders.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The response to this item is incorporated by reference from the discussion contained in the definitive proxy statement for our 2024 annual meeting of stockholders.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The response to this item is incorporated by reference from the discussion contained in the definitive proxy statement for our 2024 annual meeting of stockholders.

Item 14. Principal Accountant Fees and Services

The response to this item is incorporated by reference from the discussion contained in the definitive proxy statement for our 2024 annual meeting of stockholders.

PART IV

Item 15. Exhibits and Financial Statement Schedules

		Page
(a)(1)	***Financial Statements:*** See "Index to Consolidated Financial Statements"	41

(a)(2) ***Financial Statement Schedules:*** None

Schedules are omitted because they are not applicable, or are not required, or because the information is included in the consolidated financial statements and notes thereto.

(a)(3) ***Exhibits:***

Exhibit Number	Exhibit Description
3.1	Restated Certificate of Incorporation of Ameresco, Inc. Filed as Exhibit 3.1 to our Current Report on Form 8-K dated July 27, 2010 and filed with the Commission on July 30, 2010 and incorporated herein by reference.
3.2	Second Amended and Restated By-Laws of Ameresco, Inc. Filed as Exhibit 3.1 to our Current Report on Form 8-K filed with the Commission on April 24, 2023 and incorporated herein by reference.
4.1	Specimen Certificate evidencing shares of Class A common stock. Filed as Exhibit 4.1 to our Registration Statement on Form S-1 (pre-effective amendment no. 4; reg. no. 333-165821) and incorporated herein by reference.
4.16	Description of Ameresco, Inc. Securities Registered under Section 12 of the Exchange Act. Filed as Exhibit 4.16 to our Annual Report on Form 10-K for the year ended December 31, 2019 and filed with the Commission on March 4, 2020 and incorporated herein by reference.
10.1.1	Fifth Amended and Restated Credit Agreement dated as of March 4, 2022 among Ameresco, Inc., certain of its subsidiaries, the lenders (as defined therein), BOFA Securities, Inc. as sole lead arranger and sole bookrunner and Bank of America, N.A. as Administrative Agent. Filed as Exhibit 10.1 to our Current Report on Form 8-K filed with the Commission on March 4, 2022 and incorporated herein by reference.
10.1.2	Amendment No. 1 to Fifth Amended and Restated Credit Agreement dated as of June 9, 2022 among Ameresco, Inc., certain of its subsidiaries, the lenders (as defined therein), BOFA Securities, Inc. as sole lead arranger and sole bookrunner and Bank of America, N.A. as administrative agent. Filed as Exhibit 10.1 to our Form 10-Q for the quarter ended June 30, 2022 and filed with the Commission on August 2, 2023
10.1.3	Amendment No. 2 to Fifth Amended and Restated Credit Agreement dated March 17, 2023 among Ameresco, Inc., certain guarantors party thereto, certain lenders party thereto from time to time and Bank of America, N.A. as Administrative Agent. Filed as Exhibit 10.3 to our Form 10-Q for the quarter ended March 31, 2023 and filed with the Commission on May 2, 2023.
10.1.4	Amendment No. 3 to Fifth Amended and Restated Credit Agreement dated as of August 24, 2023 among Ameresco, Inc., certain of its subsidiaries, the lenders (as defined therein), BOFA Securities, Inc. as sole lead arranger and sole bookrunner and Bank of America, N.A. as administrative agent. Filed as Exhibit 10.1 to our Current Report on Form 8-K filed with the Commission on August 24, 2023 and incorporated herein by reference.
10.1.5	Amendment No. 4 to Fifth Amended and Restated Credit Agreement dated as of December 11, 2023 among Ameresco, Inc., certain of its subsidiaries, the lenders (as defined therein), and Bank of America, N.A. as Administrative Agent. Filed as Exhibit 10.1 to our Current Report on Form 8-K filed with the Commission on December 11, 2023 and incorporated herein by reference.
10.3.1+	Ameresco, Inc. 2010 Stock Incentive Plan. Filed as Exhibit 10.10 to our Registration Statement on Form S-1 (pre-effective amendment no. 4; reg. no. 333-165821) and incorporated herein by reference.
10.3.2+	Form of Incentive Stock Option Agreement granted under Ameresco, Inc. 2010 Stock Incentive Plan. Filed as Exhibit 10.11 to our Registration Statement on Form S-1 (pre-effective amendment no. 4; reg. no. 333-165821) and incorporated herein by reference.

Exhibit Number	Description
10.3.3+	Form of Director Stock Option Agreement granted under Ameresco, Inc. 2010 Stock Incentive Plan. Filed as Exhibit 10.12 to our Registration Statement on Form S-1 (pre-effective amendment no. 4; reg. no. 333-165821) and incorporated herein by reference.
10.4.1+	Ameresco, Inc. 2020 Stock Incentive Plan. Filed as Exhibit 99.2 Ameresco, Inc. 2020 Stock Incentive Plan. Filed as Exhibit 99.2 to our Registration Statement on Form S-8 (reg. no. 333-238792) and incorporated herein by reference.
10.4.2+	Form of Incentive Stock Option Agreement granted under Ameresco, Inc. 2020 Stock Incentive Plan. Filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2020.
10.4.3+	Form of Director Stock Option Agreement granted under Ameresco, Inc. 2020 Stock Incentive Plan. Filed as Exhibit 10.3 to our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2020.
10.5.1+	Form of Indemnification Agreement entered into between Ameresco, Inc. and each non-employee director. Filed as Exhibit 10.6.1 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2010 and filed with the Commission on March 31, 2011 and incorporated herein by reference.
10.5.2+	Form of Indemnification Agreement entered into between Ameresco, Inc. and each employee director. Filed as Exhibit 10.6.2 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2010 and filed with the Commission on March 31, 2011 and incorporated herein by reference.
10.6+	Ameresco, Inc. 2017 Employee Stock Purchase Plan, as amended. Filed as Exhibit 10.8 to our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2020 and filed with the Commission on August 4, 2020 and incorporated herein by reference.
10.7+	Ameresco, Inc. Executive Management Team Additional Annual Incentive Performance Program. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2019 and filed with the Commission on August 8, 2019 and incorporated herein by reference.
10.8+	Offer Letter between the Company and Doran Hole dated June 26, 2019. Filed as Exhibit 10.1 to our Current Report on Form 8-k filed with the Commission on July 1, 2019 and incorporated herein by reference.
10.9#	Turnkey Engineering, Procurement, Construction and Maintenance Agreement dated as of October 21, 2021, by and between Ameresco, Inc. and Southern California Edison Company. Filed as Exhibit 10.10 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the Commission on February 28, 2023 and incorporated herein by reference.
10.10+	Form of Non-Employee Director Restricted Stock Unit Agreement. Filed as Exhibit 10.11 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the Commission on February 28, 2023 and incorporated herein by reference.
10.11*+	Ameresco, Inc. Form of 2023 Executive/Employee RSU Award Agreement.
10.12+	Non-Employee Director Compensation Policy. Filed as Exhibit 10.12 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the Commission on February 28, 2023 and incorporated herein by reference.
21.1*	Subsidiaries of Ameresco, Inc.
23.1*	Consent of RSM US LLP.
31.1*	Principal Executive Officer Certification required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Principal Financial Officer Certification required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certifications pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following consolidated financial statements from Ameresco, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2023, formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Balance Sheets (ii) Consolidated Statements of Income, (iii) Consolidated Statements of Comprehensive Income, (iv) Consolidated Statement of Changes in Redeemable Non-Controlling Interests and Stockholders' Equity, (v) Consolidated Statements of Cash Flows, and (vi) Notes to Consolidated Financial Statements.
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

Exhibit Number	Description
*	Filed herewith.
**	Furnished herewith.
+	Identifies a management contract or compensatory plan or arrangement in which an executive officer or director of Ameresco participates.
#	Certain portions of this exhibit are considered confidential and have been omitted as permitted under SEC rules and regulations. Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K.

Item 16. Form 10-K Summary

Not applicable.

SIGNATURE

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AMERESCO, INC.

Date: February 29, 2024

By: /s/ George P. Sakellaris
George P. Sakellaris
President and Chief Executive Officer

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ George P. Sakellaris George P. Sakellaris	Chairman of the Board of Directors, President and Chief Executive Officer (Principal Executive Officer)	February 29, 2024
/s/ Spencer Doran Hole Spencer Doran Hole	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 29, 2024
/s/ Mark Chiplock Mark Chiplock	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 29, 2024
/s/ David J. Corrsin David J. Corrsin	Director	February 29, 2024
/s/ Claire Hughes Johnson Claire Hughes Johnson	Director	February 29, 2024
/s/ Nickolas Stavropoulos Nickolas Stavropoulos	Director	February 29, 2024
/s/ Jennifer L. Miller Jennifer L. Miller	Director	February 29, 2024
/s/ Joseph W. Sutton Joseph W. Sutton	Director	February 29, 2024
/s/ Frank V. Wisneski Frank V. Wisneski	Director	February 29, 2024
/s/ Charles R. Patton Charles R. Patton	Director	February 29, 2024

Directors

George Sakellaris
Chairman, President and CEO, Ameresco

David Corrsin
Executive Vice President, General Counsel, Secretary, Ameresco

Claire Hughes Johnson
Corporate Officer and Advisor, Stripe

Jennifer L. Miller
Chief Business Sustainability Officer (Retired), Sappi North America;
Chair of Nominating and Corporate Governance Committee

Charles R. Patton
Executive Vice President, External Affairs (Retired),
American Electric Power Company, Inc.

Nickolas Stavropoulos
President and Chief Operating Officer (Retired),
Pacific Gas and Electric Company

Joseph W. Sutton
Chief Executive Officer, Sutton Ventures Group;
Chair of Compensation Committee

Frank V. Wisneski
Partner (Retired), Wellington Management Company;
Chair of Audit Committee

Corporate Headquarters

Ameresco Inc.
111 Speen Street | Suite 410
Framingham, MA 01701 USA
+1-508-661-2200

Stock Listing

Our common stock is traded on the New York Stock Exchange under the symbol AMRC.

Transfer Agent
Equiniti Trust Company, LLC

Executive Officers & Management

George Sakellaris
President and Chief Executive Officer

Michael Bakas
Executive Vice President

Nicole Bulgarino
Executive Vice President and General Manager,
Federal and Utility Solutions

Mark Chiplock
Senior Vice President and Chief Accounting Officer

Peter Christakis
Executive Vice President, East Region

David Corrsin
Executive Vice President, General Counsel,
Corporate Secretary and Director

Leila Dillon
Senior Vice President, Corporate Marketing and Communications

Doran Hole
Executive Vice President and Chief Financial Officer

Louis Maltezos
Executive Vice President, West Region and Canada

Lenka Patten
Senior Vice President and Chief Human Resources Officer

Shareholder Information

Copies of all SEC filings, including our 10-K, are available on our website under the Investor Relations section.

General Information

Ameresco Inc.
+1-866-AMERESCO
ameresco.com

AMERESCO®

Green • Clean • Sustainable

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"Green. Clean. Sustainable." are registered in the U.S. Patent and Trademark Office. All rights reserved.

Appendix C

Surety Letter and Bonding Capacity

Letter of Recommendation Financial Institution

Appendix D

Resumes

Dana Dunn

Senior Account Executive

Education

Park University, Parkville MO

Bachelor of Science, Management & Marketing

Energy and Environmental Training Center of Kansas City

Licenses & Certifications

Certified Energy Auditor

Building Analyst

Professional Experience

Ameresco, Inc.
Senior Account Executive

P1 Group, Inc.
Director of Business Development K-12

Energy Consultants, L.L.C.
Principal

Project Role

Dana specializes in providing superior service and supports our client relationships, working with them to assess risk, opportunities and build valuable programs aligned to their objectives and needs. Dana will ensure Wichita Public Schools objectives are met and will leverage his expertise to ensure excellence throughout the process.

Dana works closely with customer stakeholders, our internal subject matter experts and Ameresco business unit leaders.

Dana has spent the last 19 years developing complex solutions, options, and recommendations for customers and will be the City of Abilene' primary point of contact.

Project Experience

Unified Government of Wyandotte County and Kansas City
Kismet-Plains USD 483
St. Louis Public Schools
Hazelwood School District
Ritenour School District
Hiawatha Unified School District*
Flint Hills Unified School District*
Kansas Association of School Boards*
Fort Riley Amy Base Phase 1*
South Barber Unified School District *
Nemaha Unified School District *
Ellis Unified School District
Marion Unified School District *
Clearwater Unified School District *
Vermillion Unified School District *

**Projects with previous employer*

Steve Taggart

Regional Vice President

Education

La Sierra University

Bachelor of Arts, Marketing

Training

Silver Spring (Itron) Lighting

Management System Training

Professional Experience

Ameresco, Inc. 2004 – present

Regional Vice President

Exelon Solutions 2002 – 2004

Senior Account Executive

Project Role

Mr. Taggart has over 20 years of experience in the energy solutions field and has extensive experience in structuring and developing energy conservation projects. He works with all external and internal team members and has ultimate responsibility for customer satisfaction with all regional projects. Mr. Taggart's responsibilities include the oversight of business development, project development, project management, and project performance for eight states. He is recognized at Ameresco, and in the industry, for building strong relationships with superior customer service. During his tenure at Ameresco, Mr. Taggart has personally executed over $330 million dollars in performance contracts, and under his leadership the region has successfully developed and implemented over $1 billion in performance contracting.

Select Project Experience

University of Illinois – Chicago | $65.1 M

Interior and exterior lighting retrofits, building envelope upgrades, HVAC upgrades, controls optimization, laboratory fume hood replacements, and abatement. The project significantly reduced carbon emissions as a part of the University's long-term sustainability goals.

Public Building Commission – Chicago Public Schools | $15.0 M

Engineering, development, oversight, and audit of 17 Chicago Public School Buildings for the development of an ESPC project.

City Colleges of Chicago, IL | $22.8 M

Comprehensive energy project encompassing 13 energy conservation measures. Development and implementation of a project that included a solar installation and demonstration geothermal bore that could be used in curriculum at Dawson Technical Institute.

Chicago Housing Authority, IL | $54.7 M

Installation of 10,000 super-efficient refrigerators, common area lighting in 61 senior sites, decentralization of central steam systems, water saving measures, installation of high-efficiency apartment lighting in 9,400 senior apartments, major mechanical improvements at 12 large developments, new fan coil units and piping, and ACM abatement.

Kenneth W. Gross

Senior Vice President – Safety, Quality Assurance & Risk Management

Education

Columbia Southern University

BS Occupational Safety and Health Engineering

Licenses & Certifications

OSHA 30-Hour Course Construction Safety and Health

OSHA Construction Outreach Trainer for 10-Hour and 30-Hour Construction Safety

TN-EPSC Level-1 Certified #115146-TN07

American Society of Safety Engineers #000055900

State of Tennessee Certified Hazardous Materials Technician

Professional Experience

Ameresco, Inc. 2007 – present

VP – Safety, Quality & Risk Management

Blaine Construction Corporation, 2001 – 2007

Deputy Safety Director

State of Tennessee Occupational Safety & Health Review Commission

1996 – 2004 Chairman

2015 – Present East TN Commissioner

Project Role

Mr. Gross is the executive responsible for the evaluation, development, implementation and overall compliance of the Corporate Environmental Safety & Health Program, Quality and Risk Management activities. He has authored numerous internal policies and procedures that have reduced the Company's overall EMR and RIIR statistics. He and his staff conduct nationwide audits of ongoing projects and operations to ensure compliance and identify any deficiencies so they can be readily corrected.

Formerly, Mr. Gross was the Project Environmental Safety and Health Manager for the U.S. Department of Energy's HEUMF and SNS Projects. He held day-to-day responsibilities to manage staff and subcontractors to ensure strict compliance to the approved Environmental Safety and Health Plans, conducted management reviews and assessments, and lead all incident investigation teams following any occurrence.

Project Experience

Department of Energy Primary measures included: construction of the Highly Enriched Uranium Storage Facility at the Y-12 National Weapons Complex	$549.0M
Department of Energy Primary measures included: construction of the Spallation Neutron Source Facilities at the Oak Ridge National Laboratory	$1.4 Billion

John J. O'Herron, CEM

Director- Business Development

Education

Ottawa University, Ottawa, Kansas

MBA, Finance

Texas Christian University, Fort Worth, Texas

BBA, Marketing & Management

Licenses & Certifications

Certified Energy Manager

Professional Experience

Ameresco, Inc., 2023 - present
Business Development Director

NORESCO, 2020 – 2022
Regional Sales Manager

Schneider Electric, 2019 – 2020
Regional Director – Energy & Sustainability Services

Engie Services, 2017 – 2019
Director of Sales

Schneider Electric, 2011 – 2017
Regional Director – Energy & Sustainability Services

Johnson Controls, Inc., 2009 – 2011
Area Manager – Public Sector Solutions

Chevron Energy Solutions, 2006 – 2009
Business Development Manager

Project Role

With 22 years of experience, Mr. O'Herron has been involved in the development and implementation of over $300 million in energy efficiency performance contracts. He oversees all sales activities and is responsible for executing the company's growth strategies. He brings comprehensive experience working closely with project development, implementation, and finance while ensuring all possible resources are available to meet our clients' high standards. His expertise is in program development and deal structure to ensure the best possible application and outcomes for our customers. He has experience with a wealth of projects including, renewable energy, asset monetization, DBOOM, PPAs and Design Build as well as a core in traditional performance contracts. John has served as a National Board Member for the Energy Services Coalition as well.

Project Experience

Great Lakes Water Authority* **Role:** Account Executive **Type:** Design Build	$20.0M
City of Portage, WI* **Role:** Account Executive **Type:** EPC	$3.5M
Michigan Dept. of Corrections* **Role:** Account Executive **Type:** EPC	$18.0M
University of Illinois* **Role:** Account Executive **Type:** EPC	$31.0M
City of St. Joseph, MO* **Role:** Account Executive **Type:** EPC	$5.0M
City of Lincoln Libraries* **Role:** Account Executive **Type:** EPC	$2.1M
City of Lincoln Streetlights* **Role:** Account Executive **Type:** EPC	$12M
City of Fort Scott, KS* **Role:** Account Executive **Type:** EPC	$1.5M
Norton County, KS* **Role:** Account Executive **Type:** EPC	$2.0M
City of La Porte, IN* **Role:** Account Executive **Type:** EPC	$9.8M

**Projects with previous employer*

Scott Faller, CEM

Director of Operations

Education

St. Louis Technical College

AAS, Mechanical Design

Licenses & Certifications

Certified Energy Manager

Professional Experience

Ameresco, Inc. 2014 - present

Director of Operations

Ameresco, Inc. 1999 - 2014

Senior Construction Manager
Senior Designer

Air Masters, Inc. 1997 - 1999

Mechanical Systems Designer & Estimator

Various Design and Mechanical Contracting Firms 1980 – 1996

Mechanical Systems Designer, Project Manager & Estimator

Project Role

Mr. Faller assesses all facility needs and designs preliminary solutions with preliminary costs and savings for the client to review, verify, and approve. Lead project designer, engineer, savings analyst, and solutions developer. Customer communications, management of all contractors, suppliers, and vendors, development of and adherence to project schedules and timelines, manager of all aspects of a quality project installation resulting in 100% customer satisfaction. With over 40 years of project management, design, and installation experience, and **$300M+ K-12 project experience**, Scott brings a vast array of construction knowledge to the project. Scott has managed the design and installation of mechanical, electrical, building envelope, and temperature control systems, while conforming to the local building codes and providing a safe and productive working environment for the skilled craftsmen. Mr. Faller assesses facility needs and conditions, the design of optional solutions, cost estimating, savings analysis, and contractor selection.

K-12 Project Experience

Hazelwood School District, MO (13 phases)
University City School District, MO (14 phases)
Belleville 201 SD, IL (8 phases)
Riverview Gardens School District, MO (2 ph)
St. Louis County Special School District (3 ph)
Salem School District, IL (11 phases)
Ferguson Florissant School District (3 phases)
O'Fallon High School, IL
Illinois Valley Central SD, IL (4 phases)
Ladue SD, MO (3 phases)
Wood River-Hartford SC #15, IL (3 phases)
Cameron R-1 School District, MO (5 phases)
Millstadt Consolidated District 160, IL
KIPP St. Louis, Charter School, MO
Ball-Chatham SD, IL
Bowling Green SD, MO
Maplewood-Richmond Hts. SD, MO

MARC RETISH

Senior Business Manager

Education

University of Wisconsin - Madison

BA History

Professional Experience

Ameresco, Inc. 2010 - present
Manager, AssetPlanner®

NorthWrite 2000 - 2010
Director of Business Development

Project Role

Mr. Retish leverages 20 years of experience in the facilities management in a multitude of sectors. He aligns closely with engineering and operational groups to ensure goal completion and implementation from initial design to live systems to ensure client needs are achieved. Mr. Retish success includes hundreds of organizations and government facilities in North America.

Select Project Experience

Boise School District
Coeur d'Alene School District
Farmington Area Public Schools
Hazelwood School District
Grand Island Public Schools
Hilliard City Schools
Kentucky Department of Education (KDE)
Lakeville Area Schools ISD 194
Poway Unified School District
Valentine Community Schools
Washington Elementary School District (WESD)
Wautoma Area School District

Timothy Farkas

Director of Finance

Education

University of Nevada, Las Vegas

Master of Business Administration, Finance

University of Oregon

Bachelor of Science, Finance and Secondary Accounting

Professional Affiliations

ImpactNV, Nevada's Sustainability Alliance, Founding Trustee and Past Board Treasurer

Professional Experience

Ameresco, Inc. 2012 – present

Director of Finance

Independent Energy Finance Consultant 2010 – 2012

Consultant to APS Energy Services Company, Inc.

Nevada State Bank Public Finance 2005 – 2010

Assistant Vice President

Harris Bretall Sullivan and Smith, LLC 2000 – 2004

Senior Associate Portfolio Manager

Seton Smoke Capital Management 1997 – 2000

Portfolio Administration

Project Role

Mr. Farkas, a former public finance banker, is responsible for providing structured financing for new projects and is experienced at managing financing processes for energy efficiency and renewable energy projects for municipal, higher education, school districts, healthcare, and commercial clients.

Over the past decade, Mr. Farkas has helped clients secure more than $300 million in energy improvement projects. As a leader in utilizing incentives, he has successfully secured over $169 million in Tax Credit Bonds for nearly 30 different projects. These Tax Credit Bonds often resulted in effective interest rates ranging from 0 to 1.5 percent interest for terms up to 21 years.

Project Experience

City of Wichita Falls Multi-Phased Project, TX | $18.8 M
Phase I included the replacement of 33,249 water meters, rebuilding of 189 existing water meters, and the installation of a fixed-based AMI system. Phase II involved an LED streetlight conversion of 5,796 roadway, underpass, and highway lighting fixtures throughout the city.

Knox County, TN | $12.5 M
Energy savings performance contract to install more than 5 MW of solar photovoltaic systems on the rooftops of 11 schools plus the Knox County Central Building, and ground-mount solar arrays at two justice facilities.

City of Casa Grande, AZ | $8.6 M
Multi-phase, multi-technology, long-term partnership including projects implemented at twenty City facilities, totaling over 235,000 square feet. Solar projects were performed citywide. Phase IV included the LED streetlighting retrofit of 3,876 lighting fixtures.

Carson City, NV | $4.2 M
LED lighting upgrades, boiler replacements, HVAC control upgrades, and HVAC system replacement at City Hall.

Wichita County, TX | $3.8 M
Comprehensive LED lighting retrofit; steam boiler replacement, HW boiler replacements, air-cooled chiller replacement, split system replacements, BAS replacement, expansion, and optimization.

Cassidy Ellis

New Market Strategy Manager

Education

Presidio Graduate School, San Francisco

Master of Business Administration, Sustainable Management

University of California, Berkeley

Bachelor of Science, Environmental Science, Policy and Management

Bachelor of Arts, History

Professional Affiliations

Texas Energy Poverty Research Institute's Energy Opportunities Coalition

Austin Climate Equity Plan Buildings Advisory Group

Energy Services Coalition, Texas Chapter, Communications Chair

Professional Experience

Ameresco, Inc. 2021 – Present

Manager – New Market Strategy

South-Central Partnership for Energy Efficiency as a Resource 2018 – 2021

Local Government Program Manager

Berkshire Partners 2018

EDF Climate Corps Consultant

Studio D Consulting+Design 2016 – 2018

Sustainability Project Manager

Austin Energy 2013 – 2016

Project Coordinator, Customer Energy Solutions

Center for Maximum Potential Building 2008 – 2013

Senior Research Associate

Project Role

With over 15 years in the renewable energy and sustainability industry, Ms. Ellis provides project expertise both internally and externally in areas of research, efficiency, sustainability, governance, policy, and grant funding. Her focus areas include program development, policy, and stakeholder engagement. Ms. Ellis' experience includes energy efficiency, clean energy, energy equity, sustainability, environmental, social, and governance goals, including low-carbon solutions.

As a sustainability consultant, she provided expert advisory service in energy-efficient and low-impact building design and construction to over 50 commercial, municipal, and institutional building project teams, convening stakeholders to develop a cohesive strategy to achieve the world's first LEED for Healthcare Platinum certification and LEED for Neighborhood Development certification for a 700-acre mixed-use development.

Select Project Experience

Cocopah Indian Tribe, AZ | $8.5 M

A ground mount 2,449 kW (DC) and 2,000 kW (AC) system interconnected to a new primary service with an expected system production of 5,220 MWh in Year 1. Project obtained a 10% low-income ITC bonus for a total ITC benefit of 40% via Direct Pay as well as a $5 Million grant from the US Department of Energy.

City of Scottsdale, AZ | $2.9 M

Engineer, procure, and construct solar photovoltaic carport arrays at the City of Scottsdale North Corporation Yard Campus. Includes solar covered parking PV arrays on top of the existing and new garage (586.08 kWDC), as well as solar covered parking PV arrays installed on the Northwest surface lot (315.36 kW-DC).

City of Dallas Solar, TX | $994,000

Design and implementation of three rooftop solar installations on Fretz Park Recreational Center, Dallas West Branch Library, and Pleasant Oaks Recreation Center for an overall total of over 420 KW of local solar for City of Dallas.

Killeen-Fort Hood Regional Airport Terminal, TX | $7M

Secured $5M federal grant to fund installation of solar parking and walkway canopies and LED lighting retrofit.

Erin Ells, MSME, PE, CEM, EBCP

Senior Project Development Engineer

Education

University of Colorado

MS Mechanical Engineering

University of Michigan

BS Aerospace Engineering

Licenses & Certifications

Professional Engineer (CO, KS, MN, MO, ND, NE, SD)

Certified Energy Engineer, AEE

Existing Building Commissioning Professional, AEE

Professional Experience

Ameresco, Inc. 2016 - present
Senior Project Development Engineer

Apollo Solutions Group 2014 - 2016
Project Development Engineer

Johnson Controls 2007 - 2014
Project Development Engineer

Belfay Engineering 2003 - 2007
Sr. Mechanical Engineer

Altair Energy 1999 - 2002
Solar Engineer

Lockheed Martin 1995 - 1998
Test Engineer

Project Role

Mr. Ells uncovers energy efficiency, energy conservation, and renewable energy opportunities to improve facility operations and reduce ongoing operating and energy costs. On this project, he will be performing energy modeling, cost and savings calculations, bid solicitation, and IGA report development. With 27 years of professional experience and over 16 years in the ESCO industry, Mr. Ells has performed energy audits in over 30 million square feet of building space, and has developed and implemented over $123M in energy performance contracts.

Project Experience

City and County of Denver, Colorado **Role**: Engineering Audit, Development, Design **Type:** ESPC	$3,640,000
City of Boulder, Colorado **Role**: Engineering Audit, Development, Design **Type:** ESPC	$995,769
City of Arvada, Colorado **Role**: Engineering Audit, Development, Design **Type:** ESPC	$4,574,729
Sioux County Schools, NE **Role**: Engineering Audit, Development, Design **Type:** ESPC	$1,459,212
Harvard School District, NE **Role**: Engineering Audit, Development, Design **Type:** ESPC	$862,401
Valentine School District, NE **Role**: Engineering Audit, Development, Design **Type:** ESPC	$1,863,360
Anaconda School District, MT **Role**: Engineering Audit, Development, Design **Type:** ESPC	$3,364,321

Gary Crabtree, CEM

Senior Project Developer

Education

Kansas State University
Manhattan, KS

BS, Mechanical Engineering

Professional Affiliations

Certified Energy Manager

Association of Energy Managers

Missouri Association of School Business Officials

Missouri Association of School Administrators

Missouri School Boards Association

Professional Experience

Ameresco, Inc. 2004 - present
Senior Project Development Engineer

Johnson Controls, Inc. 1995 - 2004
Senior Project Development Engineer

EDM, Inc. 1980 - 1995
Mechanical Design Engineer

Project Role

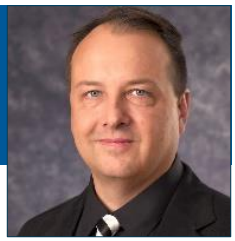
Mr. Crabtree assesses all facility needs and designs preliminary solutions with preliminary costs and savings. Gary assures the successful design and installation of all facility solutions developed for the project. He works will all contractors, suppliers, and vendors to minimize disruption to operations while adhering to a detailed project schedule. Gary manages the measurement and verification of energy savings. He then finalizes the scope of work desired by the client, chooses a contractor team, and finalizes costs and savings to be included in the final contract. With over 20 years in energy solutions, Mr. Crabtree will help assess all facility needs and design preliminary solutions with preliminary costs and savings for the customer to review , verify, and approve.

Project Experience

Hazelwood School District, MO (10 phases)	$59M
University City School District, MO (14 phases)	$55M
Riverview Gardens School District, MO (2 ph)	$20M
St. Louis County Special School District (3 ph)	$14.5M
Ferguson Florissant School District (3 phases)	$13M
O'Fallon High School, IL	$12M
Cameron R-1 School District, MO (5 phases)	$5.8M
KIPP St. Louis, Charter School, MO	$3M
Polo School District, MO	$2.5M

Thomas Bane

Manager – Project Management



Education

Dunwoody College of Technology

AA, Industrial Arts

Licenses & Certifications

Chief Engineer, State of MN License

Professional Training

High voltage systems
Auto CAD LT
Johnson Controls
Procore
OSHA 30-Hr Construction Safety & Health
502 EM385
CPR AED – American Health
First Aid – American Health
DHS
Process Control Programming
Facility Clean Room Design

Professional Experience

Ameresco, Inc. **2018 - present**

Manager – Project Management
Senior Project Manager

Energy Systems Group **2014 – 2018**
Chevron Energy Solutions **2013 – 2014**

Senior Project Manager

Cypress Semiconductor **1990 – 2013**

Corporate Project Manager
Senior Site Facility Manager
Site Facility Manager
Facilities Supervisor
Facilities Tech Lead

Project Role

Mr. Bane has over 20 years of senior-level project management experience in power plant installation and facilities management with noted cognizance of health/safety; experienced in both Federal and private industrial sectors. He has expertise in the synthesis of project engineering and design, business, technical, and operations planning. Mr. Bane is an accomplished leader and coordinator of cross-professional teams in safe, timely, and cost-effective project development and maintenance.

Project Experience

University of Minnesota Role: Lead Project Manager Solar PV project at nine locations, including ground mounts, rooftops, carports, and parking ramps	$5,905,000
City of Virginia, MN Role: Lead Project Manager LED lighting upgrades, mechanical insulation, HVAC upgrades, building automation system upgrades	$2,424,839
Holy Cross Energy Role: Lead Project Manager Summary: Installed 5MW solar PV grid-tied to distribution system, installed 15 MWh battery energy storage system	Confidential
Wells Fargo Role: Lead Project Manager Corporate office, two sites, 2 MW total rooftop and ground mount. Pollinator garden was installed beneath the ground mount.	2MW

Shaun Bauerle

Senior Program Manager

Education

Southern Illinois University

BS, Construction Engineering

Licenses & Certifications

Associate Constructor
American Institute of Constructors

Daikin Certification

VRV Training and Commissioning
8 hours

VRV Service and Trouble Shooting
16 hours

OSHA 10-Hour Certification

Professional Experience

Ameresco, Inc. 2009 - present

Senior Program Manager
Senior Project Manager

S.M. Wilson & Company 2006 - 2009

Project Estimator / Project Manager

McCarthy Building Companies 2001 - 2006

Lead Estimator

Project Role

Mr. Bauerle has over 22 years of project development experience, with LEED and energy-related projects. He assures the successful installation of all facility solutions developed, work with all contractors, suppliers, and vendors. His responsibilities include design and development, construction management, estimating, value engineering, cost control, client relationships, and ongoing project monitoring. In addition, he oversees construction management, customer liaison, daily coordination of work activities, and submittal reviewing.

Project Experience

Hazelwood School District, MO (10 phases) **Role:** Project Management ESPC, Health Life Safety, HVAC, Plumbing and Electrical Upgrades, Motor replacements, Roof replacements, Temperature controls upgrades, VRV technology, Interior/exterior camera, card-key, access, and exterior gating systems, High-efficiency lighting	$98,621,000
University City School District, MO (14 phases) **Role:** Project Development & Management ESPC, new additions, Health Life Safety, HVAC, Plumbing and Electrical Upgrades	$65,000,000
Metro West Fire Protection District (2 Phases) **Role:** Project Development & Management ESPC Station House Remodel, HVAC, Plumbing and Electrical Upgrades	$1,085,000
Riverview Gardens School District, MO (2 ph) **Role:** Project Management ESPC, HVAC Replacement, Lighting Upgrades, Security Upgrades, Restroom renovations	$20,000,000
Taylorville School District (14 phases) **Role:** Project Management New Gym Addition, Roofing, Tuckpointing, HVAC, Plumbing and Electrical Upgrades	$29,000,000

Jared Hughes, CMVP, CEM, CEA, LEED-AP

Manager – Performance Assurance

Education

Northern Illinois University
MS, Data Analytics

Missouri State University
BS, Construction Management

Certifications

Certified M & V Professional

Certified Energy Manager

Certified Energy Auditor

LEED Accredited Professional

Professional Experience

Ameresco, Inc. 2012 - present

Manager – Performance Assurance 2018-present

Measurement & Verification Team Leader 2016-2018

Senior Measurement & Verification Specialist 2012-2016

CTS Group 2009-2012

Measurement & Verification Specialist

Schneider Electric Energy Solutions 2008-2009

Project Development Engineer

Project Role

Mr. Hughes has over 16 years of experience in performance contracting, including developing ECMs, building whole facility energy models, developing scope, calculating energy savings, and performing energy audits of facilities of various sizes. He is an expert in Measurement & Verification (M&V) for projects of various sizes in numerous types of buildings using metering, software, and data analytics to monitor project results.

Mr. Hughes creates M&V plans for projects, performs risk reviews of energy calculations and energy models, ensures energy conservation strategies are implemented properly, and collects and analyzes data to verify that the savings targets are exceeded. He also assists with development of M&V commissioning, pre-installation documentation, and oversees annual M&V inspections and reports.

Select Project Experience

Metropolitan Pier & Exposition Authority, IL | $42M

ESPC encompassing 2.6M square feet of space at the nation's largest convention center. ECMs included building controls, lighting upgrades, and central chilled water plant upgrades. Over 65,000 lights were upgraded to LED, resulting in over $1.4M in annual savings.

City and County of Denver, CO | $8M

Multiple phase ESPC project that included Dushanbe Teahouse, Community Hospital, Hospital Pavilion Building, Boulder Library, Brenton Building, Exterior Lighting, 63rd Street Solar PV.

Public Building Commission, Chicago, IL | $6.5M

ESPC project with 36 buildings with a combined space of over 2.3M square feet. Included updating and refurbishing mechanical systems, lighting, and controls. Guaranteed annual savings of over $700,000.

City of Arvada, CO | $4.5M

ESPC project with 15 buildings consisting of 418,585 square feet. ECMs included cooling upgrades, RTU upgrades, boiler upgrades, interior and exterior lighting upgrades, streetlighting upgrades, and plumbing fixture efficiency. The project also included tariff optimization, gas procurement optimization, a new solar PV system, event schedule integration to the building automation system, and Analytics Planner.

P1 Service, LLC

RUSSELL RODERICK

VP, BUSINESS DEVELOPMENT

With more than three decads of industry experience, Russell specializes in design experience as well as construction and leadership. His solid knowledge base and relevant project experience in a variety of sectors ensures quality work for all clients served.

YEARS OF EXPERIENCE

- 24 Years with P1
- 40 Years in the Industry

EDUCATION

- BS Mechanical Engineering – University of Missouri
- Consulting/Design Engineering, 14 years
- Construction Project Management - 8 years
- Business and Project Development - 16 years

ASSOCIATIONS

- American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE)
- American Society of Plumbing Engineers (ASPE)
- Association of Energy Engineers (AEE)
- United States Green Building Council (USGBC - LEED)
- Mechanical Service Contractors Association (MSCA)

RELEVANT EXPERIENCE

Kansas Schools

Barber County North School District	Medicine Lodge, KS
South Barber County School District	Kiowa, KS
Hiawatha School District	Hiawatha, KS
Olathe Junior High School USD 233	Olathe, KS
Pratt USD 382	Pratt, KS
Mulvane USD 263	Mulvane, KS
Southwestern Heights USD 483	Kismet, KS
La Crosse USD 395	La Crosse, KS
Lakin USD 215	Lakin, KS
Flint Hills USD 492	Rosalia, KS
KASB (Kansas Association of School Boards)	Topeka, KS

P1 Service, LLC

WILLIAM FREDE, P.E.

PROJECT DEVELOPMENT MANAGER

Bill has a strong design background and focuses his efforts on proposal preparation including design completion, conceptual estimating, value engineering, systems' analysis, and life-cycle cost analysis. Bill specializes in developing design-build projects that meet the owner's requirements while achieving high-performance and value.

YEARS OF EXPERIENCE

- 16 Years with P1
- 29 Years in the Industry

EDUCATION/CERTIFICATIONS

- BS Architectural Engineering, Kansas State University
- Professional Engineer Kansas and Missouri

ASSOCIATIONS

- American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE)

RELEVANT EXPERIENCE

Kansas Schools

Barber County North School District	Medicine Lodge, KS
South Barber County School District	Kiowa, KS
Hiawatha School District	Hiawatha, KS
Olathe Junior High School USD 233	Olathe, KS
Pratt USD 382	Pratt, KS
Mulvane USD 263	Mulvane, KS
Southwestern Heights USD 483	Kismet, KS
La Crosse USD 395	La Crosse, KS
Lakin USD 215	Lakin, KS
Flint Hills USD 492	Rosalia, KS
KASB (Kansas Association of School Boards)	Topeka, KS

P1 Service, LLC

CASEY ROHAUS

SR. PROJECT EXECUTION MANAGER

Beginning his career as an Apprentice Pipefitter and working up the ladder to Service Projects Sales Manager has given Casey a hands-on perspective for the projects he manages. He has worked in a variety of markets, including industrial, educational, and healthcare.

YEARS OF EXPERIENCE

- 27 Years with P1
- 31 Years in the Industry

EDUCATION

- Mechanical Contractors Association/ Johnson County Community College propel program (Professional Program for Emerging Leaders)
- 5-Year Pipefitters Apprenticeship – Local 533
- P1 University
- OSHA 10-Hour Training

ASSOCIATIONS

- ASHRAE Member
- Wichita Mechanical Sheet Metal Contractors (SMACNA)
- Sheet Metal Local 29 JATC Chairman
- Mechanical Contractors Association

RELEVANT EXPERIENCE

Kansas Schools

- Wichita - **USD 259**
- McPherson - **USD 418**
- Haysville - **USD 261**
- Mulvane - **USD 263**
- LaCrosse - **USD 395**
- Lawrence - **USD 497**
- Goddard - **USD 265**
- Kismet Plains - **USD 483**
- Manhattan - **USD 383**
- Eudora - **USD 491**
- Ft Larned - **USD 495**
- Wamego - **USD 320**

P1 Service, LLC

ANDY DUNBAR

GENERAL MANAGER

Andy is the General Manager of the P1 Wichita and Topeka offices. He has three decades of experience in the industry. Prior to accepting a leadership position at P1, Andy gained two decades of field experience as a large tonnage chilled water system field engineer.

YEARS OF EXPERIENCE

- 11 Years with P1
- 30 Years in the Industry

EDUCATION/CERTIFICATION

- MCAA Advanced Leadership Institute- Babson Executive Education
- MCAA Service Manager Training
- Mechanical Licenses, Block and Associates
- RSES – Wichita, KS
- Mechanical Licenses, Block and Associates
- SECorps
- Trane Chiller Factory Training
- York Chiller Factory Training
- McQuay Chiller Factory Training
- Carrier Chiller Factory Training

ASSOCIATIONS

- ASHRAE past President, Current Treasurer
- BOMA Wichita Treasurer 2020-Present
- Timber Creek Estates - President
- Mechanical Sheetmetal Contractors Association
- Chiller Systems Group
- ICE Group

RELEVANT EXPERIENCE

Kansas Schools

- Wichita - **USD 259**
- McPherson - **USD 418**
- Haysville - **USD 261**
- Mulvane - **USD 263**
- LaCrosse - **USD 395**
- Lawrence - **USD 497**
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- Manhattan - **USD 383**
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- Ft Larned - **USD 495**
- Wamego - **USD 320**

Prepared for the City of Abilene, KS

Presented by

Prime Contractor Ameresco, Inc. and Strategic Allience Partner P1 Service, LLC

Dana Dunn, Senior Account Executive
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E: ddunn@ameresco.com

Project management location

P1 Service Office

3030 S. All Hallow Avenue

Wichita, KS 67217

T: (316) 267-3256

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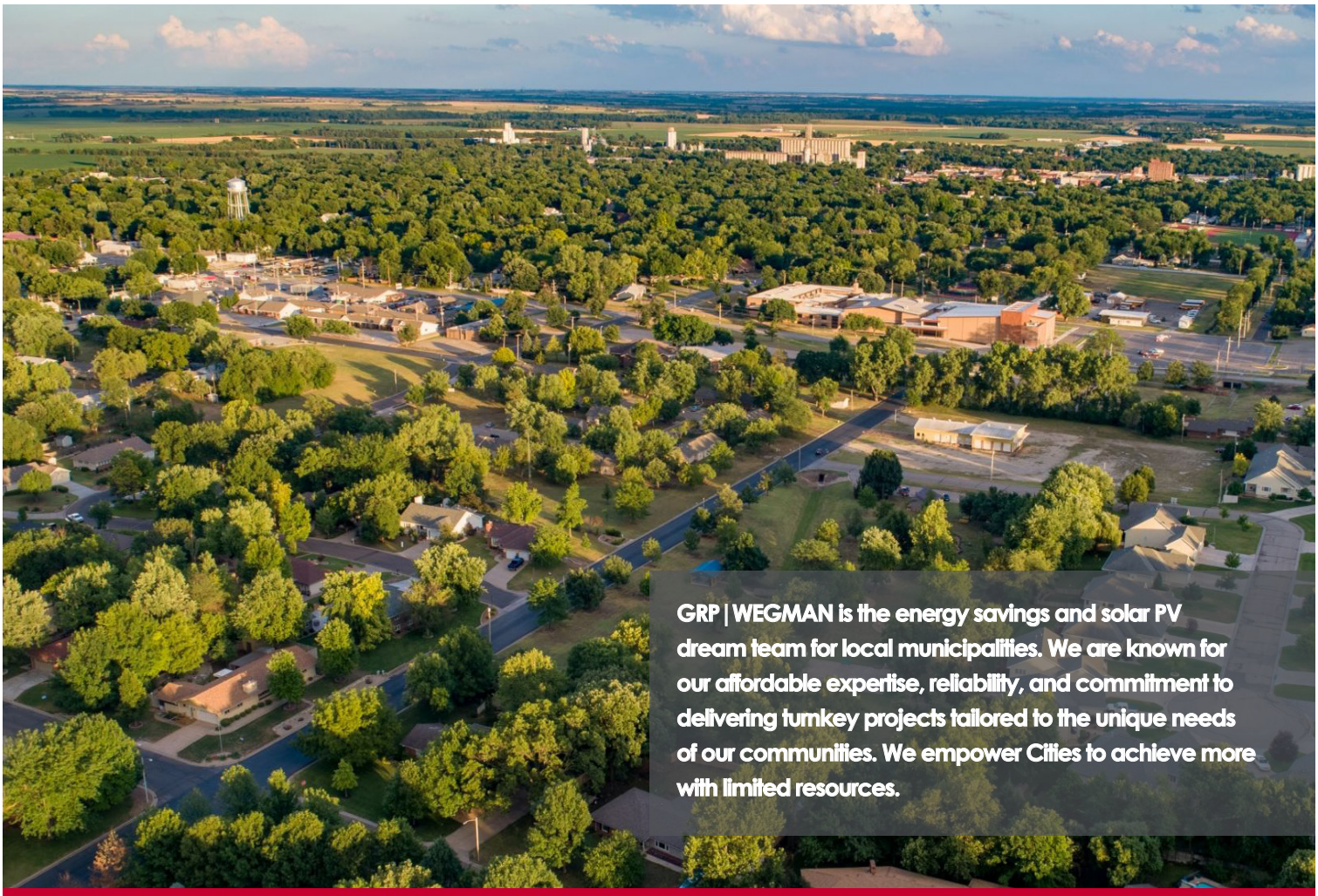

GRP | WEGMAN is the energy savings and solar PV dream team for local municipalities. We are known for our affordable expertise, reliability, and commitment to delivering turnkey projects tailored to the unique needs of our communities. We empower Cities to achieve more with limited resources.

Thrive

CITY OF ABILENE, KANSAS

ENERGY CONSERVATION AND CAPITAL REINVESTMENT PROGRAM

ABILENE KANSAS

GRP | WEGMAN
INNOVATION FROM CONCEPT TO COMPLETION

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SHARED VISION SHARED VALUES

GRP | WEGMAN is committed to helping the City of Abilene continue to provide top-tier infrastructure and services that help residents and businesses thrive. We will help Abilene continue to serve as a model of excellence for the State of Kansas by addressing both supply and demand-side energy opportunities.

COVER LETTER

City of Abilene
419 N. Broadway
Abilene, KS 67410
Attn: Ron Marsh, City Manager

November 15, 2024

Subject: Energy Conservation and Capital Reinvestment Program
City of Abilene, Kansas

Dear Mr. Marsh and Selection Committee,

Thank you for the opportunity to present our qualifications in response to the City of Abilene, Kansas ("City") Request for Qualifications (RFQ) for the Energy Conservation and Capital Reinvestment Program. GRP | WEGMAN is honored to submit our proposal and is excited about the prospect of collaborating with you to enhance your City's energy conservation and secure infrastructure. The City of Abilene is truly positioning itself for a sustainable, resilient, and cost effective future. We are your best partner to help you achieve more with limited resources.

We are proud to help Abilene thrive and lead the way as you:

- Provide the community with modern, efficient, and sustainable infrastructure
- Achieve the City's vision for your facilities while maintaining fiscal responsibility
- Leverage savings to perform impactful, high-priority work to support resident programs
- Deliver a smooth investment grade audit (IGA) and multi-site energy savings program with a highly-trusted, local, innovative ESCO and contractor
- Welcome and support quality jobs in the Abilene community
- Keep your focus on City needs and mission-critical activities by tapping a turnkey infrastructure partner for your facility projects
- Leverage solar to generate ongoing, renewable energy supply and cash flow

We applaud City of Abilene leadership for being a fiscally-responsible, future-focused community investing in the City's infrastructure while reducing energy costs.

For over seven decades, GRP | WEGMAN, an Innovative Facility & Energy Solutions company, has established an impeccable reputation, delivering exceptional quality and unparalleled service. Our extensive clientele, most of whom engage us for multi-year, multiple phased projects, are a testament to our consistency and commitment to excellence.

While we have served the Midwest for many years, our customers have been asking us to support them in Kansas and surrounding areas. We have proudly invested in Kansas with a team of top talent - Professional Engineer and Architect, Energy Managers, Solar Developers, and Grant/Incentive Specialists who are known for their success in the industry.

GRP | WEGMAN'S approach combines deep-rooted local expertise with a commitment to high-quality, cost-effective solutions. We pride ourselves on consistently saving our clients 10-20% more than our competitors while upholding superior quality standards. Our experienced team offers a single point of contact, ensuring streamlined communication and a cohesive approach throughout the project.

We take immense pride in our proven track record, highlighted by our portfolio of successfully completed projects, and by our achievements in safety and regulatory compliance. When you partner with GRP | WEGMAN, you're hiring a contractor and aligning with a tried and trusted ally committed to your long-term success. Our mission is to create projects that are built to last and are also optimized for energy efficiency. We aren't just building; we are revolutionizing infrastructure and powering efficiencies.

Our Vision is to lower the City's operational expenses by making you your own power producer, keeping profits that would otherwise go to outside developers within the community. We achieve this through a fresh approach to Energy Facility Planning and Construction. Our integrated, collaborative model ensures GRP | WEGMAN is fully accountable for planning, funding, timelines, and sustainable energy production. By utilizing federal funds, ITC grants, and state incentives, we help cities fulfill their long-term strategic goals while creating a partnership that endures.

GRP | WEGMAN will help the City of Abilene:

- Tap Federal and State grants/incentives to reduce City capital investments,
- Leverage supply side opportunities (solar) to secure additional revenue sources,
- Perform an efficient and effective IGA, and
- Prioritize, fund, and implement demand-side improvements (HVAC, building envelope, roofing, water conservation, renovations, etc.).

We look forward to discussing our proposal in detail and sharing how our unique capabilities can support your vision for Abilene. Thank you for considering our submission. We are eager to address any questions you may have and provide further insights as needed.

Sincerely,

Vincent Ardito
Director, Strategic Business Development
Innovative Facility and Energy Solutions, GRP | WEGMAN
Kansas City, Kansas
816-824-9808 | vardito@grpwegman.com

Like you, we value character as well as achievement.
We're a high-performing partner with unwavering integrity,
always putting our customers' needs first.

ALLOW US TO INTRODUCE OURSELVES

EXECUTIVE SUMMARY

RFQ review fatigue? We get it. Scan this QR code to hear Grant Ardito, Account Executive, walk you through GRP | WEGMAN's Executive Summary, while you give your eyes a well-deserved rest.

16 minutes 25 seconds

EXECUTIVE SUMMARY

Envision the Abilene, Kansas community gathered outside City Hall. There's an air of excitement as everyone's eyes focus on the ceremonial switch before them. The Mayor and City Manager step forward, ready to lead the countdown that will activate not just the city's new solar arrays, but also launch a comprehensive suite of energy savings projects that will transform how the City powers its future. As the crowd counts down—3-2-1—the switch is flipped, marking a historic moment for our community.

This achievement represents far more than just new technology installation. The City of Abilene is embarking on a journey that will generate clean, renewable energy while saving millions in energy costs through a comprehensive 15-year Guaranteed Energy Performance Contract program. Local news crews capture the moment as city leaders demonstrate how Abilene is leading the way in municipal energy innovation and fiscal responsibility. This moment symbolizes a fundamental shift in how our city approaches its energy future.

