TEN
THE EFFICIENCY NETWORK

Response to Request for Quotes for a Guaranteed Energy Savings Project

SCI Houtzdale, Clearfield County, PA
Project No. GESA 2018-1
Contract No. GESA 2018-1.1
Volume I -Technical Submission

Commonwealth of Pennsylvania
Department of General Services (DGS)

November 20, 2018
2:00 p.m.

Submitted by:
The Efficiency Network (TEN)
1501 Reedsdale Street, Suite 401
Pittsburgh, PA 15233

Mr. David Robb
Vice President, Project Development
412-7229845
david.robb@tensaves.com

Statements Regarding RFQ Requirements

- The Efficiency Network (TEN) has received and acknowledged all eight (8) bulletins released by PA DGS pertaining to the SCI Houtzdale RFQ.
- TEN has not included any cost information in the SCI Muncy Technical Submission
- TEN has not labeled any portion of our proposal as proprietary or confidential
- The total energy savings project in our TEN final scope of work will be at least 95% of the savings projected in the Quote, and the actual ECM costs shall be within 10% of the costs listed in the CEA/IGA, and the project will be self-funded from energy savings over the term of the project (maximum 18 years).
- The Energy Consultants service fees are included in our project cash flow
- Measurement and Verification Services are included in the first three years of the project
- Font and size requirement Times New Roman, 11 pt. font

Quote Signature

Offeror's Representations and Authorizations. Offeror by signing on the signature page and submitting its Quote understands, represents, acknowledges and certifies that:

1. All information provided by, and representations made by, the Offeror in the Quote are material and important and will be relied upon by the Issuing Office in awarding the contract(s). Any misstatement shall be treated as fraudulent concealment from the Issuing Office of the true facts relating to the submission of this Quote. A misrepresentation shall be punishable under 18 Pa. C.S. § 4904.

2. No attempt has been made or will be made to induce any firm or person to refrain from submitting a Quote on this contract, or to submit a Quote higher than this Quote, or to submit any intentionally high or noncompetitive Quote or other form of complementary Quote.

3. The Quote is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive Quote.

4. To the best knowledge of the person signing the Quote for the Offeror, the Offeror, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding or proposing on any public contract, except as disclosed by the Offeror in its Quote.

- See statement attached to Non-Collusion Affidavit as Exhibit 1.

5. To the best of the knowledge of the person signing the Quote for the Offeror and except as otherwise disclosed by the Offeror in its Quote, the Offeror has no outstanding, delinquent obligations to the Commonwealth including, but not limited to, any state tax liability not being contested on appeal or other obligation of the Offeror that is owed to the Commonwealth.

6. The Offeror is not currently under suspension or debarment by the Commonwealth, or any other state, or the federal government. If the Offeror has received, within three years of the issuance of this RFQ, a Notice of Default from the Commonwealth, other state or the federal government, then the Offeror shall submit, as part of the Technical Submission, seven copies of a written explanation of why such Notice of Default was issued. This written explanation shall not exceed 1 sheet (2 pages) and shall not count towards the sheet and page limit established for the Technical Submission of the Quote.

7. The Offeror has not, under separate contract with the Issuing Office, made any recommendations to the Issuing Office concerning the need for the services described in the Quote or the specifications for the services described in the Quote.

8. Each Offeror, by submitting its Quote, authorizes all Commonwealth agencies to release to the Commonwealth information related to liabilities to the Commonwealth including, but not limited to, taxes, unemployment compensation, and workers' compensation liabilities.

9. Until the awarded GESA Contractor receives a fully executed and approved written contract from the Issuing Office there is no legal and valid contract, in law or in equity, and the GESA Contractor should not begin to perform.

10. The total energy savings projected in the final scope of work will be at least 95% of the savings projected in the Quote and that the project will be self-funded over the financial term of the project (maximum term of 18 years.)

11. Offeror agrees and certifies in accordance with the enclosed Commonwealth of Pennsylvania:

o Nondiscrimination/Sexual Harassment Clause
o Tax Liability Certification
o Americans Disabilities Act
o GESA Contractor Integrity Provisions
o GESA Contractor Responsibility Provisions
o Environmental Statement
o Compliance with State and Federal Statutes, Rules and Regulations
o Non-Collusion Affidavit

I am authorized to sign this Quote on behalf of the Offeror and I agree and state that The Efficiency Network (TEN) understands and acknowledges that the above representations are material and important and will be relied upon by the Department of General Services in awarding the contract(s) for which this proposal is submitted. I understand, and my firm understands, that any misstatement shall be treated as fraudulent concealment from the Department of General Services of the true facts relating to the submission of this Quote.

Signature

Troy T. Geanopulos
Chief Executive Officer
The Efficiency Network, Inc.

Non-Collusion Affidavit

DGS Project Number: GESA 2018-1

State of Pennsylvania:
County of Allegheny: s.s.

I state that I am the Chief Executive Officer of The Efficiency Network and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the prices(s) and the amount of this Quote.

I state that:

1. The price(s) and amount of this Quote have been arrived at independently and without consultation, communication or agreement with any other contractor, Offeror, or potential Offeror.

2. Neither the price(s) nor the amount of this Quote, and neither the approximate price(s) nor approximate amount of this Quote, have been disclosed to any other firm or person who is a Offeror or potential Offeror, and they will not be disclosed before the Quote submission date.

3. No attempt has been made or will be made to induce any firm or person to refrain from proposing on this contract, or to submit a Quote higher than this Quote, or to submit any intentionally high or noncompetitive Quote or other form of complementary Quote.