The traditional approach of conducting only an investment grade audit (IGA) for energy savings, while valuable, misses a crucial opportunity for the City. While identifying efficiency improvements remains essential, we envision Abilene transforming from an energy consumer to an energy producer—creating new revenue streams while achieving energy goals. This comprehensive approach combines the best of both worlds: reducing energy consumption through efficiency measures while generating clean power through strategic solar installations.

The success GRP|WEGMAN will deliver for City of Abilene is measurable

1. **Financial Return on Investment** | Our innovative pricing models make energy savings and solar projects accessible for municipal budgets. After a brief payback period, Abilene will transform utility savings into funding for essential community services and infrastructure improvements. This means more resources for parks, public safety, and community programs without increasing taxpayer burden.

2. **Energy Production and Efficiency** | Our certified Professional Engineers design custom programs to maximize energy savings across all city facilities. From city hall to community centers, every project incorporates top-tier products and proven technologies, ensuring your systems operate at peak efficiency for decades. This reduces operational costs while improving service delivery to residents.

3. **Operational Reliability and Maintenance** | Our experienced Project Managers and Installers excel in complex municipal environments. Our systems deliver reliable performance with minimal downtime, backed by a comprehensive maintenance plan and staff training program. This ensures city operations continue smoothly while delivering consistent energy savings to taxpayers.

4. **Safe Environment and Regulatory Compliance** | We meet or exceed all local, state, and federal regulations, including safety standards, ADA requirements, and building codes. Our installation and maintenance processes are designed to minimize disruption to city services and public access. Your staff and residents can count on safe, compliant operations throughout the project lifecycle.

5. **Incentive Utilization** | Our team helps your city access millions in available incentives, including federal credits, state programs, and utility incentives. We handle the complex application processes, allowing your staff to focus on serving residents. This maximizes taxpayer value while minimizing the city's direct investment.

6. **Scalability and Future Proofing** | All installations are designed with tomorrow's technology in mind. As energy solutions evolve, your city's systems can adapt to incorporate advances like energy storage and smart grid integration. This future-proofing ensures long-term relevance and continued cost savings for decades, protecting your community's investment.

7. **Aesthetic and Functional Integration** | Our infrastructure upgrades complement existing architecture while performing efficiently in all weather conditions. We understand that municipal buildings are community landmarks, and our designs respect their character while enhancing their performance.

8. **Positive Community Engagement** | We help build public support by demonstrating the tangible benefits of these improvements. Through public relations efforts and real-time displays, residents can see their city's commitment to fiscal responsibility, environmental stewardship, and energy independence. This transparency builds trust and community pride in your energy initiatives.

9. **Longevity and Warranty Fulfillment** | Abilene leadership can make this investment in full confidence that the projects will boost energy savings for years to come. Selecting a long-term partner like us is important. With 70 years in business, 13 years in energy savings guarantee projects, and 80MW in solar PV installations, we will be there every step of the way.

10. **Economic Development and Innovation** | Your energy program becomes a catalyst for local economic growth. By demonstrating leadership in sustainable infrastructure, you'll attract forward-thinking businesses and create new opportunities for workforce development. These projects showcase your city's commitment to innovation while building a more resilient community for future generations.

We take great pride in our holistic approach to energy conservation, recognizing that effective sustainability requires a comprehensive, well-coordinated strategy on both the supply side and the demand side. To maximize impact, it is essential to develop a strategic plan that integrates all energy conservation measures under a unified design. This approach ensures that each initiative aligns with the broader objectives, creating synergy between efforts and delivering long-term efficiency. By adopting this holistic methodology, we are committed to driving sustainable energy solutions that are both innovative and impactful.

GRP | WEGMAN would be honored to be selected as your partner for this powerful energy program. At every level of our Kansas team, the City of Abilene project will be top priority.

We are committed to a smooth, scientifically sound, and financially strong project with you.

A Smooth Project

- Choose a proven municipal energy partner with deep expertise in city operations. With over 70 successful municipal energy projects and numerous renewable installations across multiple cities, we deliver fully-managed and well-executed projects that respect the unique needs of local government. Our track record speaks for itself - we encourage you to contact our references to hear firsthand about their experience.

- We understand that consistent communication and accountability are crucial for city projects. That's why we provide a dedicated Project Executive who serves as your single point of contact throughout the program. Vince Ardito, your Project Executive, brings over 20 years of experience managing complex municipal projects. Their commitment to your success means they'll become a trusted extension of your team, understanding your city's unique needs and ensuring smooth

project delivery from start to finish.

- Every construction project faces challenges - it's how these challenges are handled that sets great partners apart. Our team excels at proactive problem-solving and transparent communication with city leadership. When obstacles arise, we present solutions alongside problems, always keeping your city's best interests at the forefront of decision-making.

A Scientifically Sound Project

- Our professional engineers and development team bring decades of municipal project experience to your city. We've seen firsthand the challenges cities face when working with inexperienced contractors, especially in the rapidly evolving solar and energy performance contracting industries. Some contractors leave cities with debt but no real savings or power generation to show for it. By choosing our team, you're selecting a proven partner with the right expertise, processes, and technologies to ensure your project's success.
- We maintain complete vendor neutrality - we're not aligned with any equipment manufacturer, controls provider, distributor, or utility company. This independence allows us to be completely unbiased in our approach, giving us the freedom to develop and implement the most cost-effective solutions for your specific needs. We prioritize American-made products whenever possible, ensuring quality and supporting domestic manufacturing.
- Results drive everything we do. We measure project outcomes and savings using real data, onsite monitoring technology, and your actual utility bills. Our project management systems provide real-time updates and comprehensive sustainability reporting, giving city leadership the transparency and accountability they need. Our renewable energy team stays ahead of industry developments, managing the complex landscape of resilience technology, supply chain challenges, and installation resources. With our experience spanning solar, energy storage, and other renewable systems, we help cities secure funding for more than 50% of initial costs through various incentive programs.

A Financially Strong Project

- Our streamlined business model eliminates unnecessary overhead and excess profit margins. We can execute critical services in-house or leverage our extensive network of local, diverse subcontractors, ensuring the best value for your city. We believe in complete transparency with project costs because we're committed to changing the face of the contracting industry - bringing integrity, fair competition, responsible profitability, and trusted relationships back to public projects.
- Every project we design is structured to qualify for attractive financing options, and we actively help cities access available RECs, rebates, incentives, and grants to manage project costs.
- Our financial approach focuses on long-term sustainability and predictable results. We understand that city leaders need certainty in their investments, especially when it comes to energy infrastructure. That's why we back our projects with solid performance guarantees and maintain transparency throughout the project lifecycle. This commitment to financial responsibility and clear communication ensures that your energy project will deliver lasting value to your community while protecting taxpayer investments.

EXECUTIVE SUMMARY

Your Vision Made Reality

The City of Abilene stands at a pivotal moment. While addressing deferred maintenance needs across city facilities, you have the opportunity to simultaneously invest in your community's future through a comprehensive energy strategy. This isn't just about fixing what's worn—it's about building something better.

For the City, adopting solar power alongside traditional energy efficiency measures represents more than an environmental choice; it's a strategic approach to budget management and long-term fiscal resilience. Today's unprecedented Inflation Reduction Act (IRA) incentives create a unique opportunity to address multiple challenges at once. By combining these federal incentives with energy performance contracting, Abilene can tackle deferred maintenance, reduce operating costs, and generate new revenue streams—all while minimizing the impact on your current budget.

The financial impact is compelling. As energy prices continue their upward trend, traditional operating budgets are under increasing pressure. Our comprehensive approach helps Abilene break this cycle by:

- Leveraging IRA incentives to fund up to 50% of project costs
- Reducing annual energy expenses through efficiency upgrades
- Generating revenue through solar power production
- Creating predictable energy costs for long-term budget planning
- Freeing up operating funds for other critical city services

This strategy allows the City to address immediate infrastructure needs while building energy resilience for the future. Aging HVAC systems, outdated lighting, aged building envelope and roofing, and inefficient building controls can be upgraded with modern, efficient alternatives. Simultaneously, strategic solar installations transform underutilized spaces into power-generating assets that provide decades of value to the community.

The impact extends beyond city facilities. This comprehensive energy program positions Abilene as a leader in municipal innovation, demonstrating fiscal responsibility while creating new opportunities for economic development. The visible commitment to sustainable infrastructure sends a powerful message to businesses and residents about Abilene's vision for the future.

Most importantly, this program provides a sustainable funding mechanism for the City's long-term goals. The guaranteed savings and potential revenue from solar generation create a reliable financial foundation that can support continued investment in community services and infrastructure. While other cities struggle with rising energy costs and aging infrastructure, Abilene will be positioned to thrive.

The time is right to move beyond traditional facility maintenance and embrace a comprehensive energy strategy that serves Abilene today and for decades to come. By combining critical infrastructure updates with strategic solar investments, the City can create a more resilient, sustainable, and prosperous future for all its residents.

Let's work together to make this vision a reality for Abilene. Through careful planning, proven technology, and innovative financing, we can help you lead the way in municipal energy innovation while delivering lasting value to your community.

WE'RE HERE TO HELP YOU ACHIEVE YOUR GOALS

1 | BUSINESS QUALIFICATIONS

THE VALUES DRIVING US FORWARD

Values are only as important as the behaviors behind them. Every project we take on is different, but our behaviors to achieve the highest quality are the same. Here are the principles driving us every day:

WE PUT OUR CUSTOMERS FIRST

We are a servant-minded team committed to advocating for our clients and putting their needs first.

WE WORK TO BE DILIGENT

We are hard workers - committed to going the extra mile to build trust and getting projects done right.

WE STRIVE TO BE INNOVATIVE

We are problem solvers - unafraid of stepping into new environments and difficult tasks.

Who is GRP | WEGMAN?

For over seven decades, GRP | WEGMAN, an innovative facility & energy solutions company, has established an impeccable reputation as a provider of energy and mechanical services. GRP | WEGMAN has been performing guaranteed projects since 2012, consistently delivering results by putting customers' needs first.

Thomas DeClue Sr. opened the business in 1952 under the name General Refrigeration and Plumbing. Since then, it has grown naturally and through acquisitions into GRP | WEGMAN.

The company now includes over 100 trucks on the road and divisions in solar and renewable energies, sheet metal, pipeline, commercial and industrial HVAC, plumbing, electrical, windows, doors, and performance contracting.

From $13.50 in refrigeration repair in the 1950s to $20M infrastructure improvement projects today, we've come a long way. But one thing has remained the same - our commitment to put our customers first.

We take immense pride in our proven track record, our portfolio of on-time, on-budget projects, our customers who invite us to perform multiple projects, and our achievements in safety and regulatory compliance.

When you partner with GRP | WEGMAN, you're hiring a partner and aligning with a tried and trusted ally committed to your long-term success. Our mission is to create projects that are built to last and are also optimized for energy efficiency. We aren't just building; we are revolutionizing infrastructure and powering efficiencies.

PASSION FOR CUSTOMERS

21,589
kW Solar Installations

>$300 MILLION
Facility Improvements with Guaranteed Energy Savings Contracts

250+
Employees Helping Customers Achieve their Infrastructure Goals

INDUSTRIES SERVED

MUNICIPALITIES
K-12 SCHOOLS
HIGHER EDUCATION
INDUSTRIAL
COMMERCIAL

Our Commitment to Sustainability

GRP | WEGMAN is a privately held, debt-free company headquartered in Bethalto, Illinois and incorporated in Delaware. We are proud to employ team members throughout the state, including 8 in Kansas.

All of our 250+ employees take great pride in our mission - it reads as follows: "There is a lack of trust and advocating for the client in the contracting industry. We are a contracting team that puts the needs of our clients first. We build trust over time by completing projects that create economic stability in their organization."

Our values are lived out every day on every project site. We are the team your community can look up to.

- SELFLESS | We are a servant-minded team committed to advocating for our clients and putting their needs first.
- DILIGENT | We are hard workers, committed to going the extra mile to build their trust and getting projects done right.
- INNOVATIVE | We are problem solvers, unafraid of stepping into new environments and difficult tasks that may lead to failure.

GRP|WEGMAN practices what we preach when it comes to clean, renewable energy generation and electrification. Our self-designed, installed, and maintained rooftop solar array at our East Alton, Illinois office has offset 75% of our electrical usage since 2019. As of this submission, we are currently installing rooftop and parking canopy solar PV with EV chargers at our Bethalto, IL headquarters. These projects showcase our commitment to sustainability and our expertise in integrating various energy-efficient technologies.

Vendor Neutrality: Outcome-Driven Product Selection

GRP | WEGMAN is a service provider with a reputation for the highest level of excellence. We are vendor neutral when it comes to systems and equipment, so our customers' projects only include products that make the most sense for their specific needs and application.

Our vendor neutrality, in combination with our GRP | WEGMAN employees – including our sales team, engineers, project managers, electricians, plumbers, service technicians, and certified energy managers - enables us to delight customers every step of the way.

Over time and experience, we have developed our Standard System Architecture, a standardized and efficient method of building commercial solar projects. Whenever possible, we use direct manufacturer relationships for all key materials and equipment.

Self-Performing Capabilities

GRP | WEGMAN takes great pride in our capacity to self-perform portions of every project - especially in mechanical, electrical, and carpentry work - or we can tap our vast industry relationships and team of qualified, local contractors familiar with your facilities to provide the highest quality solutions. GRP | WEGMAN, in either approach, will provide the best overall value to the customer while also creating and sustaining well-paying jobs in the area.

GRP|WEGMAN's company portfolio includes two union electrical companies: Lowry Electric and

Wegman Electric. This allows us to provide superior electrical services. When installing projects outside of our local jurisdiction we have strategic reciprocal relationships with other union contractors throughout the state.

A Brighter Future

GRP|WEGMAN specializes in customized energy solutions from concept to completion. We are a single-source provider offering turn-key solutions for clients across solar, LED lighting, mechanical upgrades, and building envelope projects. We excel in designing, installing, and maintaining energy-saving systems in education, commercial, government, and industrial sectors.

We provide integrated solutions to help municipalities maximize energy savings and improve overall building performance. Our team of expert engineers, project managers, and technicians can design, create, and install your systems quickly and efficiently, considering special accommodations you might need for your project.

Our projects range from rooftop solar installations and ground mounts to canopy structures in downtown urban areas and megawatt fields. We've also implemented cutting-edge LED lighting systems in various settings, from office buildings to industrial facilities, and have executed building envelope projects that significantly enhance energy efficiency.

Contracting Integrity - Always

GRP|WEGMAN is proud of our reputation for the highest level of excellence and integrity in contracting and energy solutions. We create real value for our clients by providing and improving the occupant experience, helping owners reduce energy consumption and saving money that can, in turn, be used for other important initiatives. Our emphasis on safety and quality permeates everything we do.

GRP | WEGMAN is a proudly American, privately held company - which means customer needs take priority over investor needs. ***That's why the majority of our clients invite us back for multiple phase projects.***

At GRP|WEGMAN, we are proud to say:

1. We have never had any projects result in litigation or arbitration.
2. We have never signed a contract and not delivered on the agreed upon contract. We always deliver our contracts with our clients. We take pride in our effective communication throughout the project to ensure our objectives, timelines, and methodologies are aligned. We have never had a contract canceled.
3. We have never missed an energy guarantee. We have kept our commitment to every guarantee. If an aspect of a project is under performing, we work directly with the customer to make it right.

This speaks to our thoroughness, craftsmanship, and professionalism. Our team utilizes the latest in proven technology and construction techniques to deliver high value projects to our customers. We are 100% Customer Focused. We sustain our reputation by delivering the highest quality projects the first time and standing behind all our work both today and into the future.

Industry Leadership

GRP | WEGMAN maintains memberships and certifications that highlight our commitment to excellence and leadership in the energy efficiency sector. Our relevant memberships and affiliations include:

- NAESCO Member and Board of Directors: GRP | WEGMAN adheres to industry best practices and standards, promoting quality service delivery and innovation in energy efficiency solutions.
- National Electrical Contractors Association (NECA): This underscores our expertise in electrical contracting services, ensuring compliance with industry regulations and standards in electrical installations related to energy efficiency projects.
- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE): GRP | WEGMAN aligns with ASHRAE's advancements in HVAC&R technology and standards, ensuring optimal indoor environmental quality and energy efficiency in building systems.

Additionally, GRP | WEGMAN leaders are active members of:

- American Council for an Energy Efficient Economy (ACEEE): This reinforces our commitment to advancing energy efficiency policies and practices through advocacy and research.
- Association of Energy Engineers (AEE): This enhances professional development and knowledge exchange opportunities in energy management and sustainability practices.
- American Water Works Association: GRP | WEGMAN is dedicated to ensuring the safety and sustainability of water supply systems, adhering to best practices and promoting innovation in water management.
- Construction Management Institution: This reflects our commitment to excellence in construction management, emphasizing effective project delivery, cost control, and high-quality standards in the construction industry.
- Energy Services Coalition: GRP | WEGMAN collaborates with public and private sectors to advance energy efficiency solutions, supporting initiatives that promote sustainable energy use and reduce environmental impact.
- Smart Cities Council: GRP | WEGMAN is committed to leveraging technology and data to create smarter, more efficient urban environments, enhancing the quality of life for residents through innovative solutions.

These memberships and certifications demonstrate GRP | WEGMAN's dedication to industry excellence, continuous learning, and collaboration with leading organizations to deliver innovative energy solutions that meet the highest standards of performance and sustainability.

NAESCO MEMBER

GRP | WEGMAN is a member of the National Association of Energy Service Companies Organization (NAESCO) and has been for many years. **As a leader in the industry, GRP | WEGMAN has a seat on the Board of Directors for NAESCO.**

WHY GRP|WEGMAN?

1 OPERATIONAL AGILITY

We are NIMBLE. Our organizational structure isn't just flat; it's functional. Decisions are made quickly, without getting tangled in the web of bureaucracy. We empower our team of experts to approach your projects in a unified way. Our executives are engaged in every aspect of the process and are only a phone call away. Your voice matters, which is why we strongly advocate for each client and project.

2 TRANSPARENCY & HONESTY

At GRP | WEGMAN, we don't just promise reliability—we've been delivering it for over 70 years. We've consistently placed our clients' needs first, helping them achieve economic stability through efficient, cost-effective solutions. Our track record of successful projects and satisfied clients speaks to our unwavering commitment to trustworthiness and unbiased service. We stand behind our Financial Guarantee; it's our bond. We are so committed to delivering on time and within budget that we put our money where our mouth is. You know exactly what to expect with us—no surprises, only solutions!

3 RELIABILITY & TRUST

Our commitment doesn't end with delivering a project. We take full responsibility for both the design and its successful implementation. This "end-to-end" approach eliminates the typical disconnection you might find between the design and execution stages in other companies. Our untarnished record of never having had a contract canceled or having been in litigation speaks volumes about our business ethics and the trust our clients place in us. Our vendor-neutral approach ensures that you're getting the best equipment and controls without the influence of vendor partnerships.

4 CLIENT-CENTRIC APPROACH

When we say our focus is on you, WE MEAN IT. From the initial consultation to project completion and beyond, we take the time to understand your needs, concerns, and objectives. This intimate understanding allows us to tailor our flexible procurement and financing options to suit your specific circumstances. We recognize that energy efficiencies, measurable results, and minimal disruption to their operations are key. We guarantee timely execution of projects. In a world where promises no longer hold weight, GRP | WEGMAN stands out—for our exceptional services, unique guarantees, and our unwavering commitment to put our clients first. ***Experience the GRP | WEGMAN Way!***

Where Makes A

DIFFERENT DIFFERENCE

Project Management • Solar & Renewable Energy Development • HVAC/R Solutions • Electrical Solutions
Design-Build • Industrial Maintenance & Construction • Water & Wastewater Solutions • Engineering
Risk Management • Procurement • Solutions Provider • Guaranteed Energy Savings • Performance Contracting

CAPABILITIES, SOLUTIONS, AND SERVICES WE PROVIDE

GRP | WEGMAN is far more than an energy services company (ESCO). We stand alone in the ESCO industry based largely upon our in-house design, construction, and measurement and verification (M&V) capabilities. We are proud of our full in-house HVAC service division, as well as in-house sheet metal, plumbing, electrical, and solar divisions.

We have experience working with contractors that the City is happy with and is qualified to perform the work. Since we are contractors ourselves, GRP | WEGMAN does have the capability to self-perform parts of the project if the City desires. Also, being a contractor, we are able to hold our contractors accountable and to a higher standard than other ESCO's.

GRP | WEGMAN provides all services Cities need to achieve their mission and best serve the community. Our capabilities include:

- Investment Grade Audits
- Performance Contracting
- LED Lighting - Interior and Exterior
- Mechanical Upgrades
- Solar PV
- Electrical Upgrades
- Carpentry
- Building Envelope
- Windows and Doors
- Tuck Pointing
- Roofing
- Construction Management
- EV Charging Stations
- Plumbing
- Sheet Metal
- Ongoing Service

Investment Grade Audits

One of our services available is performing an Investment Grade Audit (IGA), if not already complete. We perform a comprehensive Investment Grade Audit inclusive of building envelope, mechanical, electrical, plumbing and finishes – including expected continuing service life. We are always focused on delivering a healthy, safe, sustainable, accessible, comfortable, beautiful, and easy-to-use building for the next 20-30 years.

1. Pre-Audit Consultation
   - Initial Meeting: Meet with the customer to understand their goals, current energy and water usage, and any specific concerns or constraints.
   - Data Collection: Gather historical utility data, building plans, and operational details.

2. Facility Assessment
   - Comprehensive Walk-through: Conduct a thorough on-site inspection of all energy and water systems,including HVAC, lighting, plumbing, building envelope, and control systems.
   - Equipment Inventory: Document the current condition, age, and efficiency of existing equipment and systems.
3. Energy and Water Use Analysis
   - Detailed Analysis: Perform detailed measurements and monitoring to analyze energy and water usage patterns.
   - Benchmarking: Compare the building's performance to industry standards and to usage in similar facilities as determined by the US Department of Energy.
4. Integration of 3D Modeling and Drawings
   - Visualization: When the projects and stakeholder sessions are enhanced by visualization, we create detailed 3D models and renderings to illustrate proposed energy and water efficiency upgrades, enhancing customer understanding and decision-making.
   - Spatial Optimization: Use 3D models to optimize equipment layout, piping, and ductwork design, ensuring efficient use of space and minimizing energy loss.
   - Coordination and Clash Detection: Identify and resolve potential clashes with existing systems through 3D modeling, facilitating seamless integration and construction efficiency.
5. Identification of Efficiency Measures
   - Energy Conservation Measures (ECMs): Identify potential ECMs such as upgrading HVAC systems and controls, improving insulation, installing energy-efficient lighting, and implementing renewable energy solutions.
   - Water Conservation Measures (WCMs): Identify WCMs such as low-flow fixtures, greywater recycling, and efficient irrigation systems.
   - Operational Measures: Assess the existing operating practices as they relate to the facility support systems and recommend modifications to processes or equipment to reduce operating costs and/or meet regulatory operational requirements.
6. Technical and Financial Feasibility
   - Engineering Analysis: Conduct a detailed engineering analysis of the proposed measures to determine technical feasibility.
   - Cost Estimates: Provide accurate cost estimates for the implementation of each measure. These estimates provide a maximum price without change orders pertaining to the agreed upon scope.
   - Energy and Water Savings Calculations: Calculate the potential energy and water savings for each measure utilizing current engineering best practices.
7. Economic Analysis
   - Return on Investment (ROI): Calculate the ROI for each proposed measure.
   - Payback Period: Determine the payback period for the investments.
   - Net Present Value (NPV) and Internal Rate of Return (IRR): Provide NPV and IRR calculations to

help in financial decision-making.

8. Financing Options
   - Funding Sources: Identify available funding sources, incentives, and rebates. These may include third party financing where applicable.
   - Financial Models: Present various financial models, including performance contracts, to facilitate project financing.
9. Implementation Plan
   - Project Timeline: Develop a detailed timeline for the implementation of the proposed measures. This will be coordinated with the customer staff to minimize disruption to the customer's normal operations.
   - Resource Allocation: Outline the resources required, including labor, equipment, and materials.
   - Risk Management: Identify potential risks and develop mitigation strategies.
10. Measurement and Verification (M&V)
    - M&V Plan: Develop a comprehensive M&V plan to verify the performance of implemented measures and ensure projected savings are achieved. This plan will follow the International Performance Measurement and Verification Protocol (IPMVP) process to ensure consistency in reporting.
11. Reporting and Recommendations
    - Final Report: Provide a detailed report summarizing findings, proposed measures, cost-benefit analysis, financing options, and the implementation plan.
    - Presentation to Stakeholders: Present the findings and recommendations to stakeholders and decision-makers to facilitate informed decision-making.

SOME OF OUR MOST FREQUENT IMPROVEMENT MEASURES

Below is a listing of some of the typical measures that we evaluate for our customers. The specific inclusion of these items is determined through the discovery process outlined above. Additional measures may be included depending upon the needs of the customer.

Building Envelope

Any work related to the building envelope must be derived from analyzing existing conditions and development of solutions to correct deficiencies. Some of the items we review and address are:

1. Cleaning of cast stone, brick masonry, or other exterior materials
2. Tuckpointing
3. Replacement of windows
4. Replacement of doors
5. Existing roofing condition
6. Existing building insulation condition and effectiveness

Mechanical Scopes

Our mechanical capabilities are designed to address a variety of existing systems, whether aged or modern. We upgrade and enhance mechanical systems in buildings of different eras and configurations to meet the current and future planned building needs. Our mechanical capabilities address:

1. High-Efficiency HVAC Systems
   - Energy-Efficient HVAC Units: Installation and maintenance of high-efficiency heating, ventilation, and air conditioning (HVAC) units that consume less energy while providing optimal indoor climate control.
   - Heat Recovery Systems: Implementing heat recovery ventilation (HRV) or energy recovery ventilation (ERV) systems to capture and reuse waste heat from exhaust air, reducing overall heating and cooling demands.
2. Advanced Piping and Ductwork
   - Efficient Duct Design: Designing and installing ductwork that minimizes air leakage and resistance, ensuring efficient airflow and reducing energy loss.
3. Renewable Energy Integration
   - Geothermal Heat Pumps: Installing geothermal heat pump systems that use the stable temperature of the ground to provide heating and cooling, significantly reducing energy consumption.
   - Solar Thermal Systems: Implementing solar thermal systems to provide hot water and supplement domestic water heating systems, reducing reliance on conventional energy sources.
   - Photovoltaic (PV) systems to provide an electrical source to augment or replace the one currently serving the facilities. This may include energy storage and electric vehicle charging.
4. Smart Controls and Automation
   - Building Automation Systems (BAS): Integrating BAS to monitor and control mechanical systems (HVAC, lighting, water heating) for optimal performance and energy efficiency.
   - Programmable Thermostats and Sensors: Installing programmable thermostats and occupancy sensors to automate heating and cooling based on occupancy and usage patterns, reducing unnecessary energy consumption.
   - The use of Artificial Intelligence (AI) to assist the building management system to predict and quickly respond to changes in the needs of the building.
5. Ventilation and Air Quality
   - Energy-Efficient Ventilation: Installing energy-efficient ventilation systems that ensure adequate air exchange while minimizing energy use.
   - Airside Economizers: Implementing airside economizers that use outside air for cooling when conditions are favorable, reducing the load on mechanical cooling systems.
   - Demand Control Ventilation: The provision of ventilation based upon the facility occupancy.
6. System Commissioning and Maintenance
   - Commissioning: Performing thorough commissioning of mechanical systems to ensure they are

installed correctly and operating as designed, maximizing efficiency and performance.

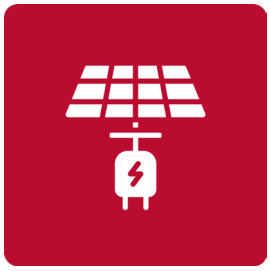
- Preventive Maintenance: Establishing preventive maintenance programs to keep mechanical systems running efficiently and to extend their lifespan.

7. Energy Audits and Analysis
   - Comprehensive Energy Audits: Conducting detailed energy audits to assess current mechanical system performance and identify opportunities for improvement.
   - Energy Modeling: We are experienced in using energy modeling software on complex projects to simulate the performance of proposed mechanical systems and ensure they meet energy-saving goals.

Electrical Scopes

As we are working on an energy-saving project, we tap our following electrical capabilities to enhance efficiency, sustainability, and compliance with modern standards:

1. Energy-Efficient Lighting Systems
   - LED Lighting: Installation of LED lighting, which uses significantly less energy compared to traditional incandescent or fluorescent lighting.
   - Lighting Controls: Implementation of advanced lighting controls, such as occupancy sensors, daylight harvesting systems, and timers, to reduce energy consumption by ensuring lights are only used when needed.
2. Energy Management Systems (EMS)
   - Smart Meters: Installing smart meters to provide real-time data on energy consumption, allowing for better monitoring and management of energy use.
   - Building Automation Systems (BAS): Integrating BAS to control and monitor building systems (HVAC, lighting, and other electrical systems) for optimal energy efficiency.
3. Electrical Load Analysis and Optimization
   - Load Analysis: Conducting detailed electrical load analysis to identify areas of high energy consumption and potential savings.
   - Power Factor Correction: Implementing power factor correction devices to improve the efficiency of electrical systems and reduce energy losses.
4. Smart Building Technology
   - Smart Devices: Integrating smart plugs, switches, and appliances that can be controlled remotely to optimize energy use.
   - IoT Integration: Utilizing the Internet of Things (IoT) to connect and control various electrical devices and systems for improved energy management.



5. Renewable Energy Systems
   - Solar Power Systems: Designing and installing photovoltaic (PV) systems to harness solar energy, reducing reliance on grid power and lowering energy costs.
   - Battery Storage: Incorporating battery storage systems to store excess renewable energy for use during peak demand or when renewable sources are not available.

6. Electric Vehicle (EV) Charging Stations
   - EV Charger Installation: Installing EV charging stations to support electric vehicles, encouraging sustainable transportation options.
   - Load Management: Implementing load management solutions to ensure EV charging stations do not overload the electrical system and are used efficiently.
7. Backup Power Systems
   - Energy-Efficient Generators: Installing energy-efficient backup generators to ensure critical systems remain operational during power outages.
   - Uninterruptible Power Supply (UPS): Using UPS systems to provide temporary power and protect sensitive equipment from power interruptions.
8. Energy Audits and Compliance
   - Energy Audits: Conducting comprehensive energy audits to assess the current energy use and identify opportunities for improvement.
   - Regulatory Compliance: Ensuring all electrical installations and upgrades comply with relevant codes, standards, and regulations, including those aimed at improving energy efficiency.

Water Conservation Scopes

For energy and water-saving projects, GRP | WEGMAN's plumbing capabilities are essential to ensure efficiency, sustainability, and compliance with modern standards:

1. High-Efficiency Fixtures and Appliances
   - Low-Flow Fixtures: Installation of low-flow faucets, shower heads, and toilets to reduce water consumption without compromising performance.
   - Water-Saving Appliances: Integration of energy-efficient dishwashers, washing machines, and other appliances that use less water and energy.
2. Leak Detection and Repair
   - Advanced Leak Detection Systems: Use of sensors and monitoring systems to detect leaks early and prevent water waste.
3. Greywater Recycling Systems
   - Design and Installation: Capability to design and install greywater recycling systems that collect, treat, and reuse wastewater from sinks, showers, and washing machines for non-potable uses such as irrigation and toilet flushing.
4. Rainwater Harvesting Systems
   - Collection Systems: Designing and installing systems to capture and store rainwater for landscape irrigation, flushing toilets, and other non-potable uses.
   - Filtration and Treatment: Ensuring that the harvested rainwater is properly filtered and treated to meet safety standards for its intended use.
5. Efficient Piping Systems
   - Optimal Pipe Sizing and Layout: Designing piping systems to minimize water pressure losses and reduce the energy required for pumping.
   - Insulation: Insulating hot water pipes to reduce heat loss and improve energy efficiency.

6. Water Heating Solutions
   - Tankless Water Heaters: Installation of tankless or on-demand water heaters that provide hot water only when needed, reducing standby energy losses.
   - Solar Water Heaters: Incorporating solar water heating systems to harness renewable energy and reduce reliance on conventional energy sources.
7. Backflow Prevention
   - Devices and Systems: Installation and maintenance of backflow prevention devices to protect potable water supplies from contamination.
8. Sustainable Materials and Practices
   - Eco-Friendly Materials: Utilizing sustainable and environmentally friendly materials in plumbing installations and repairs.
   - Green Building Standards: When green certification is identified as a project goal, we gladly implement sustainable building standards such as LEED (Leadership in Energy and Environmental Design) to ensure the plumbing systems contribute to overall sustainability goals.
9. Smart Plumbing Technology
   - Water Monitoring Systems: Implementing smart water monitoring systems that provide real-time data on water usage, identify patterns, and alert for potential issues.
   - Automated Controls: Using automated control systems to optimize water and energy use based on occupancy and usage patterns.

Safety and Security

For our customers, ensuring safety and security is paramount. Here are some key safety capabilities that GRP | WEGMAN brings to our projects:

1. Fire Safety Systems
   - Fire Detection and Alarm Systems: Installing advanced fire detection systems, including smoke detectors, heat detectors, and alarm systems, to provide early warning and ensure prompt response.
   - Sprinkler Systems: Designing and installing efficient sprinkler systems that are integrated with energy-saving measures, ensuring they are both effective in fire suppression and optimized for water use.

   - Fire Suppression Systems: Implementing fire suppression systems such as clean agent systems for areas with sensitive equipment, minimizing damage and ensuring safety.
2. Security Systems
   - Access Control Systems: Installing access control systems to regulate entry to critical areas, ensuring that only authorized personnel can access certain parts of the facility.
   - Surveillance Systems: Setting up advanced surveillance systems, including CCTV cameras and monitoring software, to enhance security and provide real-time monitoring.
   - Intrusion Detection Systems: Implementing intrusion detection systems to detect unauthorized entry and alert security personnel promptly.
3. Emergency Response Systems
   - Emergency Lighting and Signage: Ensuring that emergency lighting and exit signage are

installed and properly maintained to guide occupants safely out of the building during an emergency.

- Public Address Systems: Installing public address systems to communicate important information quickly to building occupants in case of an emergency.

4. Building Management Systems (BMS)
   - Integrated Safety Controls: Integrating fire safety, security, and emergency response systems with the building management system to enable centralized monitoring and control.
5. Redundancy and Backup Systems
   - Redundant Power Supplies: Ensuring that critical safety and security systems have redundant power supplies, such as backup generators or battery systems, to maintain functionality during power outages.
   - Backup Communication Systems: Implementing backup communication systems to ensure that emergency communication remains possible even if primary systems fail.

Ongoing Service

GRP | WEGMAN's is a safe and reliable maintenance partner for our customers. We are an on-going, trusted, and dependable maintenance partner who prioritizes safety, saves our customers money and works tirelessly to keep their facilities running. From construction to maintenance, the GRP | WEGMAN team is built to handle the most complex systems, keeping our customers ahead of the curve at every turn.

1. Maintenance and Support
   - Preventive Maintenance Programs: Establishing preventive maintenance programs to keep systems running efficiently and extend their lifespan.
   - Repair Services: Providing prompt repair services to address any unexpected issues and minimize downtime.
   - Warranty Support: We help manage all warranty claims on behalf of our operations and maintenance customers.
2. Training and Education
   - Customer Training: Providing training for customers and building operators on the efficient use and maintenance of new systems.
   - Sustainability Education: Educating customers on best practices for energy and water conservation to ensure long-term sustainability. We often collaborate with leadership to develop ways to engage team members in a variety of coursework.
   - Reporting and Communication: Our team provides ongoing, proactive communication. Customers receive regular solar PV production, energy use, performance reporting, and preventative maintenance reminders.

Construction Management

Our team of construction managers employs a highly skilled and meticulously phased design approach to ensure that cities continue operating with minimal disruption during construction. By carefully planning each phase, we

strategically schedule and sequence construction activities to coincide with the facility's operational needs, reducing downtime and interference.

Our approach includes detailed risk assessments, robust communication plans, and coordination with facility managers to anticipate and address potential issues proactively. We utilize temporary structures and barriers to isolate construction zones, ensuring safety and continuity of daily operations as necessary. This methodical process not only preserves the facility's functionality but also enhances efficiency and safety throughout the project lifecycle.

Site and Building Accessibility/ADA Assessment and Building Code Compliance

With building retrofits, it's important to design for ADA regulations and building code compliance. Our team gathers information during the facility assessment to identify and document deficiencies. During the design process, we will design all spaces in areas of new construction or renovation to be fully accessible and meet code requirements. We provide practical solutions to address specific concerns that violate or undermine regulations.

PROFESSIONAL LICENSES

KANSAS STATE BOARD OF TECHNICAL PROFESSIONS

Licensure Confirmation

Name:	Roger Thielen Ostmeyer
License Type:	Professional Engineer
License Number:	9241
Status:	**Active***
License Expiration Date:	04/30/2025

***Status subject to change. Use Find a License on KSBTP website for up-to-date information.**

HIGH VALUE PROJECTS AT THE BEST PRICE

2 | FINANCIAL INFORMATION

LEVERAGING GRANTS AND INCENTIVES

We will assist the City in applying for all grants and incentives available. We will help you secure the largest dollar volume available to provide financial assistance for this program.

SIGNIFICANT SAVINGS FOR YOU

GRP | WEGMAN's streamlined operations allow us to pass on significant savings to you, maximizing the scope and impact of your project within your budget.

COMMUNICATING COSTS CLEARLY

The energy market is dynamic. It's important to us that we always present clear, comprehensive costs without hidden fees - delivering real value to our customers.

EFFECTIVE RISK MANAGEMENT

We proactively identify, assess, and mitigate risks for our customers and our own business across financial, operational, and market domains. We prioritize long-term value creation over short-term gains to foster trust and confidence among employees, customers, and other partners.

Financial Soundness and Stability to Support our Guarantee

GRP | WEGMAN is a privately held, debt-free company incorporated in Delaware as GRP | WEGMAN.

Audited Financials | As a privately held company we reserve the right to not include our audited financials in a public document that can be subject to FOIA requests. We would be happy to provide a copy of our audited financials in a timely manner to anyone in your organization upon request. We understand the scoring ramifications of not including a copy of our audited financials in this response. To comply with the requirement of the RFQ, we humbly ask that you obtain a private copy of our financial report by contacting: Chris Ammann, President at GRP | WEGMAN, 618-258-9261 | cammann@grpwegman.com.

Provisions for Reimbursement | GRP | WEGMAN will provide a written guarantee for the energy savings projections and will reimburse the City for any shortfall on an annual basis for the energy savings. However, GRP | WEGMAN has exceeded our energy guarantees for the past 13 years and not missed a single guarantee.

Performance and Payment Bonds | GRP | WEGMAN will provide a performance and payment bond on project installation. These bonds may include security bonds, performance bonds and others. The costs of these bonds are relative to the size and scope of the projects. Performance and payment bonds provide the City an even higher level of assurance that the project will perform as expected. Our bonding agent is Lockton Companies. Their address is Three City Place Drive, Suite 900, St. Louis, MO 63149. (314) 812-3832. Attn: DeAnna Maurer.

Best Financing Options | We will consult the City on the best financing option for the City which could include a number of funding sources: financing, grants, rebates, savings, general fund, etc. We understand the desire of the City of Abilene to limit the long term tax obligations associated with a project of this nature and will utilize our network of finance partners to create a structure that could utilize a non-debt instrument to fund the overall program across the term. We will consult with you to identify the best mix of capital, finance structures, and other grants, rebates, and incentives for the most responsible financial solutions for the taxpayers of Abilene.

Comparison | Performance Contract Funding Options

Topic	GO Bonds	TELP	Contingent Payment
Rate	Baseline	GO Bonds + 50 BP	TELP + 120 BP
Closing costs	50 BP + $100k legal	$12k legal	None
Pledge	Tax revenues	Equipment lien	Equipment lien
Max term	40 years	20 years	25 years
Obligated term	Full term	1 budget cycle	1 budget cycle
Commitment	Full term commitment	Budget appropriation	Budget appropriation
Termination	0-2% after 10 years	1-3% anytime	3-4% after construction
Issuance	Public issuance	Private placement	Direct with GRP|WEGMAN
Approval	Voter referendum*	Governing body	Governing body

* Some states have "home rule" laws that allow local governments to issue LTGO debt without voter approval

Our pricing always includes an efficient design, strategic use of available incentives, use of tier-1 products installed by certified experts, and our commitment to passing on savings from our low-

overhead model. Our projects qualify for highly attractive interest rates, when necessary.

Accessing Grants and Incentives | GRP | WEGMAN has a team that is experienced in seeking grant and rebate funding. We will explore all avenues of funding for your project and arrive at a strategy that is optimal for the City. We have successfully written millions of dollars' worth of grants for our customers. Grant programs currently exist for energy efficient gas and electric systems through local utility providers and GRP | WEGMAN will assist in applying for all grants available.

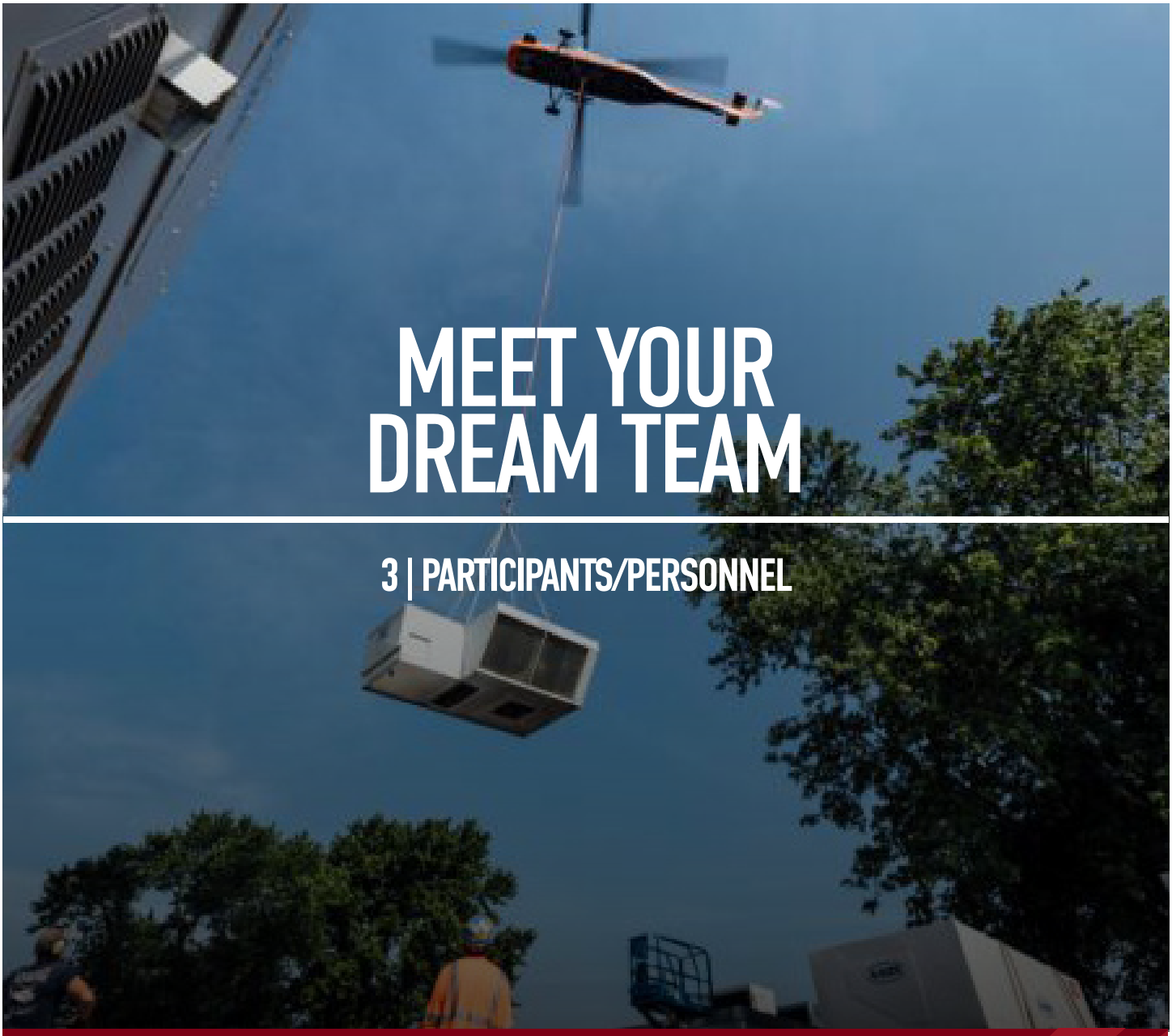
We offer this service to your City to help secure the largest dollar volume available to provide financial assistance for this construction program. Some of the categories frequently approved for rebates and grants are as follows: Solar PV, building envelope, compressed air, controls, HVAC, office equipment, refrigeration, motors, some electrical equipment, renewable energy strategies, and lighting. We will assist with the Investment Tax Credit (ITC) program.

The Investment Tax Credit (ITC) is a federal incentive designed to encourage investment in renewable energy, particularly solar power. For solar energy projects, the ITC allows project owners to deduct a significant percentage of their solar installation costs from their federal taxes, making solar projects more financially viable. Currently, the ITC offers a 30% tax credit for solar systems installed on residential and commercial properties, significantly reducing upfront costs and improving return on investment. This credit has been instrumental in driving the growth of the solar industry by making clean energy more affordable for homeowners, businesses, and institutions.

For energy-saving projects in the public sector, the ITC can be a critical funding mechanism. Although tax-exempt entities like municipalities don't directly benefit from tax credits, they can partner with third-party developers who use the ITC to reduce the overall cost of energy-saving projects. These funding opportunities allow municipalities to invest in sustainable infrastructure, achieve long-term energy savings, and reduce their carbon footprint while allocating budgetary savings to other citywide initiatives.

Energy Savings | Energy savings realized by the Customer during a given year are calculated by subtracting the current year's amount of energy consumption from the corresponding baseline year's energy consumption. Many of our customers realize savings above the amount guaranteed. These excess savings are retained by the customer adjustments to any related performance guarantees.

Operational Savings | Operational Savings include all the costs the Customer would spend maintaining and repairing equipment versus those that will be avoided through the implementation of the performance contract. These costs include: all costs incurred to operate and maintain facilities, money the Customer pays to outside vendors to maintain the various components of its building systems, as well as materials and supplies to maintain their facilities. Operational savings also includes the total savings associated with implementing this project today instead of phasing the project in over numerous years in the future, and the future capital costs avoided by implementing this project now. The amount of capital required will be lowered by implementing a comprehensive project today instead of phasing in projects over several years. Cost avoidance is defined as the avoided expense, in today's dollars, attributable to a retrofit or other management initiative.



MEET YOUR DREAM TEAM

3 | PARTICIPANTS/PERSONNEL

A PROJECT TEAM YOUR COMMUNITY WILL BE PROUD OF

Our Kansas team is passionate about bringing upgraded infrastructure and renewable energy to our communities. We know our project teams are inspiring the next generation of energy innovators.

DELIVER YOUR PROJECT SAFELY, ON-TIME, AND ON-BUDGET

Our commitment to safety combined with our work ethic results in project excellence.

REDUCE DISRUPTIONS AND DOWNTIME

Our team schedules work around your schedules. City operations take priority.

PRIORITIZE COMMUNICATION EVERY STEP OF THE WAY

We make sure every stakeholder is on the same page through proven communication practices.

We're Building People who Build for People

80-90% of our lives are spent in buildings. Most occupants of a building do their work, serve their customers and don't think about the walls, windows, the systems, air flow, fixtures, the walkways and wayfinding. They never have to give it a second thought, because we have designed, built, and operate the building with them in mind.

GRP | WEGMAN is your proud energy services partner as well as your mechanical, electrical, and service contractor. Because we are a contractor, we have the expertise to evaluate the practicality of designs and performance of subcontractors.

GRP | WEGMAN's business model of self-performing some portions of the project by our in-house craftspeople empowers GRP | WEGMAN to have tighter control over the entire project which improves quality and eliminates several layers of overhead. This more efficient approach also allows us to deliver the project in a timely manner and at a significantly lower cost than any of our competitors.

GRP | WEGMAN also has the capability to service the equipment that is installed. We offer the flexibility to work with your own service provider or we could service the installed equipment.

Our safety-first and service-driven culture, always putting customer needs first, and our commitment to our guarantees has attracted top talent to the GRP|WEGMAN team.

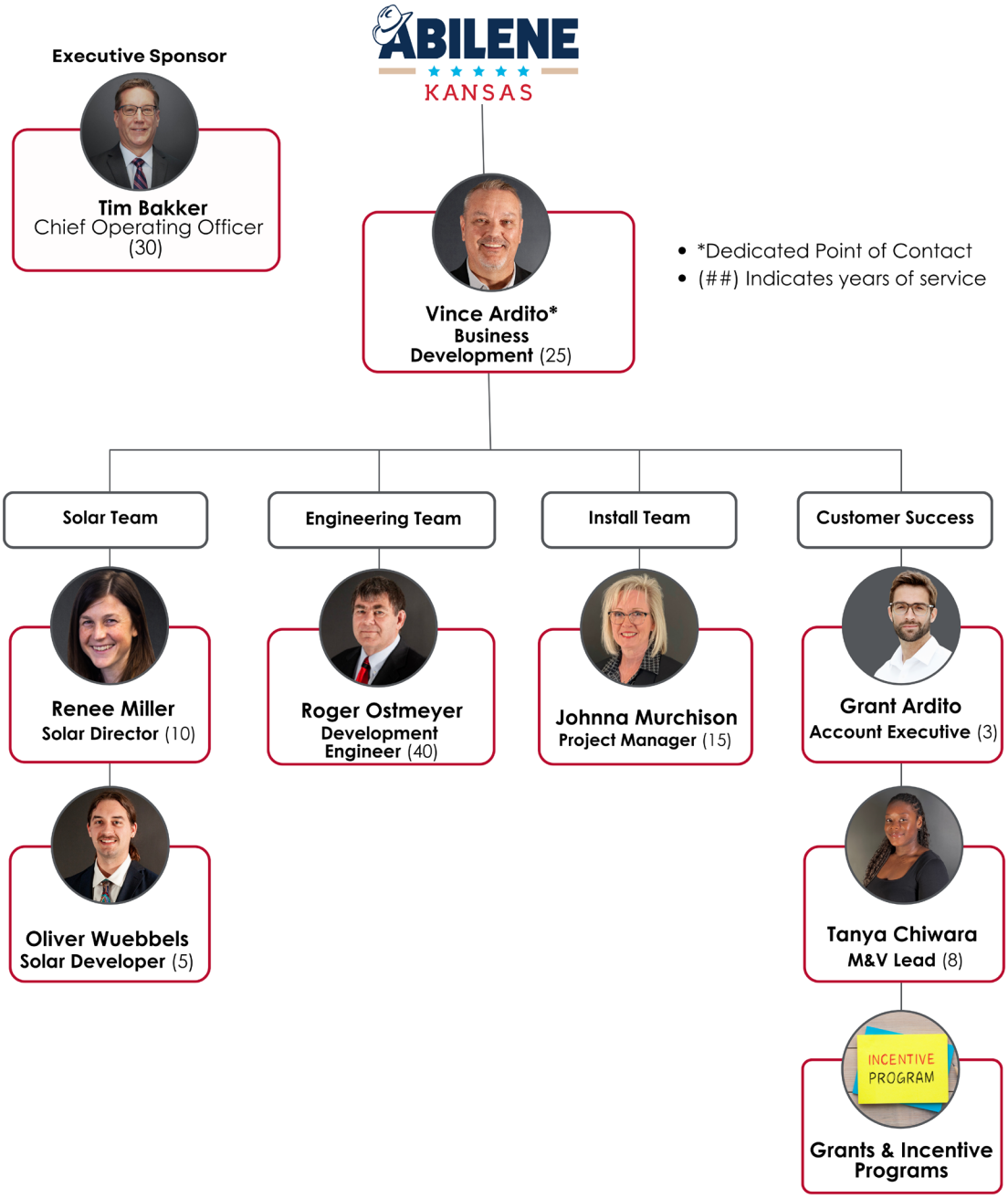
Your Dedicated Team

We don't want the City of Abilene projects to get lost in the mix of an investor-driven, mega-national general contractor (GC) or ESCO. At every level of our team, the City of Abilene projects will be top priority.

Our strength starts with servant leadership. Our team is empowered by **Vincent Ardito,** who has 25 years experience in the energy, sustainability, renewables, and facility management industries. Vince has led design-build, energy savings guarantees, and renewable energy projects across the United States. He brings industry-leading innovative ideas to every project, both demand side and supply–side solutions.

Our Customer-Focused Approach is Key to Project Success!

City of Abilene will benefit from selecting our proven energy savings team.



CITY OF ABILENE

Dedicated Point of Contact

Vincent Ardito
Director, Strategic Business Development

Innovative Facility & Energy Solutions

816.824.9808

vardito@grpwegman.com

Kansas City, KS

www.grpwegman.com

With more than 25 years of experience in government facilities, Vince is responsible for coordinating services through all phases of construction projects and ensuring GRP WEGMAN meets customer goals and requirements. He has been instrumental in developing and implementing complex construction projects that include alternative funding structures and renewable energy solutions. He is experienced in working with municipalities all across the Midwest.

EXPERIENCE

Vince has been involved in a number of projects across the US and abroad. He has worked with a number of municipalities and educational institutions:

- Kansas City, KS
- City of Salinas, KS
- Kansas City, MO
- Savannah, MO
- Independence, MO
- Jackson County, MO
- Cleveland County, OK
- City of Norman, OK
- East Central College
- Grandview School District
- Belton School District
- Center School District
- Kansas City, MO School District
- Hoisington, KS School District

Vince has completed projects in Puerto Rico, for US Air Force, for Duke Energy, Solar Streetlights in Chile, and Wyndham Resorts microgrids.

EDUCATION

- Central Missouri State University, Safety Management

ORGANIZATIONS | LICENSES | CERTIFICATES

- Sandler Business Management Training
- Lean Management Certification
- NAESCO

CITY OF ABILENE

Executive Sponsor

Tim Bakker

Chief Operating Officer

Innovative Facility & Energy Solutions

618.258.9216

tbakker@grpwegman.com

Bethalto, IL

www.grpwegman.com

Tim leads sales and operations across all GRP | WEGMAN divisions. He is focused on operational excellence in all disciplines to serve our customers as well as strategic growth initiatives of the company. He has 30 years' experience in energy, sustainability, and facilities management services. Early in his career, Tim was instrumental in establishing some of the first Illinois public sector performance contracting programs and has since participated in some of the largest performance contracting projects in the country. Tim has led businesses in energy efficiency, sustainability, building technologies, and facility services throughout his career on both a local and national level.

EXPERIENCE

As COO, Tim is involved in every GRP | WEGMAN project. Throughout his career, he has participated in over $1 billion dollars in energy projects. He has proudly delivered transformational infrastructure programs for these customers, and more:

- Akron University
- Argonne National Labs
- Art Institute of Chicago
- Beloit College
- Chicago Park District
- City of Evansville
- Dalhousie University
- General Motors
- Henry Ford College
- Indiana Department of Corrections
- Louisville Metro Government
- Milwaukee Public Schools
- New Trier District 203
- Northern Michigan University
- Oakridge National Laboratory
- Ohio State University
- Richland District 88a
- Stellantis
- Stevenson District 125
- University of Wisconsin
- Youngstown State University
- Various Federal ESPC
- Western Springs SD 101

EDUCATION

- Purdue University - Bachelor of Science, Electrical Engineer

ORGANIZATIONS | LICENSES | CERTIFICATES

- National Association of Energy Service Companies (NAESCO)
- American Council for an Energy Efficient Economy (ACEEE)
- Association of Energy Engineers (AEE)

WOOD RIVER PROJECT

Engineering Lead

Roger Ostmeyer, PE, RA, LEED AP

Senior Solution Development Engineer

Innovative Facility & Energy Solutions

913.908.8181

rostmeyer@grpwegman.com

Kansas City, KS

www.grpwegman.com

As Senior Solution Development Engineer, Roger provides comprehensive building solutions from design concept to project completion. His engineering management responsibilities include performing and overseeing all infrastructure surveys, energy audits, project development, estimating, energy/operational savings analysis and measurement/verification processes that assist sales teams in providing final solutions to meet the present and future needs of our clients. Roger also leads teams of engineers and architects in providing these services when called upon.

Roger is both a licensed professional engineer and a registered architect with over 40 years of experience within the industry.

EXPERIENCE

Roger delivers projects on-time and on-budget for complex facilities in Colorado, Kansas, Nebraska, Missouri, Oklahoma, Washington, Texas, Illinois, South Carolina. He has managed campuswide projects as well as individually sited facilities. He is particularly proud of the $42M Boys Town, Nebraska project, where he saved $250K per year by:

- Replacing all central plant operations serving 30 campus buildings
- Replacing 160k lbs of steam boilers with 60k lbs of 80 psig distributed steam
- Replacing two 1200 ton chillers with two new 750 ton chillers
- Replacing 800 hp of chilled water circulation pumps with 200 hp
- Final design corrected chilled water system developed delta-T from 6 to 14 degrees resulting in continuing energy savings.

Other Notable Projects Include:

- United States Army Corp of Engineers - Kansas City District, Infinite Delivery Design Contract
- TWA Maintenance Facility - Kansas City, Design Build
- Colby Community College - Kansas, Energy Savings Performance Contract
- Corpus Christi Army Depot, Design Build
- Falcon Air Force Base - National Test Facility, Design Build

EDUCATION

- Kansas State University – Bachelor of Science, Architectural Engineering

ORGANIZATIONS | LICENSES | CERTIFICATES

- Registered Architect (RA) – Colorado
- Licensed Professional Engineer (PE) – Kansas, Missouri, Oklahoma, Colorado
- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

CITY OF ABILENE

Install Team

Johnna Murchison

Project Manager

Innovative Facility & Energy Solutions

405.650.3926

jmurchison@grpwegman.com

Kansas City, Kansas

www.grpwegman.com

Johnna Murchison has more than 15 years' experience in the construction industry providing operations support and Construction Management for multi-million dollar Construction Management and performance contracting construction projects. Johnna has extensive experience in Operations, Construction Management, Contract Administration, Marketing, Preconstruction, Project Accounting, Staff Development and Operational Policies and Procedures. Johnna is passionate about building long term relationships with clients and insuring each client has a positive experience throughout the design and construction process, and is committed to insuring GRP Wegman exceeds the Owner's project goals.

EXPERIENCE

- Cherry Creek School District, Energy Conservation, Denver, CO
- Grady County Courthouse, Maintenance and Historical Restoration Grady County Courthouse, Security Vestibule Addition
- First National Bank & Trust, Main Branch Renovation
- University of Science & Arts of Oklahoma, Robertson Hall Renovation University of Oklahoma, Energy Upgrades
- OSU Henry Bellmon Center, Energy Upgrades
- KCKHA Housing Project, Energy & HVAC Upgrades, Kansas City, MO
- KCMO, Energy & HVAC Upgrades, Kansas City, MO
- Tulsa Community College, Energy Upgrades, Multiple Campuses, Tulsa, OK
- Haysville Schools, Energy Upgrades, Haysville, KS
- K-State University, Housing & Dining, Energy Conservation, Manhattan, KS
- K-State University, Vet-Med Center & Modular Chill Plant, Manhattan, KS
- Kansas State University, Central Chill Plant Expansion, Manhattan, KS
- King County Waste Water Treatment Plant, Energy Upgrades, Seattle, WA
- Mason County Jail, Facility Improvements, Shelton, WA
- Mason CO. Courthouse, New Roof & Energy Conservation, Shelton, WA
- City of Blaine Waste Water Treatment Plant, Blaine, WA
- Lloyd Center Mall, Renovation & Energy Conservation, Portland, OR

ORGANIZATIONS | LICENSES | CERTIFICATES

- OSHA 30 Certification
- Society of Marketing Professional Services
- Design Build Institute of America
- Construction Management Association of America
- Association of General Contractors of Oklahoma

CITY OF ABILENE

Account Executive

Grant Ardito

Account Executive

Innovative Facility & Energy Solutions

816.645.1642

gardito@grpwegman.com

Kansas City, Kansas

www.grpwegman.com

GRP | WEGMAN is committed to training the next generation of building innovators. We are proud to have Grant as an Account Executive on our Innovative Facility and Energy Solutions team. In this role, he leverages his diverse background in project management and commercial sales to develop comprehensive energy solutions for our clients.

Grant brings valuable experience as a former foreperson, giving him deep insight into the practical aspects of building operations and energy systems. His expertise in developing financial models helps clients achieve the immediate and long-term value/ROI of infrastructure improvements.

As an Account Executive, Grant works closely with facility managers, building owners, and stakeholders to identify energy-saving opportunities and implement sustainable solutions that achieve infrastructure goals, reduce costs and support the mission of the organization.

EXPERIENCE

As Account Executive, Grant is involved in every Kansas, Missouri and Oklahoma GRP | WEGMAN project.

EDUCATION

- University of Missouri – Bachelor of Science, Biological Sciences

CITY OF ABILENE

Measurement & Verification

Tanya Chiwara

M&V Lead

Innovative Facility & Energy Solutions

618.258.9225

tchiwara@grpwegman.com

St. Louis, MO

www.grpwegman.com

As Measurement and Verification Leader, Tanya brings 8 years of experience to her role, ensuring the accuracy and efficacy of our energy-saving initiatives. Leveraging her Envision Sustainability Professional (ENV SP) certification, Tanya masterfully integrates sustainability principles into her work, enhancing the long-term value of our projects. Her expertise spans developing comprehensive measurement plans, conducting rigorous data analysis, and producing detailed reports that demonstrate the tangible impacts of our energy conservation measures. Tanya's meticulous approach not only validates our guaranteed savings for clients but also contributes to continuous improvement.

EXPERIENCE

- Tanya is involved in every Missouri Performance Contracting project for GRP | WEGMAN.

EDUCATION

- Indiana Institute of Technology - Bachelor of Science, Mechanical Engineering Technology and Energy Engineering

ORGANIZATIONS | LICENSES | CERTIFICATES

Envision Sustainability Professional (ENV SP) - Institute for Sustainable Infrastructure

National Society of Black Engineers

Society of Mechanical Engineers

CITY OF ABILENE

Solar Team

Renee Miller, PE, LEED

Director, Solar Development

Innovative Facility & Energy Solutions

618-258-9000

rmiller@grpwegman.com

Bethalto, IL

www.grpwegman.com

Renee directs the solar and renewable energy group, overseeing projects from concept to completion and managing a team of solar development engineers, solar project managers, and energy engineers. She works closely with sales, engineering, project management, and contractors to develop and implement projects to meet the present and future needs of our customers. Her responsibilities also include Solar Renewable Energy Credits through the Missouri Shines/Adjustable Block Program, Inverter Rebates, and Federal Investment Tax Credits. Renee has over 14 years of experience in the industry.

EXPERIENCE

- Brownstown CUSD #201, IL
- Bunker Hill CUSD #8, IL
- Edwardsville CUSD #7, IL
- Effingham CUSD #40, IL
- Erie CUSD #1, IL
- Highland CUSD #5, IL
- Mendota ESD #289, IL
- Millstadt CCSD #160, IL
- Polo CUSD #222, IL
- Red Bud CUSD #132, IL
- Keytesville R-3 School City, MO
- Neosho R-5 School City, MO
- Mountain View Birch Tree R-3, MO
- Pattonville R-3 School City, MO
- Slater School City, MO
- Summersville R-2 School City, MO
- City of Edwardsville, IL
- City of Sparta, IL
- City of Troy, IL
- Columbia Correctional Institution Chiller Replacement, WI
- Waupun Correction Institution Chiller Replacement, WI
- SC Johnson Chiller Replacement, WI
- Nestlé HVAC Master Planning, Air Handler Replacements, & Process Piping Improvements, 3 Plants in WI & IL
- Resilience Research Center Energy Modeling for LEED Certification, WI
- Kwip Trip Energy Modeling for LEED Certification, 20+ Stores, WI
- UW-Madison Microbial Sciences Building Energy Improvement Project, WI
- UW-Madison Mechanical Engineering Building Energy Improvement Project, WI

EDUCATION

Bachelor of Science, Mechanical Engineering
University of Wisconsin – Madison

ORGANIZATIONS | LICENSES | CERTIFICATES

Professional Engineer Licensed in MO, IL, and CA
LEED® Green Associate™
ASHRAE Member

CITY OF ABILENE

Solar Team

Oliver Wuebbels

Solar Developer

Innovative Facility & Energy Solutions

618-258-9000

owuebbels@grpwegman.com

Bethalto, IL

www.grpwegman.com

Oliver is responsible for assessing customer needs to develop solar, battery, and electric vehicle solutions to ensure customer satisfaction. His responsibilities include surveying sites to determine feasibility and identifying potential issues, collaboration with subcontractors, and project managers, utility analysis, and estimation of new solar projects. Oliver has 5 years of experience designing, estimating, and developing these solutions for residential, commercial, and municipal customers.

EXPERIENCE

Oliver has managed design, installation, and ongoing solar energy production for the following projects:

- BeDell Achievement Center
- Belleville Area Special Services Cooperative
- Brownstown CUSD 201
- Bunker Hill CUSD 8
- Carbondale ESD 95
- Carbondale HSD 165
- City of Collinsville, IL
- City of Edwardsville
- City of Sparta, IL
- City of Troy, IL
- Edwardsville CUSD 7
- Gibson City Melvin Sibley CUSD 5
- GRP Wegman Main Office
- Heartland Baptist Church
- Kohl Warehouse
- Lovejoy Presbyterian Church
- Mendota ESD 289
- Millstadt CCSD 160
- Red Bud CUSD 132
- Smithton CCSD 130
- Unity Point CCSD 140
- Valmeyer CUSD 3
- Westminster Presbyterian Church
- Whiteside SD 115

EDUCATION

- Illinois State University - Normal
  Bachelor of Science, Sustainable and Renewable Energy

ORGANIZATIONS | LICENSES | CERTIFICATES

- Missouri Solar Energy Industries Association (MOSEIA)
- American Solar Energy Society (ASES)

UPGRADE YOUR FACILITIES TO SAVE YOUR BUDGET

4 | PROJECT MANAGEMENT PLAN

GRP|WEGMAN TYPICAL PROJECT SCHEDULE

While every project and program is unique and custom, a typical Guaranteed Energy Performance Contract project schedule often takes this shape:

DESIGN	~3 months
INSTALL	~3-12 months
SERVICE	~1-15 years
M&V	~10-15 years
FINANCE	~10-15 years

The long-term nature of an Energy Savings partnership means it's essential to select a partner who:

- Has shared vision and values
- Dedicates top talent to the project
- Has a 25+ year track record in Energy Savings and can commit to the next 30 years
- Can anticipate and mitigate challenges
- Can self-perform or tap local partners

Project Approach

GRP | WEGMAN takes a comprehensive, high-tech, and people-centered approach to engineering guaranteed energy savings projects. Our methodology combines cutting-edge technology with a deep understanding of your unique facility needs.

The completion of a thorough audit and assessment is a necessary foundation for a successful project plan and implementation. This will provide the information needed for all of us to work together - Abilene facilities team and GRP | WEGMAN - to effectively prioritize needs moving forward. This process requires three components to make it successful:

1. Alignment on program goals
2. Clear, open communication
3. Software and modeling to visualize innovation
4. Stakeholder review and approval

We use state-of-the-art software and modeling to engineer the best solution for our customers. However, we all agree that there's no AI or predictive solution that can replace the infrastructure insights and knowledge the Abilene facility team and your longtime service partners bring to the table. Your team knows the ins-and-outs of your facilities, and we leverage their insights in our designs. Our engineers are expert designers as well as expert listeners.

Engineering Excellence and Superior Solar Solutions

As a certified engineering company, GRP | WEGMAN brings unparalleled expertise to your energy savings and solar PV projects. Our technical solutions represent the pinnacle of energy savings, meticulously crafted to deliver optimal performance and longevity.

Key Highlights of Our Approach:

- Certified Engineering Prowess | Our Kansas certification underscores our commitment to adhering to the highest professional standards and codes in engineering and design.
- Cutting-Edge Technical Solutions | We leverage the latest advancements in technology to provide you with state-of-the-art systems.
- Superior Engineering and Design | Our team of experienced engineers ensures every aspect of your project is optimized for maximum efficiency and durability.
- Premium Product Selection | We source only the highest quality components, guaranteeing reliability and performance throughout the system's lifecycle and prioritizing US-made components.
- Turnkey Excellence | From initial assessment to final commissioning, we offer a comprehensive, streamlined solution.
- Fully-Managed Process | Our seasoned project managers oversee every detail, ensuring a smooth, well-executed implementation from start to finish.

By choosing GRP | WEGMAN, you're investing in a meticulously engineered system backed by certified expertise. Our turnkey solution combines technical excellence with streamlined project management, delivering projects that sets the standard for quality and performance in the education sector.

Production Guarantee: A Confident Solar Investment

At GRP | WEGMAN, we stand firmly behind the performance of our projects. To provide you with confidence in your investment, we offer a robust, weather-adjusted production guarantee.

Weather-Adjusted Production Guarantee | Our guarantee is designed to account for the natural variability in weather patterns while ensuring your system performs as promised. Here's how it works:

1. Baseline Projection | We establish a baseline annual energy production projection using historical weather data and our advanced modeling tools.
2. Weather Adjustment | Actual weather conditions are measured throughout the year using on-site sensors and regional weather stations.
3. Performance Calculation | We compare the actual, weather-adjusted production to our guaranteed output.
4. Compensation | If the system underperforms relative to our weather-adjusted guarantee, we compensate you for the shortfall.

Annual Performance Review and Compensation | We can provide a thorough performance review at the end of each operational year. If we fall short of our guarantee, we calculate the difference and provide compensation based on the agreed-upon rate. This ensures you receive the financial benefits you expected from your investment.

By offering this weather-adjusted guarantee with annual reconciliation, we demonstrate our confidence in our project design and installation quality while providing the City of Abilene with long-term performance assurance.

Solar Production Modeling and Performance Prediction | We provide you with accurate, data-driven projections for your solar investment. We utilize Helioscope, an industry-leading solar design and modeling software, to simulate the performance of our proposed solar array for your City. This advanced tool takes into account your specific location, roof characteristics, system design, and historical weather data to generate a highly accurate production forecast.

Investment Grade Audit

The Investment Grade Audit (IGA) is a critical component of Energy Savings Contracting Services. If an IGA has not been completed recently, GRP I WEGMAN will work with City of Abilene to complete an IGA that identifies, evaluates, and presents a recommended package of energy retrofits with associated energy savings and guaranteed costs. The purpose of the IGA is to develop a scope of work to be implemented by GRP I WEGMAN, establish guaranteed savings, develop an agreed upon-plan to measure and verify the guaranteed savings, and ensure that the agreed-upon project meets or exceeds Missouri statute requirements.

The completion of a thorough Investment Grade Audit (IGA) is a necessary foundation for a

successful project plan and eventual implementation. This audit will provide the information needed for your staff to effectively prioritize needs moving forward. This process requires three components to make it successful:

1. Determination of audit goals
2. Clear open communication
3. Stakeholder acceptance

The following is a summary of the four-step process that GRP | WEGMAN will utilize as we complete an IGA and assist you with achieving your goals for the future.

STEP 1 - INTERVIEWS WITH STAFF | GRP | WEGMAN will conduct a series of workshops with your staff to determine the goals for your organization, facility needs, and priorities. Additional workshops will be held to provide updates to your team and create a prioritization of potential measures within the facilities.

STEP 2 - DATA GATHERING | We will collaborate with your team to obtain the following information:

- Utility Information: This is in the form of copies of utility bills, summary of costs and consumptions, determination of the existing metering structure
- Facility Information: Site surveys of the facilities to be included in the audit will be conducted to determine the type, age, and condition of the HVAC equipment serving it along with factors that effect the utility usage of the building (i.e., windows, roofs, insulation, etc.)

STEP 3 - ENERGY USAGE ANALYSIS | The utility usage of the facilities will be compared to similar facilities through a comparison to the Department of Energy database to determine the delta between a nominally operated facility and the one in the audit. This allows for a projection of potential energy savings for each of the facilities. This will be combined with the facility survey results to ensure there is a pathway to achieve those projections.

STEP 4 - RECOMMENDATIONS | Upon completion of the above steps, GRP | WEGMAN will make recommendations to accomplish the goals determined in Step 1 along with the potential fiscal impact they will have on the operation of the facilities. Prioritization can be identified by payback periods, energy savings, or other measures mutually agreed upon.

Baseline Methodology & Calculations

To accurately assess the effectiveness of an energy project, it is necessary to be able to make comparisons of pre-retrofit and post-retrofit conditions under similar terms. To do this, Baselines are established to document pre-retrofit conditions and serve as the basis for post-retrofit analysis. For more complex integrated solutions GRP | WEGMAN utilizes industry-leading software to perform this utility baseline determination and to normalize conditions to determine the energy savings benefits associated with the implemented improvements. The following details the calculation process:

1. The program applies baseline data for the specified "tuning period" to the regression calculation

detailed in 1(c) or 1(d).

2. The program attempts to establish a relationship between utility consumption or demand and the independent variable(s) (e.g., HDD, CDD, Hours of Operation, etc.). Coefficient(s) of consumption per unit will be tuned and documented for variables where such a relationship can be established.

3. During the post-retrofit period the pre-retrofit coefficients and the post retrofit variable data are applied to the regression calculation to adjust for differences in conditions. This projects an adjusted baseline which represents what would have been consumed had no facility improvement measures been implemented.

4. The energy units saved are equal to this adjusted baseline minus the actual consumption for the billing period. The adjusted baseline referred to in this document is equivalent to the "baseline scenario".

The regression analysis methodology used in this agreement is capable of making adjustments for changes in base load, heating degree-days, cooling degree-days, and up to three other variables. The inclusion of any variables will be mutually agreed upon by GRP | WEGMAN and the City of Abilene and supported by regression analysis documentation.

In addition, some consumption may be allocated to tuning period modifications if any are defined.

Note: Simpler projects like Lighting or Window replacement would likely be accomplished with engineering hand calculations.

Application of Regression Analysis Calculation

DEFINITIONS	
Baseline	The Baseline(s) presented will illustrate the relationship(s) of each utility consumed to independent variables during a representative pre-retrofit tuning period. The Baseline is determined by using Regression Analysis Calculations.
Adjusted Baseline	The Adjusted Baseline(s) estimates post-retrofit utility consumption using the same Regression Analysis Calculation plus any modifications. The Adjusted Baseline represents an estimate of utility consumption had no Energy Conservation Measures (ECMs) been implemented.
Regression Analysis Calculation	Regression Analysis is the means by which the relationship(s) between utility consumption and other variables are determined. The relationships that will be presented will be established using a utility accounting software program.

To follow is the equation used to both establish the Baseline and serve as the basis for post-retrofit analysis. The inputs and outputs to the equation vary depending on whether the equation is being applied to the pre-retrofit tuning period or the post-retrofit tracking period. Once the coefficients B, DH, DC, D1, D2, D3 and the base temperatures TBH ,TBC have been obtained by regression, they remain fixed and are used to derive adjusted meter consumption for all future time periods.

E=B*Dt+DH*HDD(TBH)+DC*CDD(TBC)+D1*U1+D2*U2+D3*U3

where:

E	Adjusted Baseline Consumption throughput through meter. During the post retrofit period, this value represents what the consumption would have been under current conditions (weather, etc.) had no Facility Improvement Measures (FIMs) been implemented.
B	Base load consumption per unit of time (Utility Units/day), that part of the meter consumption that is independent of (cannot be correlated to) any of the independent variables, including the degree-days. This consumption will be present no matter what the weather conditions or other independent variables are. This fixed value, dependent only on the number of days in the period being evaluated, is determined when defining the Baseline.
Dt	Time interval (days) in analysis period.
DH, DC	Coefficients for Heating and Cooling Degree-days (Utility units/deg-day). These fixed values, which are determined when defining the Baseline, define the sensitivity of consumption to changes in weather.
HDD, CDD	Heating and Cooling degree-days (oF-day or oC-day) for the period being analyzed;
TBH, TBC	Heating and Cooling degree-day base (or balance point) temperatures (oF or oC) upon which the HDD and CDD values are derived. These balance point temperatures represent the outdoor air temperature at which utility consumption or demand begins to react to any further change in outdoor temperature. When outdoor air temperature is equal to balance point temperature heat loss = heat gain.
DI	Coefficients for user defined variable I (I=1,2,3 for any one meter). These coefficients (or relationships) are determined when defining the Baseline.
UI	Value of independent user variable I (I=1,2,3 for any one meter) for the period being analyzed. A maximum of three optional user defined variables (e.g., occupancy hours, production rates, square footage) can be included in the fit to any one meter.

Regression Analysis Calculation for Demand - The program treats demand differently from consumption since demand is an instantaneous value and consumption is a value totaled over time. As can be seen in the following calculation, demand is not dependent on the number of days in the billing period. Rather, demand is a function of a fixed base load component and a variable component, which is sensitive to changes in the independent variables. Instead of cumulative degree-days, the regression calculation for demand uses the average temperature difference between the balance point temperature and the average daily temperature. The average temperature difference is calculated by dividing the total DD in the billing period by the # of days in the period as shown in the following equation. The units for the heating and cooling coefficients are kW per DD per day. The equation shows kW as the demand unit but any appropriate demand unit may be used.

$$kW_{base} = Offset_Coefficient + DD_Coefficient \times \left(\frac{DD_{per}}{\#Days_{per}}\right)$$

where:

kWbase	kW for the baseline scenario for the current bill period (per)
Offset_Coefficient	the demand value that is not associated to weather
DD_Coefficient	relationship of demand to weather (e.g., kW/DD)
DD(per)	degree days for the current bill period (heating or cooling)
#Days(per)	number of days in the current bill period

Baseline Calculation

Following is a summary of how a Baseline is developed:

1. Select a Tuning Period | The first step in developing a Baseline is to identify a pre-retrofit period of time that is representative of physical and operational conditions within the premises. In the program this period of time is known as the Tuning Period.

2. Identify Relationships of Consumption to Independent Variables | The Regression Analysis Calculation is then applied to each individual utility item during the selected Tuning Period against one or more independent variables. The resultant relationship(s) of utility consumption as a function of time, weather and other independent variable(s) is represented by the Regression Analysis Calculation.

3. Modifications to the Baseline | A modification is made up of a number of units to be applied, a time period to apply the units, and a description of why the modification is being applied.

    - Annual Periodic Modifications | Annual Periodic Modifications are used to adjust the Baseline consumption for anomalies that occurred during the Tuning Period because of operational procedures or abnormal conditions that occurred. These "out of line" consumption periods cause the regression equation to over or under predict consumption. A modification helps to fit the equation's predicted value to the actual value that occurred during the tuning period. Future consumption can be predicted with a high degree of confidence once the predicted and actual tuning period consumption is matched properly.

    - Additional Modifications | During the term of the Agreement, it may also be necessary to make modifications to the baseline, as a result of physical or operational changes within the premises that are beyond the agreed upon conditions and as implied by the baseline values of any independent user variable.

4. Utility Consumption Project Benefits | For each time period being evaluated, an Adjusted Baseline is calculated by performing the Regression Analysis and applying to it any necessary modifications. This Adjusted Baseline represents the utility consumption that would have occurred if the retrofits had not been implemented. Utility consumption Project Benefits is the difference between the Adjusted Baseline consumption and the actual post-retrofit consumption for the same period.

5. Utility Cost Project Benefits | Utility cost Project Benefits is the result of applying the contract specified minimum utility unit costs to the utility units or the future commodity unit cost if greater than the minimum utility unit cost. The method of selecting unit costs will be documented and will be used throughout the term of the agreement to assign costs to the physical units. The following describes the four possible cost calculation methods:

   - Single Rate | The "single utility rate" method uses the rate modeling capabilities of the program. This method applies the same rate to all of the scenarios within the program.
   - Multiple Rate | The "multiple utility rate" method also uses the rate modeling capabilities of the program. This method allows different rates to be attached to the scenarios within the program. This method may be used if Project Benefits are expected from a GRP | WEGMAN initiated rate change.
   - Average Cost of Consumption and Average cost of Demand | The "average cost per unit" method allows the program to calculate Project Benefits using a simpler strategy. Dollar Project Benefits are equal to the physical unit difference between the baseline scenario and the actual scenario (units saved) multiplied by the appropriate unit cost. The appropriate unit cost is equal to the average unit cost for the current billing period or the minimum unit cost, whichever is greater.
   - Average Cost of Consumption | The "average cost of consumption" blended method allows the program to calculate Project Benefits using the same strategy as the "average cost per unit" method shown above. The only differences being that the blended method only needs to track consumption, and it combines the consumption and demand costs before calculating the average unit cost. The appropriate unit cost is equal to the average blended unit cost for the current billing period or the minimum unit cost, whichever is greater.
   - Total dollar Project Benefits is the sum of the utility cost Project Benefits from each utility type plus any other Project Benefits.

COMPREHENSIVE MANAGEMENT FOR CITY PROJECTS

At GRP|WEGMAN we know effective project management is essential for the successful execution of any construction endeavor. Our approach is characterized by meticulous planning and attention to safety, proactive communication, agile adaptation to evolving needs, and comprehensive contractor management.

For the City of Abilene project, our project management process will encompass the following key elements:

Initial Engagement & Analysis
- *Key Project Parameters Known*

Preliminary Proposal Development
- *Project Outline Accepted by Customer*

Preliminary Engineering
- *Installation Contract Executed*

Final Detailed System Engineering
- *System Engineering Complete*

Procurement
- *Materials Ordered*

Preconstruction
- *Construction Plan & Schedule Finalized*

Construction
- *Substantial Completion*

Commissioning
- *Fully Functional System*

Operations

Project Management Approach

This project will require the coordination and management of a multitude of resources with a strict budget and focused schedule. One key to effective delivery of our projects across the US is our expert Project Managers (PM). Our expert PM, Johnna Murchison, will work closely with the City's designated representative. This PM will maintain an on-site presence with City of Abilene for the duration of the project.

GRP | WEGMAN has assembled an in-house project management group that includes construction and project managers, project engineers, superintendents, estimators, and schedulers. Our effective PM applies technical expertise, project knowledge, people and communication skills as well as management talent, in a proactive manner to ensure that our contract commitments are met on time, within budget, and at the quality levels expected by the customer.

Every project and customer have unique requirements. At GRP | WEGMAN, we address customer needs through a formal communication process which utilizes experienced and talented people with expertise on similar projects. All of GRP | WEGMAN's Project Managers have maintained a track record of customer satisfaction.

The PM serves as the single point of responsibility for all aspects of the project. In this role, the Project Manager monitors and coordinates all necessary site resources to ensure that customer requirements are met and completed as set out in the project goals. The PM develops and maintains effective, on-going contact with the customer and all other project participants in order to resolve issues and update project status.

The Project Manager's responsibilities include:

- Ensure the program meets 100% of the customer's requirements
- Ensure the overall quality and successful implementation of the program
- Manage all subcontractors and suppliers
- Present the City with all necessary documentation
- Avoid disruption of facility activities for visitors and staff
- Maintain site safety program
- Meet all required deadlines
- Obtain project acceptance and sign-off from the City
- Follow up with the customer and owner after the project is complete
- Coordinate the delivery of training programs

Project Progress Meetings | The most important aspect throughout the process is communication and interaction with the City. There will be weekly progress meetings involving all project personnel - City of Abilene, in-house GRP | WEGMAN employees, and subcontractors. GRP | WEGMAN relies

on input from the customer and regularly schedules these meetings to ensure optimal communication and coordination. Our project managers continually communicate all elements of the projects master schedule, construction activity and coordination.

Each progress meeting reviews the following:

- Work scheduling
- Security
- Disruption to normal City operations
- Shutdown of utilities, equipment, or systems
- Housekeeping issues throughout construction
- Safety plan review
- Location of people and items
- Permits

Safety and Compliance Oversight | We are committed to ensuring a safe and compliant work environment for all project participants, including contractors and City of Abilene team members. GRP | WEGMAN will provide comprehensive safety training, conduct regular inspections, and enforce adherence to regulatory requirements and best practices to minimize risks and ensure compliance.

Real-Time Updates with Procore Project Management Software | We utilize Procore project management software to manage the project and will offer system access to the City and our contractors. This software is designed to provide complete control of the project management process including drawing management, meetings, E-mails, photos, request for information, specifications, schedules, submittals, daily logs, inspections, budgets and change management. By providing this high level of quality project management, both the City and the entire construction team will benefit, producing a premium result.

Our team has unmatched experience in facilities with high security needs. Our protocols and personnel will be reviewed and approved by the City.

The Procore cloud-based, secure software allows GRP | WEGMAN to have a central location/database for all project documents. This repository includes drawings, submittals, weekly meeting minutes, daily job logs, project schedule, job progress reports as well as final punch lists. The City will have access to Procore to stay up to date with the status of the project.

Procore helps GRP | WEGMAN boost project accountability and efficiency by mobilizing and streamlining project documentation communication from project inception to project

completion. The real-time data that our subcontractors and customers have access to reduces expensive delays and risks. Procore facilitates unlimited collaboration enabling GRP | WEGMAN to work with anyone, from anywhere, in real-time. Procore allows GRP | WEGMAN to communicate with anyone through a PC, tablet, or android and iOS apps to communicate with mobile devices. Procore has an open system allowing integration with other systems, such as Microsoft Project which GRP | WEGMAN uses for scheduling the many tasks associated with a project.

It is important that a schedule be kept up to date in order to assure that critical timelines are met to keep a project on track. GRP | WEGMAN has many years of experience working with clients and understands that there is a limited window of opportunity to complete a project. Therefore, our project manager understands that the schedule and manpower that a subcontractor commits to is essential to the successful completion of any project or task.

Procore organizes all project drawings and places everything GRP | WEGMAN needs (photos, punch list, RFI's, submittals) into the current drawing set to enable every team member to access and use them when they need it.

Scheduling to Support Smooth City Operations

At GRP | WEGMAN, we understand the unique challenges of implementing an infrastructure improvement project in an educational environment. That's why we've developed a flexible approach tailored to your City's needs.

When working with cities, we always prioritize scheduling work during breaks and off-hours to minimize disruption to your daily activities. Throughout the project, our team maintains open lines of communication, providing weekly progress updates to keep you informed every step of the way. We recognize that each City has its own specific scheduling requirements and potential constraints. Rest assured, our experienced project managers remain adaptable and ready to accommodate any particular needs City of Abilene may have.

Our goal is to deliver a seamless installation experience that aligns with your operational rhythm, ensuring minimal impact on your educational mission while maximizing the benefits of your new solar energy system.

Subcontractor Selection, Management, and Performance

GRP | WEGMAN sometimes relies on the performance of subcontractors for its projects. We understand the importance of subcontractor selection and management and have extensive experience with mechanical, electrical, and other contractors in the area by virtue of our management of similar projects.

Our approach to selecting subcontractors is thorough and strategic, ensuring the highest quality of work and alignment with our project goals. GRP | WEGMAN prioritizes establishing long-term relationships with subcontractors who demonstrate exceptional performance and reliability. Here are the key elements of our subcontractor selection process:

- **Competitive Bidding** | We solicit multiple bids from qualified subcontractors where possible. This allows us to compare proposals and select the best value based on a comprehensive evaluation of cost, quality, and capabilities.

- **High Quality and Long-Term Relationships** | We prioritize subcontractors with a proven track record of delivering high-quality work. Our focus is on building long-term relationships with subcontractors who consistently meet our standards and contribute to successful project outcomes.
- **Local and Diverse Partners** | We actively seek out local and diverse subcontractors who are familiar with our customers' facilities and operational requirements. This approach supports local economies and promotes diversity within our supply chain and allows those most familiar with our customer's facility to perform the work - resulting in a more accurate installation and reduced risk.
- **Preferred Partners** | We maintain a network of preferred partners who have demonstrated their expertise and reliability on previous projects. These partners are often familiar with our customers' facilities, enabling them to deliver tailored and efficient solutions.

In our commitment to community engagement, we prioritize the utilization of local and diverse subcontractors. By partnering with these businesses, we foster economic growth and ensure that our projects reflect the rich tapestry of our communities.

- **Total Cost of Ownership** | Our evaluation process goes beyond initial cost comparisons. We consider the total cost of ownership, including long-term maintenance, operational efficiency, and warranties. This ensures that we select subcontractors who provide the best overall value and sustainability for our projects.
- **Warranties and Guarantees** | We assess the warranties and guarantees offered by subcontractors and suppliers to ensure that their work is backed by solid assurances of quality and performance. This reduces risk and provides additional peace of mind for our customers.

By incorporating these principles into our subcontractor selection process, we ensure that we partner with subcontractors who share our commitment to integrity, excellence, sustainability, and customer satisfaction.

Managing Changes to Scope or Cost Adjustments

As a construction and project management company, we understand that changes in scope and cost adjustments are a natural part of the project lifecycle. Our approach to managing these changes is grounded in transparency, collaboration, and proactive communication. We begin by working closely with our clients to establish clear project goals and expectations from the outset, ensuring that any potential areas of uncertainty or risk are identified early. This helps minimize the likelihood of unexpected changes, but when they do arise, we are fully prepared to handle them efficiently.

When a change in scope or cost is identified, our team conducts a thorough analysis to assess the impact on the overall project. We evaluate how the modification will affect timelines, resources, budget, and any associated risks. Once the analysis is complete, we present our findings to the client along with recommended solutions. Our goal is to ensure that all stakeholders have a clear

understanding of the implications and can make informed decisions. We prioritize maintaining alignment with the original project objectives while adapting to the new requirements in a way that minimizes disruption.

Our change management process is structured to ensure that any adjustments are carefully reviewed, approved, and documented. We use industry-standard tools and best practices to track changes and update project plans accordingly. This ensures that cost fluctuations, design modifications, or shifts in scope are managed in a controlled manner, preventing scope creep and maintaining the integrity of the project. Regular status updates and progress reports keep all parties informed, allowing for continuous feedback and engagement.

Ultimately, our commitment to managing scope and cost changes reflects our dedication to delivering high-quality projects on time and within budget. By fostering a collaborative environment and employing a systematic approach to change management, we can respond to evolving project needs with agility and precision. City of Abilene can trust that we will handle any modifications with professionalism and care, always working to ensure the success of the project.

Issue Resolution and Effective Conflict Resolution

In the event of issues or conflicts arise, our team will employ proactive resolution strategies to address them promptly and effectively. Open dialogue, mediation, and collaborative problem-solving rooted in respect and transparency will be utilized to mitigate disputes and maintain positive working relationships.

OPTIMIZING OUTCOMES WITH PROVEN PERFORMANCE STRATEGIES

MEASUREMENT AND VERIFICATION

Measurement & Verification (M&V) Methods

M&V services are a very important, essential component of a successful energy performance contract. GRP I WEGMAN, M&V begins the day after selection with our in-house M&V team. We follow protocols established by the International Performance Measurement and Verification Protocol (IPMVP). The mission of IPMVP is to develop and promote the use of standardized protocols, methods, and tools to quantify and manage the performance risks and benefits associated with end-use energy efficiency, renewable energy, and water efficiency business.

Our M&V processes and proven track record provides confidence to financing providers that the energy efficiency investments will result in a savings stream sufficient to make debt payments. M&V practices allow project performance risks to be understood, managed, and allocated among the parties.

Our M&V process for Energy Performance Contracts is second nature to us:

1. Baseline Establishment
    - Data Collection | The GRP | WEGMAN team begins by gathering historical data on energy consumption, typically covering a period before the implementation of energy conservation measures (ECMs) to take into account any anomalies that have occurred.
    - Baseline Calculation | Using this data, our team establishes a baseline energy consumption level. This baseline serves as a reference against which post-implementation energy savings will be measured.
2. Implementation of ECMs | The agreed-upon energy conservation measures are implemented within the facility or building. Installation and commissioning of new equipment, upgrades to existing systems, and implementation of operational improvements are conducted according to the project plan.
3. Measurement Period | Following ECM implementation, we monitor energy consumption using utility bills for the defined period.
4. Verification Process
    - Data Analysis | We analyze post-implementation energy consumption data using utility bills, ensuring accuracy and consistency in measurement.
    - Adjustments for Variables | Adjustments are made for factors such as weather variations, changes in occupancy, and other relevant variables that may impact energy use during the measurement period.
    - Comparison to Baseline | The actual energy savings achieved are compared against the established baseline.
5. Reporting and Documentation | At the request of the customer, the GRP | WEGMAN prepares

comprehensive reports detailing the measured energy savings achieved during the measurement period. These reports include detailed calculations, methodologies used, and any adjustments made to ensure transparency and clarity in the verification process.

6. Verification and Approval | The results of the M&V process are reviewed and verified by both the GRP | WEGMAN and customer teams. Upon mutual agreement on the accuracy and validity of the savings calculations, the achieved energy savings are formally documented and approved.

7. Performance Guarantee | We are proud to have always achieved our energy savings and will continue to stand behind our guarantees. If guaranteed savings are not achieved, we will make financial adjustments. There are two methods through which our performance guarantee can be provided, depending on project sizes as well as GRP | WEGMAN and customer leadership preferences:

   - Self-Funded Guarantee (most common): In this approach, we utilize our own financial resources and operational capabilities to provide the performance guarantee.
   - Third-Party Backed Guarantee: We may opt to secure a performance guarantee from a third-party insurer or bonding company.

8. Ongoing Monitoring and Support: Ongoing support may include training facility staff, conducting periodic audits, and recommending further optimization measures to maintain or enhance energy efficiency.

Overall, our M&V process ensures that energy savings are accurately quantified, validated, and documented, providing confidence to our customers and finance partners in achieving energy efficiency goals and financial outcomes.

Measurement & Verification Methods

GRP | WEGMAN utilizes standard Federal Energy Management Program (FEMP) and United States Department of Energy's International Performance Measurement and Verification Protocol guidelines on our projects to measure and verify the energy savings. Depending on the energy conservation measures being implemented, one or more methods of verification may be used on these projects.

Option A | Verification techniques determine savings by measuring the performance of a system before and after a retrofit, either through physical measurement or use of the manufacturer data and multiplying the difference by an agreed-upon or stipulated factor, such as hours of operation.

Option B | Verification techniques are designed for projects where long-term continuous measurement of performance is desired. Metering is conducted at an individual system level, and the measured performance is compared with a baseline to determine the savings.

Option C | Verification techniques involve whole building utility meter analysis, reviewing overall energy use, and identifying the effects of energy projects on a facility. Energy use before and after a retrofit project is compared to determine savings. The measurement of energy consumption and the cost savings associated with installed energy management equipment are a comparison between

the energy consumed during the current calendar period and the baseline calendar period. The baseline calendar period is a consecutive twelve-month period for which reliable data exists prior to the contract execution. It consists of only the energy bills applicable to the buildings under energy management. Once the program is in place, actual energy use is taken from current utility bills.

Option D | Computer models are developed that use calibrated simulations of baseline and post-installation energy use to determine savings.

Energy Savings

Energy savings realized by the City during a given year are calculated by subtracting the current year's amount of energy consumption from the corresponding baseline year's energy consumption. Savings calculations are performed separately for natural gas and electricity and are added together to give the total energy cost savings on an annual basis. Many of our customers realize savings above the amount guaranteed. These excess savings are retained by you - the customer.

Operational Savings

Operational Savings include all the costs the City would spend maintaining and repairing equipment versus those that will be avoided through the implementation of the performance contract. These costs include: all costs incurred to operate and maintain facilities, money the City pays to outside vendors to maintain the various components of its building systems, as well as materials and supplies to maintain their facilities. Operational savings also includes the total savings associated with implementing this project today instead of phasing the project in over numerous years in the future, and the future capital costs avoided by implementing this project now. The amount of capital required will be lowered by implementing a comprehensive project today instead of phasing in projects over several years. Cost avoidance is defined as the avoided expense, in today's dollars, attributable to a retrofit or other management initiative.

We Stand Behind our Guarantee

We are very willing to develop projects and provide written guarantees for the energy and/or operational cost savings. We understand City of Abilene leadership is most interested in 15 year payback schedules. If a performance guarantee isn't being met, we stand by our agreement and will work with you to make financial adjustments to reimburse the City for the shortfall. Then, we will work together to find the root cause of the missed energy guarantee and develop a plan to ensure future energy savings achievement.

No Need to Wait for M&V Reports

GRP | WEGMAN leverages a leading-edge energy management and building optimization platform that provides comprehensive facility control and real-time insights. The platform delivers 24/7 measurement and verification (M&V) capabilities through three key pillars: Monitoring & Control for real-time equipment performance tracking and automated set point management; Analytics & Optimization powered by machine learning algorithms that detect faults and identify energy-saving opportunities; and Reporting & Visualization through customizable dashboards that transform

complex data into actionable insights. This integrated approach enables the City to continuously optimize building performance, verify energy savings, and make data-driven decisions to meet your sustainability goals. We are thrilled to show the system to you.

Prompt Attention and Effective Resolution to Warranty Issues

At GRP | WEGMAN, our commitment to our customers extends beyond project completion. We understand the importance of providing ongoing support and assistance, particularly when it comes to addressing warranty issues. For the City of Abilene project, we pledge to support the City in resolving any warranty-related concerns promptly and effectively. Our approach to supporting the City with warranty issues includes the following key components:

- **Clear Warranty Coverage** | We will provide the City with comprehensive documentation outlining the warranty coverage for all aspects of the project, including materials, workmanship, and systems. This transparency ensures that the City is fully informed about their rights and entitlements under the warranty agreement.
- **Responsive Communication** | In the event of any warranty issues or concerns, our team will maintain open and responsive communication channels with the City. We will establish dedicated points of contact and procedures for reporting and addressing warranty claims promptly. Our goal is to ensure that the City's inquiries and requests are acknowledged and addressed in a timely manner.
- **Thorough Investigation and Resolution** | Upon receiving a warranty claim from the City, our team will conduct a thorough investigation to identify the root cause of the issue. We will work diligently to assess the validity of the claim, determine the appropriate course of action, and expedite resolution efforts. Whether it involves repair, replacement, or other remedial measures, we are committed to resolving warranty issues swiftly and satisfactorily.
- **Documentation and Follow-Up** | Throughout the warranty process, we will maintain detailed documentation of all communications, actions taken, and outcomes achieved. This ensures accountability and transparency, facilitating efficient follow-up and tracking of warranty claims until their resolution. Our team will remain engaged with the City every step of the way, providing regular updates and status reports as needed.

GRP | WEGMAN is dedicated to supporting City of Abilene with any warranty issues that may arise following the completion of the project. Our proactive and customer-centric approach ensures that the City receives prompt attention and effective resolution.

Expert, Affordable, and Responsive Ongoing Maintenance & Service

Operations have to run seamlessly. We are here as your trusted partner - even after your facility improvement measures have been installed. With our operations and maintenance services you can receive monthly utility savings reporting, maintenance checks, and be supported by a team of experts who can monitor some technical components remotely. This service takes the burden off your operations teams.

We've been a trusted install, service, and maintenance partner for organizations for over 70 years. Our experience in high quality work, timely response and billing are second to none. We can perform O&M services ourselves or work with the City's trusted partners. If you select us for O&M services, here's what our service team can do for you:

- **Highly Qualified and Trained Workforce** | Whether it's a brand new install or routine maintenance, no two service calls are the same. We qualify and train some of the best in the industry to handle any unit, machine or problem they may face. We hire the best so you don't have to.
- **Timely, Clear Invoicing and Billing** | A large frustration in the service industry is how companies are often behind on billing. We use a billing system that services our clients needs first, keeping them in the loop on everything.
- **Guaranteed Response Times** | Our Preventative Maintenance customers enjoy lightning fast response times that keep everyone happy. We'll fix what you need as quick as possible so you can take care of what matters most.
- **Get It Right the First Time** | It goes without saying, but we pride ourselves in no second trips. You deserve high-quality service work that gets it right the first time, and we deliver it.

Solar PV that is Built to Last

Our solar PV systems are designed and constructed for optimal durability and performance. From our component procurement selections and careful design considerations to our installation procedures and safety protocols, we work diligently throughout every stage of our process so that customers are provided with a robust foundation to help them realize decades of clean, reliable, and cost-effective power.

While our systems require minimal day-to-day upkeep, conducting periodic preventative maintenance and enlisting operational support for the system over its useful life provides customers with complete assurance of the asset's ongoing performance. Our Solar PV O&M Plan is a time-saving, cost-effective tool that allows customers to reap maximum financial benefit from their system investment.

O&M Plan | The Key to Long-Term Performance Protection

We view O&M support as an important extension of our long-term relationship with the City of Abilene. Our program includes advanced system monitoring and troubleshooting, warranty support, periodic system reporting, and onsite service capabilities to give customers maximum peace of mind. The program includes:

Staff Training| Upon commissioning, we provide City staff with solar PV training so that facility managers and other onsite personnel can easily and cost-effectively perform routine equipment inspections and simple care procedures unassisted. When Abilene team members have questions about their systems or need additional training for new employees, our PV technicians are available to provide live, video, or phone-based assistance and training.

4 | PROJECT MANAGEMENT PLAN

Successfully upgrading City facilities is about more than simply improving mechanical systems or the building itself. It is also about equipping the staff with the tools they need to maintain and operate the systems successfully for the long term. Proper comprehensive training of the City's staff may include the following:

- Overview and explanation of basic systems and design
- Service and maintenance of major mechanical systems
- Operations of building automation and control systems
- Remote monitoring, diagnostics and troubleshooting to support on-site staff

We involve the maintenance staff starting with the installation phase, so they have a clear understanding of the systems. The maintenance staff will also be included during the factory start up. These programs will focus on the necessary operations and service requirements needed after the performance contract is completed. We provide both on-site training and off-site training to you and your staff or whom you deem necessary with factory representatives. The staff will be provided with full maintenance manuals, software and interface tools to be able to provide maintenance on the systems. This successful training will ensure the persistence of energy savings, as well as help to maintain the comfort and control of the facilities.