4. The Quote of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive Quote.

5. The Efficiency Network its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by state or federal law in any jurisdiction, involving conspiracy or collusion with respect to proposing and/or bidding on any public contract, except as follows:

    - See following statement as Exhibit 1.

Exhibit 1 - A former employee pled guilty to his unilateral involvement in a conspiracy involving a bid to the City of Allentown, PA in 2015. The Company was not charged and had no knowledge of the former employee's actions.

To ensure such a matter could not reoccur, TEN went beyond its standing ethics policies and formed a Compliance and Ethics Committee headed by a former FBI regional director with significantly increased training in order to better prepare our employees.

Since the time of this matter, TEN has been awarded dozens of contracts and has not been penalized in any way as a result of this matter nor precluded from bidding on any contract or program. The above matter pertains exclusively to a former employee who acted unilaterally, in violation of the Company's ethics policies, and without the Company's knowledge. The Company fully cooperated in the investigation and has never been involved in any such matter.

TEN is committed to maintaining the highest levels of ethics and integrity in its business dealings.

I state that The Efficiency Network understands and acknowledges that the above representations are material and important and will be relied upon by the Department of General Services in awarding the contract(s) for which this Quote is submitted. I understand, and my firm understands, that any misstatement in this affidavit is and shall be treated as fraudulent concealment from the Department of General Services of the true facts relating to the submission of this Quote.

Troy T. Geanopulos, Chief Executive Officer

SWORN TO AND SUBSCRIBED
BEFORE ME THIS 19th DAY OF
Nov, 2018

Notary Public

Christopher P. Niemiec, Chief Financial Officer

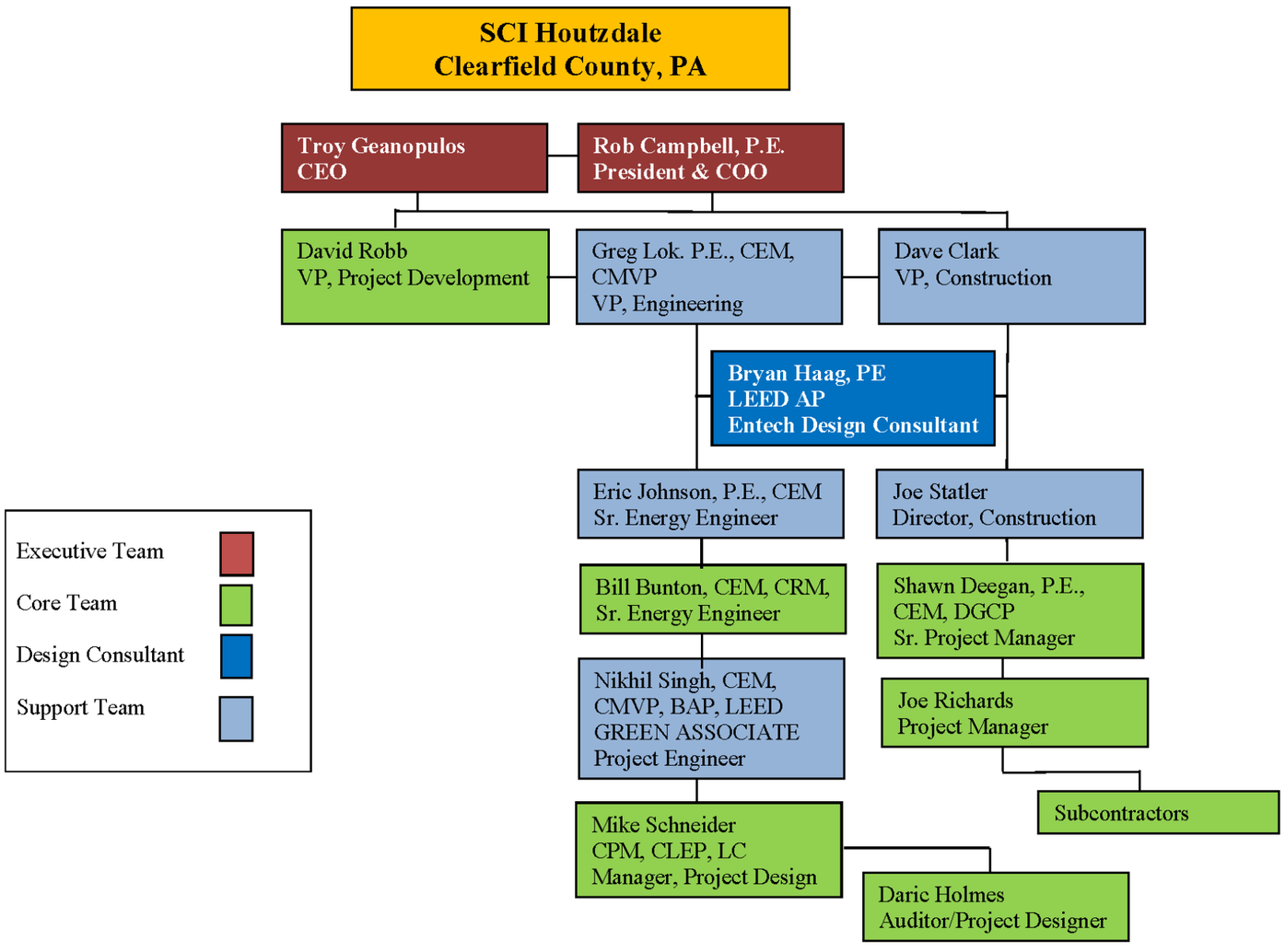
My Commission Expires 07-03-2018

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Christopher P. Niemiec, Notary Public
City of Pittsburgh, Allegheny County
My Commission Expires July 3, 2019
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Project Management Team Overview (2-5.1)

Project Team Organizational Chart

Below is proposed Project Team Organization Chart that graphically depicts the hierarchy and reporting structure of the Team members, with specific personnel identified.