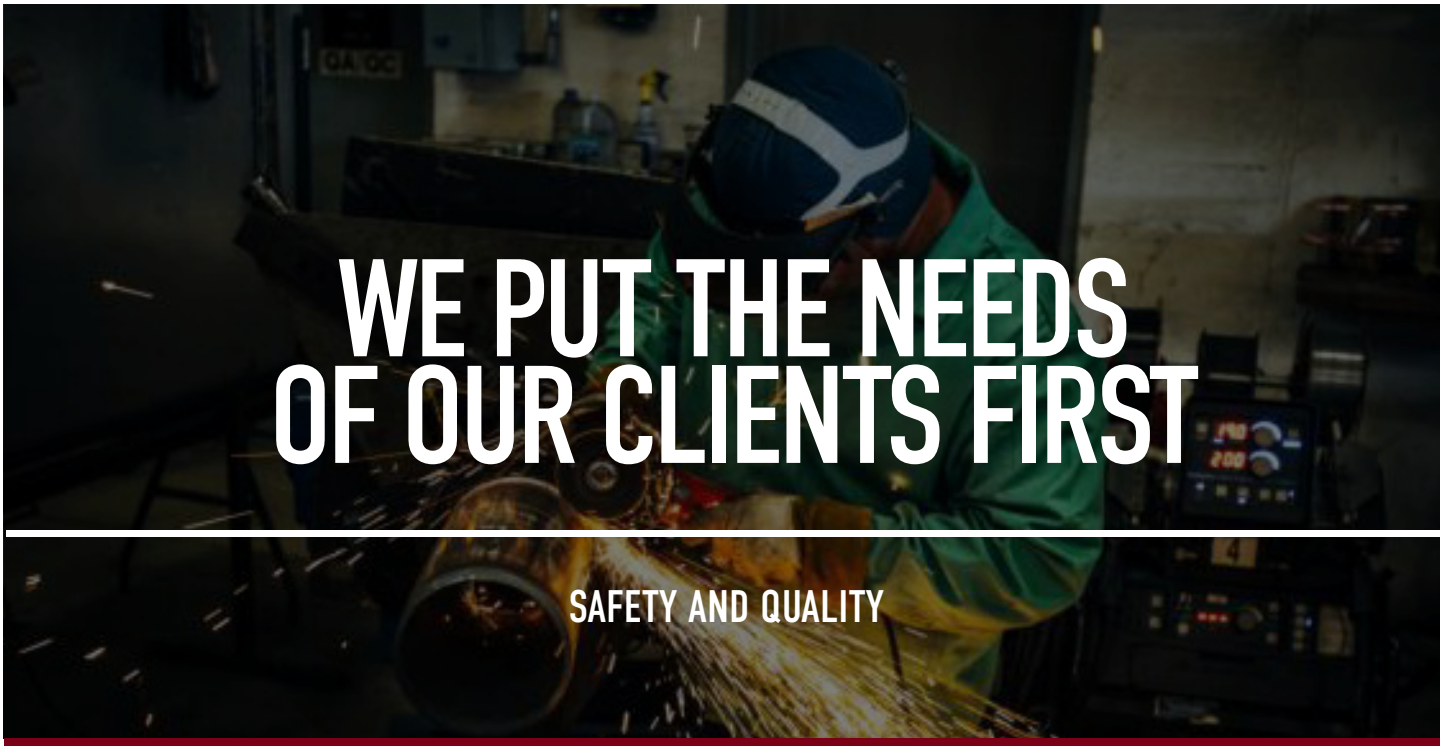
Once improvements are implemented, we train your personnel to maximize the benefits of those improvements. Knowledgeable staff help ensure the sustainability of a savings project. Periodically, we will revisit the training program's effectiveness and modify as necessary with the customer, so they are tailored as needed and available to the personnel who will be responsible for operating and maintaining the equipment. Training manuals will contain as-built prints, OEM operations guides, OEM maintenance manuals and OEM summaries of recommended service.

Continuous Performance Monitoring | O&M includes an annual subscription to a cloud-based, remote system monitoring platform. This sophisticated tool continuously communicates energy production data and other system information to our O&M team as well as the Abilene facilities team. If any problems or power disruptions arise, the system will generate an error notification, allowing our PV technicians to further investigate the issue and address it with the City when needed.

This system also offers customizable and visually appealing displays the City can use in its facilities to showcase the ongoing environmental benefits of this solar investment.

Root-Cause Analysis | Whenever a potential issue or an error arises, our team has access to myriad tools to diagnose and even resolve some problems remotely. For example, if a string of solar panels underperforms over a set period, technicians can examine inverter data to pinpoint the source of the problem. Taking a proactive and skilled approach provides the greatest insurance for the City.

Reporting and Communication | Our O&M team provides ongoing, proactive communication. O&M customers can expect regular production and performance reporting and preventative maintenance reminders.



WE PUT THE NEEDS OF OUR CLIENTS FIRST

SAFETY AND QUALITY

"I PLEDGE TO NOT WALK BY ANY SAFETY ISSUE WITHOUT DOING SOMETHING ABOUT IT IMMEDIATELY"

At the core of our GRP|WEGMAN culture is an unwavering commitment to safety, embodied in this pledge that every member of our team lives by.

This isn't just a slogan – it's a fundamental principle that guides our actions every day. From our seasoned project managers to our newest apprentices, this pledge is ingrained in our culture, visible on our job sites, and reinforced in our daily operations.

It empowers every employee to be a proactive guardian of safety, fostering a environment where vigilance is second nature and collective responsibility is the norm.

This cultural cornerstone ensures that when we step onto a site, we bring with us not just solar expertise, but an uncompromising dedication to the well-being of every resident, staff member, and colleague.

Prioritizing Safety

Safety is paramount when installing energy savings projects on city grounds, where the well-being of residents, staff, and installers intersects with complex technical work. Municipal environments present unique challenges, from maintaining a secure perimeter around work areas to minimizing disruptions during hours of operations.

Our team employs rigorous safety protocols that go beyond industry standards, recognizing that we're not just installing lighting, windows, doors, or solar panels – we're safeguarding a learning environment. This includes comprehensive risk assessments, strict adherence to fall protection measures, and meticulous equipment handling procedures.

We also coordinate closely with site leadership to schedule work during off-hours or breaks when possible, reducing potential safety risks to the community. It's important that the path to sustainable energy is paved with the utmost care for safety.

Safety Practices

On our team, safety is a top priority. Our safety program is designed to comply with all applicable federal, state, and local safety regulations, including OSHA standards. Below are key elements of our safety practices:

Comprehensive Safety Training

- Initial Training | All employees undergo initial safety training when they join the company, covering basic safety protocols, hazard recognition, and emergency procedures.
- Ongoing Training | Regular refresher courses and specific training sessions are conducted to keep employees updated on the latest safety practices and regulatory changes.
- Specialized Training | Employees working on specialized tasks receive additional training tailored to their specific roles, such as handling hazardous materials, working at heights, and electrical safety.

GRP | WEGMAN
NOT ON MY WATCH

Our safety program integrates safety measures in all aspects of our work.

In our 70+ years serving customers, we are proud of our team members for creating and thriving in a culture of safety first.

Safety Meetings and Toolbox Talks

- Weekly Safety Meetings | Held to discuss ongoing safety concerns, review incidents, and reinforce best practices.
- Toolbox Talks | Short, focused safety briefings are conducted at the beginning of each shift to address specific hazards related to the day's tasks.

Site Safety Inspections

- Regular Inspections | Routine safety inspections are carried out at all project sites to identify potential hazards and ensure compliance with safety standards.
- Safety Audits | Periodic safety audits are conducted by our safety team to evaluate the effectiveness of our safety program and identify areas for improvement.

Personal Protective Equipment (PPE)

- Provision of PPE | All necessary personal protective equipment, such as helmets, gloves, goggles, and high-visibility clothing, is provided to employees.
- Enforcement | Strict enforcement of PPE usage is maintained at all times on the job site.

Incident Reporting and Investigation

- Immediate Reporting | Employees are encouraged to report any incidents or near-misses immediately.
- Thorough Investigation | All reported incidents are thoroughly investigated to determine root causes and implement corrective actions to prevent recurrence.

Safety Recognition

GRP | WEGMAN has accumulated safety recognitions and awards for our relentless dedication to minimizing hazards and keeping everyone safe. A few awards we've received include:

- 2019 Commendation Award, 70% Below the National Average Lost Time Accidents Over 150,000 Work Hours - Southern Missouri Builders Association (SIBA)
- 2020 Occupational Safety & Health Excellence Award for Construction - SIOSH/ Safetycon
- 2020 Zero Injury - National Electrical Contractors Association (NECA)
- 2020 Safety Excellence - NECA
- 2020 Certificate of Commendation for Excellent Safety Record - Association of General Contractors of America (AGCA)
- 2020 Merit Award, Zero Lost Time Accidents over 150,000 Work Hours - SIBA
- 2021 Merit Award, Zero Lost Time Accidents over 150,000 Work Hours - SIBA
- 2021 Excellence Award, 5 years Zero Lost Time - SIBA
- 2021 Merit Award, Zero Lost Time Accidents 60,000-150,000 Work Hours - SIBA
- 2021 Recognition of Achievement Safety Excellence - NECA

- 2022 Merit Award Zero Lost Time Accidents Over 150,000 Work Hours - SIBA
- 2020 Technology Award in Existing Educational Buildings, Runner Up – ASHRAE St. Louis Chapter
- 2021 Recognition of Achievement in Safety Excellence - NECA
- 2022 BizSavers Program, Top Performing Trade Ally – Ameren Missouri

Safety and Compliance Oversight

We are committed to ensuring a safe and compliant work environment for all project participants, including contractors and City team members. GRP | WEGMAN will provide comprehensive safety training, conduct regular inspections, and enforce adherence to regulatory requirements and best practices to minimize risks and ensure compliance.

Additional Service Offerings for City Needs

GRP | WEGMAN has grown in its offerings by responding to the needs of our customers. Some additional services City of Abilene may benefit from include:

Offering	Goals We Help Achieve	Potential Application to City of Abilene
Solar Solutions	• Lower utility costs • Easy install • Sustainable energy source • Community pride in renewables	• Supply side energy savings opportunity
Battery Energy Storage Solutions	• Resiliency and grid stabilization • Peak demand management	• Emergency backup power • Cost savings
Strategic Facility Planning	• Optimizing space utilization • Support City objectives • Future-proofing infrastructure • Long-term cost management	• Long-term facility master plan • Space planning and allocation • Risk management plans • Technology integration
Building Automation & Optimization	• Energy efficiency optimization • Occupant comfort	• Data-driven, machine learning offerings to optimize energy use • Real-time energy reporting
Lowry Electric	• Commercial electrician services • Electrical construction & maintenance • Telecommunications • High- and low-voltage	• Pole line maintenance • Other telecom or electrical needs
Operations and Maintenance Service	• 24/7 call system with fast response times • Smooth operations • Reliable, experienced service pros	• Ongoing service needs

Control Optimization Technologies | Control optimization technologies for building automation systems (BAS) are advanced techniques that enhance the performance, efficiency, and functionality of various building systems. This technology can enable City of Abilene to make data-informed decisions throughout the project and:

- **Unify, simplify, and optimize** | Bring data from disparate systems into one centralized platform; monitor HVAC, water, occupancy, natural gas, work orders, chilled water, electricity, steam, and alerts.
- **Optimize current assets** | Gain actionable insights, streamline work orders and occupancy management, and effectively expand the capabilities of your team.
- **Harness machine learned insights** | Unlock operational efficiencies utilizing data trends to recommend and enhance current usage for optimized performance.
- **Put data into context** | Transform raw data into meaningful visualizations to better understand building dynamics and enable retrospective analysis for trend identification and anomaly detection.

Tapping Control Optimization and Automation will put City of Abilene **on the leading edge for all of Missouri to learn from.**

Imagine presenting your project impact at the next leadership conference.

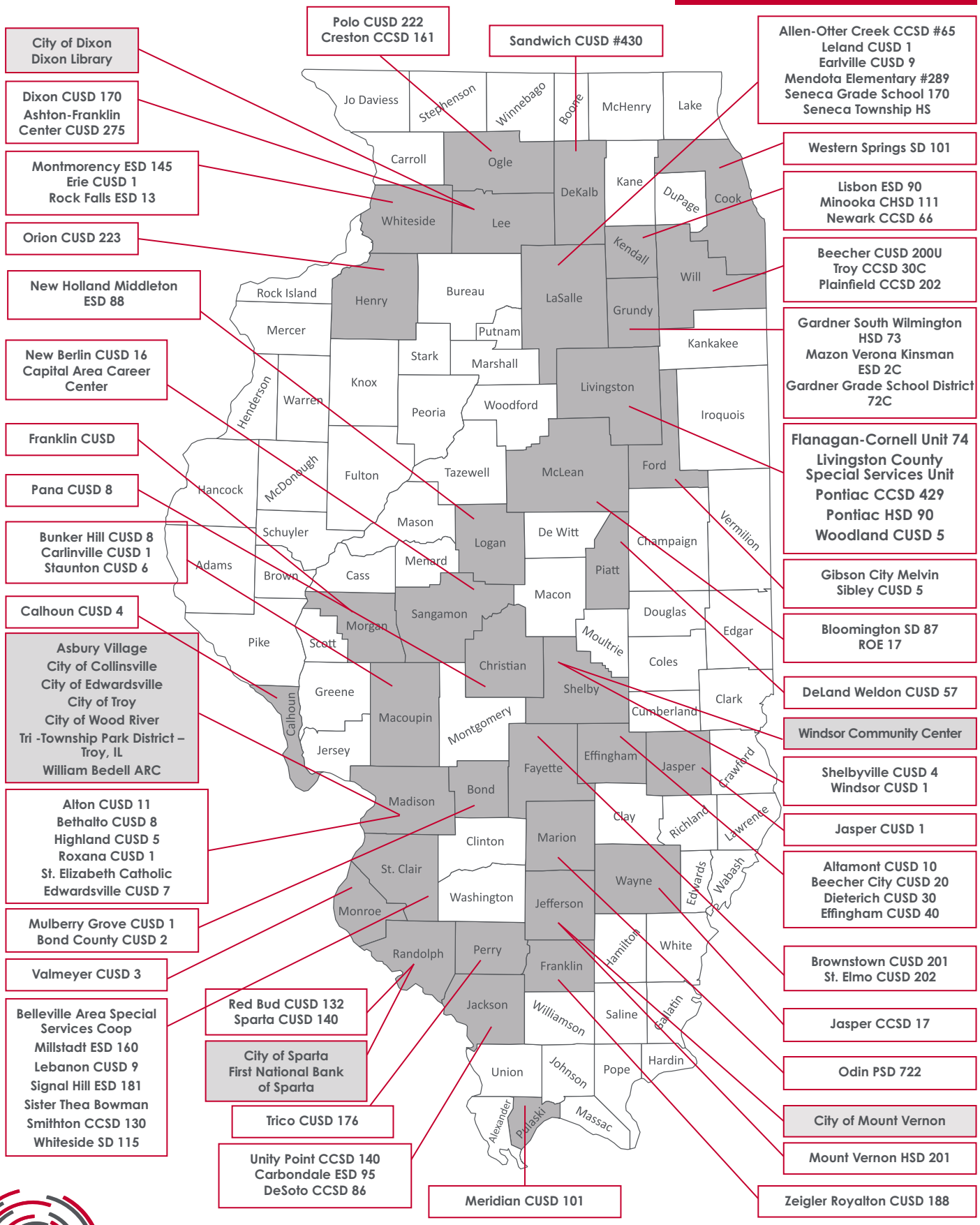
PROVEN SUCCESS IN ENERGY INNOVATION

5 | PROJECT EXPERIENCE

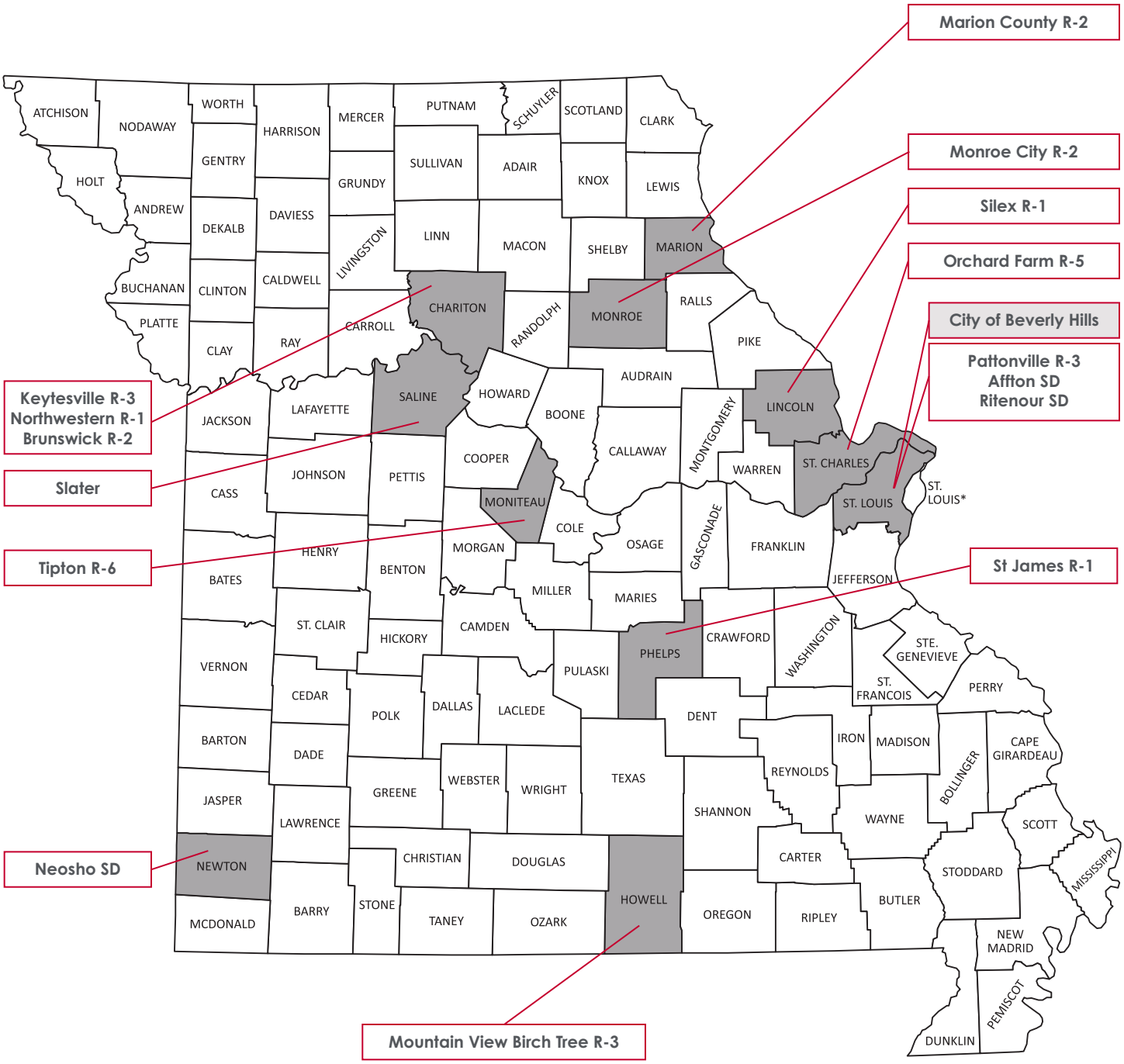
GRP | WEGMAN has been performing guaranteed projects in Illinois since 2012 and Missouri since 2016, consistently delivering results by putting customers' needs first. Now, we're excited to announce our expansion into Kansas with the addition of experienced local team members who bring deep understanding of Kansas municipalities, utilities, and energy markets. Our Kansas-based professionals join our established team of energy experts, combining regional insights with our proven processes and track record of success.

When customers choose us, they know they have a reliable partner whose projects will deliver savings as promised for decades to come. We've strategically built a team that understands local challenges, regulations, and opportunities unique to Kansas communities. This local expertise, backed by our years of successful guaranteed energy projects across the Midwest, ensures that Kansas municipalities receive both the personal attention of a local team and the proven capabilities of an established energy services company.

ILLINOIS
CUSTOMER MAP



MISSOURI
CUSTOMER MAP



ORCHARD FARM SCHOOL DISTRICT
ST. CHARLES, MO

$5.5 MILLION PROJECT ADDRESSES DEFERRED MAINTENANCE

OUTCOMES

- Deferred Maintenance
- Energy Savings
- Transition from Liquid Propane to Natural Gas

PROJECT FOOTPRINT

- 3 Schools
- 276,000 square feet

GUARANTEED ANNUAL SAVINGS

- $80,127

FACILITY IMPROVEMENT MEASURES

- HVAC
- Controls
- Roofing
- LED Interior & Exterior Lighting
- Natural Gas Installation
- Dual Fuel Heat Pump Technology

15 Year Contract

In 2019, Orchard Farm School District in St. Charles, MO, embarked on a $5.5 million energy savings and deferred maintenance project across three schools, covering 276,000 square feet of facilities. The project aimed to address aging infrastructure while improving energy efficiency and reducing operational costs. Key facility improvement measures included upgrading HVAC systems, installing advanced controls, replacing roofing, converting to energy-efficient LED lighting, and switching to natural gas for enhanced sustainability.

One of the most notable achievements of the project was the removal and replacement of 110 rooftop units (RTUs), which was completed in just one day with the aid of a helicopter. The new RTUs contained dual fuel heat pump technology.

As part of the project, the district worked with Spire Energy to install 2 miles of natural gas pipeline to the district, eliminating the need for liquid propane gas. This transition to natural gas further enhanced the district's sustainability efforts and operational efficiencies.

Construction began in May 2019 and concluded by November of the same year - on-schedule and on-budget. The district is now enjoying guaranteed annual savings of $80,127, making the project a critical step toward enhancing the learning environment while responsibly managing resources and costs.

CUSTOMER DETAIL

With a mission to empower each student to achieve personal success and contribute to the community, Orchard Farm School District in St. Charles, MO, serves 2,100 students across four schools, supported by over 300 dedicated faculty and staff members.

Contact | Dr. Wade Steinhoff, Superintendent
636.925.5450 | wsteinhoff@ofr5.com

RITENOUR SCHOOL DISTRICT
ST. LOUIS, MO

$8.6 MILLION PROJECT DELIVERS ENERGY SAVINGS FOR 10 SCHOOLS

OUTCOMES

- Energy and Cost Savings
- Student Attraction and Retention

PROJECT FOOTPRINT

- 10 Schools
- 991,131 square feet

GUARANTEED ANNUAL SAVINGS

- $151,165

FACILITY IMPROVEMENT MEASURES

- HVAC
- Controls
- LED Lighting
- Art Studio Renovation
- Football Stadium Lighting
- Building Envelope
- Flooring

15 Year Contract

Ritenour School District in St. Louis, MO, launched an $8.6 million energy savings initiative in September 2022, aimed at enhancing learning environments, reducing operational costs, and improving facility efficiency across its 10 schools, covering 991,131 square feet. This multi-phase, comprehensive project that continues to today is addressing critical areas such as HVAC system upgrades, installation of energy-efficient LED lighting, advanced controls, and improvements to the building envelope. Additionally, key enhancements included renovations to the art studio, flooring replacements, and new lighting for the football stadium.

The district is reaping the benefits of $151,165 in guaranteed annual savings, which directly supports its mission of empowering student success. Beyond energy and cost savings, the project has positively impacted student attraction and retention by creating more comfortable and modern learning environments. The upgrades ensure that Ritenour School District continues to offer top-quality education in sustainable, state-of-the-art facilities that reflect the district's commitment to both academic excellence and environmental stewardship.

CUSTOMER DETAIL

Ritenour School District in St. Louis, MO, serves 6,300 students across 10 schools, with a mission to ensure every student is empowered to learn and achieve academic success, supported by over 500 dedicated faculty and staff.

Contact | Michael Smith, Director of Operations

314.493.6075 | smithm@ritenourschools.org

PATTONVILLE R-3 SCHOOL DISTRICT
ST. ANN, MO

$11.5 MILLION ENERGY SAVINGS INITIATIVE POWERS SUSTAINABILITY AND STUDENT SUCCESS

OUTCOMES

- Energy Savings
- Cost Savings

PROJECT FOOTPRINT

- 12 Facilities
- 528,639 square feet

GUARANTEED ANNUAL SAVINGS

- $193,784

FACILITY IMPROVEMENT MEASURES

- HVAC
- Controls
- Roofing
- LED Interior & Exterior Lighting
- Electrical Upgrades
- Boiler Replacement

15 Year Contract

Pattonville R-3 School District in St. Ann, MO, has undertaken a series of energy savings projects from February 2016 through May 2023, totaling $11.5 million. Spanning 12 facilities and covering 528,639 square feet, the initiative was designed to enhance energy efficiency and reduce operational costs across the district. Facility improvement measures included comprehensive HVAC upgrades, advanced controls, new roofing, lighting improvements, electrical upgrades, and boiler replacements, addressing both sustainability and long-term infrastructure needs.

With guaranteed annual savings of $193,784, these projects not only deliver significant cost reductions but also enhance the learning environment for students and staff. By modernizing its facilities and ensuring operational efficiency, Pattonville R-3 School District is reinforcing its commitment to academic excellence while responsibly managing its resources. This long-term investment in energy savings strengthens the district's ability to focus on providing quality education within a sustainable, forward-thinking framework.

CUSTOMER DETAIL

Pattonville R-3 School District in St. Louis, MO, educates around 5,500 students in 10 schools, with a mission to inspire every student to achieve their full potential and become responsible, lifelong learners.

Contact | David Winslow, Director of Facilities
314.213.8040 | dwinslow@psdr3.org

ST. JAMES R-1 SCHOOL DISTRICT
ST. JAMES, MO

IMPROVING ACCESSIBILITY & SUSTAINABILITY VIA $5.9 MILLION SCHOOL STRATEGIC INITIATIVE

OUTCOMES

- Improved Accessibility
- Energy Savings
- Modern & Healthy Buildings

PROJECT FOOTPRINT

- 3 Facilities
- 295,000 square feet

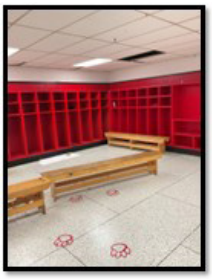
GUARANTEED ANNUAL SAVINGS

- $43,749

FACILITY IMPROVEMENT MEASURES

- HVAC
- Controls
- Roofing
- LED Interior & Exterior Lighting
- Flooring
- Locker Room Remodel
- Weight Room Remodel

15 Year Contract



St. James R-1 School District in Missouri embarked on a $5.9 million infrastructure initiative spanning three phases from July 2021 to October 2023, targeting energy efficiency, healthier building environments, and improved accessibility across three facilities. The project introduced comprehensive facility improvement measures, including HVAC upgrades, advanced controls, new roofing, LED lighting for both interior and exterior spaces, flooring upgrades, and remodels of the locker room and weight room to enhance functionality and accessibility.

With part of the project funded through guaranteed annual savings, the district significantly reduced operational costs while improving the comfort and health of its facilities. These updates align with the district's mission to equip students with the skills and knowledge needed for future success. By investing in modern infrastructure and energy-efficient solutions, St. James R-1 School District is creating sustainable, safe, and accessible environments that support student learning and community well-being.

CUSTOMER DETAIL

With a mission to equip students with the skills and knowledge to be successful in an ever-changing world, St. James R-1 School District in Missouri serves 1,900 students across five schools.

Contact | Tim Webster, Superintendent
573.265.2300 | twebster@stjschools.org

BROWNSTOWN CONSOLIDATED INDEPENDENT SCHOOL DISTRICT #201 BROWNSTOWN, IL

$5.2M SOLAR AND ENERGY SAVINGS PROJECT

OUTCOMES

- Cost & Energy Savings
- Sustainability Goals

PROJECT FOOTPRINT

- 2 Facilities
- 193,000 Square Feet

GUARANTEED ANNUAL SAVINGS

- $381,174

FACILITY IMPROVEMENT MEASURES

- Ground-mount Solar
- Roofing
- Plumbing
- Restroom Renovation
- Storm Drain Pipe Install
- Building Envelope
- Tuckpointing
- Interior Renovations
- Electrical
- Boilers
- Parking Lot

SOLAR DETAILS

- 394,869 kWh Annual Production
- 103% Offset
- <5 Year Payback

20 Year Contract

In a major step toward sustainability and long-term energy and cost savings, Brownstown CUSD #201 in Illinois completed an energy savings and solar project within their elementary school and high school.

The multi-phase project, which began in May 2020 and concluded in November 2023, focused on both renewable energy and critical infrastructure upgrades to enhance the learning environment and reduce operating costs. Key facility improvements included the installation of a ground-mount solar system, roofing upgrades, restroom renovations, plumbing and storm drain updates, and electrical enhancements. Additional work, such as tuckpointing, door installation, and other building envelope improvements, ensured the longevity and efficiency of the district's facilities.

With guaranteed annual savings of $381,174, the project not only addressed immediate infrastructure needs but also helped the district meet its sustainability goals. The solar installation, with a payback period of fewer than 5 years, provides a renewable energy source, reducing the district's carbon footprint while cutting energy costs. Interior renovations and upgrades to boilers, parking lots, and other systems have further improved both the functionality and energy efficiency of the district's buildings, positioning the district as a leader in environmental responsibility and cost management.

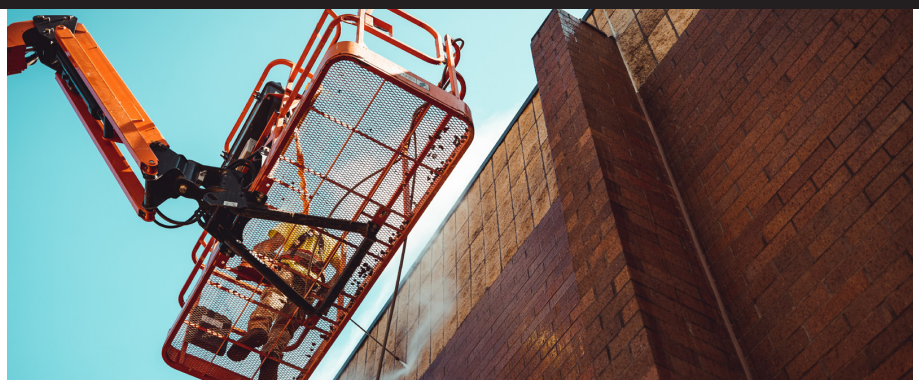
CUSTOMER DETAIL

Brownstown CUSD 201 in Illinois serves 350 students across two schools, with a mission to provide a quality education that prepares students for future success.

Contact | Mike Shackelford, Former Superintendent
217.663.5051 | mike.shackelford@caseywestfield.org

CITY HALL
BEVERLY HILLS, MO

$562K MODERNIZATION PROJECT



OUTCOMES

- Improve Accessibility
- Upgrade and Modernize City Hall
- Cost & Energy Savings
- Sustainability Goals
- Increase Leasable Square Footage

PROJECT FOOTPRINT

- 1 City Hall

GUARANTEED ANNUAL SAVINGS

- $53,000 Energy
- $508,000 Operations/ Revenue

FACILITY IMPROVEMENT MEASURES

- Full Renovation
- Building envelope
- HVAC upgrade
- Roofing
- Upgrade Electrical
- Solar - Roof Mounted
- LED Lighting
- LED Marquis Signage

15 Year Contract

The 2021 renovation of Beverly Hills, Missouri's City Hall, executed by GRP | WEGMAN, represented a comprehensive modernization effort that transformed the municipal building into a more efficient, accessible, and sustainable facility.

The project encompassed multiple strategic improvements, including a complete interior renovation, building envelope upgrade, new HVAC systems, roofing work, and electrical system modernization. These improvements were designed to enhance public accessibility while increasing the building's leasable square footage.

Notable sustainable features included the installation of roof-mounted solar panels and facility-wide LED lighting upgrades, including new marquee signage. The renovation has delivered significant economic benefits, generating guaranteed annual savings, along with operational savings, and an increase in city revenue.

WATCH Mayor Jackson talks about working with us to transform City Hall.

CUSTOMER DETAIL

Beverly Hills, MO is a city of less than 1,000 residents located in St. Louis County.

Contact | Brian Jackson, Mayor | 614.382.6544

SELECT THE BEST VALUE AND THE BEST RESULTS

6 | BEST VALUE

6 | BEST VALUE

UNMATCHED VALUE: THE GRP | WEGMAN ADVANTAGE

As you evaluate potential partners for your IGA and energy program, we welcome the opportunity to demonstrate why cities across the Midwest have chosen GRP | WEGMAN to deliver their energy and infrastructure projects - and why cities in Kansas will being doing the same. We understand that selecting an energy services partner is a significant decision that will impact your community for decades to come. Here's why GRP | WEGMAN offers unmatched value for the City of Abilene:

1. Comprehensive Energy Strategy That Pays for Itself

Unlike traditional ESCOs that focus solely on efficiency, we maximize your returns by addressing both energy supply and demand. Our innovative approach combines solar power generation (heavily subsidized by federal incentives and grants) with guaranteed energy savings from facility improvements. This dual strategy creates multiple revenue streams: immediate utility savings, new income from power generation, and reduced maintenance costs. The solar investment typically achieves payback in under seven years, after which it generates significant revenue to fund citywide initiatives. This means Abilene can address critical infrastructure needs while creating a sustainable funding source for future projects.

2. Direct Implementation Model Maximizes Taxpayer Value

Our streamlined business model eliminates the excessive overhead and multiple profit margins typical in the industry. While other companies layer on fees, we maintain a lean structure that delivers more value directly to your community. Our local Kansas team executes critical services in-house, and when we do partner with subcontractors, we maintain direct relationships that ensure competitive pricing and quality control. Our approach typically delivers 15-20% more project scope for the same investment compared to traditional energy service companies.

3. Local Expertise Backed by Proven Performance

We've strategically built our Kansas team by recruiting experienced professionals who understand your specific challenges and opportunities. These local experts bring decades of energy performance contracting experience and deep knowledge of Kansas utilities, regulations, and incentive programs. This local presence is backed by our company's strong track record of successful projects in Illinois and Missouri, where we've consistently delivered on our guarantees since 2012. When you work with us, you get the best of both worlds: a dedicated local team, supported by an established company with proven processes and impeccable references.

4. Risk-Free Financial Results for Long-Term Budget Stability

Critical for any City leadership, our projects come with ironclad performance guarantees backed by our strong balance sheet. We're so confident in our ability to deliver results that we write a check to cover any shortfall in guaranteed savings. This eliminates the budget uncertainty that often complicates large infrastructure projects. Plus, our sophisticated measurement and verification systems provide real-time monitoring of savings and performance, giving city leadership the data needed to demonstrate responsible stewardship of taxpayer resources.

We welcome the opportunity to dive deeper into any of these areas and provide detailed documentation of our capabilities, references, and approach. Our team is ready to conduct a preliminary analysis of your facilities and utility data to demonstrate the specific value we can deliver. As you move forward with partner selection, we're confident that our combination of local expertise, proven performance, and comprehensive approach will demonstrate why GRP | WEGMAN is the right choice for the City of Abilene's energy future.

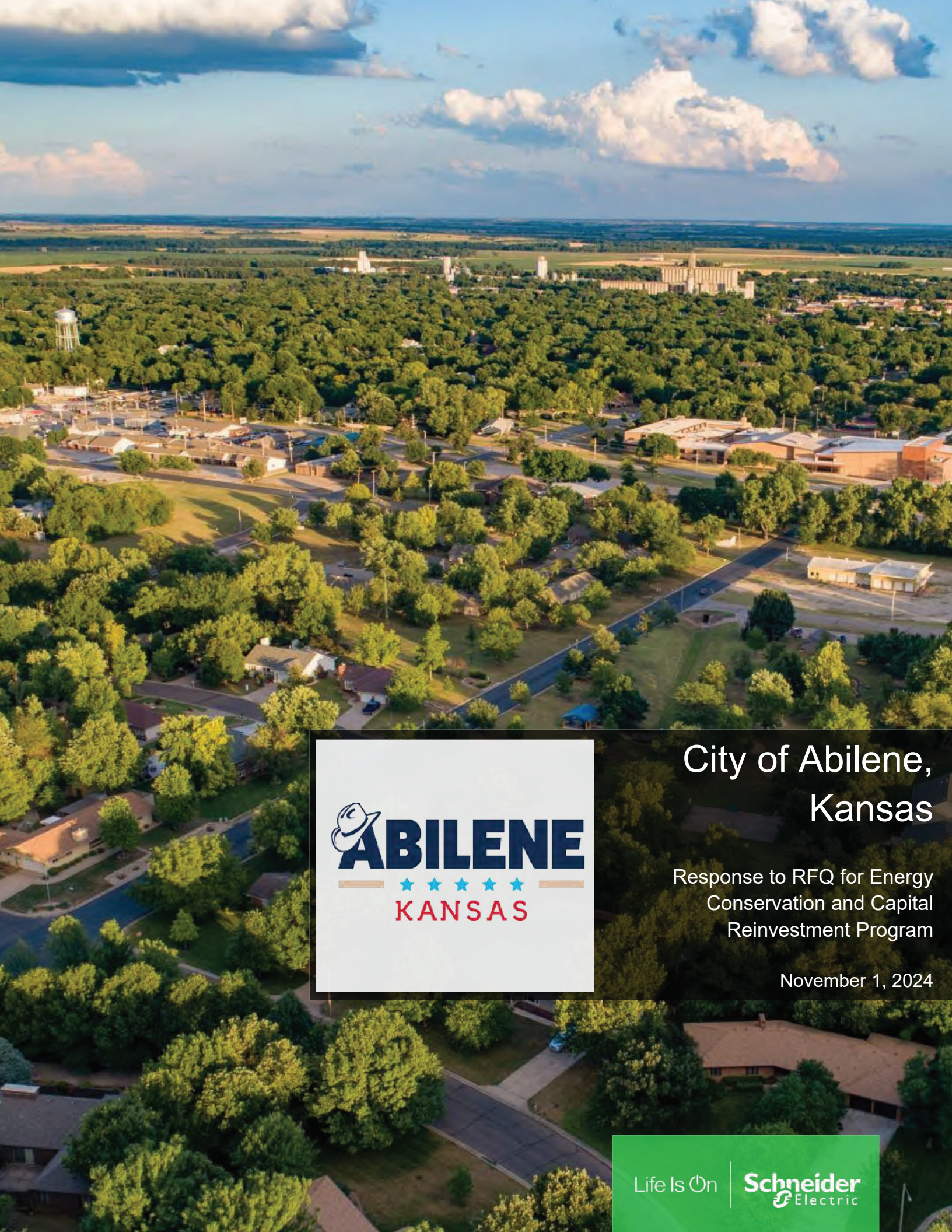
CONTACT US

Vince Ardito
Business Development Director
Innovative Facility & Energy Solutions

GRP | WEGMAN Company
1 Mechanical Drive, Bethalto, IL 62010

Cell: 816-824-9808
Fax: 618-258-9090
vardito@grpwegman.com

We look forward to hearing from you.



City of Abilene, Kansas

Response to RFQ for Energy Conservation and Capital Reinvestment Program

November 1, 2024

Life Is On | Schneider Electric

November 1, 2024
Ron Marsh, City Manager
City of Abilene

Dear Mr. Marsh,

Included in this proposal is an exciting opportunity to strategically reinvest your energy and operational dollars into infrastructure improvements and technology enhancements that will transform your City. With this project, Schneider Electric can help City of Abilene accomplish more--and spend less.

On behalf of Schneider Electric, I am pleased to submit Qualifications for an Energy Conservation and Capital Reinvestment Program. I will be the primary contact for this response and am authorized to supply any clarification needed; my contact information is provided below. Schneider Electric will act as the prime contractor, lead integrator, and turnkey provider of services outlined in this proposal and will comply with all applicable laws and requirements of the State of Kansas.

The Schneider Electric Difference

After discussions with yourself and investing many hours to understand the needs of Abilene, we're confident that Schneider Electric is the long-term energy partner that can make your vision a reality. As you review this response, we hope you'll see how we stand apart from others with these key Schneider attributes:

Excellence

With over $1,377,627,885 of repeat business from satisfied customers, we have cultivated an established track record you can count on. **Schneider Electric has been rated the #1 Energy Services Company (ESCO) since 2017** and holds the highest level of accreditation as an Energy Service Provider (ESP) from the National Association of Energy Service Companies (NAESCO).

Integrity

Abilene can count on authentic savings guarantees and transparent results. **Rated by Ethisphere in 2023 as one of the "World's Most Ethical Companies,"** we take our commitments very seriously. If your project doesn't achieve the savings we promised, Schneider Electric will write a shortfall check. We have a vested interest in making your project a success.

Innovative Approach

It is important to us that your project not only saves you energy, but also encompasses everything you envision. We first listen to your needs and then strive to bring innovative options to the table that are usually outside the ability or scope of most of our competitors.

Schneider Electric has read the contents associated with this RFQ, and we certify the veracity of our submitted response. For us, this is not just a project, but the beginning of a long-standing partnership between our organizations. We look forward to serving City of Abilene with excellence.

Sincerely,

Peter Hinkle
Program Manager
15200 Santa Fe Trail Dr. Ste. 204.
Lenexa, KS 66219
P: 913.433.6609
E: Peter.Hinkle@se.com

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Appendix A - Financial Statements
Appendix B – Surety and Bank of America Letters
Appendix C - Resumes

This proposal, and any exhibits and attachments hereto, (collectively, this “Proposal”) and any information contained herein, is the property of Schneider Electric Buildings Americas, Inc. (Schneider Electric) and shall constitute proprietary and confidential information. The party to whom this Proposal is addressed (the “Receiving Party”) acknowledges the confidential nature of this Proposal and agrees to take all necessary precautions to ensure the confidential treatment of this Proposal and all information contained herein. This Proposal is intended solely for the employees, representatives, and agents of the Receiving Party (the “Receiving Party Representatives”); provided, however, that this Proposal is only to be disclosed to those Receiving Party Representatives on a “need-to-know” basis. Except for the Receiving Party Representatives, the Proposal will not be used, copied, reproduced, disclosed or otherwise made available, directly or indirectly, to any other person, firm, corporation, governmental unit, association or entity, for any purpose whatsoever, without the prior written consent of Schneider Electric.

1

Business Qualifications

1. Business Qualifications

a. Please provide a brief history of your firm and number of years in the ESCO business. The ESCO should have at least ten (10) years of experience in Kansas in the analysis, design, implementation, and guarantee of energy efficiency and conservation measures. Please provide the date of your first ESPC project implemented in the state by the responding firm.

Brief History of Firm

Schneider Electric was established in 1836 and has grown into a global specialist in energy management, efficiency, and infrastructure. We entered the ESCO business 32 years ago with the founding of our Sustainability Business in 1992.

Our operations span more than 100 countries, with nearly 168,000 employees and $35.9 Billion in annual revenue. In short, we offer the backing and stability of a large company, while the Sustainability Business operates within the ESCO space as a smaller division. Abilene will receive the resources and expertise you need with the personal touch of local representatives who understand your unique challenges.

At Home in Kansas

Abilene can move forward with confidence knowing that you will have a qualified team well-versed in the unique requirements of cities in Kansas. We have successfully implemented over 1050 projects across the country, with many being multi-phase partnerships over period of up to 20 or more years. One of our strongest partnership begin in 2005 with Shawnee Heights USD 450 as an initial energy efficiency improvement program across the district. Our Client Services team maintained the relationship for over 15-years and we completed another phase (2020) to support more capital and technology upgrades. Over the life of these two projects the district will save over $10M in energy and operational savings to benefit their community.

We bring a local feel with national support. In the state of Kansas and the Midwest we bring to the table:

- 25+ years operating in Kansas
- 70 employees local to Kansas
- $573M+ in infrastructure improvements across the Midwest
- 209 ESPC projects implemented across the Midwest

Most importantly we bring a team dedicated to working with our clients to align the long-term vision of their community with projects we can help create.

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Partner with the Country's #1 Energy Services Company

We have an unmatched reputation in our industry. Schneider Electric has been the top-rated ESCO in the nation since 2017, and we are honored as one of the world's most ethical companies. Our customers state that our integrity, reliability, and the ease of working with our team members place us on a level above our competition. You will work with certified professionals who have the proven expertise to develop innovative solutions to your most pressing challenges—and to see them through to completion. Our extensive experience and financial strength position us to support your project now and well into the future.

Above all, you will see the savings where they count—on your utility bills. In the unlikely event that your project does not deliver as expected, we will write a check for the difference.

As a result, you will be able to deliver on your promises to your stakeholders—and continue to build trust in your strategic direction. This commitment to excellence is why our customers repeatedly select us for future projects. It has also earned us numerous recognitions in the industry, including:

- #1-ranked ESCO in the nation since 2017 — Guidehouse INSIGHTS
- 2023 Partner of the Year — ENERGY STAR PARTNER
- 2023 Honoree and ranked for 12 years and counting — THE WORLD'S MOST ETHICAL COMPANIES, WWW.ETHISPHERE.COM
- Highest-ranked ESCO on Global 100 List — Most Sustainable Corporations in the World GLOBAL100

Taking the Next Step—Together

Your vision is attainable, and Schneider Electric is here to help. Backed by our long track record and ironclad guarantee, you will have the expertise you need to turn your vision into reality. With your approval, we can get started right away on delivering positive outcomes for your community.

b. Describe your firm's in-house resources and expertise in the areas described above, as this will be considered a strong point for leveraging best practices and for ensuring a single point of accountability.

In House Resources and Expertise

From the first visioning session through your guarantee period, Abilene will have a fully integrated team of knowledgeable and skilled experts at your side who are well-versed in the unique requirements of cities in the region. That's because Schneider Electric staffs all projects with in-house personnel from our deep bench of internal resources, including:

86 **Energy Analysts**	Specialists in both traditional and unique energy efficiency, facility improvement, and retrofit design strategies.
122 **Design Engineers**	Have the expertise to integrate your existing infrastructure with your vision for the future.
127 **Implementation Experts**	Project Managers and Site Superintendents, who will provide expert coordination to minimize disruption to your occupants and to keep your jobsite safe.
94 **Client Services Representatives**	Dedicated to your project during the guarantee period to safeguard, and even enhance, your energy savings.

Maintaining this expertise under one roof **eliminates layers of markup** and results in streamlined development, a more cohesive team, **and a single point of accountability for you**. Abilene doesn't need to work with multiple vendors to realize your vision. Our in-house expertise includes:

ENERGY SERVICES

- Preliminary assessment
- Energy modeling and analysis
- Design and engineering
- Construction management
- Commissioning
- Project closeout
- Measurement & Verification

FINANCIAL SERVICES

- Project economic analysis
- Savings guarantees
- Utility and financial rebates
- Project financing assistance
- Inventory management
- Grant assistance

TRAINING SERVICES

- HVAC systems training
- Energy management training
- Energy education and promotional programs
- Behavioral engagement program
- Marketing

c. Provide National Association of Energy Service Companies (NAESCO) accreditation and proof of current Kansas Professionals Engineering Corporation Certification for the responding ESCO.

Schneider Electric is a pre-approved vendor with Kansas Facility Conservation Improvement Program (FCIP) Schneider Electric is an active, accredited member of NAESCO as an **Energy Service Provider (ESP)** and is certified by the U.S. Department of Energy (DOE) as an ESCO.

FACILITY CONSERVATION IMPROVEMENT PROGRAM

As one of the original four Energy Services Companies on the **FCIP pre-qualified list, Schneider Electric has been dedicated to the program and the state of Kansas since its inception.** We continue to work with state entities to support their energy, infrastructure, and financial needs to create customized solutions to address their individual challenges.

This accreditation, the highest that NAESCO awards, means that we offer all of the capabilities of a traditional ESCO, as well as additional offerings not all firms in the energy business are able to provide. Our projects not only include energy conservation measures, but we also have the expertise to **help our clients meet emissions reduction targets or achieve carbon neutrality** as part of their performance outcomes. This includes solutions such as distributed energy generation, cogeneration, combined heat and power (CHP) projects, as well as arrangement of firm contracting of energy supply and energy-as-a-service (EaaS).

Schneider Electric is registered as a Kansas Professional Engineering firm and functions as a general contractor on energy savings performance contracts. Our registration number is E-1485.

All subcontractors working for Schneider Electric on your project will be required to have a valid Kansas contractor's license, and our Project Manager will ensure that applicable permits are obtained prior to project start. Your project team will also include a designated Professional Engineer licensed in the State of Kansas.

NAESCO ACCREDITED

Certificate of Accreditation

This is to certify that

Schneider Electric

has participated in the Accreditation Program and Review and has been recognized by the National Association of Energy Service Companies to be an Accredited **Energy Service Provider**.

Chairman

Executive Director

June 2024

Certification of Accreditation covers a period of 36 months from date of issuance.

Accredited since 1993.

Schneider Electric is accredited by the National Association of Energy Services Companies (NAESCO) as an **Energy Service Provider**

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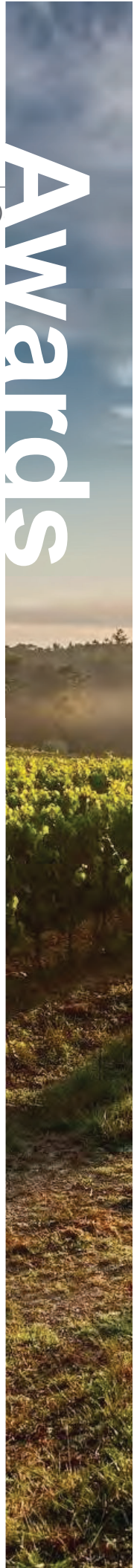

d. Provide a list of pertinent certifications, awards and credentials (including safety and EPA or DOE affiliations)

We are honored to be recognized and awarded globally in areas of innovation, sustainability, ethics, and safety. The list below highlights some of our most recent awards, including those we are most proud of:

Commitment to Customers Earns #1 ESCO Rank from Guidehouse Insights

Abilene can count on Schneider Electric to address your needs far beyond energy. In fact, our commitment to our customers earned us the #1 spot on Guidehouse Insights 2023 ESCO Leaderboard Grid, our 3rd consecutive time leading the way. The assessment ranked 10 leading ESCOs based on their strategy and execution.

Guidehouse INSIGHTS

ENERGY STAR Partner of the Year Award Recognizes Ongoing Success with Helping Customers Save Energy and Money

Schneider Electric has been recognized by the Environmental Protection Agency (EPA) as an ENERGY STAR Partner of the Year for more than a decade, validating our expertise in facility benchmarking and utility data analysis. This means you have an expert team in tracking and assessing energy and water use across your buildings.

2023 World's Most Ethical Company Designation

Ethics and responsibility are foundational to our relationships with all customers, partners, suppliers, and communities in which we work. And it shows: Schneider Electric has been recognized for 12 years as a World's Most Ethical Company Honoree.

To read more about the designation, visit: https://www.worldsmostethical companies.com/

WORLD'S MOST ETHICAL COMPANIES

Emphasis on Jobsite Safety Nets More Than 200 Safety Awards

Schneider Electric's focus on prevention saves lives, reduces injuries, and protects our customers from legal liability and negative public relations. The National Safety Council has recognized Schneider Electric with more than 200 awards since 2016, including the Industry Leader Award in 2018. Schneider is also 1 of 3 to simultaneously hold the Robert W. Campbell Award and the Green Cross Award for safety excellence.

Ranked #1 World's Most Sustainable Company in 2024

Schneider Electric earned the top spot on Time Magazine's World's Most Sustainable Companies list in 2024 because of our internal emissions reductions goals and our commitment to help reduce our customers' carbon footprint. More information can be found HERE.

TIME WORLD'S MOST SUSTAINABLE COMPANIES statista 2024

Fortune's 2022 World's Most Admired Companies

For the fifth year in a row, Schneider Electric has been ranked based on a survey of U.S. and global Fortune 500 companies that are top performers. Schneider Electric received high ratings for innovation and quality of products and services.

FORTUNE THE WORLD'S MOST ADMIRED COMPANIES

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Certifications

2021 Ranked #1 World's Most Sustainable Corporation

GLOBAL100

Platinum Medal for 3rd consecutive year in Sustainability Rating

ecovadis

Diversity Leaders for 4th consecutive year

FT FINANCIAL TIMES

#1 in the Gartner Top 25 Supply Chain

Gartner

Best Place to Work (1000+ employees)

glassdoor

Terra Carta Seal Recipient – Commitment to a Sustainable Future

THE TERRA CARTA

Please visit this site for additional awards and recognition.

CERTIFICATIONS

Abilene will benefit from working with a company that is an active member of the industry's leading organizations and initiatives, holding the following certifications and credentials:

Registered Partner & Partner of the Year

ENERGY STAR PARTNER

LEED Certification

U.S. GREEN BUILDING COUNCIL

Gold Accredited Provider of Sustainability Consulting

CDP GOLD ACCREDITED PROVIDER 2021

Approved Performance Contractor

U.S. DEPARTMENT OF ENERGY

Accredited Energy Service Provider

NAESCO ACCREDITED Energy Service Provider

Approved Performance Contractor

US Army Corps of Engineers®

As an approved performance contractor for NAESCO, the DOE and the DOD, Schneider Electric has undergone substantial vetting. In short, our credentials prove that we can do what we say we will do—whether it be for the federal government or for a City like yours.

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e. Provide a description of the ESCO business unit dedicated to implementing Energy Savings Performance Contracting projects.

Schneider Electric's Sustainability Business offers over three decades of experience helping our clients successfully advance their goals through energy and infrastructure improvement projects. You will work with a team of certified, in-house experts who have the insight and skill to develop projects that align with your priorities and foster stakeholder trust in your strategic direction. Your team can rest assured that we offer the right credentials and proven expertise to deliver on our promises, as recognized by the Department of Energy, the Department of Defense, NAESCO, the Environmental Protection Agency, and more.

Schneider Electric's ESCO business unit, our Sustainability Business, specializes in comprehensive facility improvement projects for the healthcare, local and federal government, higher education, and K-12 markets. We've helped facilities across the country transform energy savings into operational gains for the past 32 years, with more than 1,050 projects and $4,120,684,485 in savings guaranteed to date.

We offer an approach that extends beyond standard performance contracting services as detailed in Section 4: Project Management Plan. We'll help Abilene realize your vision and accomplish your highest priority goals in several key areas, including:

Energy

Reduce and optimize your utility and energy usage through infrastructure improvements.

Technology

Modernize your facility using the latest technology tailored to your needs.

Funding

Leverage reallocated funds from your energy savings to fund improvements and explore available energy rebates, and more.

Facilities/Operations

Training to sustain optimal equipment performance and solutions that reduce long-term operating and maintenance costs.

Community Engagement

Empower stakeholders and educate them regarding behaviors that affect your budget.

Public Image

Co-create a marketing vision plan that will help build awareness of your environmental commitment through press releases, community outreach events, specialized signage, and more.

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Managing Offices and ESCO Headquarters

f. Provide the location(s) where this project will be managed and ESCO's division headquarters.

Your project will be managed out of the Lenexa, KS office. This Kansas City Regional Office includes one of the largest engineering and support hubs within the country. The office is staffed with approximately 70 employees ranging from professional engineers to technical support services team members, to construction and project management experts. Combined with our local support from our partners and maintenance support teams, Schneider Electric can provide any level of support when it is needed by the city. Our headquarters for our Sustainability Business Division is in Carrollton, Texas.

Managing Office for the City of Abilene
Schneider Electric Buildings Americas, Inc.
15200 Santa Fe Trail Dr. Ste. 204.
Lenexa, KS 66219
www.schneider-electric.us/enable

ESCO Headquarters
Schneider Electric Buildings Americas, Inc.
1650 W. Crosby Rd.
Carrollton, TX 75006
www.schneider-electric.us/enable

Parent Company
Schneider Electric S.E.
World Headquarters
43-45, boulevard Franklin-Roosevelt
F-92500 Rueil-Malmaison Cedex (France)
www.schneider-electric.com

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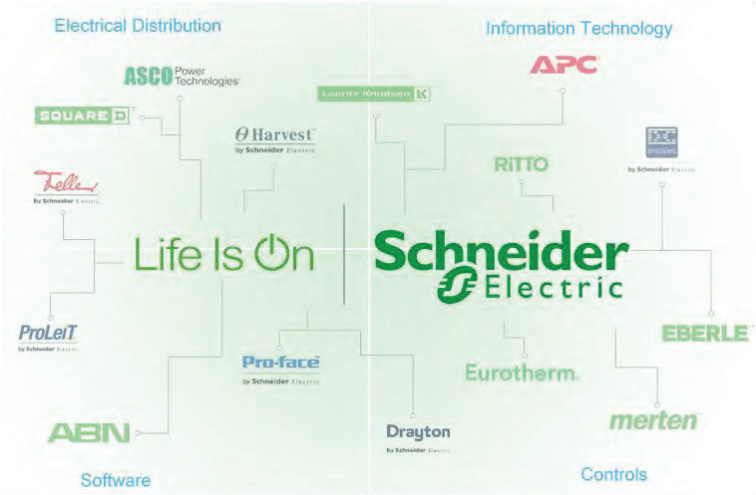
Award-Winning Brands with a Vendor - Neutral Approach

g.i. Describe your willingness to include other manufacturers' products. Identify and describe any business associations with equipment manufacturers or suppliers that might be specified for this project.



It's likely that you've seen some of our best-known brands including Square D® for power equipment, EcoStruxure™ for building automation, and APC® for IT power and back-up solutions. While we are a global leader and manufacturer, our Sustainability Business takes a vendor-neutral approach to our projects and is focused on delivering the best solutions to fit our clients' unique needs. This approach provides Abilene with a full portfolio of expertise and a partner with a vested interest in your success.

While we are a manufacturer of various component parts and have relationships with a variety of equipment vendors, we are vendor and product agnostic. One hundred percent of our focus is on making the right fiscal and operational choices for your City. We provide options throughout our process to ensure that Abilene can make your own decisions based on the criteria you set forth from the beginning of development. Schneider Electric believes in applying the right equipment to the right situation based on the desired outcomes of our clients, regardless of the manufacturer. The same holds true for any potential relationships related to business association with other equipment manufactured outside of firm. In many cases we find the best investment for our client is to reuse, upgrade, and expand the equipment already in place if it is still viable to do so.

Experience with Diverse Equipment and Systems

Schneider Electric will implement and support the equipment that best meets Abilene's needs, regardless of the manufacturer. We maintain a strict vendor-neutral approach on all projects. Rather than work with one specific equipment manufacturer, we keep current on all available equipment in the marketplace so that we can best meet your needs. From equipment selection to training, we provide the full life cycle of support to help you maximize the benefits of your systems, no matter the brand.

We support every major communication standard in building automation and security management, including TCP/IP, LonWorks®, BACnet®, Modbus® and Ethernet. You are free to choose best-in-class solutions for all of your system needs, and our team of experienced engineers will ensure your Energy Conservation Measures (ECMs) work together to meet your project goals. We use national purchasing agreements with multiple equipment manufacturers to secure preferential pricing.

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g.ii. Provide five (5) project examples where you have installed or integrated other manufacturers' products.

The following Schneider Electric project examples illustrate our experience installing and integrating other manufacturers' products into energy conservation programs. While Schneider Electric offers multiple product lines that could be included in a potential project, our Sustainability Business is product agnostic. We are not beholden to having our equipment installed and only suggest our product offerings when no clear alternative is available. The coauthored approach allows us to consider options in everything from building automation to mechanical equipment to lighting.

Shawnee Heights USD 450, Kansas
The focus of Shawnee Heights USD 450, just outside of Topeka, was to maximize previous investment and expand systems they were comfortable with maintaining. Our initial phase in 2005 and then a second phase in 2020 include Techline Sports Lighting across the district football field and track, recommissioning of JCI controls system, and installation of multiple Carrier mechanical systems throughout several sites. These systems were installed at the direction of maintenance and operation staff, with their input being a critical part of our development teams overall engineering process.

St. Charles County, Missouri
The County's Maintenance Department was heavily involved in the types of equipment, brands, and general approach for the multi-phased approach with the county. Early on in development the city knew it wanted to get away from their current building automation and mechanical equipment lines due to poor service. At the county's direction our team specified and installed Automated Logic building automation and Daikin mechanical systems. During the final development we bid out various equipment to several manufacturers to ensure a competitive process.

City of Kirksville, Missouri
With a need for updated utility grade meters, the city considered multiple platforms for meter reading and types of meters to use across the city. The result was a Badger Meter and I-Tron reading system due to the staff's history with the equipment. We believed it was the best outcome as their previous investment made in this system and continued service did not warrant a complete shift to a different produce. Schneider Electric also implemented a variety of improvements to the city's facilities that included mechanical and electrical component parts not manufactured by our firm.

City of Salina, Kansas
The city's previous investment into Trane Tracer building automation made the direction to fully integrate remaining facilities and update current systems an obvious choice. The Asst. City Manager and Facilities Director both understood the financial investment made within this system over the previous decade and believed it would be unattainable to shift to another product line. Schneider engineering team worked with Trane to establish a set of training and installation quality control parameters through our construction team to ensure the city's project performed in line with our guarantee.

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City of Houston, Texas

The City of Houston had a large investment in their existing Johnson Controls energy management system. Schneider Electric expanded the City's existing system rather than promoting an entirely new controls manufacturer. With Columbia already having invested in multiple systems across your facilities, we will work to identify the right path to maintain and maximize previous investment if possible.

ESCO Services and Capabilities

h. List the complete range of energy/utility services and capabilities the ESCO offers: such as building/facility energy analysis, engineering, design, installation, water/wastewater treatment equipment analysis, utility metering, commissioning, monitoring and performance verification, and related training.

With 563 ESPC personnel on staff, Schneider Electric provides in-house expertise for most of the professional and construction services related to performance contracting. The following table outlines the services typically provided by our team versus those typically subcontracted.

SERVICES	SCHNEIDER ELECTRIC PROVIDES	THIRD PARTY PROVIDES
ENERGY SERVICES: PROJECT DEVELOPMENT, CONSTRUCTION AND M&V		
Preliminary Assessment	X	
Energy Modeling and Analysis	X	
Design	X	
Engineering	X	
Unique HVAC Design		X
Water & Wastewater	X	X
Renewables	X	X
Construction Management	X	
Commissioning	X	
Retro & Continuous Commissioning	X	
Project Closeout	X	
Measurement and Verification	X	
FINANCIAL SERVICES:		
Project Economic Analysis	X	
Savings Guarantees	X	
Utility & Financial Rebates	X	
Project Financing Assistance	In House Assistance	X
Inventory Management	X	
Grant Management	X	
Tax Credits	X	X
TRAINING SERVICES:		
HVAC Systems Training	X	
Energy Management Training	X	
Energy Education & Promotional Programs	X	
Behavior Modifications Program	X	

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SUBCONTRACTED SERVICES:		
HVAC/Mechanical/Electrical		X
Lighting Retrofits		X
Roofing Replacements		X
Building Automation / Controls	X	X
Water Fixture & Irrigation Upgrades		X
Building Envelope		X
Financial Services (Project Financing)		X
Other Scopes of work as needed		X

Litigation

i. Has your firm, or any of its parents or subsidiaries, ever been involved in litigation/lawsuits resulting from the design and/or implementation of a guaranteed energy cost savings project pursuant to K.S.A. 75-37,125 or within a contiguous state? If yes, explain in detail the circumstances, dates associated with the litigation and the resolution of the case (or current status, if still ongoing). Failure to disclose this information will lead to immediate disqualification.

Schneider Electric cannot comment on present or anticipated litigation. However, we can represent that there is no such litigation that would prevent us from meeting the requirements of this RFQ and we have never been involved in litigation surrounding a performance based contracting project pursuant to K.S.A. 75-37, 125 or within a contiguous state.

Due to confidentiality obligations, Schneider Electric Buildings Americas, Inc. ("SEBA") may not be at liberty to comment on all claims and/or legal actions involving SEBA. Further, given the size of Schneider Electric and its global footprint, it is possible that the company has been involved in matters in other parts of the world of which we are not aware. However, as relates to SEBA and its performance on energy sustainability projects, we wish to disclose the matters below.

SEBA has addressed these matters in a professional and ethical manner, and we can represent and warrant that there are no such legal actions that would impair our credentials or our ability to perform under the Resulting Agreement, if selected.

1. United States Department of Agriculture

RESOLVED

- In May 2013, SEBA entered a Task Order with the USDA to construct energy conservation measures. The Project was installed, commissioned, and accepted by USDA in May 2016. USDA has realized the guaranteed savings in each year of performance to date. Despite SEBA's demonstrated commitment to the Project, USDA terminated the Task Order for default in July 2020 based on maintenance issues related to one ECM. USDA had refused attempts to resolve the matter, and in January 2021 SEBA filed a claim in the U.S. Court of Federal Claims alleging wrongful termination and seeking to have the termination reversed. The Judge recently granted Schneider's motion for Summary Judgement in part and converted the Termination for Default to a Termination for Convenience. Payment was made to SEBA by the DOJ via the Dept of Treasury in the amount of $1,000,000. The USDA settled with SEBA on all remaining issues and resolved the questions of past payments to be made to SEBA. The matter was closed in 2023.

2. City of Atlanta – Department of Watershed Management

RESOLVED

- In December 2017, the City of Atlanta and SEBA entered a Guaranteed Energy Savings Performance Contract (GESPC). SEBA's successful completion of this Project was contingent on the City repairing and replacing equipment and infrastructure. The City failed to perform its obligations in a timely manner and the delays caused SEBA to incur significant additional costs. After months of negotiation, the City sent a letter in December 2020 to terminate the GESPC. In February 2021, SEBA filed suit against the City alleging wrongful termination, seeking reversal of the termination for default. The parties have reached a Settlement Agreement, pursuant to which the City of Atlanta has agreed to convert the termination for default to a termination for convenience.

3. City of Riverbank Arbitration

RESOLVED

- SEBA and the City of Riverbank entered a contract in 2013 wherein SEBA agreed to implement several Energy Conservation Measures at the City's wastewater treatment facility. In 2022, the City alleged that SEBA breached this contract because the new Biolac System SEBA installed at the City's facility failed to consistently meet the City's wastewater discharge permit. SEBA maintains that the City's claim is unfounded as the fully integrated Energy Services Contract entered into between the parties places no Permit requirements on SEBA. The goal of the new Biolac system was to reduce energy consumption and generate energy savings. Any harm that resulted from the purported lack of permit compliance is the City's responsibility, and not SEBA's. The Contract clearly allocates responsibility for amending the Permit to the City. An arbitration hearing was held in January of 2024 before a three-member panel. After hearing concluded and briefs were prepared, the panel found SEBA to be the prevailing party and rejected all the claims of the City of Riverbank. As the prevailing party, SEBA was able to submit its legal fees for consideration of payment by the City. The three-member arbitration panel found against the City of Riverbank and found SEBA to be the prevailing party and awarded SEBA a substantial portion of its legal fees.

4. Medford Township School District, NJ

RESOLVED

- SEBA was a plaintiff / counterclaim-defendant in a dispute with the Medford Township School District, New Jersey ("Medford") arising out of an Energy Services Construction Contract, dated June 29, 2015 (the "Contract"). SEBA was not paid the complete balance owed under the Contract and filed a demand for arbitration. In April 2018, Medford filed a Complaint in the Superior Court of New Jersey seeking to enjoin the arbitration and alleging claims against SEBA for breach of contract. The Parties ultimately agreed to mediate the matter and reached a mutually agreeable settlement in October 2020.

5. City of Memphis, TN

RESOLVED

- In 2021, SEBA bid on and was awarded a lighting project with the City of Memphis, TN. The City of Memphis Request for Proposal (RFP) required that bidders disclose any past or ongoing litigation within the State of Tennessee. SEBA does not have any past or ongoing litigation in Tennessee and answered accordingly. Shortly after award of the project, the City of Memphis learned of the settlement between SEBA and the US DOJ (noted below), and based on SEBA's failure to disclose this information the City revoked the award and suspended SEBA from performing work with the City of Memphis for one year. SEBA appealed this decision and the parties entered into a settlement agreement wherein the City of Memphis revoked its suspension of SEBA.

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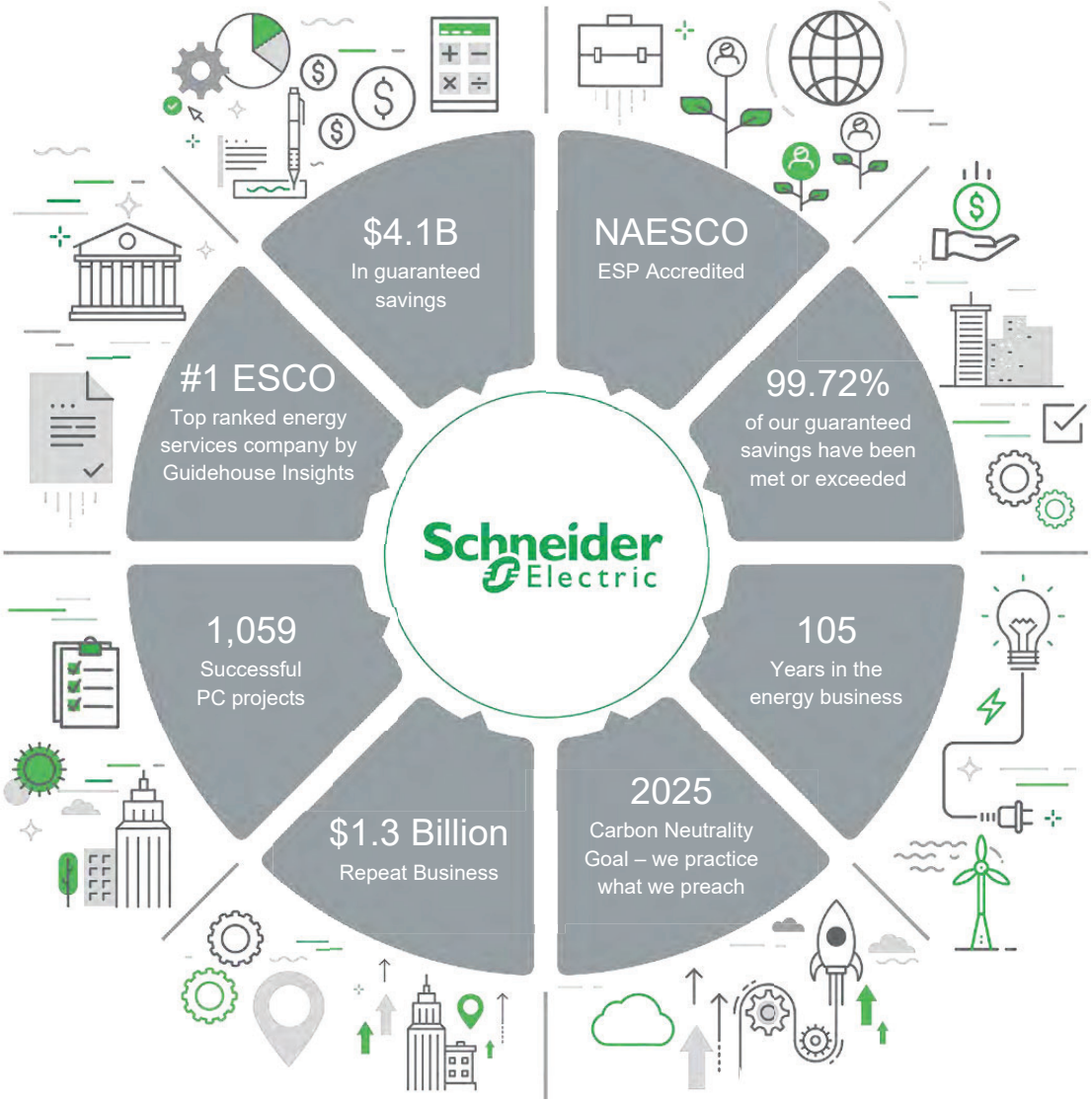
6. U.S. Department of Justice

RESOLVED

Please note that this matter does not involve litigation or arbitration; however, in the interest of full disclosure, SEBA feels that it is important to include:

- In 2016, SEBA terminated Bhaskar Patel ("Patel"), a former employee on SEBA's Federal ESPC project team, upon learning that Patel had engaged in unlawful subcontracting activities for personal gain. Patel's actions, which were those of a rogue employee and were in direct violation of SEBA's code of conduct, led to an investigation by the U.S. Department of Justice (the "DOJ"), which further identified that certain design costs had not been properly allocated in compliance with the Federal Acquisition Regulations. In December 2020, although no legal actions were brought against SEBA, SEBA entered into a settlement with the DOJ to resolve any potential liability related to these matters. In addition, since learning of these issues, SEBA has added new compliance safeguards, including a multi-layered approach to contract management. SEBA remains in good standing as a Federal vendor and has been awarded an additional $624 million in Federal contracts since the DOJ's investigation began in 2016.



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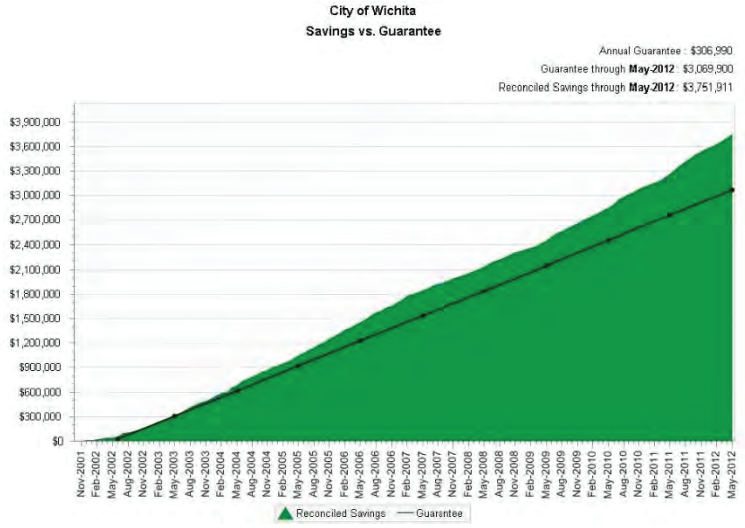
Successful Performance Contracts

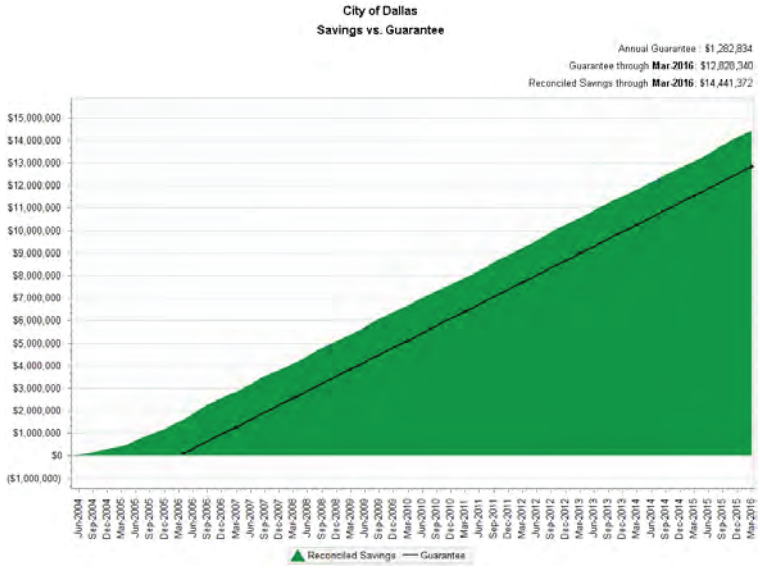
> j. Provide examples of customers (municipalities) who have completed a performance contract to the end of the term performance guarantee and give results on actual dollar savings achieved.

The partnership we carry into our Client Services and guarantee of performance process is what has allowed us to have more than $1.3B in repeat business. The trust created by supporting an ongoing guarantee of performance across a 10-15-20-year guarantee term is something most ESCOs cannot claim or do not want to take on the ongoing risk associated with that long of a partnership. However, we believe these projects are meant to perform over the long-term and as such have several examples below that highlight the commitment we make to our clients.

City of Wichita, KS: A great example of how our guarantee not only goes the full term, but also provides meaningful value throughout is the work we've done over the years with the City of Wichita. We continue to support them via building automation and their savings continues to be seen within their facilities. The real story is how our team continued to work with staff to build savings over time and improve year over year on their total cost savings. This was because we had a real guarantee we had to stand behind and the support of our Client Services team to ensure the project was a success.



City of Dallas: After being selected over more than ten other firms, Schneider Electric started with this initial phase of work with the City. The first phase was comprised of six core facilities that were out of compliance with the states mandate to reduce energy consumption (Texas State Senate Bill 5) by 5% per year. Upgrades to their mechanical, lighting, and energy management systems helped save the City over $1.2M annually and supported the investment of over $25M in improvements. Since this initial phase we have continued to support the City's initiatives and partner with their Public Safety Facilities, Dallas Museum of Art, and City Hall.



"The performance contract provides the city with infrastructure spending that won't impact the operating or capital budgets or bond funds. It's a win–win deal for the City of Dallas." – Steve Park, Director of Building Services, City of Dallas

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2

Financial Information

2. Financial Information

Describe the financial soundness and stability of the ESCO (ability to support the performance guarantee).

Abilene requires a partner that offers financial soundness and stability to protect your investment in your project. Schneider Electric has the wherewithal to deliver on our promises so that you can follow through on yours. By partnering with Schneider Electric, you will have a dedicated financial expert at your side to answer your questions and explain your options as you seek financing associated with your project.

As a result, you will:

1. **Proceed** with confidence knowing you have all of the information you need to make informed decisions about the project and its associated financing.
2. **Attain** a package of financing options for consideration that offers competitive terms and optimizes the value of your energy savings.
3. **Reduce** your exposure to risk during construction and throughout the guarantee period.

Your energy savings guarantee is a direct obligation and commitment from Schneider Electric, not a “savings assurance” guarantee provided or issued by a third party. We hold our guarantees as a liability on our financial statements and truly bear the financial responsibility of the savings guarantee. This means we are professionally and financially vested in making sure your savings are achieved. If your project does not deliver the savings promised, we make up the difference.

A PARTNER WITH EXCELLENT FINANCIAL STANDING

You will have the support and backing of a reputable, credit-worthy ESCO partner:

Fully Insured & Bonded	A3 Moody’s Rating
A- S&P Global Rating	5A1 Dun & Bradstreet Rating

What this means for the City of Abilene is the confidence in the financial backing we bring to each scope developed and implemented within your project. The ability to stand behind facility improvements, water and wastewater system enhancement, metering, streetlights, and renewable technologies through a single or multiple guarantees is what allows our firm to create successful and impactful projects for our clients.

Financial Statements

a. Provide financial statements for the two most recently completed fiscal years. City may, during the course of the evaluation process, request additional financial information to supplement and clarify the information provided.

According to Dun & Bradstreet, Schneider Electric has a higher-than-average financial strength, compared to others in our industry sector, and a lower-than-average risk indicator when comparing other businesses of the same financial strength category.

Our Sustainability Business Division is backed by Schneider Electric's annual revenue of $35.9 Billion and assets of $17.5 billion. Our financial strength enables us to shoulder monetary risk and withstand periods of reduced cash flow should they occur during our partnership with you.

Please see the Appendix for our two most recent Schneider Electric audited financial statements, which are extracted from our larger annual reports.

Financial Solutions, One Phone Call Away

b. Provide information documenting sources of financing and financing methods available to the City.

As you anticipate the value of your energy savings, Abilene must address the costs associated with any financing to pay for the up-front investment. With Schneider Electric's excellent reputation in the financial market, and our transparent and proactive approach to arranging financing, we can help you secure a competitive financing package with favorable terms.

By partnering with us, you will also have the advantage of a dedicated resource whose sole purpose is to help you obtain the best financing for your project. Our national Finance Director offers more than 30 years of relevant experience and will work with your team to arrange financing. We have supported funding efforts for hundreds of successful projects across the country, ranging from less than $1 million to more than $40 million, using a variety of debt instruments and funding sources.

Our team will be at your side to bid out the financing and review the results. While we will not make a recommendation, we can assist you by explaining all terms and conditions. You will have all of the information you need to weigh the advantages and disadvantages of each response against your end goals. We will coordinate with all parties throughout the documentation and funding process so that you have the support you need through closing.

A FINANCIAL PACKAGE TAILORED TO YOUR

With Schneider Electric, there is no one-size-fits-all approach to arranging financing. We will work with the lending community to provide debt structures that are most advantageous to you.

More Options for Financing Your Goals

The larger the pool of lenders at your disposal, the better your opportunity for finding the right package to fund your goals. With Schneider Electric, Abilene will have access to a national network of lenders that are motivated to finance energy projects for municipal customers. These lenders understand the benefits of performance contracting and can offer long-term interest rate locks, competitively low interest rates, and flexible prepayment provisions.

In addition to bringing competitive pricing to the table, this network provides Abilene with alternatives in terms of both lenders as well as structure options. We have vetted these institutions and fostered relationships of trust to secure the best results for our customers.

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One of the unique benefits of our collaborative approach is we will develop your project and arrange financing hand in hand. This means you will have a defined scope and an assessment of anticipated costs that is based on actual data, including cash flow assumptions. Our Finance Director will provide real-time interest rate assumptions that are reflected in the cash flow models.

Rather than approaching potential lenders with a ballpark figure, you will have a more complete plan against which to compare rates and terms. As a result, there will be no surprises for you when it is time to lock in costs for our contract and lender financing.

KIM ALBERTSON is Schneider Electric's in-house project finance director. With over 30 years of experience, she will work with you to seek out the best possible financing arrangements.

Schneider Electric will not charge you for—or make any profit from—the financing of your project, nor do we serve as a financial or municipal advisor. All financing for Schneider Electric projects comes from independent third-party lender/investor sources, such as Bank of America Public Capital Corp, Pinnacle Bank, US Bank, Signature Bank, Sterling National Bank, First Security Finance, Stifel, and D.A. Davidson. Our only interest is to help you find the capital you need with the best terms possible to support your vision for mission-critical improvements for your City.

Approach to Grants and Rebates

Our firm's dedicated in-house team of grant and financial experts will identify any additional funding the city may qualify for. The potential for Historical Tax Credits (HTC) and 179D tax incentives will be a real possibility for the city. **These resources will help lessen needed debt services and allow potential investment to go further.** The goal is to create projects that allow for infrastructure investment, while being responsible stewards of taxpayer dollars. Schneider Electric will support Abilene's efforts to leverage all available funding mechanisms (energy savings performance contracts, grants, rebates and incentives, public-private partnerships, etc.) to successfully implement infrastructure renewal.

SCHNEIDER ELECTRIC HELPS YOU DO MORE:

$630M
in grants, rebates, incentives, and energy financing captured for our clients in the past 15 years

$800,000
average grants and incentives secured per project

While there are thousands of incentive and grant programs available nationwide, and more promised through recent federal relief packages, gaining access to that money is not always simple. We have both grant and energy incentive specialists on our team actively monitoring **over 52,000** rebate, grant, and incentive programs across North America. We do the work for you by researching and identifying the right funding opportunities to maximize the capital available for your project. We can assist you by researching and identifying the right funding opportunities to maximize the capital available for your project, including:

- Utility rebates and incentives
- State and federal grants

Our experienced team can also guide you through the grant application process to ensure you secure the maximum number of incentives available. Over the past 15 years, we have helped our clients secure more than **$630 Million** in rebates, incentives, grants, and energy funding to fund their infrastructure improvement projects.

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Two examples are highlighted below.

City of Salina, KS

Secured funding for advanced and innovative energy solutions as part of the city's capital project plan

$517K Historical Tax Credits
approved by the State of Kansas Historical Society

$14,105 rebates
from Evergy energy efficiency incentives

$160K Investment Tax Credits
from via DOE's solar tax credit program

City of St. Joseph, MO

Schneider secured multiple funding streams through the 5 phases of work with the city

$15M State Revolving Funds
Missouri Department of Natural resources low-interest loan program

$1.5M Green Grant
as a result of the biogas reuse project at the city's wastewater treatment facility

$167,878 rebates
from Evergy energy efficiency incentives

There are several grant opportunities that the city may be able to leverage. Our team can assist the City of Abilene by applying for any applicable grants. In 2021, we increased our resources by bringing on a consultant, Learn-Design-Apply (LDA) and Andrew Henshaw, with 20-years of grant management and grant writing experience. This Schneider resource has supported entities in requesting over $600M in federal and state grants over the past year with a success rate of 50% above the national average.

We identified several grant funding opportunities the City of Abilene may be able to pursue based on scope and the appetite from Abilene. Below are several grant opportunities:

General

179D Tax Deduction
$5 per square foot reduction of tax liability for executing firm
Max Funding: None

SEC. 40109 - State Energy Program
Building Efficiency Upgrades
Max Funding: ~$2,000,000

Energy Efficiency and Conservation Block Grants
Anything energy efficiency-related LED retrofits, HVAC, building automation, misc. efficiency improvement
Max Funding: Annual allocation

EV

Low/No Emissions Bus Program
Zero-emissions buses and infrastructure
Max Funding: $20,000,000

Charging and Fueling Infrastructure Grant
Commuter and Fleet Charging Station
Max Funding: $15,000,000

Bus and Bus Facilities
Upgrade fleet and infrastructure, along with the bus facilities themselves
Max Funding: $20,000,000

SEC. 11401 - Grants for Charging and Fueling Infrastructure
Electric Vehicle (EV) Charging Stations
Max Funding: ~$5,000,000

Utility

Inflation Reduction Act ITC (cash payment)
Solar PV
Max Funding: 30 to 60% of project

SEC. 40107 - Deployment of Technology to Enhance Grid Flexibility
Solar PV
Max Funding: ~$10,000,000

Grid Resilience and Innovative Partnerships Program
Strengthening grid through solar/battery storage/ electrical grid upgrade
Max Funding: $250,000,000

WaterSMART Grant
Efficiency for water usage (canal lining, irrigation retrofits, etc.)
Max Funding: $5,000,000

Misc.

EDA Economic Adjustment Assistance Grant
Sports Tourism
Max Funding: ~$5,000,000

Department of Transportation RAISE Grant
Multi-modal, Multi-jurisdictional projects
Max Funding: $25,000,000

Safe Streets and Roads for All
Street lighting, Smart Grid
Max Funding: $25,000,000

Community Change Grants
Efficiency, carbon reduction, indoor and outdoor air quality focus connected to Justice 40 initiatives
Max Funding: $20,000,000

Surety Letter

c. Provide a letter from its surety company demonstrating the ESCO's capability to provide payment and performance bond associated with construction projects. The letter should also state the bonding capacity of the ESCO.

Rest assured, you will not take on the risk of or responsibility for an unfinished project. With Schneider Electric, you will partner with a company that has a long history of growth and financial strength that can support your project needs well into the future.

We have the ability to bond all work that will be developed as part of your project. Our commitment to complete the work for the fixed price promised is bolstered by our performance bond, which guarantees we will fulfill all of our construction obligations.

Likewise, because Schneider Electric acts as your single point of accountability, Abilene will not be exposed to the risk of subcontractor liens resulting from unpaid invoices. We will obtain payment bonds to ensure our subcontractors are paid on time and in compliance with our contract. This protects your bottom line, your fiscal reputation, and your valuable public image.

WESTERN SURETY COMPANY represents Schneider Electric for all their surety bonding needs.

Currently, we can bond a single project up to $50 Million with an overall limit of $400 Million.

Specialty values can also be considered.

Schneider Electric primarily uses Western Surety Company when providing payment and performance bonds to our customers. Western Surety Company is rated "A-" by AM Best and is capable of providing written confirmation of Schneider Electric's bonding capacity. Schneider Electric is in the position to consider single projects up to $50 million with an aggregate limit of $400 million. This excellent bonding capacity translates into lower bonding costs for Schneider Electric, which translates into savings for you. The current bonding rate is $3.35/$1000.

Please see the Appendix for a letter from Western Surety Company, our bond partner, that describes our capability to provide payment and performance bonds for your project. Our bonding agent is:

Jessica Iannotta, Bond Specialist, AVP
Marsh USA, Inc.
445 South Street, Suite 210
Morristown, NJ 07960

P: (973) 401-5116
F: (973) 401-5380
jessica.iannotta@marsh.com

Letter of Recommendation

d. Provide a letter of recommendation from a financial institution.

Our lenders are familiar with our processes and approach, and they know that a Schneider Electric project is a low-risk undertaking. Please see the Appendix for a letter from Bank of America that demonstrates Schneider Electric's long-standing banking relationship with this nationally recognized institution.

3 Participants/Personnel

3. Participants/Personnel

Identify known participants in the project and provide information regarding capabilities and experience of personnel directly assigned to this project.

The Best Projects Begin with a Strong Partnership

As a leader within your community, we know that the City of Abilene is looking for the best partner and strongest team possible to implement your project. Here at Schneider Electric, we've assembled a team of experts that are not only the best in their field; we also love what we do.

> "The best projects begin with a strong partnership, and Schneider Electric listened to us every step of the way"
>
> Dr. Pablo Arenaz, President
> Texas A&M International University

We believe our great people make us a great company. Based on employee feedback, we are proud to share that in 2023, Schneider Electric was certified as a Great Place to Work® for the 5th year in a row. Additionally, **86% of our in-house engineers have advanced degrees or specialized certification**. This means you will partner with a passionate, productive team with a commitment to excellence. We listen to you, and your project is in good hands. The core team responsible for leading this project includes the following essential roles:

Program Manager
Serves as your point of contact throughout the entire project

Project Development Manager
Collaborates with your team to define the scope, and oversees development, design and engineering

Project Manager
Provides regular communications to project stakeholders and oversees schedule and budget

Site Superintendent
Provides daily oversight of construction, subcontractors, and all health, safety, and quality-related performance

Client Services Representative
Manages monitoring, M&V, and ongoing support and training to ensure that your project delivers guaranteed savings

Financing Specialist
Assists in determining funding opportunities and optimal financing options

Project Core Team

Your dedicated core team consists of representatives from each discipline who collaborate and pool their expertise throughout the project lifecycle, resulting in first-time quality and lower risk of change orders and schedule impacts.

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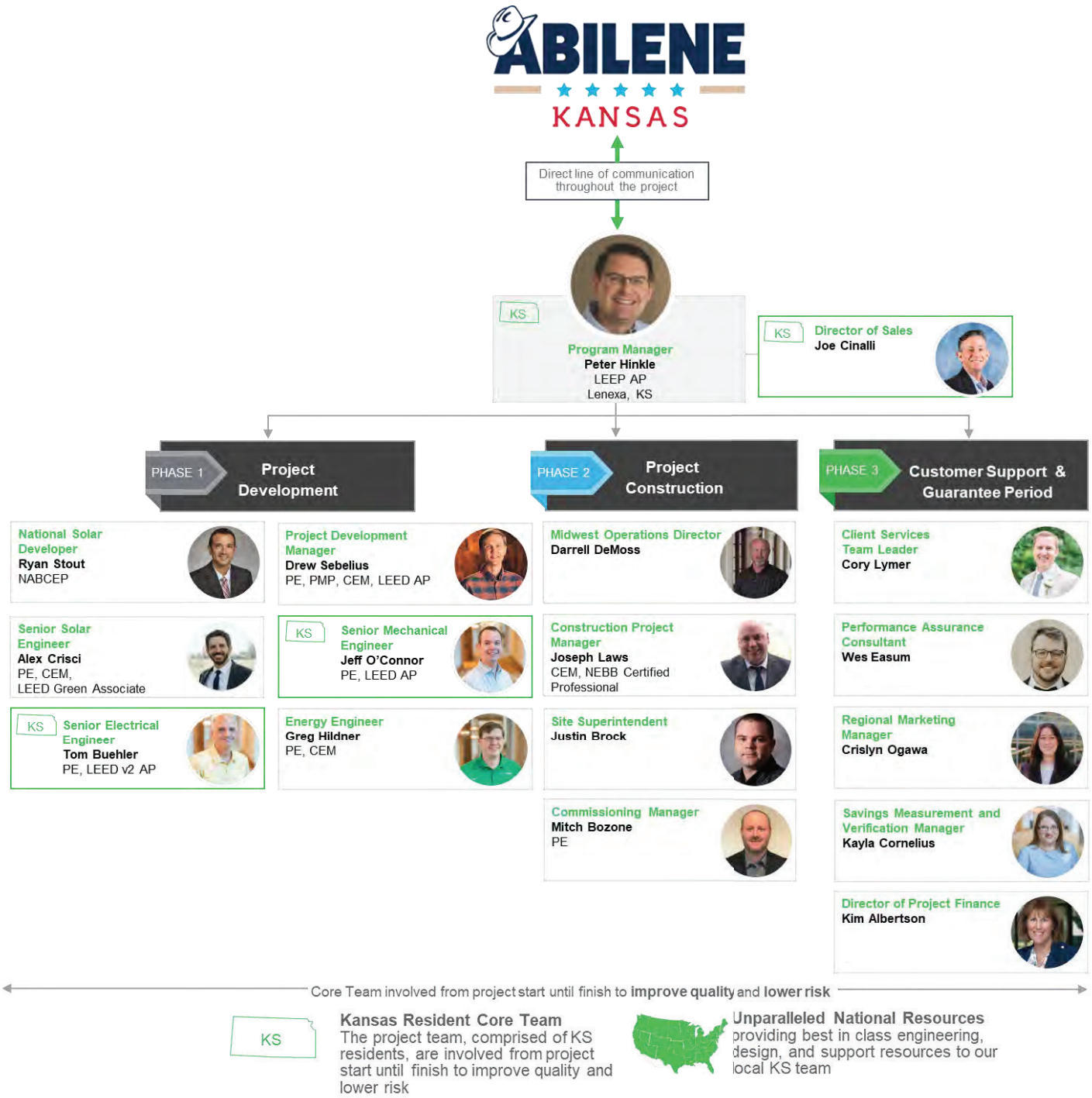
a. Organizational chart that clearly describes your ESCO's project organization with supervisory reporting.



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Key Personnel and Responsibilities

b. A list of key personnel and their responsibilities for the duration of the project contract terms should be listed. Resumes should be provided in the Appendix. In the resumes, indicate the education and professional licensing of each person as it relates to this project. Also, include a list of previous projects in which each team member has played a significant role.

Abilene will collaborate with a core project team from the initial development phase of your project to post-installation support. Below are the roles and responsibilities of the key personnel on your core team. Each role will have varying levels of involvement and responsibility throughout the project lifecycle, but all will be involved from start to finish with a collaborative voice that advocates for your project goals. Resumes for each individual have been provided in Appendix C, which includes a number of previous projects in which each team member has played a significant role.

	PHASE 1 Development	PHASE 2 Construction & Commissioning	PHASE 3 Customer Support & Guarantee Period
Program Manager **Peter Hinkle, LEED AP** 17 Years with Schneider Electric	Your point of contact throughout the project. Involved with communicating to you and your key stakeholders.		
Project Development Manager **Drew Sebelius, PE, PMP, CEM, LEED AP** 18 Years with Schneider Electric	Site auditing, project development and design	Design intent consultation as needed	Consultation as needed
Project Manager **Joseph Laws, CEM, NEBB Certified Professional** 21 Years with Schneider Electric	Schedule development, subcontractor selection	Cost and schedule monitoring, communication to stakeholders	Consultation as needed
Site Superintendent **Justin Brock** 6 Years with Schneider Electric	Constructability assessment	Daily oversight of construction and commissioning	Consultation as needed
Client Services Team Leader **Cory Lymer** 9 Years with Schneider Electric	Measurement & verification plan development		Measurement and verification, performance assurance

Project Team Life Cycle: While the core team is involved in varying degrees throughout the project lifecycle, they maintain involvement throughout all three project phases to ensure the highest level of collaboration, communication, and quality.

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4

Project Management Plan

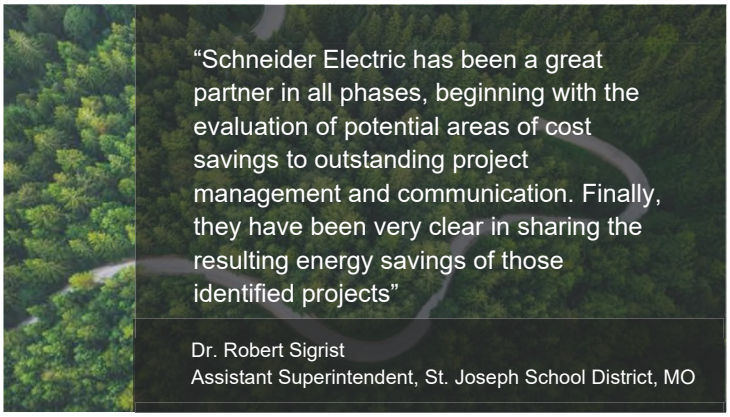
4. Project Management Plan

Describe your firm's methodology of developing and implementing comprehensive energy efficiency and conservation programs and projects for the City.

Developing and implementing a comprehensive energy efficiency and conservation program for the City of Abilene is centered on a tried-and-true methodology to engineer, build, and ensure the performance of your infrastructure. Most procurement methods require the city to oversee project details, while also taking care of the day-to-day operations and stakeholder expectations.

With Schneider Electric, Abilene will gain a knowledgeable partner that provides innovative solutions and will take on the roles and risks of project management. You'll have a single, integrated team that works side-by-side with you and your stakeholders to:

1. **Define** your goals
2. **Prioritize** your needs
3. **Develop and implement** innovative solutions
4. **Ensure** long-term facility performance



You have our commitment that **trust**, **collaboration,** and **communication** will remain consistent in your project, so that you know what to expect at every step.

An integrated core team of highly skilled, cross-functional experts will be at your side throughout your project—and even long after construction.

Your core team will include:

- A **Program Manager**, who serves as your point of contact throughout the project
- A **Project Development Manager**, who oversees development and collaborates with you to define the scope
- A **Project Manager**, who oversees construction scheduling and implementation
- A **Site Superintendent**, who provides day-to-day oversight of the project, subcontractors, quality control, and health and safety related performance
- A **Client Services Representative**, who manages monitoring, measurement and verification (M&V), ongoing support and training, and ensures your project delivers guaranteed savings

This core team does not divide responsibility into silos. Instead, representatives from each discipline are brought together to pool their expertise throughout your project. Unlike common project management models, your Schneider Electric Project Manager is involved during the development phase to ensure your solutions will be

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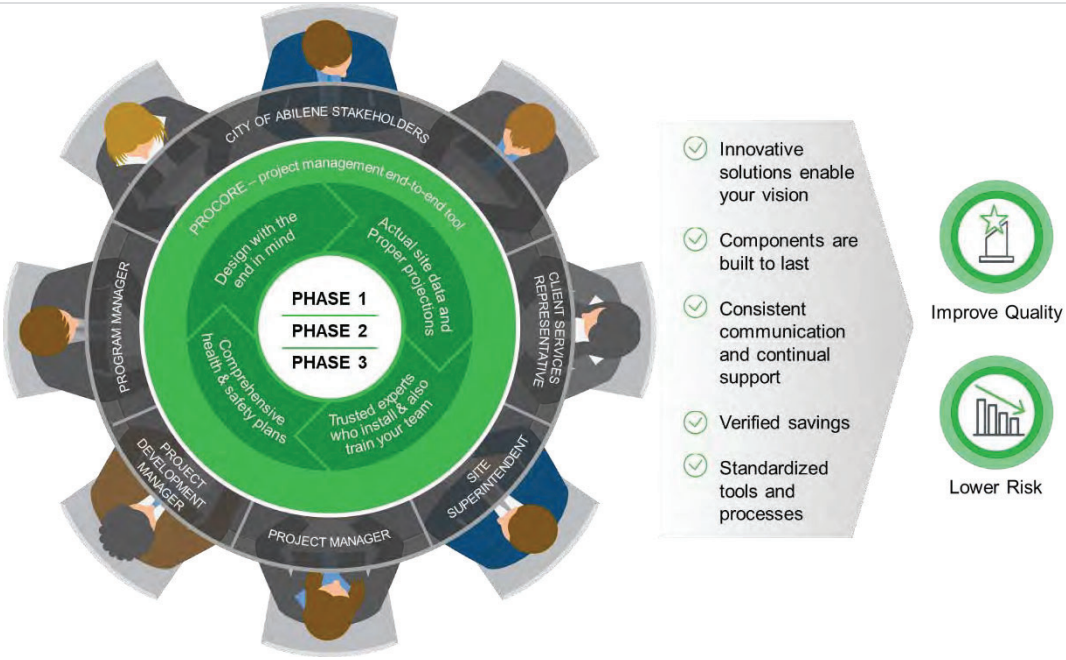
constructed as intended. Likewise, your Client Services Representative is also involved during development to create an M&V plan that is best suited for the proposed scope.

You can expect:

1. **Your vision** to be carried forward with fidelity and with smoother transitions between phases
2. **Less rework and no change orders,** minimizing risk to your schedule and budget



Our Holistic Approach With everyone at the table, Abilene can count on high quality and lower risk when working with our cross-functional core team who collaborate throughout the project life cycle.

Project Phases

Your Schneider Electric team will focus on delivering with excellence, with your vision at the forefront, at every stage of our three-phase approach:

PHASE 1

Development

Facility surveys, energy modeling and analysis, project development, preliminary engineering and design, cost estimating

PHASE 2

Construction & Commissioning

Final engineering, construction and project management, commissioning, training, safety, and quality assurance

PHASE 3

Customer Support & Guarantee Period

M&V of savings and performance assurance activities, ongoing support and training

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a. Facility and infrastructure surveys

Once the IGA contract is signed and executed, the audit begins with a kickoff meeting involving all key stakeholders from the City of Abilene and Schneider Electric. The purpose of this initial meeting is to set project expectations and goals. This meeting early in the process opens the lines of communication and fosters collaboration to influence scope development. Key client questions serve as the agenda for addressing the most critical items defining a project's success including schedule, scope, finance, construction, and performance requirements. A communication plan is developed for scheduling and managing daily activities. With your specific needs in mind, Schneider Electric creates a customized plan for developing a cost effective, solutions-oriented project.