Note:
It is TEN's preference to construct the project with a combination of resources from the following subcontractors. We recognize, however, per the RFQ and Bulletins that final subcontractor selection will not occur until the Investment Grade Audit stage. TEN will complete final subcontractor selection in consultation with DOC and in keeping with small business and small diverse business goals and commitments. In certain instances, we have identified multiple firms for each discipline to maintain the value of competitive pricing during the IGA and acknowledge the advantage of various contracting/sub-contracting relationships to cost effectively meet Commonwealth rules and objectives. Additional sub-contractors may also be considered during the IGA stage as certain firms have signed exclusive agreements with other ESCOs for the proposal stage, which will expire after selection and hence improve the competitive environment for the project and the Commonwealth.

Lighting
- Hunt Consulting
- Lighting Services Inc

Mechanical & General Contracting
- Snelick Construction
- GM McCrossin
- Gunning Mechanical Contractors

Water Conservation
- Intelligent Conservation Systems (ICON Solution)
- East End Plumbing

Building Automation System
- NRG

Roof Replacement/Insulation
- Blair Roofing
- Marcon Roofing
- Munn Roofing Corp

Solar Panel Array
- Hunt Consulting

Team Assignment of Responsibilities

All the identified core team members, carefully chosen from our staff of 32 professionals, have a successful history of developing and implementing projects together. In fact, very specifically, all have previously delivered similar projects to those contemplated here for the Commonwealth under current and previous employment. TEN is also the ESCO that completed the DGS Small GESA-1 (Keystone) and DGS Small GESA-2 (Thaddeus Steven College) projects and, is currently building the GESA 2017-1 DGS (PA Capitol Complex) project, which not only demonstrates our team's comfort level working within state government facilities but also our familiarity with the GESA investment grade audit (IGA), construction and M&V requirements. These past projects, although in different buildings, also encompassed the diversity of Energy Conservation Measures (ECMs) contemplated here. Of note, our team's collective experience includes over $100 million in state, county and private correctional facilities and another $40 million in state hospitals with secure units.

Greg Lok, (P.E., CEM, CMVP), Vice President of Engineering, Mr. Lok's responsibilities include managing the engineering group including design and M&V, developing the scope, cost and savings. As an industry-recognized energy efficiency engineering expert, Greg is a proven team leader and project manager, adept at developing creative and cost-effective engineering solutions for a broad range of building types and building systems. In additional to his current responsibilities, Mr. Lok previously managed Constellation's MUSH (Municipal Governments, Universities, Schools, Hospitals) Energy Services team with over 35 professional designers and engineers encompassing projects from coast to coast.

Role for this project:
Mr. Lok will be managing the engineering team and design consultant as well as reviewing engineering designs and energy savings calculations. Mr. Lok will directly assist the engineering team when needed and oversee the team's measurement and verification of the project's results.

Percentage of time: 10% during the audit.
Mr. Lok has worked on the following projects: Small GESA #1 (Keystone), Small GESA #2 (Thaddeus Stevens College), GESA 2017-1 (Capitol Complex), Cambria County, Dauphin County, Temple University and DPW-Polk Center, with various project team members including Dave Clark, Daric Holmes, Joe Statler and Rob Campbell.

Daric Holmes, Project Designer, audits, designs, and oversees field installations and testing of high-quality, cost-effective lighting and water conservation measures. His extensive field experience allows him to improvise and enhance designs to best meet all situations. Having directly managed the electrical labor sub-contractor on the previous DGS lighting upgrades and most recently having designed the Keystone and PJC LED upgrades, Mr. Holmes has a strong appreciation for what is required for this project and he has incorporated this experience into this project. With over 20 years of experience in the lighting industry, including eight years of military service, Mr. Holmes is a strong asset to effective, well designed projects.

Role for this project:
Mr. Holmes will be responsible for the audit and preliminary design of the LED lighting upgrades and lighting control solutions.

Percentage of time: 30% during the audit, 5% during construction.
Mr. Holmes has worked on the following projects: Small GESA #1 (Keystone), Small GESA #2 (Thaddeus Stevens College), GESA 2017-1 (Capitol Complex), Dauphin County and DPW-Polk Center projects with various project team members including Dave Clark, Joe Statler, Rob Campbell, and Greg Lok.

Bill Bunton, (CEM, CRM), Sr. Energy Engineer, with over 20 years in the field, Mr. Bunton is responsible for performing on-site energy audits and for the design of solutions for commercial, industrial, and institutional buildings. His responsibilities include the analysis of building systems, complete engineering and economic evaluation of energy

cost reduction measures, project costing, and conceptual design of thermal systems including air handlers, chillers, boilers, geothermal, control systems and efficiency optimization.

Role for this project:
Mr. Bunton will be responsible for further developing energy baselines, auditing the facilities, identifying and developing mechanical / thermal building solutions including, developing engineering designs and scopes of work, performing energy savings calculations, and reviewing bid results / pricing. These responsibilities will also extend into the construction phase due to the close coordination required by engineering and our BAS and mechanical subcontractors to ensure proper installation and commissioning of these improvements for optimum efficiency.

Percentage of time: 100% during the audit, 5% during construction.
Mr. Bunton has worked on the following projects: Cambria County Prison, Fayette County Prison, Dauphin County Prison, The Bradley Center, DCAMM MA State Police Energy Performance Contract, Penn State with various project team members including Dave Clark, Joe Statler, Rob Campbell, Greg Lok and David Robb.

Nikhil Singh, (CEM, CMVP, BAP, LEED GREEN ASSOCIATE) Project Engineer, is an engineering and technical specialist with core skills in energy modeling, HVAC and controls re-tuning, data analysis, field testing and inspection of buildings, and energy audit report writing. He leads post-construction customer site audits, verifying energy efficiency strategies and calculating and reporting project performance.

Role for this project:
Mr. Singh will be assisting the Lead Engineers (Mr. Hainsworth and Daric Holmes) and Greg Lok with designing and then implementing the project measurement and verification plan.

Percentage of time: 5% during the audit, 5% during construction, 5% during M&V.
Mr. Singh has worked on the following projects: Small GESA #1 (Keystone), Small GESA #2 (Thaddeus Stevens College), GESA 2017-1 (Capitol Complex), City of Harrisburg, City of Bethlehem, Temple University and United Steel Workers with various project team members including Dave Clark, Joe Statler, Mike Schneider, Shawn Deegan and David Robb.

Dave Clark, Vice President of Construction, is responsible for directing the project management staff, working on the development of new project design concepts ensuring "constructability", preparing scopes of work and bid specifications, and overseeing the project health and safety program.

In addition to Mr. Clark's 30+ years of experience working in commercial and industrial facilities, he has accumulated more than 2,000 hours of related education and training in professional management; building construction; mechanical, electrical and energy management systems and services; numerous college courses in business management. He also retains a national certification for General Contractor licensing in the states of AL, AK, GA, LA, MS, NC, SC, TN & WV.

Role for this project:
Mr. Clark will collaborate with the engineering team on the development of project design concepts, constructability and maintenance; review scopes of work and bid specifications, review subcontractor pricing and oversee the selection of subcontractors and construction management team. The important mechanical requirements of this project warrant Mr. Clark's direct expertise in review of the design and constructability of the central plant ECMs and experience in correctional facilities.

Percentage of time: 10% during the audit, 5% during construction.
Mr. Clark has worked on the following projects: Small GESA #1 (Keystone), Small GESA #2 (Thaddeus Stevens College), GESA 2017-1 (Capitol Complex), DPW-Polk Center, Temple University and Dauphin County, with various project team members including Rob Campbell, Greg Lok, Joe Statler, Dave Robb, Nikhil Singh, Shawn Deegan and Daric Holmes.

Shawn Deegan, (P.E., CEM, DGCP), Sr. Project Manager, is responsible for all onsite project management and subcontractor supervision during construction. He will ensure the worksite is safe and supervised in an effective and efficient manner. Mr. Deegan is the liaison between the construction team, engineers, and designers and the owners and stakeholders. In this role, he facilitates effective communication, safety decision-making and problem solving. With over 16 years of mechanical retrofit construction experience, Mr. Deegan is adept at project supervision, customer service, project development and management, building and installing.

Role for this project:
Mr. Deegan will plan, coordinate, implement and conclude the project according to specifications, deadlines and budget, with an overall objective of complete customer satisfaction.

Percentage of time: 25% during the audit, 70% during construction.
Mr. Deegan has worked on multiple phases at Temple University with various project team members including Dave Clark, Joe Statler, Rob Campbell, Mike Schneider, Nikhil Singh and Daric Holmes.

Joe Richards, Project Manager, will be accountable for all project and subcontractor management for the duration of the project. He will ensure the worksite is safe and supervised in an effective and efficient manner. Mr. Richards will be the liaison between the owners, engineers, designers, subcontractors and construction team.

Role for this project: Mr. Richards will be responsible for daily coordination of subcontractors, inspections and commissioning, quality assurance and quality control.

Percentage of time: 100% during construction.
Mr. Richards has worked on the following projects: GESA 2017-1 (Capitol Complex), Cambria County, Penn State University, Indiana County and the City of Danville with various project team members including Dave Clark, Joe Statler, Rob Campbell, Mike Schneider, Shawn Deegan and Daric Holmes.

David Robb, Vice President, Business Development, is responsible for leading TEN's development efforts and serves as Program Manager for all of the company's DGS/DOC GESA projects. With over 20 years of energy efficiency experience, he has a valuable combination of skills and expertise: a master's degree as well as hands-on experience in building construction management. He has extensive knowledge of facility auditing, performance measurement and verification, payback analysis and project development.

Role for this project:
Mr. Robb will be DGS's program manager and main point of contact throughout the duration of the project. Mr. Robb's responsibilities will include working with DGS/DOC Representatives throughout the entire project from development through construction to M&V to ensure overall customer satisfaction. He will also coordinate the engineers, contract administrators, financial analysts, project managers and M&V specialists to execute deliverables and successful solutions for DGS.

Percentage of time: 40% during the audit, 5% during construction.
Mr. Robb has worked on the following projects: Small GESA #1 (Keystone), Small GESA #2 (Thaddeus Stevens College), GESA 2017-1 (Capitol Complex), City of Harrisburg, Kutztown University, Temple University and Cheyney University with various project team members including Mike Schneider, Daric Holmes, Joe Statler, Rob Campbell, Dave Clark, Nikhil Singh and Shawn Deegan. His nearly $80 million in corrections experience is delineated in Section 2.5.4

TEN's Teaming Approach is Key to Project Success - TEN's engineering and construction teams work closely with each other to develop the scopes of work that are competitively bid (or negotiated) to customer qualified vendors and contractors to ensure that the design intent is met, the project / system can be installed properly and maintained, and the construction team is very familiar with the project before installation begins. This seamless and transparent hand-

off to construction ensures quality control including well planned procurement and timely delivery of material to facilitate an efficient and well managed installation. TEN's team is also open to our subcontractors' input when it improves the design and/or lowers the cost to provide a better and more sustainable solution for each customer.