Investigate Facilities and Systems

The collection of facility data is a tedious, yet vital step of the project. Utility consumption data is a critical component used for establishing the energy baseline and boundary for savings potential. Other pieces of information, such as building plans and operating schedules, help to focus time on-site and act as the basis for assumptions used in engineering calculations. Typical data collected includes the following:

- 26 months of utility bills and rates
- Building square footages
- Original and renovation drawings (Architectural, MEP, Controls)
- Equipment lists
- Maintenance records and repair costs
- Control system access
- Equipment operating schedules
- Standards of comfort
- Occupancy data
- Calendar of events and holidays

The goal of the on-site audit is to understand the systems in each facility and to uncover potential energy conservation measures through site visits, client interviews and field measurements. This process provides an opportunity to understand the deficiencies in the building systems and determine improvements that can be made to the current operating strategies. Field measurements, such as instantaneous light level readings or continuous data logger measurements of lighting burn hours, space temperature and equipment run hours, contribute to energy calculation inputs.

Schneider Electric evaluates each building and its systems in terms of age, condition, and performance. We typically examine your facilities for occupant comfort, mechanical systems, energy management, building automation, lighting, electrical loads and distribution, domestic water systems, building envelope, IT, and renewable infrastructure. After completing the audit, we will provide a written summary of our findings for each building and compile an energy conservation measure list based on our observations.

b. Energy modeling and analysis

Abilene's ability to fund priorities by using energy and maintenance related savings is dependent on your facilities performing as promised. Establishing an accurate estimate of savings on the front end is key to ensuring you can achieve your goals. We start with an establishment of baseline energy use and costs, then determine the impact of a given improvement, and finally determine the monetary value for the city.

When it comes to estimating savings, many ESCOs simply take a snapshot of energy use at a specific time and place. A prescribed set of assumptions are applied to the data to land on a set of savings projections. These calculations may or may not account for interactions with other building systems, the magnitude of savings relative to the baseline, and changes to how spaces are used seasonally, on holidays, or even on weekends.

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Schneider Electric does not delegate the critical task of energy analysis to a project manager. Instead, we have a dedicated team of energy engineers within our larger engineering group who are charged with developing precise utility and energy baselines and determining reliable savings projections. **The group of energy engineers is unparalleled in the industry with 92 Certified Energy Managers (CEM), 9 Certified M&V Professionals (CMVP) and 73 Professional Engineers (PE) on staff with active memberships in ASHRAE, Association of Energy Engineers (AEE), and International Building Performance Simulation Association (IBPSA).**

Once we have established your baseline, we will use a combination of modeling tools and calculations to determine energy and utility savings. Our energy engineers will calibrate these models and calculations against actual utility bills to develop an accurate representation of how your building is designed and operated.
Our energy analysis approach is influenced by several factors: magnitude of cost savings, impact of savings on an individual meter, complexity of the measures to be implemented, impact on other systems not included in scope, needs of the city, and general operating parameters established by our customers.

The graphic below provides a high-level review of the general steps we use to determine savings potential through energy modeling and detailed analysis.

There are four important steps in determining energy savings.

STEP 1 **Survey Facilities**

- Our analysis starts with a building and systems survey, including lighting, HVAC, controls systems, building operating characteristics, building construction, and other miscellaneous energy-consuming equipment.
- We also review site data, drawings, specifications, codes, and standards related to the project scope, and collaborate with site personnel to fully understand existing conditions.

STEP 2 **Establish Utility Baseline**

- Schneider Electric collects two years of actual utility bills for analysis.
- We perform year-to-year utility data comparisons to identify trends and anomalies.
- The baseline normalization process involves a linear regression analysis comparing energy usage and weather. The most representative 12-month utility baseline is established for the project.

STEP 3 **Perform Utility Rate Analysis**

- We develop a thorough understanding of each utility meter and rate structure to fully analyze energy costs and savings potential.
- We create rate simulations based on actual utility tariffs.
- The rate simulations are calibrated to the actual utility billing data to verify rates and formulas match the utility provider.

STEP 4 **Calculate Savings**

- Energy models are developed using baseline data collected and calibrated to the utility baseline established.
- Energy savings are determined through the difference between baseline and post project energy consumption.
- Cost savings are calculated using the utility rates established.

We do not take a one-size-fits-all approach to energy analysis, nor do we operate with the same set of assumptions across different projects. Rather, we have multiple tools at hand to forecast energy savings, including commercially available energy modeling tools to simulate complex buildings, spreadsheet calculation tools to model simple buildings, systems and specific ECMs, and a suite of in-house tools used to process and analyze utility date, simulate rate tariffs, and manage energy model results and savings.

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Our experience spans single buildings with complex systems, to simple buildings with a similar scope, to facilities that have undergone multiple renovations and additions. You can expect us to scale our analysis methods up or down to match the needs of your project. The graphic below are a few of the energy modeling tools we used based on a specific situation or solution being considered.

Your priorities and project scope will determine our approach for analyzing energy savings. Below are some examples of our analysis approach based on ECM type.

Lighting Upgrades	HVAC Retrofits	Controls Improvements	Solar PV	Whole Building Measures
Tools: • Line by Lines • LEAPS[1] **Approach:** • Account for burn outs, demand diversity, heating and cooling interaction • Verify baseline and savings against utility baseline • May include short-term data logging to verify burn hours	**Tools:** • eQuest[1] • eCalcs[2] **Approach:** • Varies based on system and facility complexity • Evaluate equipment efficiency performance over different part-load ratios and outdoor air conditions • May include building models and/or load calculations	**Tools:** • eQuest[1] • eCalcs[2] **Approach:** • Employ a whole-building model such as eQuest for capturing interactions • Use eCalcs suite of bin-hour spreadsheets for simple or limited scope measures	**Tools:** • Helioscope[1] • System Advisor Model (SAM)[1] • PV Watts[1] • Solar Energy Analysis Tool[2] **Approach:** • Depends on system complexity and development stage • Calculate solar production based on key factors	**Tools:** • eQuest[1] • HAP[1] • Element[2] • Simple Building Modeler (SBM)[2] **Approach:** • Capture multiple ECM interaction within a model and simulate them in succession so that no one measure is overestimated

[1] Industry tool
[2] Schneider Electric proprietary tool

Cost Savings Methodology

Establishing a monetary value for units of energy savings is a critical step to every project. To accurately assign cost savings for energy saved, it is essential to have a thorough understanding of each rate structure for every utility account. An accurate savings projection is pointless if the cost rates applied are not representative of the actual rates. That's why Schneider Electric traces each unit of energy saved back to the utility meter. All utility companies have different rates and unique billing structures. Based on the region and market, energy costs may vary based on time of use or season rates, tiered rate based on amount of energy consumed, maximum peak demand draw, or other factors such as a rachet rate or contract rate.

For this reason, simplified approaches to rates—such as blended or marginal rates—can overstate cost savings. We have expertise in analyzing utility rates as well as an extensive utility rate library, which enables us to quickly and accurately analyze the rate structures that apply to you. A key step of our energy analysis process is developing and calibrating tariff rate simulations to accurately reflect all the components of your utility bill. We apply these same rates to projected future use after our energy measures are implemented to determine the true

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financial impact. This comprehensive approach makes sure your energy savings align with the cost savings seen on your bill.

c. Project development

With Schneider Electric, the City of Abilene will gain a knowledgeable partner that provides innovative solutions and will take on the roles and risks of project management. You'll have a single, integrated team that works side-by-side with you to:

1. Define your goals
2. Prioritize your needs
3. Develop and implement innovative solutions
4. Ensure long-term facility performance
5. Communicate environmental and fiscal stewardship

An integrated core team of highly skilled, cross-functional experts will be at your side throughout your project—and even long after construction. Working side-by-side with your key stakeholders, our approach to Project Development is one of coauthoring the solutions that fit the outcomes most desired by the City. The core team of business professionals, engineers, and construction experts will ensure this project is a success.

You have our commitment that **trust, collaboration, and communication** will remain consistent in your project, so that you know what to expect at every step. The following highlights the responsibility of our engineering staff, construction team, and post-project measurement and verification department.

d. Non-construction related energy conservation strategies

Schneider Electric brings a number of potential opportunities and resources to creating significant energy reduction and operational improvements. As an organization we look beyond the traditional low hanging fruit of other ESCO's to determine how we can best support the mission of the organization. Schneider Electric provides the tools needed to expand the reach of your project beyond just construction and into real optimization of your systems.

Where we truly differentiate is how we provide value at every level of your organization. To the right are a few of the items we can provide that support your energy conservation strategies that are not related to construction or a physical change to a given facility. Our ongoing measurement and verification of performance is what sets our organization apart.

Capital Asset Planning

With Schneider Electric's Capital Asset Planning (CAP) tool and assistance, you can align your energy and resource plans to create a long-term comprehensive master plan that makes sense for your buildings and your budget. This solution is perfect for forward-thinking municipalities that are looking to address issues before they become expensive problems. It includes extensive data collection and detailed analysis to provide you with a comprehensive current view and future projection of your facilities and systems.

Behavior Change through Sustainable Policy

Our team is well-versed in global, sustainable initiatives including carbon reduction programs, energy efficiency, renewable energy, resiliency, and supply side initiatives. As the most sustainable corporation in the world, we bring an unparalleled level of leadership to supporting the development of sustainable policy and practices within the city. We help to make your energy goals of 10-20% reduction depending on the utility a reality by: 1. Defining

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Success, 2. Setting Targets & Timeframes, 3. Deploying Policy & Programs, and 4. Sustaining Results. Working with the City to help establish the goals and policy will help change behavior once adopted by the governing body.

Building Analytics through Building Advisor

Building Advisor can sit atop any building automation platform and provides constant monitoring and identification of faults to proactively address building inefficiencies. The City's ability to sync current staff with new technologies lead to lower operating costs, improved comfort, staff efficiency gains, and an enhanced building lifecycle approach. Through detailed diagnostics the system will automatically identify and summarize potential issues within your infrastructure. The ability to sort based on cost, energy consumption, comfort, and maintenance related issues provides a prioritized list for staff. We believe in providing the tools to be successful and creating a partnership, using new technologies, that makes a more efficient approach to maintenance.

e. Engineering and design

The City's project will launch with a series of visioning sessions and facility surveys. During this time, your key stakeholders will also share their wants and needs with our team. Site audits will enable us to identify hidden challenges and opportunities to improve your operations. We will then begin to determine where performance, security, and/or public engagement expectations are falling short and start identifying potential solutions. As the project scope takes shape, we will conduct an audit to:

- Analyze your facilities, review actual utility data, and conduct detailed energy modeling and analysis
- Evaluate facilities and current operations, and how they could most efficiently operate in the future
- Develop desired goals and priorities based on financial, facility, operational, and educational needs
- Meetings with onsite operations staff to review operational issues

This assessment enables us to develop a holistic set of infrastructure improvements based on real data that is specific to city facilities. Your team will then select the combination of scope options that will best satisfy your goals and budget. As a result, you have:

DREW SEBELIUS will be the Project Development Manager for your project. He will be responsible for every aspect of technical development including energy baseline creation, scope development, and development resourcing.

- A defined scope earlier in the process, minimizing the risk of change orders later
- A realistic M&V plan that ensures you will see the savings you were expecting
- Detailed cost estimates, so that financing is based on accurate numbers

We don't develop stand-alone solutions and hope for the best. Our energy analysts incorporate your actual metering data into their detailed energy models to test how the ECMs will interact with each other and your existing systems. This exacting level of analysis ensures your ECMs work in concert to achieve your goals and deliver sustainable savings to your operations. Along with traditional ECMs, we also propose non-construction-related options to improve your energy savings, such as stakeholder training and behavioral awareness.

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During the initial phases of our design and development our team will create a full **energy model and analysis** of the buildings being reviewed. This is completed from the onset of project development to allow our mechanical and energy teams to work together to determine the most efficient solutions to your building needs. By accurately creating and tuning your energy model our team can predict how various scope items interact with one another, system type comparison that results in the most favorable outcome and consequences of a specific building improvement. Studying how ECMs interact and affect each other is crucial to avoiding comfort and equipment problems after the project is implemented. Although this exercise may seem labor intensive, it is critical to our effort because it provides the risk reduction necessary for Schneider Electric to guarantee the energy savings.

The **engineering and design** of your project will be handled by our in-house team of engineers to ensure the highest quality and oversight of your project. Once a path has been determined with the City of Abilene on scopes to pursue, our team will complete a full design of the project to allow for each scope item to be competitively bid. Taking scopes out to bid and allowing our engineering team to continue to fine-tune scope allows for a project to be delivered at high value but limiting the upfront cost to the City. By selecting Schneider Electric as your partner, we can deliver on a project that matches both value and cost through a long-term partnership.

f. Construction and project management

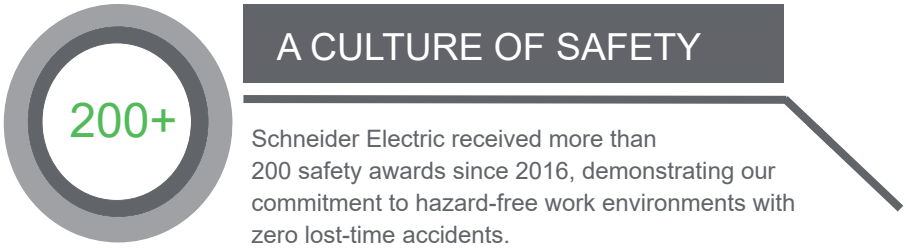
Infrastructure projects are complex undertakings with many moving parts. Abilene can proceed with confidence knowing that our project management approach will account for every detail while also minimizing disruption to your daily activities.

From development to the guarantee period, your project will be managed by seasoned experts using tools and processes that foster collaboration and communication. Schneider Electric's project management process includes:

- **Single-source accountability**, including coordination and management of subcontractors, to reduce your risk
- A **fully integrated team** that works hand-in-hand with your stakeholders to design and deliver solutions that advance your strategic goals
- The use of **PROCORE**, an industry leading Project Management Information System (PMIS) software to keep **your project organized and on track**
- Regular, **frequent project updates** to eliminate surprises and **minimize occupant disruption**
- **Well-defined processes** that keep your vision, goals, expectations, and **priorities at the forefront**

Consistency is the backbone of our project management approach. Built on PMP® and ISO standards, our processes are robust and proven, while also flexible and scalable. This enables us to plan with great detail, execute with excellence, and make fast, precise decisions when necessary so that we design and implement your project right the first time.

The outcome: you can deliver on your commitments to your stakeholders because our team is vested in your success. Your project will be delivered on time, on budget, and will produce the savings we promised.



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Communication Plan with the City of Abilene

Abilene will work with a partner that designs solutions with you, not for you. Bringing everyone to the table at the outset is key to transforming your vision into reality. Our approach is inclusive of your key stakeholders and receptive to their ideas and opinions from start to finish.

Your Schneider Electric Program Manager will be your primary point of contact throughout the project, and other members of our core team will meet with your stakeholders at key points.

Abilene can rely on the frequent, regularly scheduled communication outlined below that eliminates uncertainty of what is coming next. We will collaborate with you and your team on logistics and schedule at every step. The Project Manager will schedule regular project update meetings to cover process and schedules and address any concerns.

We also collaborate with your team on innovative ways to keep your stakeholders informed. This could be a combination of press releases, information kiosks, or interactive websites.

SCHEDULED COMMUNICATIONS BY YOUR PROJECT MANAGER

Daily Report	Summarizes daily accomplishments, safety briefings, equipment used, staff involved, and any events that occurred causing impact to schedule
Weekly Four-Week Rolling Schedule	Consists of the past week, the present week, and the next two weeks to come, providing a detailed picture of historical and current work progress
Monthly Progress Meeting	Provides an evaluation of the project schedule compared against baseline target and the percentage complete for each activity
Monthly Progress Report	Summarizes the work performed to date, risks, issues, and financial performance; includes a recovery plan if a milestone is predicted to slip by more than one week

Project Management Information System (PMIS)

Because infrastructure upgrades involve a lot of moving parts and people, we specifically designed our PMIS to capture, manage, and track the details for your project. PROCORE:

- Plans, tracks, and monitors activities to ensure they are on time and on budget
- Provides real-time project information reports from your Project Manager to your stakeholders
- Ensures we meet and exceed safety and performance expectations

A Streamlined Process: We use PROCORE, an all-in-one 3rd party project management tool

All members of the core team use this tool to maintain all project information in one place. This ensures that transitions between phases are seamless and provides your team with a single source for project details. Any time Abilene needs information, our PMIS allows our Project Managers to access real-time information and documents, including meeting minutes, the risk register, and installation timelines.

Coordination with Subcontractors

Abilene will work with one team: Schneider Electric. We eliminate the hassle of managing a patchwork of subcontractors by taking sole responsibility for all construction activities. This streamlined approach is more responsive to the sensitive scheduling and logistical needs of your City..

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To ensure that subcontractors on your site are professional and qualified, we:

1. **Thoroughly screen** every subcontractor's performance, safety record, financial statements, and backlog
2. **Contact customer and vendor references** to confirm a track-record of reliability and work completion according to specifications

Using Avetta, a leading provider of supply chain management solutions, we can ensure your project utilizes subcontractors that can meet minimum vetting and governance criteria including operational verification, insurance checks, and compliance. Moreover, all of our subcontractors are required to sign a Subcontractor Master Agreement, which defines all terms and conditions under which they must operate. This eliminates the potential for litigation against you, while ensuring the subcontractors meet all requirements for performance.

Managing Supply Chain Safety: We use Avetta to maintain our subcontractor database

As a result, Abilene will have no additional workload associated with supervising and managing fieldwork. Your Schneider Electric Project Manager will handle all paperwork, invoicing, and accounting with subcontractors. Your Schneider Electric Site Superintendent will manage all day-to-day communications, scheduling, and safety audits.

During development, we can collaborate with you to develop a list of potential partners that can provide both a local presence and a quality product. We commit to keeping as much work as possible in local areas and welcome the opportunity to work with preferred vendors and equipment providers.

g. Commissioning

You can depend on our guaranteed savings, which start by confirming that all scopes of work as intended and that your staff can confidently operate new equipment before project closeout.

Our Commissioning Approach Our approach verifies that equipment is installed correctly, functions together as a system, and complies with design intent to ensure sustained and optimal performance over time.

Schneider Electric is a member of the Building Commissioning Association (BCA), and our commissioning approach is based on BCA best practices. We focus on optimizing system interactions between installed, retrofitted, and existing equipment. The process also benchmarks a number of operational and maintenance conditions against which performance can be checked for years to come.

A project-specific Commissioning Approach and Plan can be developed and carried out by Schneider Electric's team of commissioning engineers

Our commissioning process often yields 5–10 percent improvements over and above building energy efficiency savings.

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if required. Whatever the situation, we have the expertise in-house to meet your commissioning requirements.

h. Training

Training is key to optimizing building performance. But too often, knowledge about how the systems are designed to operate is lost with staffing turnover and time. When you partner with Schneider Electric, training is available throughout the guarantee period.

51

A DEDICATED M&V TEAM

Unlike any other ESCO, Schneider Electric's Client Services team has 51 dedicated experts entirely focused on measurement and verification of savings as well as ongoing performance assurance services.

Assistance is just a phone call away for your facilities team. Our remote support group is staffed by energy experts who have expertise with your systems and understand your goals and standards. Whether you have a question, or a new staff member requires training on your systems, our Client Services team is available to them. Likewise, our Client Services representatives will provide detailed training manuals and preventive maintenance logs so that information is available to your team.

Your team can also lean on our Client Services representatives when it comes time to replace equipment. The improvements in your facilities are interrelated. Tweaking one can knock the rest out of balance. Our team can help ensure that appropriate replacements are made to protect your energy savings.

Training will be provided on-site, online, and through third parties based on the equipment installed. We create value by ensuring the training is tailored to the city's specific project and the skillset of the team who will manage future operations. Therefore as we go through the initial engineering and into construction, a training and future operating plan will be put together for the city's benefit.

i. Safety and quality program

Health and Safety: Safety is paramount for City of Abilene. That's why your project will include a Health and Safety Plan that marries global safety practices and OSHA standards with requirements specific to your site. Nothing will be left to chance; our detailed plan will assess the potential risk of every ECM on your project.

0.17
Schneider's medical incident rate

8x
Safer than the industry average

Our track record for safety is eight times better than the industry average, with more than 180 OSHA certified employees in our ESCO division alone. Monthly safety meetings, daily toolbox talks, and regular jobsite safety audits will ensure the implementation team and all subcontractors follow your Health and Safety Plan.

The Site Superintendent will be responsible for ensuring compliance with the Safety and QC Plan and will be willing to stop work if necessary, to correct any problems.

Quality Control: The benefit of having inhouse personnel to support your project from beginning to end, means we work together to ensure the approach, design, engineering, constructability, and performance are able to be maintained over the life of your project. Throughout our process we have several quality control steps,

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procedures, and reviews done to ensure the project meets both the expectations of our clients and our own high standard.

During design our Project Development Manager will host peer reviews of your project to ensure the engineering and design of the project can be achieved during the implementation phase. Our Engineering Director and Manager will both review all engineering documents prior to going out to bid and be a part of the construction process to ensure the integrity of the design is being achieved. The Site Superintendent will be responsible for overseeing the quality of construction and ensuring the project is delivered on time and on budget. We put various steps in place to ensure your project is of the highest quality. During the design phase our team will work closely with staff to help coauthor the desired outcomes and ensure that preferred equipment or vendors are included in this process. We want this project to be of the highest quality and value for the City of Abilene and believe the only way to achieve this is through a truly partnered approach.

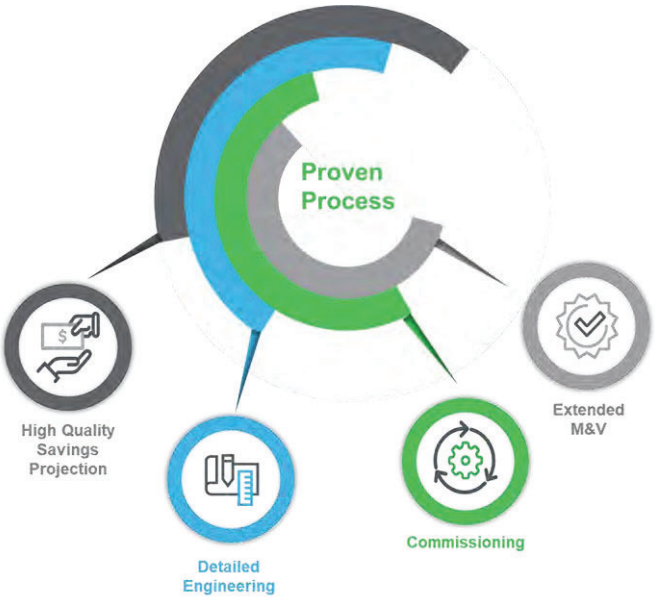
j. Measurement and verification of results

Energy savings should be seen where they count—on your utility bills. The City of Abilene will save what we promise, or Schneider Electric will make up the difference.

Abilene will work with a partner whose entire process is designed to ensure your expectations are met. You will benefit from:

- Accurate, dependable energy savings projections that are developed by one of the industry's most comprehensive energy engineering teams
- A transparent process for measuring results
- A team of performance assurance engineers at your side to confirm your savings are on track for years to come

Our energy engineering team will ensure your vision for infrastructure improvements and savings translates into achievable savings. You can move forward with confidence knowing that we are financially vested in the outcome.



Proven Process From the moment we begin design work through your guarantee period, every step we take is aimed at ensuring you achieve the savings we promise.

Method Used to Established Projected Savings

Abilene's ability to fund priorities by using energy savings is dependent on your facilities performing as promised. Establishing an accurate estimate of savings on the front end is key to ensuring you can achieve your goals.

When it comes to estimating savings, many ESCOs simply take a snapshot of energy use at a specific time and place. A prescribed set of assumptions are applied to the data to land on a set of savings projections. These calculations may or may not account for interactions with other building systems, the magnitude of savings relative to the baseline, and changes to how spaces are used seasonally, on holidays, or even on weekends.

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When you partner with Schneider Electric, you can count on accurate energy savings. Schneider Electric does not delegate the critical task of energy analysis to a project manager. Instead, we have a dedicated team of energy engineers within our larger engineering group who are charged with developing precise utility and energy baselines and determining reliable savings projections.

GREG HILDNER will be the Energy Engineering Lead for your project. He will be responsible for establishing the overall energy baseline, energy modelling, weatherization, and determining scope feasibility.

Our energy engineers will walk your buildings, review as-builts and design drawings, study your equipment, talk with your staff, and dig into your utility data. We develop an in-depth understanding of how your facilities were designed and how they are being operated. All of this information is used to establish the energy baseline and is critical for determining the potential savings that can be achieved in the future.

Once we have established your baseline, we will use a combination of modeling tools and calculations to determine energy and utility savings. Our energy engineers will calibrate these models and calculations against actual utility bills to develop an accurate representation of how your building is designed and operated.

Adapting Analysis to Your Specific Project

Your goals and how you use your facilities are unique to your city. For Abilene, we will tailor our savings analysis to your situation and the needs of your project. You will benefit from an energy development plan that is customized to your buildings and specific ECMs.

YOUR ENERGY EXPERTS

The group of energy engineers dedicated to your project is unparalleled in the industry. Our certified professionals include:

92	9	73
Certified Energy Managers (CEM™)	**Certified M&V Professionals (CMVP®)**	**Professional Engineers (PE)**

Our energy engineers are active members of several leading industry organizations, including:

- The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- The Association of Energy Engineers (AEE)
- The International Building Performance Simulation Association (IBPSA)

Our energy analysis approach is influenced by several factors: **Magnitude** of cost savings, **Impact** of savings on the meter, **Complexity** of the measure, **Impact** the measure will have on other systems (systems interaction), **Measurement & Verification** plan, **Impact** of other measures on shared meter or billing.

We do not take a one-size-fits-all approach to energy analysis, nor do we operate with the same set of assumptions across different projects. Rather, we have multiple tools at hand to forecast energy savings, including:

- Commercially available energy modeling tools to simulate complex buildings and campuses
- Spreadsheet calculation tools to model simple buildings, systems, and specific ECMs

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- A suite of in-house spreadsheet tools to process and analyze utility data, simulate rate tariffs, and manage energy model results and savings

Our experience spans single buildings with complex systems, to simple buildings with a similar scope, to facilities that have undergone multiple renovations and additions. You can expect us to scale our analysis methods up or down to match the needs of your project.

Project Scope Determines our Tools and Approach Your priorities and project scope will determine our approach for analyzing energy savings. Below are some examples of our analysis approach based on ECM type.

Lighting Upgrades

TOOLS
- Line by Lines
- LEAPS[1]

APPROACH
- Account for burn outs, demand diversity, heating and cooling interaction
- Verify baseline and savings against utility baseline
- May include short-term data logging to verify burn hours

HVAC Retrofits

TOOLS
- eQuest[1]
- eCalcs[2]

APPROACH
- Varies based on system and facility complexity
- Evaluate equipment efficiency performance over different part-load ratios and outdoor air conditions
- May include building models and/or load calculations

Controls Improvements

TOOLS
- eQuest[1]
- eCalcs[2]

APPROACH
- Employ a whole-building model such as eQuest for capturing interactions
- Use eCalcs suite of bin-hour spreadsheets for simple or limited scope measures

Solar PV

TOOLS
- Helioscope[1]
- System Advisor Model (SAM)[1]
- PV Watts[1]
- Solar Energy Analysis Tool[2]

APPROACH
- Depends on system complexity and development stage
- Calculate solar production based on key factors

Whole Building Measures

TOOLS
- eQuest[1]
- HAP[1]
- Element[2]
- Simple Building Modeler (SBM)[2]

APPROACH
- Capture multiple ECM interaction within a model and simulate them in succession so that no one measure is overestimated

[1] Industry tool
[2] Schneider Electric proprietary tool

Methods Used to Calculate Cost Savings

Establishing a monetary value for units of energy savings is a critical step to every project. To accurately assign cost savings for energy saved, it is essential to have a thorough understanding of each rate structure for every utility account. An accurate savings projection is pointless if the cost rates applied are not representative of the actual rates. That's why Schneider Electric traces each unit of energy saved back to the utility meter.

All utility companies have different rates and unique billing structures. Based on the region and market, energy costs may vary based on:

- When energy is consumed (time of use rate, seasonal rate)
- How much energy is consumed (tiered rate)
- Maximum peak draw (demand charge)
- Other factors, such as a ratchet rate or contract rate

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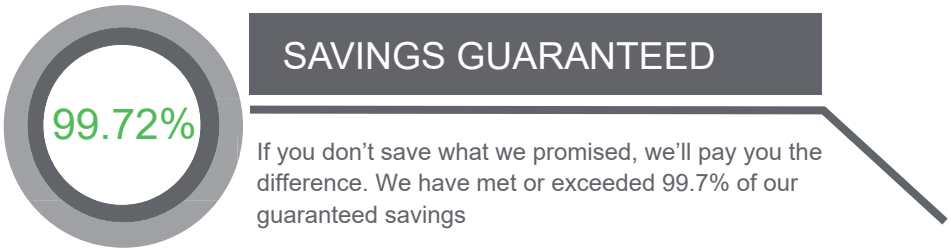
For this reason, simplified approaches to rates—such as blended or marginal rates—can overstate cost savings.

Schneider Electric does not take shortcuts to determine the appropriate rates to use for each project. We have expertise in analyzing utility rates as well as an extensive utility rate library, which enables us to quickly and accurately analyze the rate structures that apply to you. A key step of our energy analysis process is developing and calibrating tariff rate simulations to accurately reflect all the components of your utility bill. We apply these same rates to projected future use after our energy measures are implemented to determine the true financial impact. This comprehensive approach makes sure your energy savings align with the cost savings seen on your bill.

Methods Used in M&V of Project Savings

Like most ESCOs, Schneider Electric follows the guidelines established by the International Performance Measurement and Verification Protocol (IPMVP). The IPMVP offers a framework and four M&V options for measuring, computing, and reporting savings.



However, we stand apart in that we do not rely on a one-time data logging exercise of specific ECMs after construction and declare the savings achieved. Rather, to deliver **the highest value and lowest risk** to our customers, we almost always recommend **Option C, the "whole-building,"** meter approach. By measuring building performance against the meter, we hold ourselves accountable for actual performance as reflected in your utility bills. This ensures that you see a reduction in energy use over the long term. There is no murky math or vague guarantees that your savings are being met—you will see the savings reflected on your utility invoices. In the unlikely event that your savings performance falls short, we will make up the difference. **We keep our promises to you, so you can keep your promises to your stakeholders.**

In this way, Schneider Electric assumes most of the risk for energy performance. We can take on this higher level of risk because our M&V department is second to none. We have 60 energy professionals who are dedicated to measuring energy performance and troubleshooting issues as they arise.

Your project's needs will dictate which option is best suited for your City. In cases when Option C is not prescribed, will recommend Options A, B, or D. We have demonstrated experience with all IPMVP options. This expertise will ensure your savings are accurately measured and transparently verified, no matter the scope of your project. The figure below summarizes how the different IPMVP options are typically applied based on project scope.

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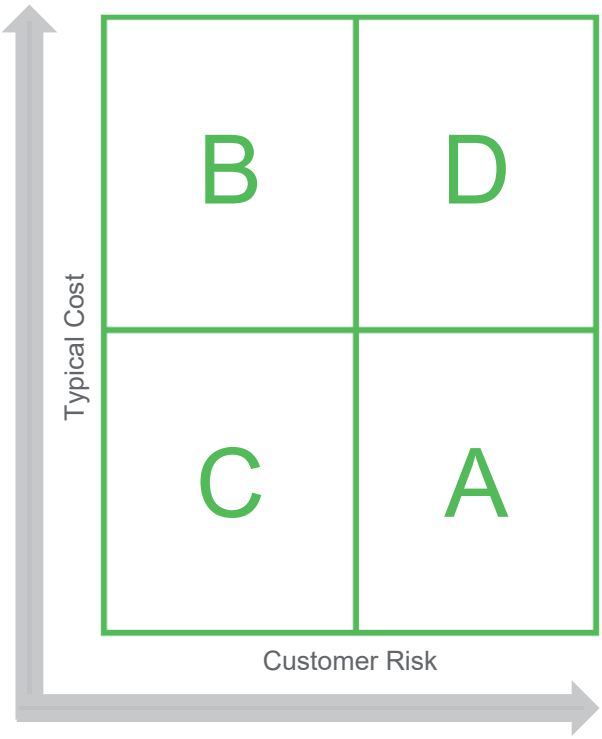
Measurement and Verification Matrix When establishing an M&V plan, the cost of conducting the measurement versus the project risk must be weighed. The table below shows typical ECMs with the most common IPMVP option proposed for tracking savings.



IPMVP Option	Typical ECMs
A Partial Retrofit Isolation	Lighting retrofits, water conservation measures
B Retrofit Isolation	Renewable energy generation, chiller replacement, process improvement-related ECMs, such as laundry facilities where sub-metering was included
C Whole Meter Measurement	Multiple interactive ECMs (for example, a project that includes HVAC replacements, lighting retrofits, and building automation controls
D Calibrated Simulation	New construction performance contracting, ECMs implemented when significant historical data is unavailable.

k. Guarantee of savings

As described within our financial section of this proposal, we provide a financially backed guarantee based on the measurement and verification practices described above. It is a simple as saying that in the event that a savings shortfall takes place we will write a check to make you financially and budgetarily whole. Most of our industry believes in providing a fully stipulated guarantee or offering services to offset a shortfall, but we know that this is not a financially sustainable practice. To ensure the ongoing efficiency and effectiveness of City's project, you will have the full support of Client Services program during the guarantee period. You will have:

Monitoring and Support Methods Used to Guarantee Ongoing Savings

During the guarantee period, Abilene will have the full support of our Client Services program, which provides ongoing performance assurance and support services through the contract term.

Unlike traditional M&V programs, which offer a one-time confirmation of savings, our Client Services program offers ongoing monitoring of your facilities throughout the guarantee period. This ensures that your energy savings are protected, and even improved, over time. You will receive:

CORY LYMER will be the Client Services Team Leader for your project. He will be responsible for all aspects of M&V and performance assurance during the project's guarantee period.

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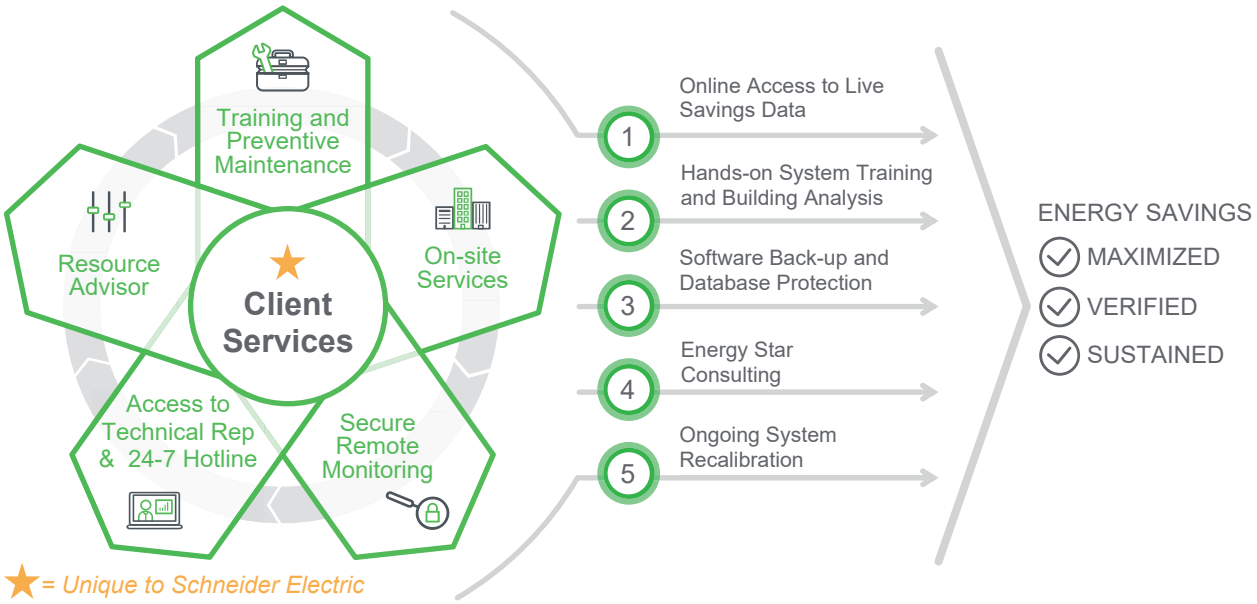
- **A dedicated Client Services representative.** Your Client Services consultant will provide technical assistance during business hours and with most after-hours needs. If your consultant is unavailable, one of our other consultants will be available 24 hours a day, 7 days a week through a toll-free Client Services Hotline.
- **Training and preventive maintenance**. Your facilities team will have the support they need to ensure that your equipment is properly operated and kept in top condition.
- **Secure remote monitoring.** Your utility data will be monitored down to individual meters to ensure that you are benefitting from the savings we promised. Regular reviews of your building automated systems will also provide leading indicators of performance and flag areas that may need to be addressed.
- **Onsite services.** We offer onsite support that is annually tailored to your needs, whether it is finding ways to improve your energy savings, helping you cross items off your list of priorities, offering hands-on training, or even evaluating your operating strategy. These services are highly customized to assist you and your team with meeting your energy performance expectations.
- **Resource Advisor.** You will have access to Resource Advisor, our secure, cloud-based software platform for tracking and managing energy, water, and other resource usage. You can even use Resource Advisor for managing your utility bills. All information is provided in real time and available at your fingertips.

Client Services Deliverables Schneider Electric's unparalleled support services are designed to optimize your system performance and energy use.



Your Client Services team will pay attention to energy performance details so that you don't need to. This also enables us to identify potential concerns before they become problems. If any performance issues emerge, we will:

- Investigate the issue
- Pay you the difference between the guaranteed and actual savings
- Work to resolve the issue to avoid future shortfalls

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Reconciliation of Savings

Ensuring savings is achieved is essential to a successful project. Your savings is reconciled at the end of each contract term year. However, this is not a one-time event, but a calculated and transparent effort our team will share with the City of Abilene throughout the corresponding twelve (12) month guarantee cycle. On a monthly basis our team will review potential issues within system performance that may be adjusted to ensure your project meets your guaranteed savings. Then, each quarter, your dedicated Client Services Representative, Rusty Young, will meet with staff to discuss the financial performance of the project at that point in time.

Each performance year Schneider Electric will give a report and presentation to key City personnel. **Should any savings shortfall take place, you will be notified at this meeting and a check will be presented in the amount of the shortfall within thirty (30) days.** Schneider Electric will then, at our own expense, work to determine the root cause of the shortfall and evaluate potential strategies to overcome any shortfall in future performance years.

Continuous Improvement

Your Client Services Team will be responsible for working with Abilene's Maintenance Staff to review and identify potential opportunities to continuously improve on building energy and operational savings. Our team will collect, analyze, and review your system data through a monthly review and connect with staff to discuss trends or items identified as issues within the installed building automation systems. We will then ensure each issue can be addressed, analyze the information to provide meaningful insights and changes in operation to positively impact your bottom line, and suggest actionable steps that align with the mission and vision of the City.

The program will also provide your team with enhanced M&V services. This provides you with:

- Analysis of your actual utility bills and metering data to measure and confirm real savings
- Remote phone and monitoring support, available 24/7
- Flexible contract options to match your needs and resources on an annual basis

Our Client Services program is an annually renewable service that is customizable to your facility's needs, allowing you budget flexibility in future contract years. You are free to cancel at any time with no "buy-out" or early termination penalty. But many of our customers have achieved savings far above expectations based on the analysis provided by our team.

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Client Services Program Deliverables

- Monthly systems performance comparisons
- Quarterly savings reports
- Annual reconciliation reports
- Online access to savings reports anytime
- Online access to savings calculations methodology
- Calculation relating energy savings to environmental impact
- Conversion of energy units saved into tons of greenhouse gases abated

Client Services Program Deliverables Unlike most competitors, our Client Services program goes beyond traditional M&V. Our menu of program deliverables is designed to ensure savings show up on your utility bills.

During the guarantee period, Abilene will also have access to Resource Advisor, our secure, cloud-based platform for tracking and managing energy, water, and other resource usage. More than 4,500 clients of all sizes in 300,000 sites around the world trust Resource Advisors to manage and track their energy and sustainability initiatives across their enterprises.

Resource Advisor will be your dashboard to:

1. **Review** utility data
2. **Analyze** system performance
3. **Track** your savings guarantee
4. **Review** and **compare** actual savings vs. targets
5. **Communicate** with your Client Services team

Resource Advisor can even provide you with one platform for managing your utility bills in real time.

Schneider Electric energy analysts identified and documented a metering error for Kingsville ISD from the utility company, resulting in a $400,000 credit from the utility company to the customer.

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PRICING AN INVESTMENT GRADE AUDIT

Please describe you firms approach to pricing an Investment Grade Audit for the City and how it is handled if the City decides it is not in the best interest to move forward once the audit is complete.

The Investment Grade Audit (IGA) contract is a contingency contract and not an upfront expense or invoice from Schneider Electric. The fee associated with the IGA is only chargeable if the City of Abilene decides not to pursue the implementation of scopes developed by our project team. Should the City decide to move into a construction contract with Schneider Electric, then the IGA fee will be rolled into that contract price as part of the design and engineering expenses.

The IGA fee is based on the scopes of work to be investigated by the City. For example, our project team will discuss with the City which buildings and specific scopes of work are to be included in a potential project prior to signing the IGA contract. The fee will be built around what our team is responsible for in terms of specific electrical, lighting, plumbing, mechanical, building automation, renewable, building envelope, and other needs. The general cost of the audit will range from $0.025 to $0.10 per square foot per building and the cost is completely negotiable and at your discretion to determine the depth of scope to be included.

5

Project Experience Summary

5. Project Experience Summary

Kansas and Midwest Project Experience

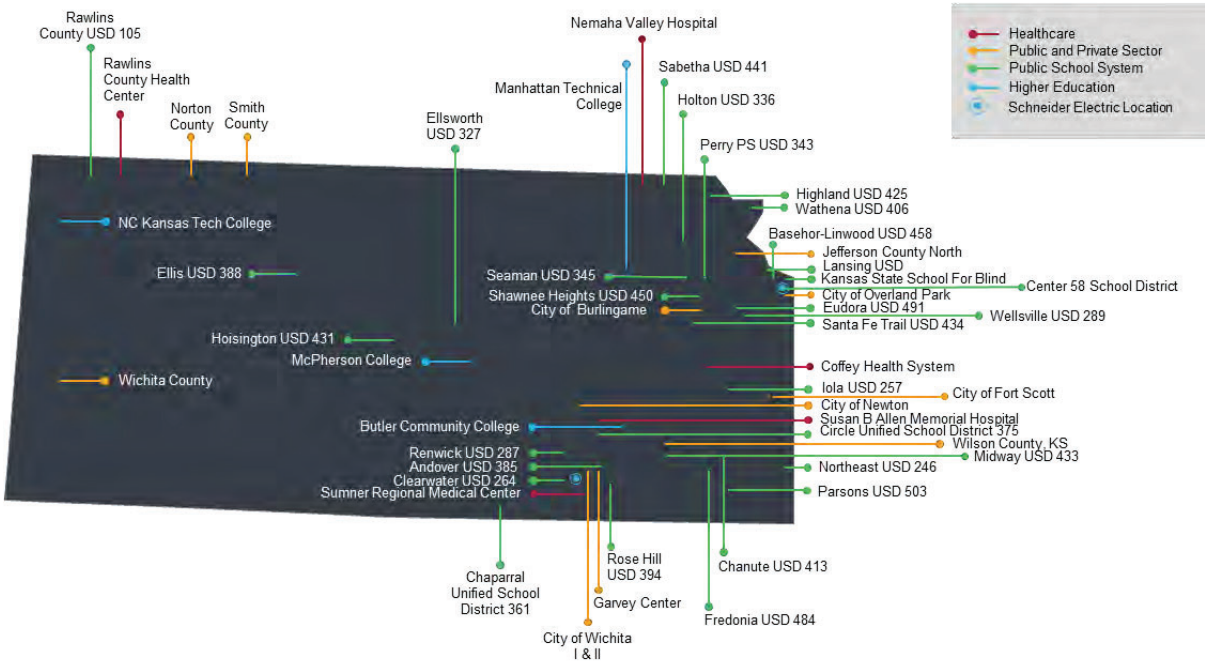
Provide a project experience summary for five (5) energy savings performance contracts implemented with municipalities.

Our experience within the energy conservation services and guaranteed savings space is the direct result of the trust our customers have when working with our entire organization. We have successfully implemented over 1050 projects across the country, with many being multi-phase partnerships over period of 15 or more years.

Local Government	State Agencies	Federal Government
147 Projects - $752M	19 Projects - $112M	21 Projects - $902M

Municipal Projects: We have multiple projects with cities close to the City of Abilene. These include multiple phases with the City of Overland Park, City of St. Joseph, and are currently under design agreements with the Unified Government and KCMO. Additionally, our team supported design-build-perform contracts with City of Wichita (KS), Wilson County (KS), City of Fort Scott (KS), City of Newton (KS), Norton County (KS), St. Charles County (MO), City of Maryville (MO), City of Shelbina (MO), and City of Kirksville (MO) in the past few years. These projects ranged in size and complexity but focused on identifying their needs during development and engineering a coauthored solution that aligns with their long-term goals and initiatives.

Midwest Focus: The City of Abilene can move forward with confidence knowing that you have an excellent partner who offers best-in-class services and is well versed in the unique requirements of municipal government. We have a long history of working across the Midwest with our clients to deliver guaranteed energy cost savings projects that perform long-after construction is complete. Across the Midwest region alone we have successfully completed more than 200 projects at a value of over $570M, with 60 project phases and over $100M in Kansas alone.



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Kansas Project Highlights

A company's references may be the most indicative gauge of that company's performance. Schneider Electric relies heavily on references as our marketing platform to gain new business. Our business approach is built around achieving 100% customer satisfaction from project design, through implementation and the long-term guarantee. This is so important to us that we perform third party customer satisfaction surveys with several points of contact within each of our references on an annual basis. If we receive a score less than perfect, we work with the client to build our score back up.

For 25+ years Schneider Electric has been a trusted partner for energy consevation projects across the state of Kansas, successfully completing a diverse array of projects, savings our customers more than $115M in guaranteed energy savings. Below is a testament to our enduring commitment and expertise, showcasing the comprehensive list of projects we've brought to completion for our valued clients throughout Kansas.

2000 City of Wichita
2000 Nemaha Valley Community Hospital
2001 Chanute USD
2001 Circle USD
2001 Jefferson County North
2001 Lansing USD
2002 Fredonia USD
2002 Santa Fe Trail USD
2002 Seaman USD
2003 Basehor-Linwood USD
2003 Garvey Center
2003 Parsons USD
2003 Perry USD
2003 Shawnee Heights USD
2004 Clearwater USD
2005 Manhattan Area Technical College
2005 Renwick USD
2005 Wellsville USD
2006 North Central Kansas Tech College
2007 Doniphan West USD
2007 Ellis USD
2007 Hoisington USD
2007 Holton USD
2007 Iola USD
2007 Rawlings County Health Center
2007 Rawlings County USD
2007 Wathena USD
2008 Eudora USD Phases 1, 2 & 3
2008 Kansas State School for Blind
2008 Rose Hill USD
2008 Smith County Memorial Hospital
2008 Wichita County
2009 Prairie Hills USD
2011 Susan B Allen Memorial Hospital
2013 Coffey Health Systems
2013 Ellsworth USD
2013 Butler Community College
2015 Andover USD
2016 McPherson College
2018 Overland Park Convention Center
2018 Chaparral USD
2019 Overland Park Resource Advisor
2019 City of Fort Scott
2019 Fort Scott Community College
2019 Norton County
2019 Wilson County
2020 Shawnee Heights USD Phase 3
2021 City of Overland Park P2 Facilities
2021 City of Overland Park P3 Streetlights
2023 City of Salina
2024 City of Salina – Solar – Under Design
2024 City of Derby – Under Design

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Included in this section are a sampling of projects that have been completed by our team, share common goals as Abilene, and were completed under KSA 75-37,125. We have included a few references that reflect the type of improvements that the City is looking to implement. We encourage you to call any of our references to discuss their project experience with Schneider Electric.

References Included:

1. **City of Salina, KS** – The City of Salina looked to tackle a combination of energy efficiency and deferred capital needs within their infrastructure. This partnership included a solar component, much like the Indian Creek Library portion of this solicitation. In Salina's case we were able to balance the solar photovoltaic array's size with the demand charge to take their water park into a smaller tariff. The results are approximately $30,000 in annual savings at this site alone, with approximately 30% paying paid for through federal tax credits.

2. **City of Overland Park, KS** – Working with the City since 2016, our team helped develop their strategy around building an infrastructure energy management plan through a series of audits and construction projects. Overland Park's projects helped to replace lighting across the Scheels Sports Complex, multiple golf courses, upgrade controls and replace aging mechanical infrastructure to support their sustainable mission across multiple phases of work. Additionally, our partnered focus helped replace aging streetlights and delivered an updated photometrics of the entire city to better align with their safety and security standards.

3. **Shawnee Heights USD 450, KS** – Shawnee Heights contracted is a great example of how a lasting partnership makes a huge difference when going through these types of construction models. Our original phase was over 15-years ago, and we maintained a guarantee throughout that time. The team acted as an extension of staff to help troubleshoot issues and ensure efficient operations, which led to a second phase in 2020 to help modernize mechanical systems and create a phased capital plan we are actively supporting to this day.

4. **Wilson County, KS –** Schneider Electric redesigned the Wilson County Courthouse's HVAC system, resolving comfort issues and maintenance problems while ensuring cost-effectiveness, ultimately saving the county over $40,000 annually in utilities and maintenance. The partnership extended into a Phase 2, which included mechanical, building envelope improvements and lighting retrofits across multiple county facilities.

5. **City of St. Joseph, MO –** Schneider Electric supported over $20M in total improvements across 5 phases work with the city. These projects made a combination of energy, operational, and capital improvements in support of the city's mission to become more efficient and effective in the services they provide. We worked directly with staff and the city's governing body to create meaningful improvement programs that were supported through various funding mechanisms. The City received grants, state revolving fund loans, incentives, and federal funds throughout this near decadelong partnership with our team.