Subcontractor Selection Process - TEN believes that it will provide the best value for the SCI Houtzdale's Energy Efficiency Program dollars. TEN's efficient cost structure and strong local presence will allow DGS to obtain a maximum amount of improvements for its available energy and operational savings. Further, TEN's independence from any particular subcontractor and manufacturer ensures that it is able to provide the most appropriate solutions that efficiently address specific needs. As a result, TEN can develop an objective and unbiased partnership with DOC by implementing the equipment and system upgrades that generate maximum returns.

The TEN team has also worked with the following anticipated list of contractors and subcontractors on previous GESA projects. Hunt Consulting, Lighting Services, NRG, Gunning Mechanical, McCrossin, and Zerodraft. These GESA projects have included the Small GESA #1 (Keystone), Small GESA #2 (Thaddeus Stevens College), GESA 2017-1 (Capitol Complex), Community College of Allegheny County, Millersville University and SCI Rockview. While some contractors are new to TEN, we will finalize a robust sub-contractor qualifications review of all sub-contractors during the IGA prior to any final selections and share the results with DGS/DOC.

Construction Management Approach

TEN's commitment to offering energy efficient solutions is evident based on the credentialed, high-caliber team assembled at TEN to deliver world-class energy efficiency – including a significant focus on performance contracting. **This is our exclusive focus.** There are few, if any, energy and utility situations TEN has not already encountered and successfully addressed. TEN has a significant amount of engineering and technical resources to support the project throughout the contract term.

When it comes time for installation, TEN's dedicated staff of experienced project and construction managers specialize in delivering guaranteed, energy efficient solutions as planned. After TEN has assisted DOC with competitively procuring equipment and materials (decided upon during the design phase), the installation can begin. During the project, TEN's onsite construction project managers will collaborate with our internal engineering team on specific design issues. The presence of TEN's onsite project management throughout the process is critical to ensuring overall project success for this significant initiative undertaken by DOC. TEN's project management is key to a quality installation, and we guarantee that there will be accountable TEN employees assigned to this project throughout each task required by DGS/DOC. Please refer to the next section for more detail.

Repairs, Service and Emergencies

Issues undoubtedly occur during construction and equipment will ultimately require service and repair during its useful life. TEN works closely with our clients and contractors to establish clear lines of communication and safety protocols so that we can address issues as quickly as possible. This is facilitated by onsite construction management and electronic reporting tools along with a 24-hour toll-free emergency phone number (855.429.1010 x:163). In the design and construction stages, we also consider equipment that is easily repaired and serviced within region. This includes parts availability. A recent and very relevant example of this approach occurred with the selection of the manufacturer of the new Capitol chillers.

Committed Team

The Efficiency Network commits the personnel identified on this project team to the GESA 2018-1 SCI Houtzdale project and shall not alter the organizational structure without prior written authorization by the DGS/DOC.

Work Plan for This Project (2-5.2)

Understanding the Design Process

In this section, we have detailed the skills and steps necessary for the delivery of a successful project. Key among them is the engagement of TEN's project management team from the beginning of any audit and design process to ensure that DGS/DOC objectives are addressed and that the solutions proposed are buildable. This process also includes gaining a clear understanding of phasing requirements and coordination of construction to minimize the effect on occupants. TEN has never asked staff to vacate their workspace for the upgrades contemplated under an energy performance project. We always adjust the project work flow to accommodate client schedules and regularly work 2nd and 3rd shift to avoid any distractions. We also appreciate the careful scheduling that occurs in a correctional facility and will adjust construction activities as necessary and accordingly.

Please take note of TEN's cTEN application which provides daily effective communication to key project participants. This tool is used in addition to regular site supervision, project meetings, meeting minutes and look ahead schedules to inform our clients and avoid unnecessary impact on building occupants.

TEN THE EFFICIENCY NETWORK

THE EFFICIENCY NETWORK
CONSTRUCTION PROGRESS REPORT

Subcontractor:
Hunt Consulting

Location:
15-01-031 PA DGS Small GESA 1 - Keystone Building -5th Floor West Open Office Area

Weather:
Sunny

Report Date:
6/15/2017

Keystone 5th Floor West T5

6" Can light samples

Action Items that The Efficiency Network will need to address:
There are no Action Items to be addressed at this time.

Delays:
There were no delays.

Verbal instructions received:
There were no instructions received.

Visitors:
There were no visitors.

Work performed today:
Hunt Consulting Installed: (124) T5 RLRB Pendants in Open Office Areas (30) T8 RLRB in utility spaces / restrooms (2) 6" Can samples for review

Work to be performed following day:
Monday 6/19 2x2 Installation on 3rd Floor east OR T5 installation on 5th floor east confirmation to be provided monday pending delivery schedule

Reported by: Adam Trosko

Project Management Approach

One significant key to our approach is our large, experienced in-house lighting design team. Lighting is a dominant component of most every energy performance contract and is typically outsourced in a turnkey manner by ESCOs to third party lighting contractors. TEN takes a very different approach that creates a better and more predictable outcome, at a lower cost. At TEN all design, equipment procurement and construction management are performed by direct TEN employees instead of through a third-party lighting contractor. TEN only outsources installation labor. The TEN lighting process involves a great deal of sample installations and a focused design approval process that is a critical step to ensure customer satisfaction given the long-term consequences that are associated with LED technologies. As we say, "the good news about LED is the life expectancy but the bad news about LED is the life expectancy" (the point being that it is possible to suffer with a mistake for a long time.) It is absolutely critical to make the right, informed decisions about LED design and we are adamant that our approach, driven by internal experienced resources, that we control as opposed to unrelated contractors, is both better and more cost-effective.