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CITY OF SALINA

SALINA, KS

CONTACT INFORMATION

Mr. Jacob Wood, Deputy City Manager
300 W. Ash St.
Salina, KS 67401
(785) 309-5700

PROJECT COST

$7,717,649

ANNUAL PROJECT SAVINGS

$208,624

SCOPE OF WORK

Multiple city facilities and infrastructure

- Interior & Exterior Lighting
- Mechanical Replacements – furnaces, air handling units, packaged equipment, boiler, and other ancillary mechanical equipment
- Electrical Upgrades
- Building Automation System – third party manufacturer
- Commissioning
- Window Replacement
- Solar Installation
- Building Envelope

PROJECT TERM & DATES

20 Year Term
Project & Guarantee Beginning and End Dates
2023-2043

PROJECT DESCRIPTION

The City of Salina and Schneider Electric partnered in 2022 to identify energy savings opportunities and address critical infrastructure issues at multiple facilities and sites within the city.

The challenge started nearly 20-years ago when the city passed bond measures to expand and add new facilities and infrastructure. This expansion caused multiple building's mechanical systems to need replacement at all once. With this issue becoming a financial challenge, the city looked to our team to develop efficiency-based solution to replace needed equipment and improve overall operations. Through this strategic partnership, Schneider Electric helped to address issues within critical safety, museums, parks and recreation, and community centers. These improvements helped to reduce the energy use and improve the indoor environments to better support the local community through services provided by the city.

Beyond just the facility and infrastructure improvements made, the Schneider Electric team helped secure multiple funding streams to pay for the infrastructure investment needed. Our team worked with the state of Kansas to leverage Historical Tax Credits, guaranteed energy and operational savings for the city to issue debt, identify capital improvement program funds for specific mechanical needs, and received Energy Efficiency & Conservation Block Grant funding as a direct result of the energy efficiencies created through this partnership.

Our partnership continues throughout the construction of the improvements and into a second phase focused on potential solar opportunities at other sites within the City of Salina's wastewater and water treatment facilities. We anticipate these projects leveraging ITC funding and implementation beginning in 2024.

CITY OF OVERLAND PARK

OVERLAND PARK, KS

CONTACT INFORMATION

Chelsee Newkirk, Assistant City Manager
8500 Santa Fe Drive
Overland Park, KS 66212
(913) 895-6106

PROJECT COST

$14.8M across 4 phases

ANNUAL PROJECT SAVINGS

Phase 1: $174,598
Phase 2: $452,678
Phase 3: $367,996
Phase 4: $141,303

SCOPE OF WORK

Phase 1: Overland Park Convention Center

- New Building Automation System (BAS)
- Replacement of 3-cell cooling tower
- Resource Advisor utility tracking and Building Advisor (analytics)

Phase 2: Streetlights

- Replacement of 6,703 luminaires

Phase 3: Facilities

- Recommission and expand BAS
- Smart electric meters across facilities
- Mechanical improvements
- Building envelope and plumbing upgrades

Phase 4: Convention Center Phase 2

- Lighting – Upgrade Convention Center lighting system with LED and advanced controls

PROJECT TERM & DATES

Phases 1, 2, & 3: 20 years
Phases 4 currently in construction

PROJECT DESCRIPTION

The City of Overland Park and Schneider Electric have partnered on various phases of work across the City. The partnership began by addressing their critical mechanical needs at the Overland park Convention Center. Our team then integrated Resources Advisor to provide city-wide energy use data for the local community, and recently started the construction of a streetlight conversion project of all remaining roadway and thoroughfare fixtures.

The City's high design standards when it comes to facilities and streetlights have positioned them as a leader within the region. So much so that neighboring cities adopt the standards set by the City of Overland Park and incorporate their best practices into their day-to-day operations. City Manager Bill Ebel was even recognized by the Mid-American Regional Council (MARC) in 2021 for his dedication and service to the public sector and setting the standard for others to follow.

Schneider Electric has standardized on an EcoStruxure building automation system. The original system was legacy Schneider and our team worked to ensure the functionality of the new system, along with integration of current hardware was possible. The system, along with Building Advisor and Resources Advisor, help create the foundation to support day-to-day activities of the city's maintenance personnel.

Over the past several years our partnership continues to expand as our project and approach provide valuable to the city. With challenges of how to address current and future deferred maintenance, our team has been asked to address additional work across city facilities and the convention center. Both of these projects, currently under development, will continue the relationship with the City and our team for years to come.

SHAWNEE HEIGHTS USD 450

TECUMSEH, KS

CONTACT INFORMATION

Nathan Hofstra, Buildings / Grounds Director
4401 SE Shawnee Heights Road
Tecumseh, KS 66542
(785) 379-5800

PROJECT COST

Phase 1: $1,417,501
Phase 2: $4,341,534

ANNUAL PROJECT SAVINGS

Phase 1: $137,624
Phase 2: $279,759

SCOPE OF WORK

- Comprehensive lighting retrofit
- Energy management system
- Heat-pump unit replacements
- Ductwork modifications

ROLE OF RESPONDER

Energy Services Company

PROJECT TERM & DATES

20 Year Term
Project Beginning and End Dates
Phase 1: 2005-2020
Phase 2: 2020-2040

PROJECT DESCRIPTION

The original phase of work was identified by district administration who realized their buildings' utility expenditures were out of line. The, coupled with efforts to secure bond funding for new construction projects, motivated them to look for creative was to improve facilities without eating into bond funds.

Schneider Electric engineers discovered that the district's high costs were due largely to lengthy equipment run times and an unusual amount of electrical heat. By implementing a sophisticated energy management system throughout the district, Schneider Electric worked with USD 450 to save nearly $140,000 annually. This tremendous amount of guaranteed savings was also able to fund a district-wide lighting retrofit and mechanical improvements in many of the district's buildings.

Shortly after contracting with Schneider Electric, Shawnee Heights was able to procure bond financing for several construction projects.

Our team maintained a relationship for another decade in support of the guarantee and troubleshooting issues as they arose. After years of proven performance, USD 450 looked to Schneider Electric for additional improvements. The team coauthored solutions to Tecumseh North Elementary to improve comfort and replace aging mechanical systems, improved lighting through new LEDs and lighting control strategies, expanded the building automation system, and improved a variety of other mechanical needs across the district.

The real value was the capital plan we produced as a part of our auditing process. This plan will help the district to plan for future bond needs and create a strategic investment strategy for making needed improvements.

WILSON COUNTY

FREDONIA, KS

CONTACT INFORMATION

Kris D. Marple, Wilson County Coordinator
615 E. Madison St.
Fredonia, Kansas 66736
(620) 378-3472

PROJECT COST

Phase 1: $715,281
Phase 2: $549,996

ANNUAL PROJECT SAVINGS

Phase 1: $41,355
Phase 2: $31,112

SCOPE OF WORK

- Complete mechanical redesign
- Boiler replacement
- Piping upgrades
- New outside air intake
- Exhaust fan replacements
- Complete facility air balance
- Dual-duct to VAV conversion
- Direct digital control system
- Comprehensive lighting retrofit
- Courthouse cooling system
- Lighting retrofits
- Building envelope upgrades

PROJECT TERM & DATES

15 Year Terms
Project Beginning and End Dates
Phase 1: 2007-2020 (incorporated into phase 2)
Phase 2: 2020 - 2035

PROJECT DESCRIPTION

The Wilson County Courthouse was constructed in 1959, and nearly every original piece of heating and air conditioning equipment was still in place nearly 50 years later. The county's problems extended beyond the inefficiency of such outdated equipment: comfort problems were rampant in the facility; the cooling system had a growing refrigerant leak; and maintenance costs were beginning to mount.

The Wilson County Commission asked Schneider Electric to complete a redesign of their system that not only effectively eliminated all comfort and maintenance problems, but it did so in the most cost-effective manner possible.

The new design sought to utilize portions of the existing system where possible to control costs, and Schneider Electric uncovered opportunities to save more than $40,000 annually from the county's utility budget, in addition to savings on facility maintenance. These savings were utilized to help fund the needed improvements to the facilities.

Wilson County and Schneider Electric continued their relationship beyond Phase 1 of the project, working to support the guaranteed savings and realize additional efficiency opportunities. Phase 2 of our work together was developed in 2019, with work beginning in 2020. Phase 2 focuses on further mechanical and lighting retrofits at the Courthouse and Law Enforcement Center, as well as building envelope improvements that also include the Health Department facility.

ST. JOSEPH SD

PHASES 1 – 4

ST. JOSEPH, MO

CONTACT INFORMATION

Dr. Gabe Edgar, Assistant Superintendent
1415 N 26th Street
St. Joseph, MO 64506
(816) 671-4001

PROJECT COST

Phase 1: $2,825,653
Phase 2: $10,793,050
Phase 3: $20,551,622
Phase 4: $9,182,801

ANNUAL PROJECT SAVINGS

Phase 1: $145,196
Phase 2: $90,709
Phase 3: $60,339
Phase 4: $22,061

SCOPE OF WORK

- Building automation system across district
- Outside air system upgrades & balancing
- Variable refrigerant flow retro-commissioning
- LED upgrades
- Plumbing fixture retrofits
- Building envelope sealing
- Continuous commissioning with Building Advisor – Analytics

ROLE OF RESPONDER

Energy Services Company

PROJECT TERM & DATES

15 Year Terms

Project Beginning and End Dates
Phase 1: 2020 – 2035
Phase 2: 2021 – 2036
Phase 3 & 4: 2022 - 2037

PROJECT DESCRIPTION

St. Joseph School District (SJSD) partnered with Schneider Electric on a multi-phase facility master plan to improve energy efficiency through strategic capital investment into aging facilities.

Phase 1 focused on improving the overall energy efficiency and operations within six key facilities. These facilities had previously been upgraded by another ESCO with multiple failures and issues persisting that were never addressed over 6 years since construction completed. Our team worked directly with staff to identify the operational challenges and provide a solution to the VRF systems previously installed. We also installed building controls, mechanical improvements, lighting upgrades, recommissioning, water system improvements, and continuous building improvements through enhanced building analytics.

Phase 2 addressed indoor air quality and the lack of heating and cooling capacity at three high schools and Hillyard Technical Center. These improvements leveraged ESSER II grant funds.

Phase 3 replaced and modernized the heating and cooling systems across all classroom space within two high schools. Central HS's aging packaged equipment was replaced, and all systems included bipolar ionization to ensure healthy environments for students and staff.

Phase 4 completed the work within the Central HS's facility to the remaining portions of the building via a four-pipe hot and chilled water central plant. These phases were funded through a combination of ESSER III funds and capital allocation to help improve indoor air quality.

The partnership with SJSD goes beyond just the scopes of work and centers on a focused effort of understanding their long-term goals and needs. The success of these projects is based on the collaboration between the Schneider team and the district staff and administration.

Project Shortfalls

Please provide an example of a project where a savings guarantee was not met and the steps taken by the ESCO. If no shortfall has taken place within the history of the ESCO, please provide a written statement signed by an officer of the company stating that no shortfall has taken place.

Schneider Electric's performance contracting approach is built around delivering and sustaining real savings. The engineering and savings forecasting before the project is implemented are focused on creating a program with achievable savings. The construction and commissioning of the ECMs are done with excellence to create the opportunity for savings. The ongoing engagement of Client Services provides the mechanism for ensuring these savings are realized throughout the performance period. Despite these safeguards, savings shortfalls do happen. When the guaranteed savings aren't realized for a project year, Schneider Electric promptly pays the customer for that shortfall. Long before the shortfall has occurred, Client Services identifies savings deficiencies and works to maximize the savings potential of the project. If the cause of the shortfall can be remedied through additional investment, Schneider Electric may elect to improve the savings in this manner.

At Schneider Electric we take our commitments very seriously. To date we have completed more than $4.3 Billion worth of performance contracting projects and met 99.72% of the guaranteed dollars we've promised.

On those rare occurrences where we have fallen short, Schneider Electric has reimbursed shortfalls for our customers. Below is a list of customers who have received shortfall cash reimbursements. The amount listed is a total which may reflect shortfalls, paybacks, and multi-year contracts. In each case, the customer received a check for **the full amount** of the shortfall. If you are interested in speaking with any of these customers directly, we would be happy to supply references upon request.

CUSTOMER	YEAR(S)	TOTAL SHORTFALL
Ashton-Franklin Center School District	2010	$1,311
Brooks County Independent School District	1999	$3,867
Buena Vista City Public Schools	2016-2023	$125,813
Carteret County Schools	2017, 2020	$28,195
Castleberry Independent School District	1999-2001	$53,684
City of Covington Aquatic Center	2009-2020	$59,180
City of Greenville	2016, 2020-2021	$37,379
Claremore Public Schools	2008	$13,316
Commerce ISD	2021	$4,278
Corpus Christi Country Club	1998-2001	$16,574
Depue Unit School District	2009-2014	$23,763
Edwards County Community Unit School District	2004	$4,049
Elgin Independent School District	2004	$920
Fredonia Unified School District 484	2006-2007	$24,275
Gilmer Independent School District	2003	$3,157
Grape Creek Independent School District	2005-2007	$24,773
GSA St. Croix	2015-2017	$213,346

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CUSTOMER	YEAR(S)	TOTAL SHORTFALL
Hadley Luzerne Central School District *(paid off contract balance)*	2012-2015	$172,201
Kingston K-14 School District	2004	$5,435
Mahanoy Area Schools (*paid off contract balance)*	2013-2014	$288,153
Midway USD 433	2010-2011	$1,769
Midwestern State University *(paid off contract balance)*	1997-1998, 2000	$664,154
Mineola Independent School District	2004	$8,926
Morgan County	2021	$14,104
Niagara School District	2017	$7,306
North Central Kansas Technical College *(paid off contract balance)*	2008-2009	$92,132
Palacios Independent School District	1997	$1,950
Pennsylvania Capital Area Intermediate Unit	2007-2008	$11,268
Pennsylvania State Farm	2005	$1,600
Pennsylvania State Police	2010	$1,794
Plymouth Public Schools	2003-2004	$37,686
Randolph Field Independent School District	1996-1999	$15,491
Redlands Community College	2006-2008	$17,094
Redwater Independent School District	2008	$1,790
Riviera Independent School District	2005-2008	$19,579
Roanoke City Schools Phase 2	2020	$11,530
Shelby County	2012	$17,997
Silver Valley USD	2021-2022	$62,112
Smith County Community Hospital	2012-2018	$153,812
Stone County Schools	2019-2022	$34,407
Tahlequah Public Schools	1999	$12,160
Texas Parks and Wildlife	2006	$16,139
Thomasville City Schools	2018	$33,421
Thrall Independent School District	2006-2008	$7,254
USCG Puerto Rico PV	2016-2017	$268,937
Valley View Independent School District	2011-2015	$36,045
Virginia Community College System-Annandale	2011-2013	$79,165
Virginia Community College System-Danville	2007	$9,186
Virginia Community College System-Germanna	2014-2016	$14,231
Virginia Community College System-John Tyler	2007	$8,457
Virginia Community College System-JSR Downtown	2016	$241
Virginia Community College System-Manassas	2007-2008	$2,875
Virginia Community College System-Virginia Highlands	2007-2009	$27,398
Virginia National Guard	2015	$6,267
West Bolivar School District	2008	$5,188

It is important to understand that these shortfalls show that our process works. The clients represented here are a small portion of our 1,050+ projects to date that fell short of their guaranteed savings. When we write checks, it is not simply a marketing ploy, but we come back to identify why the shortfall took place and what can be done to

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correct it at Schneider Electric's expense. It is more important that the project works and meets the performance expectations than the expense we incur to help solve our customers problems.

SHORTFALL RESOULTION EXAMPLE

A municipal project in Alabama did not deliver the expected savings as construction of the project concluded. Client Services quickly identified that the main building in the project was not operating as expected overnight and on weekends. Substantial energy savings were to be realized by having relaxed comfort requirements during those unoccupied hours. Unfortunately, the heating and cooling systems for the majority of the building were still operating according to the stricter conditions of occupied periods. Our team evaluated several issues within the control sequence to troubleshoot this issue, including revising the humidity control sequence to be more energy efficient. Other steps were considered to reduce energy use, including a revision to the exhaust fan control sequence. Unfortunately, the issue was unable to be resolved quickly and the project suffered a $17,997 shortfall on a $92,524 Year 1 guarantee. Schneider Electric promptly paid the customer for this shortfall while continuing to work towards a solution to the underlying cause. After months of troubleshooting and additional site investigation, a faulty controller was identified. This controller was replaced, and the control operating strategies functioned as intended. Afterwards, in Year 2 of the guarantee period the project generated 43% more savings in 7 months than it did in the corresponding 7 months of Year 1. Subsequent Year 2 and all future years exceeded the guaranteed savings now that this issue has been resolved.

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6

Best Value

6. Best Value

a. Briefly describe how the ESCO provides the greatest value for the investment made by the City.

VALUE THROUGH THE APPROACH

Schneider Electric delivers the best value in a host of specific ways throughout our project. It begins with a transparent and upfront approach to our pricing structure, broken down in the following section of this proposal. We want to make sure that all aspects of project delivery provide a value to our customers. The fees we charge and presented within the financial section area meant to be negotiable and based on where we can provide value for the City of Abilene. If there is a focus on additional post-construction support or creating a capital planning tool for strategic planning purposes, whatever the need we will work with your staff and administration to provide the greatest overall value.

Beyond our fee structure, the size of our firm and volume of equipment we purchase from multiple manufacturers gives us significant purchasing power in the market. This also applies to our breadth of various subcontractors within Abilene and the surrounding areas. Having developed and implemented over $100M of similar projects in Kansas, another $145M in Missouri, and over $4B national-wide, we can leverage industry relationships and contacts to ensure quality equipment, installation, schedules, and pricing to help achieve your intended goals.

Prior to moving into a construction contract, our team goes through a bidding process for subcontractors and given trades. Schneider Electric's construction management team work directly with subcontractors through a bid-normalization process once all bids have been received. We review all bids to ensure any subcontractor, engineering, or equipment omissions are addressed prior to a final contract with the city. This is a way to qualify the bids provided and identify potential change-orders caused by traditional low-bid or design-bid-build processes. This step is what allows our team to deliver a guaranteed maximum price, meaning the City of Abilene will not receive a change-order based on the contracted scope of work. The process of hiring our firm as your design-build-performance based partner is to ensure unforeseen construction issues are identified as part of our team's pre-construction design process. When construction issues arise, we work with our internal team, subcontractors, and equipment providers to maintain the intended performance of the systems or equipment installed, while also holding our guaranteed maximum price for our customers.

VALUE AS YOUR PARTNER

The value we provide comes through our coauthored and partner-based approach. These projects are your projects, and you help to determine where we can provide value within the current needs of your infrastructure. Whether it is through the initial solar application at various city properties or facility, streetlighting, wastewater and water systems or other infrastructure improvements, we will deliver on what you want to achieve and align with the larger goals and initiatives as a partner to the City of Abilene.

As your partner we look at how the scope impacts long-term budgets and where to best maximize the investment. The city's size and historical relevance lends itself to several funding opportunities that our organization will help pursue. Using the USDA Rural Grant and Loan's program and State Historical Society Historical Tax Credit Program are both key differentiators we will support throughout the development and into implementation of needed improvements within the city.

Use or disclosure of data contained on this sheet is subject to the restriction on the table of contents of this proposal

VALUE OF THE GUARANTEE

The partnership with our clients extends for up to 20-years in many cases because of how we financially back our guarantee of savings and continue to support our clients across the term of the agreement. In the event of a savings shortfall, Schneider Electric writes a check to the client for the full amount of the shortfall. To date we have completed over $4.3 billion worth of design-build-performance based contract and met 99.6% of the guaranteed dollars promised to our customers.

This is important as we don't find ways to avoid paying the savings shortfall or provide additional services to offset the shortfall itself. Instead, we write a check as outlined in this proposal and then fix the issues causing the shortfall to take place. We do this because you are using tax payers dollars to reinvest back into community facilities and infrastructure. Schneider Electric knows that the value we create through the guarantee allows the risk of future budgetary performance to be shifted from the City of Abilene onto us.

VALUE OF PROPER BRANDING & MARKETING

Generate excitement and foster trust in your strategic direction with a marketing and communications plan that is tailored to your goals and audience. Schneider Electric's public relations and marketing experts can help you do more with less by becoming an extension of your team. We take the complex task of generating positive publicity and community engagement off your shoulders by putting our resources to work for you:

- **Engage:** We identify groups or stakeholders to get involved to make the most of your energy initiatives.
- **Promote:** We work with you to develop messages for local, statewide, and even national audiences.
- **Influence:** We determine the best distribution channels to share your story to reach the biggest network.

Community Awareness: Our marketing team will work with you to identify and reach key audiences in both the digital and physical worlds. We will then devise a multi-faceted plan to engage your stakeholders, generate excitement for your efforts, and promote your success. Your marketing plan will be customized for your organization and could include: public relations outreach to local and national media, community events to celebrate key project milestones, special events like Earth Day or community fairs, grant and rebate check presentations, social media campaigns, and even special signage like billboards or even at the construction site.

Branding and Positioning: Branding ensures your message is consistent and your position is clear. Schneider Electric will help you create dynamic messaging and visuals to instill confidence in your stakeholders and get your message across. Our services include: custom kiosks or branded messaging within targeted community facilities, a clear and concise visual identity to boost visibility and provide a consistent image for awareness, and targeted branding to influence critical stakeholders.

Sustainability Leadership: You are a leader in energy conservation and environmental responsibility. Schneider Electric can help you showcase the breadth of your commitment to energy conservation and fiscal stewardship through: promotional videos that celebrate your position and success with sustainability initiatives, fresh website content or a new website to showcase improvements, and case studies and white papers that bring your initiative to the national stage.

To see videos, case studies, and white papers from our previous customers, visit hub.resourceadvisor.com/performance-contracting. Your marketing and communications plan will be tailored for you. Tell us what you need, and we will craft a plan that is aimed at your audience and your success.

Use or disclosure of data contained on this sheet is subject to the restriction on the table of contents of this proposal

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Appendix A: Financial Statements

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Chapter 5 – Consolidated financial statements at December 31, 2023

5.1 Consolidated statement of income

(in millions of euros except for earnings per share)	Note	**Full Year 2023**	Full Year 2022
Revenue	**3**	**35,902**	**34,176**
Cost of sales		(20,890)	(20,300)
Gross profit		**15,012**	**13,876**
Research and development	4	(1,168)	(1,040)
Selling, general and administrative expenses		(7,432)	(6,819)
Adjusted EBITA *	**3**	**6,412**	**6,017**
Other operating income and expenses	6	98	(433)
Restructuring costs		(147)	(227)
EBITA **		**6,363**	**5,357**
Amortization and impairment of purchase accounting intangibles	5	(430)	(424)
Operating income		**5,933**	**4,933**
Interest income		79	24
Interest expense		(387)	(130)
Finance costs, net		**(308)**	**(106)**
Other financial income and expense	7	(222)	(109)
Net financial income/(loss)		**(530)**	**(215)**
Profit from continuing operations before income tax		**5,403**	**4,718**
Income tax expense	8	(1,285)	(1,211)
Share of profit/(loss) of associates	12	51	29
PROFIT FOR THE YEAR		**4,169**	**3,536**
attributable to owners of the parent		*4,003*	*3,477*
attributable to non-controlling interests		*166*	*59*
Basic earnings (attributable to owners of the parent) per share (in euros per share)	19	7.15	6.23
Diluted earnings (attributable to owners of the parent) per share (in euros per share)	19	7.07	6.15

* Adjusted EBITA (Earnings Before Interest, Taxes, Amortization of Purchase Accounting Intangibles): Operating profit before amortization and impairment of purchase accounting intangible assets, before goodwill impairment, other operating income and expenses and restructuring costs.

** EBITA (Earnings Before Interest, Taxes and Amortization of Purchase Accounting Intangibles): Operating profit before amortization and impairment of purchase accounting intangible assets and before goodwill impairment.

The accompanying notes are an integral part of the consolidated financial statements.

Other comprehensive income

(in millions of euros)	Note	**Full Year 2023**	Full Year 2022
Profit for the year		**4,169**	**3,536**
Other comprehensive income:			
Translation adjustment		(1,034)	631
Revaluation of assets and liabilities due to hyperinflation		31	44
Cash-flow hedges		(46)	36
Income tax effect of cash flow hedges	19	6	(4)
Gains and losses recorded in equity with recycling		**(1,043)**	**707**
Net gains/(losses) on financial assets		20	(8)
Income tax effect of gains/(losses) on financial assets	19	(6)	2
Actuarial gains/(losses) on defined benefit plans	20	(119)	137
Income tax effect of actuarial gains/(losses) on defined benefit plans	19	69	(25)
Gains and losses recorded in equity with no recycling		**(36)**	**106**
Other comprehensive income for the year, net of tax		**(1,079)**	**813**
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		**3,090**	**4,349**
attributable to owners of the parent		*2,950*	*4,284*
attributable to non-controlling interests		*140*	*65*

The accompanying notes are an integral part of the consolidated financial statements.

5.2 Consolidated statement of cash flows

(in millions of euros)	Note	**Full Year 2023**	Full Year 2022
Profit for the year		**4,169**	**3,536**
Share of (profit)/losses of associates		(51)	(29)
Income and expenses with no effect on cash flow:			
Depreciation of property, plant and equipment	11	743	750
Amortization of intangible assets other than goodwill	10	717	732
Impairment losses on non-current assets		60	61
Increase/(decrease) in provisions	21	87	32
Losses/(gains) on disposals of business and assets		(252)	70
Difference between tax paid and tax expense		(164)	139
Other non-cash adjustments		220	102
Net cash provided by operating activities		**5,529**	**5,393**
Decrease/(increase) in accounts receivable		62	(305)
Decrease/(increase) in inventories and work in progress		(382)	(553)
(Decrease)/increase in accounts payable		493	73
Decrease/(increase) in other current assets and liabilities		205	(254)
Change in working capital requirement		**378**	**(1,039)**
TOTAL I – CASH FLOWS FROM / (USED IN) OPERATING ACTIVITIES		**5,907**	**4,354**
Purchases of property, plant and equipment	11	(914)	(707)
Proceeds from disposals of property, plant and equipment		52	69
Purchases of intangible assets	10	(451)	(386)
Net cash used by investment in operating assets		**(1,313)**	**(1,024)**
Acquisitions and disposals of businesses, net of cash acquired & disposed	2	611	(297)
Other long-term investments		(89)	40
Increase in long-term pension assets	20	(257)	(130)
Sub-total		**265**	**(387)**
TOTAL II – CASH FLOWS FROM / (USED IN) INVESTING ACTIVITIES		**(1,048)**	**(1,411)**
Issuance of bonds	22	3,509	1,092
Repayment of bonds	22	(1,299)	(829)
Sale/(purchase) of treasury shares		(703)	(219)
Increase/(decrease) in other financial debt		939	143
Increase/(decrease) of share capital	19	284	208
Transaction with non-controlling interests*	2	(4,702)	(73)
Dividends paid to Schneider Electric's shareholders	19	(1,767)	(1,618)
Dividends paid to non-controlling interests		(84)	(157)
TOTAL III – CASH FLOWS FROM / (USED IN) FINANCING ACTIVITIES		**(3,823)**	**(1,453)**
TOTAL IV – NET FOREIGN EXCHANGE DIFFERENCE		**(240)**	**(70)**
TOTAL V – IMPACT OF RECLASSIFICATION OF ITEMS HELD FOR SALE		**(4)**	**(20)**
INCREASE/(DECREASE) IN NET CASH AND CASH EQUIVALENTS: I + II + III + IV + V		**792**	**1,400**
Net cash and cash equivalents, beginning of the year	18	3,863	2,463
Increase/(decrease) in cash and cash equivalents		792	1,400
NET CASH AND CASH EQUIVALENTS, END OF THE YEAR	**18**	**4,654**	**3,863**

* *In 2023, transactions with non-controlling interests mainly relate to the purchase of AVEVA's non-controlling interests.*

The accompanying notes are an integral part of the consolidated financial statements.

5.3 Consolidated balance sheet

Assets

(in millions of euros)	Note	**Dec. 31, 2023**	Dec. 31, 2022
NON-CURRENT ASSETS:			
Goodwill, net	9	24,664	25,136
Intangible assets, net	10	5,837	6,373
Property, plant and equipment, net	11	4,209	3,935
Investments in associates and joint ventures	12	1,206	1,241
Non-current financial assets	13	1,245	1,125
Deferred tax assets	14	1,636	1,616
TOTAL NON-CURRENT ASSETS		**38,797**	**39,426**
CURRENT ASSETS:			
Inventories and work in progress	15	4,519	4,346
Trade and other operating receivables	16	8,388	7,514
Other receivables and prepaid expenses	17	2,290	2,156
Cash and cash equivalents	18	4,696	3,986
TOTAL CURRENT ASSETS		**19,893**	**18,002**
Assets held for sale	2	209	940
TOTAL ASSETS		**58,899**	**58,368**

The accompanying notes are an integral part of the consolidated financial statements.

5.3 Consolidated balance sheet

Liabilities

(in millions of euros)	Note	**Dec. 31, 2023**	Dec. 31, 2022
EQUITY:	19		
Share capital		2,291	2,284
Additional paid in capital		2,937	2,660
Retained earnings		21,528	19,812
Translation reserve		(294)	683
Equity attributable to owners of the parent		**26,462**	**25,439**
Non-controlling interests		706	655
TOTAL EQUITY		**27,168**	**26,094**
NON-CURRENT LIABILITIES:			
Pensions and other post-employment benefit obligations	20	1,069	1,186
Other non-current provisions	21	959	994
Non-current financial liabilities	22	11,592	7,330
Non-current purchase commitments over non-controlling interests	22	50	194
Deferred tax liabilities	14	703	885
Other non-current liabilities		848	865
TOTAL NON-CURRENT LIABILITIES		**15,221**	**11,454**
CURRENT LIABILITIES:			
Trade and other operating payables		7,596	6,254
Accrued taxes and payroll costs		4,013	3,787
Current provisions	21	1,061	1,036
Other current liabilities		1,379	1,887
Current financial liabilities	22	2,341	3,133
Current purchase commitments over non-controlling interests	22	80	4,554
TOTAL CURRENT LIABILITIES		**16,470**	**20,651**
Liabilities held for sale	2	40	169
TOTAL EQUITY AND LIABILITIES		**58,899**	**58,368**

The accompanying notes are an integral part of the consolidated financial statements.

5.4 Consolidated statement of changes in equity

(in millions of euros)	Number of shares (thousands)	Capital	Additional paid-in capital	Retained earnings	Translation reserve	Equity attributable to owners of the parent	Noncontrolling interests	Total
Dec. 31, 2021	**569,033**	**2,276**	**2,456**	**19,694**	**14**	**24,440**	**3,669**	**28,109**
Profit for the year	–	–	–	3,477	–	3,477	59	3,536
Other comprehensive income	–	–	–	138	669	807	6	813
Comprehensive income for the year	**–**	**–**	**–**	**3,615**	**669**	**4,284**	**65**	**4,349**
Capital increase	2,060	8	204	–	–	212	–	212
Dividends	–	–	–	(1,618)	–	(1,618)	(157)	(1,775)
Purchase of treasury shares	–	–	–	(219)	–	(219)	–	(219)
Share-based compensation expense	–	–	–	161	–	161	23	184
AVEVA minority interest buy out	–	–	–	(1,881)	–	(1,881)	(2,907)	(4,788)
IAS 29 Hyperinflation	–	–	–	53	–	53	–	53
Other	–	–	–	7	–	7	(38)	(31)
Dec. 31, 2022	**571,093**	**2,284**	**2,660**	**19,812**	**683**	**25,439**	**655**	**26,094**
Profit for the year	–	–	–	4,003	–	4,003	166	4,169
Other comprehensive income	–	–	–	(76)	(977)	(1,053)	(26)	(1,079)
Comprehensive income for the year	**–**	**–**	**–**	**3,927**	**(977)**	**2,950**	**140**	**3,090**
Capital increase	1,743	7	277	–	–	284	–	284
Dividends	–	–	–	(1,767)	–	(1,767)	(84)	(1,851)
Purchase of treasury shares	–	–	–	(703)	–	(703)	–	(703)
Share-based compensation expense	–	–	–	196	–	196	–	196
IAS 29 Hyperinflation	–	–	–	68	–	68	–	68
Other	–	–	–	(5)	–	(5)	(5)	(10)
Dec. 31, 2023	**572,836**	**2,291**	**2,937**	**21,528**	**(294)**	**26,462**	**706**	**27,168**

The accompanying notes are an integral part of the consolidated financial statements.

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Parent company financial statements

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Chapter 6 – Parent company financial statements

6.1 Balance Sheet

Assets

(in thousands of euros)	Note	12/31/2023 Gross	Amort./Dep./Prov.	**12/31/2023 Net**	12/31/2022 Net
NON-CURRENT ASSETS					
Intangible assets	1.1				
Intangible rights		27,429	(27,429)	–	–
Property, plant and equipment	1.2				
Land		2,784	–	2,784	2,784
Buildings		48	(48)	–	–
Other		1,221	–	1,221	1,221
Total intangible assets and property, plant and equipment		**31,482**	**(27,477)**	**4,006**	**4,006**
Financial investments					
Shares in subsidiaries and affiliates	2.1	5,377,099	(19,468)	5,357,631	5,357,631
Other investment securities	2.2	1,375,376	–	1,375,376	763,201
Advances to subsidiaries and affiliates	2.3	2,532,111	–	2,532,111	2,513,350
Other (Loans/Deposits and guarantees)		80,010	–	80,010	81,172
Total financial investments		**9,364,595**	**(19,468)**	**9,345,127**	**8,715,354**
Total non-current assets		**9,396,077**	**(46,945)**	**9,349,132**	**8,719,359**
CURRENT ASSETS					
Accounts receivable					
Accounts receivable – trade	3	570,104	–	570,104	392,646
Other	3	323,972	–	323,972	232,756
Total accounts receivable		**894,076**	**–**	**894,076**	**625,402**
Marketable securities and cash					
Marketable securities	4	279,624	–	279,624	734,726
Advances to the Group cash pool	5	12,286,738	–	12,286,738	8,175,864
Other		285	–	285	1,393
Total marketable securities and cash		**12,566,647**	**–**	**12,566,647**	**8,911,984**
Total current assets		**13,460,723**	**–**	**13,460,723**	**9,537,386**
PREPAYMENTS AND OTHER ASSETS					
Prepaid expenses	6.1	3,278	–	3,278	574
Deferred expenses	6.2	22,865	–	22,865	15,883
Call premiums	6.3	33,786	–	33,786	20,153
Translation losses	9	–	–	–	–
TOTAL ASSETS		**22,916,729**	**(46,945)**	**22,869,784**	**18,292,355**

The notes form an integral part of these parent company financial statements.

Equity and liabilities

(in thousands of euros)	Note	12/31/2023	12/31/2022
EQUITY	7		
Share capital	7.1	2,291,344	2,284,372
Additional paid-in capital	7.2	2,827,850	2,616,090
Reserves			
Legal reserve		243,027	243,027
Retained earnings	7.3	273,900	325,407
Net income for the financial year		2,560,475	1,744,408
Regulated provisions		2	2
Total equity		**8,196,598**	**7,213,305**
PROVISIONS FOR CONTINGENCIES	8		
Provisions for contingencies and expenses		286,602	316,327
Total provisions for contingencies and expenses		**286,602**	**316,327**
LIABILITIES			
Convertible bond	9	1,300,000	650,000
Bonds	9	9,773,502	8,094,325
Other borrowings	10	1,808,904	39,096
Debts related to investments	11	42,000	42,000
Borrowings and financial liabilities	12	1,018,000	1,491,000
Accounts payable – trade		109,162	79,789
Accrued taxes and payroll costs		296,565	237,057
Other		2,088	80,378
Total liabilities		**14,350,221**	**10,713,646**
Deferred revenue		–	–
Call premiums	6.3	28,987	40,199
Translation gains		7,376	9,877
TOTAL EQUITY AND LIABILITIES		**22,869,784**	**18,293,355**

The notes form an integral part of these parent company financial statements.

6.2 Statement of income

(in thousands of euros)	Note	2023	2022
Sales of services and other		1	79
Reversals of provisions, depreciation and amortization and expense transfers		–	11
Other operating revenue	15	486,927	412,303
Operating revenues		**486,928**	**412,393**
Purchase and external expenses	16	(122,475)	(171,810)
Taxes other than on income		(1,306)	(5,114)
Payroll expenses		(14,607)	(2,367)
Depreciation and provision expense		(1,071)	(1,928)
Other operating expenses and joint-venture losses		(2,382)	(2,223)
Operating expenses		**(141,841)**	**(183,442)**
Operating profit/(loss)		**345,087**	**228,952**
Dividend income		2,002,364	1,500,580
Interest income		536,573	89,438
Reversals of impairment provisions for long-term receivables and other		–	–
Financial income		**2,538,937**	**1,590,018**
Interest expense		(327,774)	(111,111)
Provision expense		(578)	1,396
Financial expenses		**(328,352)**	**(109,716)**
Net financial income/(loss)	17	**2,210,585**	**1,480,303**
Current result before tax		**2,555,672**	**1,709,254**
Proceeds from fixed asset disposals		39	312,074
Reinvoicing performance share		91,009	93,678
Provision reversals and expense transfers		138,116	145,098
Other		–	1,034
Non-recurring income		**229,164**	**551,884**
Carrying amount of fixed asset disposals		–	(272,321)
Provisions, depreciation and amortization		(105,761)	(108,927)
Other		(161,507)	(154,206)
Non-recurring expenses		**(267,268)**	**(535,354)**
Net non-recurring income/(loss)	18	**(38,104)**	**16,531**
Net income tax benefit	19	**42,907**	**18,623**
NET INCOME		**2,560,475**	**1,744,408**

The notes form an integral part of these parent company financial statements.

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5.1 Consolidated statement of income

(in millions of euros except for earnings per share)	Note	**Full Year 2022**	Full Year 2021
Revenue	3	**34,176**	**28,905**
Cost of sales		(20,300)	(17,062)
Gross profit		**13,876**	**11,843**
Research and development	4	(1,040)	(855)
Selling, general and administrative expenses		(6,819)	(6,001)
Adjusted EBITA *	3	**6,017**	**4,987**
Other operating income and expenses	6	(433)	(21)
Restructuring costs		(227)	(225)
EBITA **		**5,357**	**4,741**
Amortization and impairment of purchase accounting intangibles	5	(424)	(410)
Operating income		**4,933**	**4,331**
Interest income		24	4
Interest expense		(130)	(99)
Finance costs, net		**(106)**	**(95)**
Other financial income and expense	7	(109)	(81)
Net financial income/(loss)		**(215)**	**(176)**
Profit from continuing operations before income tax		**4,718**	**4,155**
Income tax expense	8	(1,211)	(966)
Share of profit/(loss) of associates	12	29	84
PROFIT FOR THE YEAR		**3,536**	**3,273**
attributable to owners of the parent		*3,477*	*3,204*
attributable to non-controlling interests		*59*	*69*
Basic earnings (attributable to owners of the parent) per share (in euros per share)	19	6.23	5.76
Diluted earnings (attributable to owners of the parent) per share (in euros per share)	19	6.15	5.67

* Adjusted EBITA (Earnings Before Interest, Taxes, Amortization of Purchase Accounting Intangibles): Operating profit before amortization and impairment of purchase accounting intangible assets, before goodwill impairment, other operating income and expenses and restructuring costs.

** EBITA (Earnings Before Interest, Taxes and Amortization of Purchase Accounting Intangibles): Operating profit before amortization and impairment of purchase accounting intangible assets and before goodwill impairment.

The accompanying notes are an integral part of the consolidated financial statements.

Other comprehensive income

(millions of euros)	Note	Full Year 2022	Full Year 2021
Profit for the year		**3,536**	**3,273**
Other comprehensive income:			
Translation adjustment		631	1,839
Revaluation of assets and liabilities due to hyperinflation		44	-
Cash-flow hedges		36	130
Income tax effect of cash flow hedges	19	(4)	(7)
Gains and losses recorded in equity with recycling		**707**	**1,962**
Net gains/(losses) on financial assets		(8)	40
Income tax effect of gains/(losses) on financial assets	19	2	(9)
Actuarial gains/(losses) on defined benefit plans	20	137	451
Income tax effect of actuarial gains/(losses) on defined benefit plans	19	(25)	(105)
Gains and losses recorded in equity with no recycling		**106**	**377**
Other comprehensive income for the year, net of tax		**813**	**2,339**
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		**4,349**	**5,612**
attributable to owners of the parent		*4,284*	*5,212*
attributable to non-controlling interests		*65*	*400*

The accompanying notes are an integral part of the consolidated financial statements.

5.2 Consolidated statement of cash flows

(in millions of euros)	Note	**Full Year 2022**	Full Year 2021
Profit for the year		**3,536**	**3,273**
Share of (profit)/losses of associates		(29)	(84)
Income and expenses with no effect on cash flow:			
Depreciation of property, plant and equipment	11	750	726
Amortization of intangible assets other than goodwill	10	732	688
Impairment losses on non-current assets		61	34
Increase/(decrease) in provisions	21	32	(54)
Losses/(gains) on disposals of business and assets		70	(184)
Difference between tax paid and tax expense		139	(38)
Other non-cash adjustments		102	108
Net cash provided by operating activities		**5,393**	**4,469**
Decrease/(increase) in accounts receivables		(305)	(577)
Decrease/(increase) in inventories and work in progress		(553)	(955)
(Decrease)/increase in accounts payable		73	418
Decrease/(increase) in other current assets and liabilities		(254)	261
Change in working capital requirement		**(1,039)**	**(853)**
TOTAL I - CASH FLOWS FROM / (USED IN) OPERATING ACTIVITIES		**4,354**	**3,616**
Purchases of property, plant and equipment	11	(707)	(543)
Proceeds from disposals of property, plant and equipment		69	59
Purchases of intangible assets	10	(386)	(333)
Net cash used by investment in operating assets		**(1,024)**	**(817)**
Acquisitions and disposals of businesses, net of cash acquired & disposed	2	(297)	(4,231)
Other long-term investments		40	16
Increase in long-term pension assets		(130)	(136)
Sub-total		**(387)**	**(4,351)**
TOTAL II - CASH FLOWS FROM / (USED IN) INVESTING ACTIVITIES		**(1,411)**	**(5,168)**
Issuance of bonds	22	1,092	-
Repayment of bonds	22	(829)	(600)
Sale/(purchase) of treasury shares		(219)	(262)
Increase/(decrease) in other financial debt		143	(444)
Increase/(decrease) of share capital	19	208	216
Transaction with non-controlling interests *	2	(73)	(418)
Dividends paid to Schneider Electric's shareholders	19	(1,618)	(1,447)
Dividends paid to non-controlling interests		(157)	(138)
TOTAL III - CASH FLOWS FROM / (USED IN) FINANCING ACTIVITIES		**(1,453)**	**(3,093)**
TOTAL IV - NET FOREIGN EXCHANGE DIFFERENCE		**(70)**	**346**
TOTAL V - IMPACT OF RECLASSIFICATION OF ITEMS HELD FOR SALE		**(20)**	**-**
INCREASE/(DECREASE) IN NET CASH AND CASH EQUIVALENTS: I + II + III + IV + V		**1,400**	**(4,299)**
Net cash and cash equivalents, beginning of the year	18	2,463	6,762
Increase/(decrease) in cash and cash equivalents		1,400	(4,299)
NET CASH AND CASH EQUIVALENTS, END OF THE YEAR	18	**3,863**	**2,463**

* In 2021, transactions with non-controlling interests mainly relates to RIB.

The accompanying notes are an integral part of the consolidated financial statements.

5.3 Consolidated balance sheet

Assets

(in millions of euros)	Note	**Dec. 31, 2022**	Dec. 31, 2021
NON-CURRENT ASSETS:			
Goodwill, net	9	25,136	24,723
Intangible assets, net	10	6,373	6,486
Property, plant and equipment, net	11	3,935	3,826
Investments in associates and joint ventures	12	1,241	1,234
Non-current financial assets	13	1,125	1,034
Deferred tax assets	14	1,616	1,820
TOTAL NON-CURRENT ASSETS		**39,426**	**39,123**
CURRENT ASSETS:			
Inventories and work in progress	15	4,346	3,971
Trade and other operating receivables	16	7,514	6,829
Other receivables and prepaid expenses	**17**	**2,155**	**1,998**
Current financial assets		1	4
Cash and cash equivalents	18	3,986	2,622
TOTAL CURRENT ASSETS		**18,002**	**15,424**
Assets held for sale	1	940	-
TOTAL ASSETS		**58,368**	**54,547**

The accompanying notes are an integral part of the consolidated financial statements.

5.3 Consolidated balance sheet

Liabilities

(in millions of euros)	Note	**Dec. 31, 2022**	Dec. 31, 2021
EQUITY:	19		
Share capital		2,284	2,276
Additional paid in capital		2,660	2,456
Retained earnings		19,812	19,694
Translation reserve		683	14
Equity attributable to owners of the parent		**25,439**	**24,440**
Non-controlling interests		655	3,669
TOTAL EQUITY		**26,094**	**28,109**
NON-CURRENT LIABILITIES:			
Pensions and other post-employment benefit obligations	20	1,186	1,395
Other non-current provisions	21	994	1,091
Non-current financial liabilities	22	7,330	7,554
Non-current purchase commitments over non-controlling interests	22	194	176
Deferred tax liabilities	14	885	997
Other non-current liabilities		865	1,003
TOTAL NON-CURRENT LIABILITIES		**11,454**	**12,216**
CURRENT LIABILITIES:			
Trade and other operating payables		6,254	5,715
Accrued taxes and payroll costs		3,787	3,694
Current provisions	21	1,036	933
Other current liabilities		1,887	1,685
Current financial debt	22	3,133	2,195
Current purchase commitments over non-controlling interests	22	4,554	-
TOTAL CURRENT LIABILITIES		**20,651**	**14,222**
Liabilities held for sale	1	169	-
TOTAL EQUITY AND LIABILITIES		**58,368**	**54,547**

The accompanying notes are an integral part of the consolidated financial statements.

5.4 Consolidated statement of changes in equity

(in millions of euros)	Number of shares (thousands)	Capital	Additional paid-in capital	Retained earnings	Translation reserve	Equity attributable to owners of the parent	Non-controlling interests	Total
Dec. 31, 2020	**567,069**	**2,268**	**2,248**	**17,648**	**(1,541)**	**20,623**	**3,104**	**23,727**
Profit for the year	–	–	–	3,204		**3,204**	69	**3,273**
Other comprehensive income	–	–	–	453	1,555	**2,008**	331	**2,339**
Comprehensive income for the year	**–**	**–**	**–**	**3,657**	**1,555**	**5,212**	**400**	**5,612**
Capital increase	1,964	8	208	–	–	**216**	–	**216**
Dividends	–	–	–	(1,447)	–	**(1,447)**	(138)	**(1,585)**
Purchase of treasury shares	–	–	–	(262)	–	**(262)**	–	**(262)**
Share-based compensation expense	–	–	–	145	–	**145**	16	**161**
Other	–	–	–	(47)	–	**(47)**	287	**240**
Dec. 31, 2021	**569,033**	**2,276**	**2,456**	**19,694**	**14**	**24,440**	**3,669**	**28,109**
Profit for the year	–	–	–	3,477		**3,477**	59	**3,536**
Other comprehensive income	–	–	–	138	669	**807**	6	**813**
Comprehensive income for the year	**–**	**–**	**–**	**3,615**	**669**	**4,284**	**65**	**4,349**
Capital increase	2,060	8	204	–	–	**212**	–	**212**
Dividends	–	–	–	(1,618)	–	**(1,618)**	(157)	**(1,775)**
Purchase of treasury shares	–	–	–	(219)	–	**(219)**	–	**(219)**
Share-based compensation expense	–	–	–	161	–	**161**	23	**184**
AVEVA minority interest buy out*	–	–	–	(1,881)	–	**(1,881)**	(2,907)	**(4,788)**
Other	–	–	–	60	–	**60**	(38)	**22**
Dec. 31, 2022	**571,093**	**2,284**	**2,660**	**19,812**	**683**	**25,439**	**655**	**26,094**

* For more information, please refer to the Note 2.

The accompanying notes are an integral part of the consolidated financial statements.

6 Parent company financial statements

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6.1 Balance Sheet

Assets

(in thousands of euros)	Notes	Gross A. & D. or Prov.		**31/12/2022 Net**	31/12/2021 Net
NON-CURRENT ASSETS					
Intangible assets	1.1				
Intangible rights		27,429	(27,429)	–	–
Property, plant and equipment	1.2				
Land		2,784	–	2,784	2,784
Buildings		48	(48)	–	–
Other		1,221	–	1,221	1,221
Total intangible assets and property, plant and equipment		**31,482**	**(27,477)**	**4,005**	**4,005**
Financial investments					
Shares in subsidiaries and affiliates	2.1	5,377,099	(19,468)	5,357,631	5,357,631
Other investment securities	2.2	763,201	–	763,201	637,409
Advances to subsidiaries and affiliates	2.3	2,513,350	–	2,513,350	3,218,096
Other		81,172	–	81,172	10
Total financial investments		**8,734,822**	**(19,468)**	**8,715,354**	**9,213,146**
Total non-current assets		**8,766,304**	**(46,945)**	**8,719,359**	**9,217,153**
CURRENT ASSETS					
Accounts receivable					
Accounts receivable – trade	3	392,646	–	392,646	351,799
Other	3	232,756	–	232,756	136,480
Total accounts receivable		**625,402**	**–**	**625,402**	**488,279**
Marketable securities and cash					
Marketable securities	4	734,726	–	734,726	348,250
Advances to the Group cash pool	5	8,175,864	–	8,175,864	6,878,822
Other		1,393	–	1,393	306
Total marketable securities and cash		**8,911,984**	**–**	**8,911,984**	**7,227,378**
Total current assets		**9,537,386**	**–**	**9,537,386**	**7,715,657**
PREPAYMENTS AND OTHER ASSETS					
Prepaid expenses	6.1	574	–	574	1,151
Deferred expenses	6.2	15,883	–	15,883	17,021
Call premiums	6.3	20,153	–	20,153	21,246
Translation losses	9	–	–	–	84,928
TOTAL ASSETS		**18,340,300**	**(46,945)**	**18,292,355**	**17,057,156**

The notes form an integral part of these parent company financial statements.

Equity and liabilities

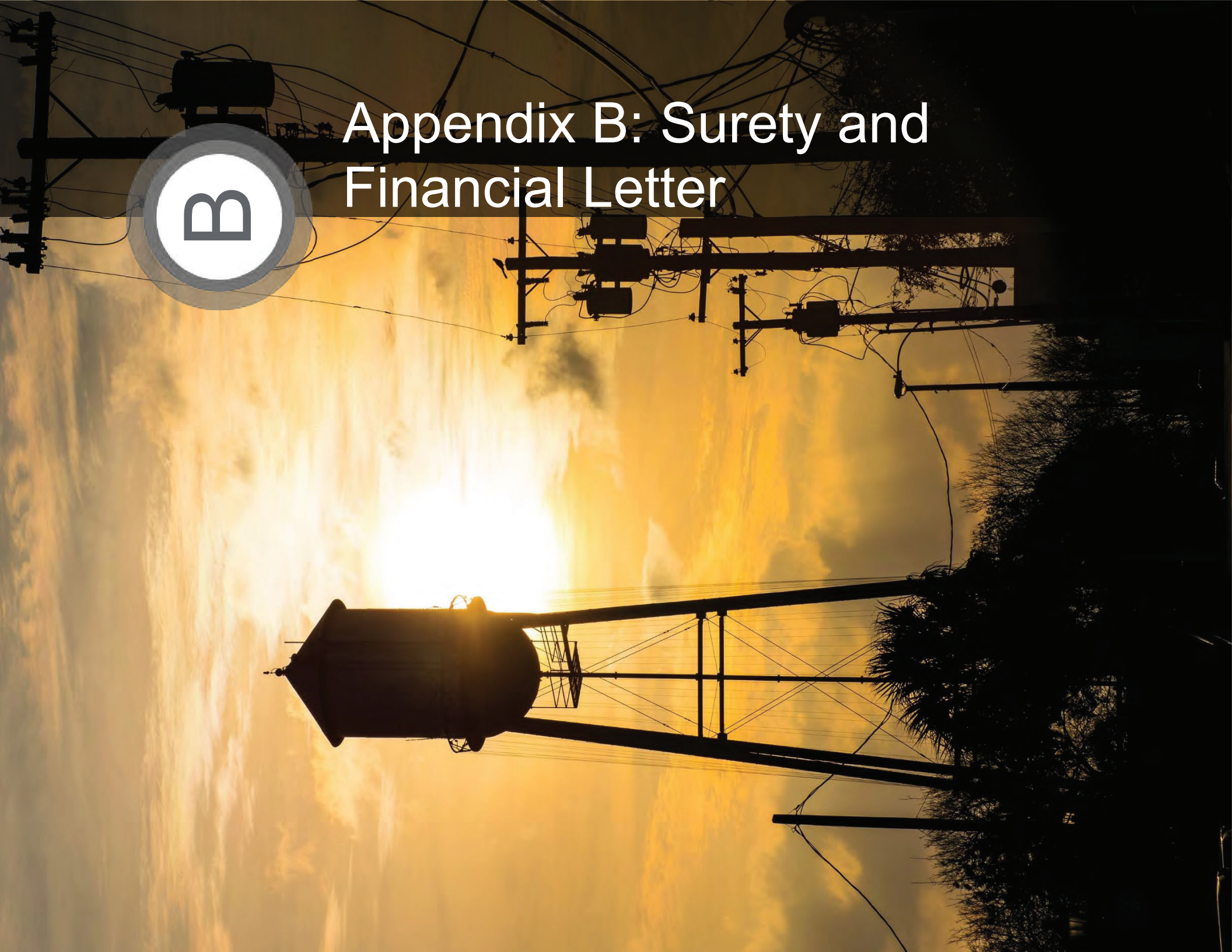
(in thousands of euros)	Notes	31/12/2022	31/12/2021
EQUITY	7		
Share capital	7.1	2,284,372	2,276,134
Additional paid-in capital	7.2	2,616,090	2,411,613
Reserves			
Legal reserve		243,027	243,027
Retained earnings	7.3	325,407	444,780
Net income for the financial year		1,744,408	1,498,235
Untaxed provisions		2	2
Total equity		**7,213,305**	**6,873,791**
PROVISIONS FOR CONTINGENCIES:	8		
Provisions for contingencies		316,327	350,596
Total provisions for contingencies and expenses		**316,327**	**350,596**
LIABILITIES:			
Convertible bond	9	650,000	650,000
Bonds	9	8,094,325	7,700,665
Other borrowings	10	39,096	80,249
Debts related to investments	11	42,000	–
Borrowings and financial liabilities	12	1,491,000	1,150,000
Accounts payable – trade		79,789	31
Accrued taxes and payroll costs		237,057	109,426
Other		80,378	5,998
Total liabilities		**10,713,646**	**9,696,369**
Deferred revenue		–	–
Call premiums	6.3	40,199	51,472
Translation gains		9,877	84,928
TOTAL EQUITY AND LIABILITIES		**18,293,355**	**17,057,156**

The notes form an integral part of these parent company financial statements.

6.2 Statement of income

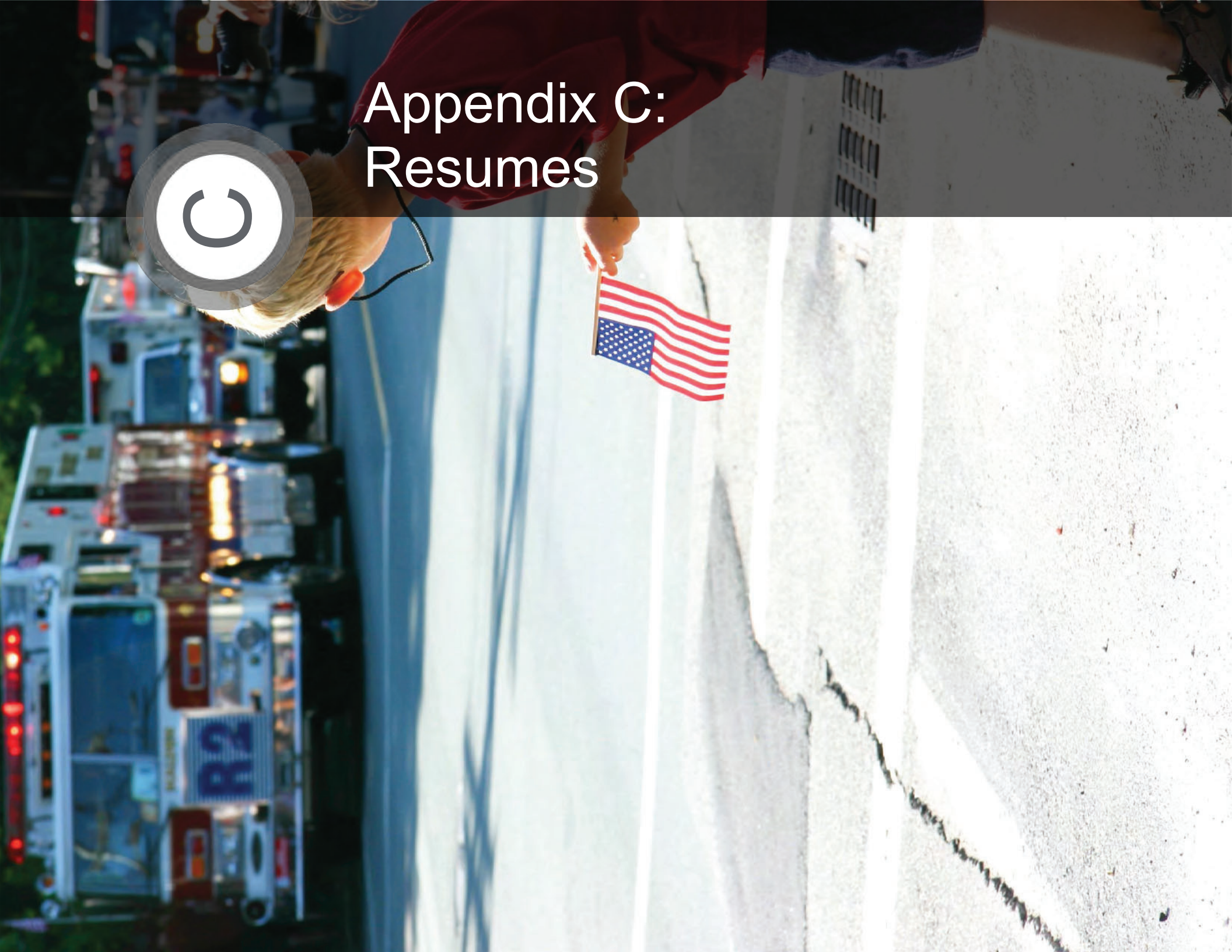
(in thousands of euros)	Note	2022	2021
Sales of services and other		79	–
Reversals of provisions, depreciation and amortization and expense transfers		11	–
Other	15	412,303	–
Operating revenues		**412,393**	**–**
Purchase and external expenses	16	(171,810)	(11,317)
Taxes other than on income		(5,114)	(2,014)
Payroll expenses		(2,367)	(1,922)
Depreciation and provision expense		(1,928)	(4,943)
Other operating expenses and joint-venture losses		(2,223)	(2,127)
Operating expenses		**(183,442)**	**(22,322)**
Operating profit/(loss)		**228,952**	**(22,322)**
Dividend income		1,500,580	1,500,363
Interest income		89,438	41,008
Reversals of impairment provisions for long-term receivables and other		–	–
Financial income		**1,590,018**	**1,541,371**
Interest expense		(111,111)	(87,130)
Provision expense		1,396	5,358
Financial expenses		**(109,716)**	**(81,772)**
Net financial income/(loss)	17	**1,480,303**	**1,459,598**
Current result before tax		**1,709,254**	**1,437,276**
Proceeds from fixed asset disposals		312,074	267
Reinvoicing performance share		93,678	82,245
Provision reversals and expense transfers		145,098	149,627
Other		1,034	154
Non-recurring income		**551,884**	**232,293**
Carrying amount of fixed asset disposals		(272,321)	(1)
Provisions, depreciation and amortization		(108,827)	(97,153)
Other		(154,206)	(126,522)
Non-recurring expenses		**(535,354)**	**(223,676)**
Net non-recurring income/(loss)	18	**16,531**	**8,617**
Net income tax benefit	19	**18,623**	**52,342**
NET INCOME		**1,744,408**	**1,498,235**

The notes form an integral part of these parent company financial statements.



Appendix B: Surety and Financial Letter

Appendix C: Resumes



PETER HINKLE, LEED AP

PROGRAM MANAGER

PROFESSIONAL PROFILE

Peter is responsible for being your point of contact for the development, design and implementation of this project. He will lead the Schneider Electric project team through the process to create consistency and continuity between each project phase. Peter will collaborate with your stakeholders to determine your facility needs, deferred maintenance issues, sustainability goals, and/or other improvements that could be addressed as part of this project. He will also provide leadership of customer meetings and correspondence, working with all stakeholders at an executive level.

EDUCATION

2007 B.S. – Marketing and Management, Kansas State University

AREAS OF EXPERTISE

- Energy Improvement, Management and Efficiency
- Business and Project Development - $175 Million +
- Grant/Incentive Funding Strategist
- Account Management
- Project Development
- Design Build and Performance Contracting
- Marketing and PR Efforts

YRS OF EXPERIENCE

16 Years with Schneider Electric

16 Years total

PROFESSIONAL QUALIFICATIONS

- LEED Accredited Professional
- Association of Energy Engineers
- Schneider Electric Next STEP Management & Leadership Program
- USGBC Affiliated Member
- TAC Sales and Technical Training: Lighting Basics, Electricity Basics, & HVAC Application
- Certified Energy Manager in Training
- Schneider Electric Mentorship Program

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
St. Joseph SD Multi-phase partnership, MO	$43,353,126
St Charles County Multi-phase partnership, MO	$27,904,170
City of St. Joseph Multi-phase partnership, MO	$22,303,978
City of Overland Multi-phase partnership, KS	$15,732,132
City of Lincoln Multi-phase partnership, NE	$20,648,111
Shawnee Heights USD, KS	$4,341,534
Wilson County, KS Ph. 2	$549,966
Norton County, KS	$2,113,229
Richmond R-XVI School District, MO	$1,517,315
Blair Community Schools, NE	$4,902,111
City of Maryville, MO	$2,995,173
City of Shelbina, MO	$1,355,407
Missouri Western State University, MO	$5,055,144
Southern Boone County RISD, MO	$1,364,644
Crowder College, MO	$1,733,132
City of Kirksville, MO	$4,747,688

JOE CINALLI

MIDWEST SALES DIRECTOR

PROFESSIONAL PROFILE

Joe is responsible for overall management leadership to our sales and account management teams of the Midwest Region, which includes dozens of projects throughout the states of Illinois, Michigan, Wisconsin, Missouri, Kansas, and Nebraska. During his tenure at Schneider, he has overseen the account management of over $180M worth of work.

EDUCATION

1992 B.A. Communications, University of Kansas

AREAS OF EXPERTISE

- Team leadership
- Energy improvement, management and efficiency
- Project and resource coordination
- Project site safety
- Long-term vision and planning

YRS OF EXPERIENCE

4 Years with Schneider Electric

30 Years total

CERTIFICATIONS AND TRAINING

- Executive training program – Philips Electronics
- Sales Management Training
- Presentation, Negotiation and presentation training

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
City of Lincoln Streetlights, NE	$12,204,095
City of Overland Park Facilities, KS	$5,549,324
Ypsilanti Community Schools, MI	$3,712,859
City of Lincoln Libraries, NE	$2,176,463
Chaparral Unified School District 361, KS	$3,230,248
City of St. Joseph, MO	$4,978,836
University of Illinois Lab Buildings, IL	$31,500,000
Lakewood Public Schools, MI	$2,034,971
St. Charles County, MO	$5,362,505
City of St. Joseph WWTP, MO	$15,366,107
City of Fort Scott, KS	$1,534,077
Norton County, KS	$2,113,229
Wilson County Ph. 2, KS	$549,966
Bentley Community Schools, MI	$931,695
Shawnee Heights USD 2019, KS	$4,341,534
City of LaPorte Civic Center Ph. 2, IN	$5,004,149
St. Joseph School District, MO	$2,825,653
Excelsior Springs School District, MO	$1,284,791
McDonald County School District, MO	$2,837,984
City of Lincoln - Waste Water, NE	$6,267,553
City of St. Joseph - Parks and Rec, MO	$1,208,359
City of Overland Park Streetlighting, KS	$5,283,748

RYAN STOUT, NABCEP

NATIONAL SOLAR DEVELOPER

PROFESSIONAL PROFILE

Ryan will be an integral contributor for the development, design, and implementation of this project. He will collaborate with the technical team to determine your facility and project needs for solar solutions. Throughout his career, Stout has developed a vertically integrated portfolio of renewable energy companies specializing in the education, design, installation, maintenance, and manufacturing of solar solutions. Ryan is a technical knowledge expert that has served the Midwest/Multistate industry associations, school boards, city councils and stakeholders for over two-decades.

EDUCATION

2001 B.A. Business / Telecommunications

Indiana University

AREAS OF EXPERTISE

- Solar Design/Development
- Microgrid Technologies
- Solar Manufacturing
- Solar Operations & Performance
- Solar engineering expert

YRS OF EXPERIENCE

22 Years total

CERTIFICATIONS AND TRAINING

- B.A. Business / Telecommunications
- NABCEP Off-Grid System Design Certification from OUTBACK POWER (2014)

PROJECT HIGHLIGHTS

Ryan Stout is a National Solar Developer serving the Midwest MUSH (commercial) market for Schneider Electric. His role supports solar project design and implementation.

Mountain View Schools, AR
Total Size: 922 kW Number of Systems: 1 Energize Date: June 2022

Union County Schools, IN Total Size: 1.3 MW Number of Systems: 1 Energize Date: June 2022

North Newton School Corp, IN
Total Size: 776 kW Number of Systems: 3 Energize Date: Q3 2021

Grayslake Public Library, IL Total Size: 120.3 kW Number of Systems: 1 Energize Date: Q3 2021

Glenbard Township HSD 87, IL
Total Size: 1.17 MW Number of Systems: 1
Energize Date: November 2020

University of Arkansas - Pine Bluff, AR
Total Size: 321 kW Number of Systems: 1
Energize Date: September 2017

**Career projects highlighted inclusive of performance outside of Schneider Electric*

ALEX CRISCI, CEM, PE, LEED GA

SENIOR SOLAR ENGINEER

PROFESSIONAL PROFILE

With a foundation in solar development and a broad spectrum of expertise in renewables, Alex brings over a decade of experience to the team. As a Senior Solar/Renewable Energy Engineer Alex is well versed in Renewable Energy Generation, Power Delivery, and the Architecture/Engineering industries. His project experience includes conceptual and detailed design, cost estimates, procurement, studies, resource assessments, and specification development of wind, solar, and battery storage projects as well as energy modeling and electrical design for commercial facilities.

EDUCATION

2012 University of Illinois Urbana-Champaign,
B.S. Electrical Engineering
Minor: The Hoeft Technology and Management Program

AREAS OF EXPERTISE

- Renewable Energy Generation
- Solar Development
- Conceptual and Detailed Design
- Sustainability
- Project Management

YRS OF EXPERIENCE

12 Years total experience

CERTIFICATIONS AND TRAINING

- Certified Energy Manager (CEM)
- Professional Engineer (PE)
  (Licensed in IL & MI)
- LEED Green Associate

PROJECT HIGHLIGHTS

PROJECT NAME	CAPACITY
*Show Me State Solar, MO (2023)	250MWac
*Lumina 1 Solar, TX (2022-2023)	320MWac
*Lumina 2 Solar, TX (2022-2023)	320MWac
*Desna BESS, TX (2022-2023)	200MW/200MWh
*Confidential Solar, TX (2022)	150MWac

Prior to joining Schneider Electric in December of 2023, Alex served as a Senior Renewable Energy Engineer, Consultant, and Manager providing utility-scale clients solar PV, wind, and battery storage support through conceptual design, detailed design, and construction.

**Career projects highlighted inclusive of owner's engineering, independent engineering, and design services outside of Schneider Electric.*

DREW SEBELIUS, PE, PMP, CEM, LEED AP

PROJECT DEVELOPMENT MANAGER

PROFESSIONAL PROFILE

Drew is responsible for overseeing the project development process. He works closely with customer stakeholders to define project objectives and develop scope that aligns with the customer's vision and mission. Drew has a working knowledge of the technical and organizational environments in which the project scopes of work will be implemented. He is an excellent collaborator with all the functions associated with the development of complex projects, and he is a strategic thinker who can adapt to changing needs and requirements in order to maximize value to our customers.

EDUCATION

2006 B.S., Kansas State University

AREAS OF EXPERTISE

- Management of preliminary and detailed project development audits
- Energy conservation measure (ECM) identification / development
- Project leadership
- Project site safety
- Report presentation

YRS OF EXPERIENCE

17 Years with Schneider Electric

17 Years total

CERTIFICATIONS AND LICENSES

- Professional Engineer (PE)
- Project Management Professional (PMP)
- Certified Energy Manager (CEM)
- LEED Accredited Professional (LEED AP)
- 12-week TRANE HVAC training course

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
St. Joseph SD - Central HS - Ph 4, MO	$9,182,801
St Charles County, MO	$4,074,113
City of St. Joseph - Parks and Rec Ph. 2, MO	$750,676
St. Charles County, MO	$5,362,505
City of St. Joseph WWTP, MO	$15,366,107
St. Joseph School District Ph. 3, MO	$20,551,622
Excelsior Springs School District Ph. 2, MO	$2,367,401
City of Overland Park Convention Center Lighting, KS	$2,812,961
City of Overland Park Facilities, KS	$5,549,324
St. Joseph School District Ph. 2, MO	$10,793,050
City of St. Joseph - Parks and Rec, MO	$1,208,359
Excelsior Springs School District, MO	$1,284,791
St. Joseph School District, MO	$2,825,653
Shawnee Heights USD, KS	$4,341,534
Wilson County Phase 2, KS	$549,966
Norton County, KS	$2,113,229
City of Fort Scott, KS	$1,534,077
Bunker R-III School District, MO	$833,876
Lesterville R-IV School District, MO	$1,265,478

GREG HILDNER, PE, CEM

ENERGY ENGINEER

PROFESSIONAL PROFILE

Greg is responsible for performing preliminary and detailed energy engineering studies of complex projects of unlimited scope and size. He performs energy-use baseline analysis, including utility rate simulations and weather normalization, generate baseline energy models, and performs energy savings calculations. Greg also assists in defining project scope, performing high-level project cost estimates, and preparing technical audit reports.

EDUCATION

2012 B.S. Mechanical Engineering, Iowa State University

AREAS OF EXPERTISE

- Energy savings and utility analysis
- Energy conservation measure (ECM) identification and development
- Development of preliminary and investment grade audits
- Coordination with other technical teams and construction team
- Design Loads Calculations

YRS OF EXPERIENCE

11 Years with Schneider Electric

11 Years total

CERTIFICATIONS AND TRAINING

- Professional Engineer (PE)
- Certified Energy Manager (CEM)

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
City of Chicago, IL	$3,565,221
City of Monroe, WI	$1,394,670
City of Overland Park – All Phases, KS	$14,800,000
University of Illinois, IL	$31,500,000
McPherson College, KS	$7,397,294
St. Joseph School District – All Phases, MO	$34,300,000
Walworth Jt. School District, WI	$6,797,542
Etowah County School District, AL	$12,256,473
Madison County Schools Ph. 2, AL	$14,776,060
Luck School District, WI	$2,269,261
Missouri Western State University, MO	$5,055,144
Blair Community Schools, NE	$4,604,720
Lakewood Public Schools, MI	$2,034,971
Eleva-Strum School District, WI	$1,938,216
Maysville R-1 School District, MO	$1,568,985

JEFF O'CONNOR, PE, LEED AP

SENIOR MECHANICAL ENGINEER

PROFESSIONAL PROFILE

Jeff is responsible for the engineering and design of mechanical systems including HVAC, plumbing, chilled water, heating water and steam generation and distribution, natural gas, medical gas, compressed air and fire protection systems. In his role, he conducts field investigations of mechanical and plumbing systems to evaluate client needs and performs engineering calculations including building loads, air and water static head pressure, ventilation rates, and psychrometric analyses. He is responsible for sizing and selecting new equipment and also prepares schematic sketches, drawings, details, and reports of mechanical systems to accomplish the goals and objectives of the projects.

EDUCATION

2006 B.S. – Architectural Engineering, Kansas State University

AREAS OF EXPERTISE

- Mechanical Design
- Electrical Design
- Mechanical Energy Conversation Measures (ECMs)
- Creating Mechanical and Electrical Bid Documents
- Verification of Mechanical and Electrical Designs

YRS OF EXPERIENCE

8 Years with Schneider Electric

17 Years total

CERTIFICATIONS AND TRAINING

- Professional Engineer (PE)
- LEED Accredited Professional (LEED AP)

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
St. Joseph SD Multi-phase partnership, MO	$43,353,126
St Charles County Multi-phase partnership, MO	$9,436,618
City of St. Joseph Multi-phase partnership, MO	$22,303,978
City of Overland Multi-phase partnership, KS	$12,686,568
City of Lincoln Multi-phase partnership, NE	$20,648,111
Ypsilanti Community Schools, MI	$3,712,859
Lakewood Public Schools, MI	$2,034,971
Wilson County Ph. 2, KS	$549,966
Rapid River Public Schools, MI	$983,987
Hillsboro R-III School District, NO	$3,657,590
Robins Air Base, GA	$12,278,906
Virginia Commonwealth University, VA	$17,962,632
Webb County, TX	$7,769,930
School District of Marinette Ph. 2, WI	$7,483,766
Blair Community Schools, NE	$4,902,111

TOM BUEHLER, PE, LEED AP

SENIOR ELECTRICAL ENGINEER

PROFESSIONAL PROFILE

Tom is responsible for the engineering and design of electrical systems including power generation and distribution, lighting, fire alarm, lightning protection, and low voltage systems. He performs engineering calculations including load studies, fault current, arc flash, and one-line design. He also prepares electrical systems plans, specifications, and study reports to accomplish the goals and objectives of the projects. This role also includes the development of electric-centric projects such as solar PV, EV charging, meter consolidation, and microgrid.

EDUCATION

1986 B.S. Electrical Engineering, University of Missouri

AREAS OF EXPERTISE

- Electrical System Analysis
- Electrical System Design
- Electrical Drawing and Bid Documents
- Energy Conservation Measure Discovery and Determination

YRS OF EXPERIENCE

12 Years with Schneider Electric

36 Years total

CERTIFICATIONS AND TRAINING

- Professional Engineer (PE) – 23 States
- LEED v.2 Accredited Professional (LEED AP)

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
Colorado Department of Human Services	In Development
Williamson County, TN	$18,900,000
Gulf Shores City Board of Education	$10,091,016
Vestavia Hills City Schools	$4,991,016
Western Line School District	$4,985,756
Lesterville R-IV School District	$1,265,478
University of West Alabama	$6,282,909
Dallas County Ph. 2C, TX	$15,431,464
Dallas County Ph. 2, TX	$17,705,154
City of Laurel, MS	$1,259,783
City of Maryville, MO	$2,995,173
Elmore County Commission, AL	$4,090,712
Neshoba County Board of Supervisors, MS	$1,621,101
City of Tupelo, MS	$5,058,746
City of Jasper, AL	$2,864,175
City of Foley, AL	$3,134,754
City of Kirksville, MO	$4,747,688
McPherson College, KS	$7,397,294
Jackson County Schools, AL	$10,853,123
University of North Alabama, AL	$18,174,000
Lakeland Union High School, WI	$13,606,360
Etowah County Schools, AL	$12,256,473

DARRELL DEMOSS

MIDWEST OPERATIONS DIRECTOR

PROFESSIONAL PROFILE

Darrell leads the Operations team for the entire Midwest region, compassing 9 states and dozens of projects. He is responsible for staffing individual projects with the appropriate development and construction personnel and ensuring adequate staffing levels across the region for all projects. On individual projects, Darrell provides ongoing reviews of manpower staffing, engineering design, schedule and milestone completion, construction phasing plans, subcontractor review and approval, and monthly project financials. He is also involved in internal and external issue resolution should the need arise.

EDUCATION

2005 A.S. Business Administration and Marketing, Alternative Energy, Hagerstown Community College

1998 Associate's Degree Applied Science in Air Conditioning, Heating, and Refrigeration, Oklahoma State University Technical Branch

AREAS OF EXPERTISE

- Adheres to construction requirements for ECMs
- Administers client contracts through construction process
- Evaluates subcontracts
- Administers project billings, forecasts, financial reviews
- Facilitates submission of permit packages, warranties, O&M documentation and commissioning reports

YRS OF EXPERIENCE

25 Years with Schneider Electric

25 Years total

CERTIFICATIONS AND TRAINING

- ASHE Healthcare Construction Certificate
- Project Management Development Program
- Universal Refrigerant Recovery
- Oklahoma State Mechanical Journeyman's License, Air Conditioning (unlimited), Heating (unlimited), Refrigeration, Gas Piping, Process Piping, Sheet Metal

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
University of Illinois, IL	$31,500,000
City of Lincoln – All Phases, NE	$20,648,111
City of Overland Park – All Phases, KS	$14,800,000
St. Joseph School District – All Phases, MO	$34,300,000
City of Monroe, WI	$1,394,670
City of LaPorte, IN	$9,748,045
City of Fort Scott, KS	$1,534,077
Norton County, KS	$2,113,229
Wilson County, Ph. 2, KS	$549,966
St. Charles County, MO	$5,362,505
Blair Community Schools, NE	$4,902,111
Ypsilanti Community Schools, MI	$3,712,859

JOE
LAWS, CEM, NEBB

CONSTRUCTION PROJECT MANAGER

PROFESSIONAL PROFILE

Joe works closely with the Program Manager and Project Development team to create the Project Management Plan. He is then responsible for executing that plan to achieve the defined project objectives and meet scope, schedule, resource and budget commitments. He communicates at all levels within the project environment and is able to adapt to dynamic and diverse situations. Joe schedules and conducts all project construction meetings, participates in the subcontractor bid solicitation process, and oversees monthly project billings, forecasting, bonds, and insurance requirements. His goal is to maintain a high level of customer satisfaction through the successful coordination of all construction activities and timely resolution of any issues that arise.

EDUCATION

1995 B.S. HVAC Engineering Technology, Ferris State University

AREAS OF EXPERTISE

- Commissioning, Equipment Startup, Punch listing
- Energy conservation measure (ECM) identification / development
- Project leadership
- Project site safety

YRS OF EXPERIENCE

21 Years with Schneider Electric

25 Years total

CERTIFICATIONS AND TRAINING

- Certified Energy Manager (CEM)
- Certified Professional – Air & Hydronics Systems, (NEBB) National Environmental Balancing Bureau
- Member - Building Commissioning Association
- Associate Member - ASHRAE

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
City of Overland Park Facilities, KS	$5,549,324
University of Illinois Lab Buildings, IL	$31,500,000
St Joseph School District, MO	$10,850,912
City of LaPorte, IN	$9,764,552
Blair Community Schools, NE	$4,876,357
City of St Joseph, MO	$5,256,244
City of Holland, MI	$3,701,439
City of Chicago, IL	3,565,221
Chicago Public Schools, IL	$17,589,884
School District of Marinette Phase 2, WI	$7,483,766
Richmond R-XVI School District, MO	$1,517,315
Maysville R-I School District, MO	$1,568,985
Lakeland Union High School District, WI	$13,906,360
McPherson College, KS	$7,397,294
Luck School District, WI	$2,269,261
School District of Niagara, WI	$2,119,278
Biloxi Public Schools, MS	$3,032,703

JUSTIN BROCK

SITE SUPERINTENDENT

PROFESSIONAL PROFILE

Justin is responsible for the scheduling, monitoring and controlling of the work of site personnel, equipment and subcontractors to achieve the objectives of the project within the scope of work assigned. He works closely with the Construction Lead to execute the project plan and achieve maximum performance in an efficient manner. Justin is responsible for ensuring the highest quality of craftsmanship of installed scope of work while maintaining the project schedule, and ensuring safe working practices in accordance with the Schneider Electric safety policy. He also continually identifies and proactively manages scope risks and issues, ensuring execution of corrective action plans up to closure.

EDUCATION

2006 North Central Kansas Technical College

AREAS OF EXPERTISE

- Energy Management
- Project Development
- Project Management
- Forecasting
- Assigning Resources

YRS OF EXPERIENCE

6 Years with Schneider Electric

25 Years total

CERTIFICATIONS AND TRAINING

- Plumbers & Pipefitters Union Apprenticeship Training
- Plumbing and HVAC, North Central Kansas Technical College
- OSHA 30

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
City of St. Joseph, MO	$4,978,836
Chicago Public Schools, IL	$17,589,884
St. Joseph School District (Phases 1-4), MO	$43,353,126
City of Fort Scott, KS	$1,534,077
Norton Co. Courthouse, KS	$2,113,229
Shawnee Heights USD, KS	$4,341,534

MITCHEL BOZONE, PE

COMMISSIONING MANAGER

PROFESSIONAL PROFILE

Mitchel is responsible for overseeing commissioning, equipment startup, and punch listing during project construction. He evaluates all scopes of work and creates a commissioning startup plan to be executed concurrently with the construction installation schedule. Mitchel collaborates with the Schneider construction team assigned to the project. Subcontractors, and client stakeholders to ensure a seamless startup of equipment.

EDUCATION

2006 A.A.S. - Air Conditioning and Refrigeration Technology, Oklahoma State University IT

AREAS OF EXPERTISE

- Performance Contracting project management
- Coordination of engineering design, contractors, quality control and documentation
- Equipment Start Up
- Timely completion of project scope
- Main customer point of contact

YRS OF EXPERIENCE

16 Years with Schneider Electric

17 Years total

CERTIFICATIONS AND TRAINING

- Professional Engineer (PE)
- Tulsa Tech HVAC Technician Program
- Bell & Gossett Large Chilled Water System Design
- Oklahoma Mechanical Journeyman License

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
McDonald County R-1 School District, MO	$2,837,984
Lesterville R-IV School District, MO	$1,265,479
Chaparral Unified School District 361, KS	$3,230,248
Phillips Theological Seminary, OK	$2,604,915
Maysville R-I School District, MO	$1,568,985
McPherson College, KS	$7,397,294

CORY LYMER

CLIENT SERVICES TEAM LEADER

PROFESSIONAL PROFILE

Cory serves as the primary point of contact for the client during the project's Performance Phase and plays a key role in ensuring the success of the performance guarantee. He is responsible for verifying the performance and sustained operation of ECMs, troubleshooting and resolving issues with installed equipment, and identifying operational improvements for improved savings performance. Cory also periodically evaluates the performance of systems for improvement opportunities and provides ongoing training opportunities for the client.

EDUCATION

2013 B.S. Electrical and Electronics Engineering, Texas A&M University

AREAS OF EXPERTISE

- Client Partner
- Building Automation Systems
- Data Analysis
- Energy/Utility management
- Energy modeling/M&V Strategy
- Small Project Development

YRS OF EXPERIENCE

9 Years with Schneider Electric

9 Years total

CERTIFICATIONS AND TRAINING

- Certified Energy Manager (CEM)
- LEED Accredited Professional (LEED AP)
- Situational Leadership II
- Leading for Performance: Individual and Teams
- HVAC Seminar
- HVAC Controls
- Illumination Engineering

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
Biloxi Public Schools, MS (multi-phase)	$21,600,000
Alabama Emergency Management Agency	$1,400,000
Etowah County Schools, AL	$12,250,000
Naval Base Coronado & San Clemente Island	$45,000,000
Madison County Schools, AL (multi-phase)	$52,750,000
Texas Health and Human Services	$5,000,000
Stone County Schools, MS	$2,550,000
City of Laurel, MS	$1,259,000
Perry County Schools, MS	$605,485
Montgomery Co. Commission, AL	$8,500,000
Bibb County Schools, AL	$2,580,000
Winston Co Schools, AL	$2,750,000
Piedmont Schools, AL	$998,000
Roanoke Schools, AL all phases	$2,300,000
Bledsoe Co Schools, TN	$952,000
Thomasville City Schools, GA	$5,000,000

WES EASUM

PERFORMANCE ASSURANCE CONSULTANT

PROFESSIONAL PROFILE

Wes serves as the primary point of contact for the client during the project's Performance Phase and plays a key role in ensuring the success of the performance guarantee. He is responsible for verifying the performance and sustained operation of ECMs, troubleshooting, and resolving issues with installed equipment, and identifying operational improvements for improved savings performance. Wes also periodically evaluates the performance of systems for improvement opportunities and provides ongoing training opportunities for the client.

EDUCATION

2021 B.S. in Mechanical Engineering – University of Kansas

AREAS OF EXPERTISE

- Building Automation and Energy Management
- System Auditing
- Measurement & Verification
- Performance Optimization
- Client Training
- Customer Service

YRS OF EXPERIENCE

2.5 Years with Schneider Electric

CERTIFICATIONS AND TRAINING

- Procore Superintendent Certification
- OSHA 30-HR Construction Certification

PROJECT HIGHLIGHTS*

PROJECT NAME	VALUE
St. Joseph SD Multi-phase partnership, MO	$43,353,126
City of St. Joseph Multi-phase partnership, MO	$22,303,978
City of Overland Multi-phase partnership, KS	$12,686,568
Excelsior Springs School District Phase 2	$2,415,285
Maysville R-1 School District	$1,568,985
Holton USD 336	$1,197,023
Savannah R-III School District	$1,150,526
Doniphan West USD 111	$916,770
Prairie Hills USD 113	$857,759
Clinton County Courthouse	$199,731

*The above is a small sampling as Wes' role encompasses oversight of the entire Midwest Region which includes dozens of projects. A thorough list of Midwest projects that he will be providing support for can be provided upon request.

KAYLA CORNELIUS

SAVINGS MEASUREMENT AND VERIFICATION MANAGER

PROFESSIONAL PROFILE

Kayla is responsible for developing project-specific Measurement & Verification (M&V) plans during the development phase of a project and supporting clients during the Performance Period phase through those M&V activities as well as remote system monitoring. Kayla reviews utility data, BAS trend data, and site information to ensure that the project and the client meet their energy savings goals.

EDUCATION

2000 B.S. Mathematics, Baylor University

AREAS OF EXPERTISE

- Measurement and Verification plan development
- Utility rate analysis
- Remote system analysis
- Sustainability reporting
- Energy performance reporting
- Utility baseline development

YRS OF EXPERIENCE

23 Years with Schneider Electric

23 Years total

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
University of North Texas Health Science Center	$21,833,000
Hacienda La Puente CISD, CA	$20,746,006
Geological Survey of Alabama	$3,096,000
Elmore County Commission, AL	$4,090,712
Capistrano Unified School District, CA	$4,321,505
City of Monroe, WI	$1,394,670
Silver Valley Unified School District, CA	$3,998,746
Robins Air Force Base	$30,202,000
Dekalb County Board of Education	$26,985,000
University of Illinois, IL	$31,500,000
Moody Air Force Base	$11,309,000
Yokota Air Base	$166,878,000
Golden Valley Unified School District	$4,818,000

CRISLYN OGAWA

MARKETING MANAGER

PROFESSIONAL PROFILE

Crislyn works closely with our clients to devise marketing plans that engage stakeholders, generate excitement within the community, and promote project success. The marketing plans are customized, helping to bring the unique vision and mission of each client to life through impactful design and storytelling alongside effective communication strategies. This may include national and local PR outreach, community events to celebrate key project milestones, special events like Earth Day, Arbor Day, or community fairs, grant or rebate check presentations, and social media campaigns and communication templates.

EDUCATION

2016 B.S. Business Administration, University of Southern California

AREAS OF EXPERTISE

- Develop and manage market strategies for performance contracting solutions
- Develop and raise brand awareness
- Deploy custom client marketing plans
- Manage and measure lead generation
- Develop core value proposition including social media, integration materials

YRS OF EXPERIENCE

6 Years with Schneider Electric

8 Years of strategic marketing experience

ROLE & EXPERIENCE HIGHLIGHTS

Crislyn joined Schneider Electric in June of 2018 as part of the IT solutions and data center business. She brings 8 years of expertise from a variety of marketing competencies including communication, channel marketing, project management, event marketing, branding, and digital marketing. In her current role, Crislyn enjoys collaborating with clients to deploy strategies that elevate awareness and boost engagement with their key stakeholders and media audiences to help drive progress around each clients' unique ambitions.

- Partner with clients to elevate marketing needs as a part of their modernization project, including branding, PR, videos, websites, social media, community events and more
- Deliver agency-style campaigns on clients' behalf to promote them as leaders in resiliency and sustainability, champions of community development and communities/schools of choice
- Led internal and executive communications strategies for 600+ employee division to drive innovation and key business priorities
- Developed and executed regionalized co-marketing plans to grow key channel partners across the US and Canada, increasing IT reseller through-partner revenue by 8-20% YoY in 2020-2021
- Developed first-ever national Diversity, Equity, and Inclusion Transparency Report for Schneider Electric US (18,000+ employees) to increase visibility, accountability, and trust

KIMBERLY ALBERTSON

DIRECTOR OF PROJECT FINANCE

PROFESSIONAL PROFILE

Kim's goal is to help our clients obtain the best financing for their projects. Kim assists our clients in bidding out the financing, reviewing the results, explaining terms and conditions, and coordinating with the appropriate parties throughout the funding process and through closing. Kim has more than 30 years of relevant experience and has supported funding efforts for hundreds of successful projects across the country, ranging from less than $1 million to more than $40 million, using a variety of debt instruments and funding sources.

EDUCATION

1982 B.A., Hillsdale College

AREAS OF EXPERTISE

- Oversight and support for deal-specific financing
- Developing and maintaining lender and financing relationships
- Developing strategies for providing the best financial options to our clients

YRS OF EXPERIENCE

9 Years with Schneider Electric

33 Years total

CERTIFICATIONS AND TRAINING

- Paralegal Certificate from Hillsdale College

PROJECT HIGHLIGHTS

PROJECT NAME	VALUE
Coahoma County, MS	$2,286,994
Valley Sanitary District, CA	$69,869,942
Harnett County Board of Education, NC	$14,483,512
Richland School District One, Phase 2, SC	$23,849,344
Hurlburt Field, FL	$22,610,576
City of Alamo, TX	$4,470,121
GSA Caribbean PV Rebuild, St. Croix	$5,589,525
Richland School District One, SC	$37,826,492
Robins Air Force Base-Group 2, GA	$17,923,579
West Windsor-Plainsboro Regional School District, NJ	$29,648,392
Norton County, KS	$2,113,229
City of Fort Scott, KS	$1,534,077
Yokota Air Base, Japan	$166,877,455
City of Simi Valley, CA	$38,598,999
City of Sierra Vista, AZ	$13,997,941
Travis County, TX	$27,147,357
City of St. Joseph, MO	$4,978,836
City of Natchez, MS	$1,538,186
Fort Huachuca, AZ	$23,841,970
City of Raymondville, TX	$1,665,035
City of Longwood, FL	$2,978,999
Fort Bend County, TX	$5,936,031
City of Shelbina, MO	$1,355,407
Naval Base Coronado, CA	$45,034,918
City of Chicago, IL	$3,565,221

"This achievement is a testament to our unwavering commitment to sustainability, which is embedded in everything we do."

- Peter Herweck
Schneider Electric CEO

Scan here to find out how Schneider Electric earned the #1 Spot of Time Magazine's World's Most Sustainable Companies of 2024

Peter Hinkle, Program Manager
913-433-6609
Peter.Hinkle@se.com

15200 Santa Fe Trail Dr., Suite 204
Lenexa, KS 66219

Life Is On | Schneider Electric

Abilene, KS

Check Register

Packet: APPKT00303 - BILLS 022525

By Check Number

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: AP Checking - Gen-AP Checking - General						
1000699	CATLETT AUTOMOTIVE INC	02/25/2025	Regular	0.00	1,006.67	1347
1000892	CBK INC	02/25/2025	Regular	0.00	79.70	1348
1001033	CED - RENSENHOUSE	02/25/2025	Regular	0.00	49.84	1349
3200	COMMUNITY FOUNDATION OF DICK	02/25/2025	Regular	0.00	500.00	1350
4370	DON'S TIRE & SUPPLY	02/25/2025	Regular	0.00	2,153.80	1351
8105	HIATT, JENNIE	02/25/2025	Regular	0.00	60.20	1352
VEN01120	INTENSITY VOLLEYBALL CLUB	02/25/2025	Regular	0.00	1,200.00	1353
1001031	JLC COMPANIES	02/25/2025	Regular	0.00	7,500.00	1354
23110	LUMBER HOUSE TRUE VALUE	02/25/2025	Regular	0.00	9.98	1355
13005	M & M TIRE & AUTO	02/25/2025	Regular	0.00	23.00	1356
999732	MIDWEST SINGLE SOURCE	02/25/2025	Regular	0.00	643.23	1357
VEN01096	NORTH AMERICA FIRE EQUIP. INC	02/25/2025	Regular	0.00	271.15	1358
1001012	PERRY WEATHER	02/25/2025	Regular	0.00	3,512.45	1359
16195	PIONEER FARM INC	02/25/2025	Regular	0.00	16.32	1360
18298	RUSH TRUCK CENTER	02/25/2025	Regular	0.00	694.89	1361
19180	SALINA SUPPLY CO	02/25/2025	Regular	0.00	742.25	1362
19550	SMART INSURANCE	02/25/2025	Regular	0.00	213.00	1363
999925	THE WHITE CORPORATION, INC	02/25/2025	Regular	0.00	311.45	1364
11221	VERIZON	02/25/2025	Regular	0.00	2,302.48	1365
22021	VISA - UMB PUBLIC WORKS	02/25/2025	Regular	0.00	1,599.29	1366

Bank Code AP Checking - Gen Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	34	20	0.00	22,889.70
Manual Checks	0	0	0.00	0.00
Voided Checks	0	0	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
	34	**20**	**0.00**	**22,889.70**

Fund Summary

Fund	Name	Period	Amount
099	POOLED CASH	2/2025	22,889.70
			22,889.70

Abilene, KS

Check Register

Packet: APPKT00318 - BILLS 030425

By Check Number

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: AP Checking - Gen-AP Checking - General						
1001080	AC WESTSIDE MARKET	03/04/2025	Regular	0.00	4.19	1367
VEN01125	AMMANN, KELLY M	03/04/2025	Regular	0.00	180.00	1368
1000699	CATLETT AUTOMOTIVE INC	03/04/2025	Regular	0.00	1,116.43	1369
1000192	CINTAS CORP NO. 2	03/04/2025	Regular	0.00	81.36	1370
3300	CLARK, MIZE & LINVILLE CHARTERED	03/04/2025	Regular	0.00	4,868.20	1371
3441	COOPER, KELLY	03/04/2025	Regular	0.00	2,700.00	1372
4244	DK CTY ADMINISTRATION	03/04/2025	Regular	0.00	14,885.00	1373
VEN01048	DK CTY CLERK	03/04/2025	Regular	0.00	13,904.18	1374
999846	GALLS, LLC	03/04/2025	Regular	0.00	22.54	1375
VEN01034	GATLIN, BELINDA	03/04/2025	Regular	0.00	210.00	1376
VEN01118	GRANT TOWNSHIP	03/04/2025	Regular	0.00	1,800.00	1377
1000912	GUFFEY PROPERTIES, LLC	03/04/2025	Regular	0.00	3,711.24	1378
2383	HOMMAN ELECTRONICS	03/04/2025	Regular	0.00	69.00	1379
9150	J & K CONTRACTING	03/04/2025	Regular	0.00	40,429.76	1380
999650	KANSAS GAS SERVICE	03/04/2025	Regular	0.00	10,012.50	1381
1350	KAP PHILLIPS CO	03/04/2025	Regular	0.00	160.00	1382
1000964	KU PUBLIC MANAGEMENT CENTER	03/04/2025	Regular	0.00	1,550.00	1383
12120	LEAGUE KS MUNICIPALITIES	03/04/2025	Regular	0.00	175.00	1384
1001045	LEGACY KANSAS, LLC	03/04/2025	Regular	0.00	607.85	1385
23110	LUMBER HOUSE TRUE VALUE	03/04/2025	Regular	0.00	273.39	1386
1000774	MARSH, RON	03/04/2025	Regular	0.00	205.67	1387
1000277	MICHELLE WRIGHT	03/04/2025	Regular	0.00	9,743.63	1388
1000545	NARAYAN, INC	03/04/2025	Regular	0.00	181.80	1389
14860	OLSSON	03/04/2025	Regular	0.00	2,246.00	1390
15067	OVERHEAD DOOR CO	03/04/2025	Regular	0.00	1,524.01	1391
16195	PIONEER FARM INC	03/04/2025	Regular	0.00	270.96	1392
4394	PVS DX, INC	03/04/2025	Regular	0.00	6,095.37	1393
999690	RHV DO IT BEST HARDWARE	03/04/2025	Regular	0.00	30.53	1394
12012	ROASTER JOES, INC	03/04/2025	Regular	0.00	51.66	1395
18320	ROBSON OIL CO, INC	03/04/2025	Regular	0.00	6,144.46	1396
1000092	RUTZ CONSTRUCTION, LLC	03/04/2025	Regular	0.00	825.00	1397
999974	RYAN & MULLIN, PA	03/04/2025	Regular	0.00	3,250.00	1398
999901	SECURE SHRED OF N.C.K.	03/04/2025	Regular	0.00	103.25	1399
VEN01124	SOLIS, JORDEN JAVIER	03/04/2025	Regular	0.00	240.00	1400
19892	SUPERIOR SANITATION SERVICE	03/04/2025	Regular	0.00	260.00	1401
1000203	TRIPLETT, INC	03/04/2025	Regular	0.00	7,113.13	1402
23210	UNIFIRST CORPORATION	03/04/2025	Regular	0.00	3,284.02	1403
22019	VISA - UMB COMMUNITY DEVELOP	03/04/2025	Regular	0.00	2,044.29	1404
5046	VYVE BROADBAND	03/04/2025	Regular	0.00	5,107.72	1405
1000056	WILDCAT SERVICE, INC	03/04/2025	Regular	0.00	1,000.00	1406

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
1000852	XEROX FINANCIAL SERVICES	03/04/2025	Regular	0.00	605.01	1407

Bank Code AP Checking - Gen Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	63	41	0.00	147,087.15
Manual Checks	0	0	0.00	0.00
Voided Checks	0	0	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
	63	**41**	**0.00**	**147,087.15**

Fund Summary

Fund	Name	Period	Amount
099	POOLED CASH	3/2025	147,087.15
			147,087.15

Packet: PYPKT00135 - 02/28/2025 PAYROLL
Payroll Set: 01 - Abilene, KS

Pay Period: 02/09/2025 - 02/22/2025

Males Paid:	63
Females Paid:	28
Unknown Paid:	0
Total Employees:	91

Total Direct Deposits:	114,373.56
Total Check Amounts:	0.00

EARNINGS

Pay Code	Units	Pay Amount
AUTO ALLOW	0.00	138.47
BI-LINGUAL	1.25	40.79
CALL OUT	137.67	2,898.27
CALL OUT VOLUTEER	18.00	540.00
CELL ALLOWANCE	0.00	230.76
COMMISSION	0.00	1,050.00
COMP TIME USED	8.50	223.27
FITNESS ALLOW	0.00	15.00
FLOATING HL	48.00	1,269.12
FUNERAL	64.00	1,658.88
HOLIDAY	464.00	11,784.64
HOURLY	3,637.83	90,476.10
NIGHT SHIFT	373.00	10,703.82
OT	144.75	4,282.39
PART-TIME	136.25	2,299.66
SALARY	658.50	34,304.88
SICK LEAVE	291.50	6,467.76
TRAINING	15.00	291.18
VACATION LEAVE	177.25	3,806.92
Total:	6,175.50	172,481.91

BENEFITS

Pay Code	Units	Pay Amount
COMP EARNED 1.0	56.75	0.00
COMP EARNED 1.5	30.00	0.00
FTC 457	0.00	360.00
IMPACT SPORTS	0.00	172.50
Total:	86.75	532.50

TAXES

Code	Subject To	Employee	Employer
FEDERAL W/H	149,100.25	12,883.52	0.00
MEDICARE	161,441.96	2,340.91	2,340.91
SOCIAL SECURITY	161,441.96	10,009.40	10,009.40
STATE TAXES	159,979.96	7,578.26	0.00
UNEMPLOYMENT	171,431.91	0.00	171.46
Total:		32,812.09	12,521.77

DEDUCTIONS

Code	Subject To	Employee	Employer
AFLAC PRE-TAX	0.00	667.76	0.00
AFLAC-AFTER TAX	0.00	287.56	0.00
CHILD SUPPORT	0.00	392.25	0.00
DENTAL INSURANCE	0.00	17.54	52.60
EMPOWER KPERS 457 PT	0.00	396.00	120.00
EMPOWER KPERS ROTH	0.00	122.00	100.00
FLEX SPEND MEDICAL	0.00	1,622.50	0.00
FTC 457	0.00	706.00	360.00
GARNISHMENT	0.00	100.00	0.00
HEALTH INS	0.00	8,694.84	26,083.99
HEALTH SAVINGS ACCT	0.00	210.00	100.00
IMPACT SPORTS	0.00	257.34	172.50
KP&F	72,376.41	5,174.93	17,855.22
KP&F OGLI	0.00	115.86	0.00
KPERS OGLI	0.00	221.17	0.00
KPERS TIER 1	39,117.06	2,347.04	4,189.44
KPERS TIER 2	15,210.79	912.63	1,629.08
KPERS TIER 3	40,752.00	2,445.11	4,364.53
LPL FIN. OPEN/ROTH	0.00	175.00	0.00
LPL FINANCIAL 529	0.00	50.00	0.00
POLICE & FIRE INS	0.00	20.92	0.00
VISION CARE DIRECT	0.00	307.80	0.00
VISION SERVICE PLUS	0.00	52.01	0.00
Total:		25,296.26	55,027.36

RECAP 01 - Abilene, KS

Earnings:	172,481.91	Benefits:	532.50	Deductions:	25,296.26	Taxes:	32,812.09	Net Pay:	114,373.56