Accurate Reporting - Reporting to The Efficiency Network's (TEN) Director, Construction Services, TEN's on-site 30-hour OSHA Certified Project Manager is accountable for the management of all assigned project construction activities taking place in the building(s). The Project Manager (PM), through their on-site management, will ensure that the worksite is safe, supervised and managed in an effective and efficient manner. Maintaining and managing communications with and directing the activities of all subcontractors is key to the success of the project. Our project managers utilize our cTEN application to quickly and efficiently report progress, concerns and work scheduled to be performed the following day. This communication will be shared with both our

Director of Construction Services and the DOC project representatives as another real-time means to communicate and to monitor quality control.

Timely delivery and Quality Assurance - TEN believes that quality control starts in the project development stage and continues all the way through construction and measurement and verification. An effective energy savings program requires interaction between engineering and construction management during design. We establish this interaction by involving the construction team during the development phase of the project to ensure the "constructability" of the solutions we propose. The ultimate success of any energy savings project is measured by the ability of the installed systems to achieve the projected savings targets and to meet environmental and comfort expectations over a sustained period, while the success of a brilliant design is predicated by its ability to be constructed. TEN takes a comprehensive approach to development and engineering to establish this critical balance. This approach is possible because TEN utilizes **in-house** engineering and construction management to develop and deliver each project.

Our engineering and construction teams work closely with each other to develop the scopes of work that are competitively bid (or negotiated) to customer qualified vendors and contractors to ensure that the design intent is met, the project / system can be installed properly and maintained, and the construction team is very familiar with the project before installation begins. This seamless and transparent hand-off to construction ensures quality control including well planned procurement and timely delivery of material to facilitate an efficient and well managed installation. TEN's team is also open to our subcontractors' input when it improves the design and/or lowers the cost to provide a better and more sustainable solution for each customer.

On-cost delivery – As described above, the integration of TEN's engineering and construction teams from the onset of development ensure that TEN's projects can be built on time and on budget. TEN excels at effective communication / accurate reporting, timely and on-cost delivery as well as technical excellence.

Technical Excellence - The Efficiency Network is comprised of professional staff, most of whom have been active in energy management for more than twenty years. TEN has a staff of experienced professionals who are very familiar with the unique aspects of designing and constructing energy services projects in numerous settings including corrections facilities and, have collective project experience of more than $700 million. TEN takes a comprehensive approach to designing and constructing energy savings projects and typically performs all energy engineering and construction management in-house. TEN employs its own lighting auditing, design and project management professionals. These professionals keep directly in tune with the lighting marketplace in terms of product innovations, availability and pricing. We also negotiate product pricing directly with manufacturers and lighting representatives to minimize layers of markup. In this way, we are also able to provide the most appropriate design for our client's available savings. In contrast, most of our competitor's turnkey sub-contract their entire lighting audit, design, material procurement and construction. For the design of many of the other solutions within our proposal for the SCI Houtzdale project, we have also teamed with ENTECH Engineering as our design professional. ENTECH was an important part of the success of the SCI Dallas GESA project and we want to deliver continuity and success to ensure a similar experience for SCI Houtzdale.

Steps to Successful Program Delivery and Contractor Quality Control

Critical Path Schedule - The major general steps of a TEN implementation plan are as follows**:**
A draft Critical Path Method (CPM) schedule is attached further in the Technical Response. In addition to the more general narrative below, it sets forth the logical progression of the proposed project including notice of energy audit award, duration and submission date of the energy audit, full execution of the GESA contract, permits submission and approval dates, durations of on-site work, commissioning and training. Also addressed are coordination with local utilities, subcontractors, equipment suppliers and DGS/SCI Houtzdale facility personnel. Our construction team uses Microsoft Project (which is preferred by many of our customers).

Initial Project Startup / Notice of Award
Immediately upon award of the project, TEN will further develop the partnership approach with DOC and further identify the personnel required to efficiently execute this project with core team members, and DOC preferred equipment providers and subcontractors. Once all the members of the project team are identified, the expectations for the project and its implementation will be clearly documented and outlined. The project's implementation milestones will be established in the IGA and in more detail in the project's regular construction meetings. These milestones will be confirmed regularly through clear lines of communication which have been established to facilitate a successful project implementation. At this point, we will coordinate with DOC on specific details such as site operations and logistics including lay down areas during construction.

Procurement
As the project scope is approved by DOC through the IGA/GESA, purchase orders will be pre-negotiated and ready for immediate issue for materials and subcontracts. During the IGA, TEN will carefully evaluate the pre-identified subcontractors and manufacturers to determine the most appropriate fit for the energy savings project scope. TEN's independence from any subcontractor or manufacturer ensures that it can provide the most appropriate solutions that efficiently address specific needs and goals. Thus, TEN can develop an objective and unbiased partnership with DOC by implementing the equipment and system upgrades that generate maximum returns. This approach also gives DOC the flexibility to select Small Diverse Business (SDB) contractors to optimize their desired participation goals. It should be noted that we have pre-qualified a team of SDB contractors for DGS/DOC consideration.

Construction
Regular meetings will be held with the DOC to establish construction guidelines and TEN will work with each DOC representative to minimize the impact of the construction activities on the facility's operations. Standard project management tools will be used to track progress. TEN prides itself on a proven track record of successful project implementations in varied settings which include everything from "after-hours" installations in offices and public areas to special access situations in restricted zones.

Construction services will be sourced through mutually agreed upon installation subcontractors who are additionally vetted based on the quality of their work, safety record and other DOC requirements. All subcontractors perform their work under the direction of our in-house construction project manager(s). TEN's construction project managers will continue to collaborate with our internal lighting design and engineering team on specific design issues. Our project management team will also be responsible for providing DOC with appropriate training and operating and maintenance (O&M) manuals and overseeing project commissioning.

Following are items that need to be and will be considered and addressed during the investment grade audit and final design to ensure a successful project for the contemplated core ECMs.

Potential Complications and Areas to Minimize DOC Risk

Potential Design Issues

- Our IGA evaluation will more deeply model the steam, hot water and chilled water plant consumption and will balance use and loads among connected buildings.
- We anticipate the availability of greater detail in records of the three aforementioned utilities and distribution during the IGA process.
- Evaluation of outside air requirements to verify minimum ventilation loads.
- If minimum ventilation loads are not being met, ventilation air will need to be increased.
- Changes to ventilation air directly impact the sizing of the central plant equipment.

Construction Packages/Planning and Phases of Construction

- Our current Gantt Schedule reflects an optimistic approach to implementing the numerous measures. During the IGA, TEN's design and project management team will work closely with the facility's administrative staff to develop comprehensive implementation plans for the various measures taking into account available secured areas for storage space of materials, tools, etc.
- Additionally, we will work with the facility's administrative staff establishing locations and procedures for mobilizing/demobilizing mobile lifting equipment, dumpsters, etc… required within the fence line areas.
- If permissible, we would also consider running a 1st and 2nd shift crew within the Central Plant to accelerate work.

Phases of Construction

- Planning and scheduling of shutdowns of specific systems to install "Future" connection points in the existing distribution systems for interconnect of newly installed equipment to minimize service interruptions.
- Sequencing of work within the central plant to maintain sufficient service to the prison under all weather conditions. Particular attention will need to be given to early installation of the CNG site work and building interconnections to ensure dual fuel capability (with fuel oil) when the coal systems are decommissioned.
- Availability of required escorts to implement work within the fence line and housing units may present challenges in implementing simultaneous ECMs. An example of this would be related to Lighting and Water Conservation measures within the Housing units. Should TEN be successful in securing the award for this project, during the IGA we will work closely with the associated Subcontractors and the facility's administrative staff to establish a schedule and appropriate crew sizes so that both measures can be implemen4ted and completed simultaneously within the Housing Units.
- To aid in this area, TEN has budgeted funds within the lighting ECM to reimburse SCI Houtzdale in hiring two additional escorts (perhaps SCI Houtzdale retirees) to help these big savings ECMs get installed sooner to maximize savings.

Critical Material and Equipment / Long Lead Items

- Review and approval of key lighting and water conservation design and materials during the IGA as to facilitate on-site work proceeding within 20 calendar days of execution of contract.
- Given the seasonal impact on the requirements for operation of the cooling and heating systems, accelerated design and shop drawing approval for the chillers and/or, boilers, associated ancillary equipment; and routing of distribution piping throughout the campus will help in expediting the installation and commissioning of systems in their respective off seasons.

Understanding Construction Challenges and Proposed Solutions

Challenges always arise in construction; TEN believes it is our responsibility to minimize the challenges and/or complications by anticipating and avoiding them before they arise. TEN's project management team has years of experience doing just that. However, some challenges invariably still arise, and TEN is uniquely positioned to handle those too, with our experienced site project managers and accessible local executive leaders that stay close to the progress of the projects, which enable TEN to be flexible, responsive, and nimble to address issues before they become problems for our clients.

A perfect example of working within the customer's time constraints is our Penn State Beaver Stadium project. Timing was a significant element of this project. To be ready for the 2015/16 football season, TEN had to expedite delivery of materials and contractors' schedules. The Beaver Stadium project included the installation of a comprehensive LED lighting system upgrade with a wireless controls system - including exterior entry gates, concession walkway areas, loading docks, main concourses, ADA-accessible ramps, pedestrian ramps, and stairways. All were completed on budget and in time for the first game of the season! Key interaction and communication with the many stakeholders of the University was essential to ensure this critical timeline was met.

Community College of Allegheny County had a similar urgent need that TEN was able to accommodate through close coordination among our engineers, project managers, design-build mechanical contractor, equipment manufacturer, and development team. In this case the South Campus existing boilers and chillers were not expected to make it through another heating/cooling season, and the building had to remain occupied during the project. CCAC was able to avoid the cost of a rental chiller even with a tight turn around. The GESA contract was signed March 25, 2015 with the first chiller coming on line in May (two months later).

Working in Occupied Environments

Nearly all our projects have been completed in occupied buildings where careful coordination and frequent/clear communication have resulted in successful implementation with little to no occupant disruption. These include projects for correctional facilities, government facilities, universities, school districts, housing authorities, office buildings and hospitals. Each with varied access requirements including high security.

TEN's team has worked on many projects, Small GESA #1 (Keystone), Small GESA #2 (Thaddeus Stevens College), GESA 2017-1 (Capitol Complex), Penn State University, Ohio University, Cheyney University, UPMC and others, and the typical challenges included minimizing disruptions in inmate/staff occupied buildings, tight timeframes, seasonal/weather concerns, coordinating cranes/lifts/equipment deliveries. TEN has experience with all these types of challenges. We have found most of the challenges can be avoided through solid project management and clear communications with our subcontractors, suppliers and most importantly, our customer.

TEN has completed lighting installation in offices, courthouses, prisons, classrooms and even patient rooms without any issues due to the coordination and communication used by our site project managers. Our team is used to working off shifts to minimize disruptions. Our team has completed comprehensive projects for Penn State where we had extremely tight deadlines and had to coordinate with other trades working in the same space when performing retrofits in their dormitories during the summer break. We completed an LED lighting upgrade for PSU Beaver Stadium that had to be substantially complete before the end August despite only receiving the contract in May. As you would expect, this required careful planning and a nuanced implementation schedule that allowed for potential material delivery delays (LED luminaires). As we anticipated, the material was two to three weeks late, but we were still able to exceed PSU's deadline by continuous follow up with the manufacturer on delivery dates and constant communication and coordination with our subcontractor as to when to increase the crew size.

Additional areas requiring special attention include our team experience coordinating crane lifts that required sidewalks and street closures without any issues. We have experienced environmental issues and developed control environments to capture and prevent the release of contaminants. At the PA Capitol Complex's original project, we were tasked with cutting out 1,800 old lead-based painted steel windows. Creatively, we designed a HEPA vacuum attachment to capture the dust particles during the cutting of the steel mullions eliminating the need for erecting large containment barriers substantially reducing the removal cost and accelerating the installation schedule.

Safety Plan, Management and Monitoring

In addition to pre-qualifying sub-contractors regarding their safety records, TEN will provide an individual experienced with safety programs during construction to serve as the Commonwealth's agent and representative in matters of construction safety, specifically one with experience which directly relates to state and local safety laws, including statutes, rules, regulations, and ordinances. Tasks will include the following:

a) Review the timeliness of safety and accident prevention procedures and review and accept Contractor Safety Programs;
b) If certain individuals are found to be continually in violation of safety requirements, direct the contractor to remove the individual employee, or to invoke any other contractual remedy deemed appropriate;

c) Observe and monitor Contractor compliance with OSHA, the Commonwealth, and local and state laws and regulations;
d) Periodically schedule and attend Foremen's 'tool box" safety meetings and evaluate effectiveness;
e) Review and accept Contractor emergency and safety plans and procedures;
f) Organize and participate in periodic site inspections and report on findings;
g) Coordinate the DOC's and Commonwealth's general and specific safety concerns with the Project; and
h) TEN's involvement in the safety of the project shall in no way relieve or decrease a contractor's obligation for safety.

Quality Control

TEN believes that quality control starts in the development stage and continues all the way through construction and measurement and verification. An effective energy savings program requires a delicate balance between engineering and construction management. We establish this balance by involving the construction team during the development phase of the project to ensure the constructability of the solutions we propose. The ultimate success of any energy savings project is measured by the ability of the installed systems to achieve the projected savings targets and to meet environmental expectations, while the success of a brilliant design is predicated by its ability to be constructed. TEN takes a comprehensive approach to development and engineering to establish this critical balance. This approach is possible because TEN utilizes in-house design, engineering and construction management.

Our design, engineering and construction teams work closely with each other to develop the scopes of work that are competitively bid to qualified vendors and contractors to ensure that the design intent is met, the project/system can be installed properly and maintained, and the construction team is very familiar with the project before installation begins. This seamless and transparent hand-off to construction ensures quality control. TEN's team is also open to our subcontractors' input when it improves the design and/or lowers the cost to provide a better solution.

Inspections & Reporting

As part of our Quality Control program, continuous inspections during construction are performed to ensure compliance with the scope of work and the Commonwealth's requirements and safety. TEN's project managers and engineers along with the DOC representatives will inspect the construction of the energy conservation measures. Progress will be tracked on a daily and bi-weekly basis with results shared with the assigned DOC representatives and the Project Team.

Reporting to TEN's Director of Construction, the on-site 30-hour OSHA Certified Project Manager is accountable for the management of all assigned project construction activities taking place. The Project Manager (PM), through their on-site management, will ensure that the worksite is safe, supervised and managed in an effective and efficient manner for DOC. Maintaining and managing daily communications with and directing the activities of all subcontractors is key to the success of the project.

Project Closeout Process

Project Commissioning Process

Commissioning is one stage of TEN's quality control process. Commissioning will verify that the related equipment and systems are installed and functioning in accordance with the design intent. Commissioning assures that what has been purchased by DOC has in fact been provided. Proper commissioning is a key component of all energy conservation measures to ensure not only functionality and optimal operation but also guaranteed and sustainable savings.

Commissioning begins during the project design phase and continues after construction is complete. It requires thorough documentation of system design, construction quality, functional performance tests, and operation and maintenance requirements. The training of building operators and staff also is a key component of building commissioning since staff, in many instances, are responsible for some equipment maintenance.

Project Acceptance

TEN's Project Manager will work in conjunction with the Commonwealth personnel to make sure all measures are performing as designed. Any deficiencies will be identified as punch list items and will be used to track and correct the deficiencies. Once DOC and Project Manager have signed off on the completion of the Project, it is technically turned over to the facilities operation personnel. The Project Acceptance date marks the start of the workmanship warranties and the savings measurement period. Often initial savings are confirmed at this point and savings performance reviewed with our customer. In addition, a functional O&M Manual would be provided to help optimize facility operation to continue to provide significant energy savings and comfort benefits. TEN views its O&M Plan as a risk reduction strategy, which will help equipment run efficiently, function properly, and deliver its full life expectancy.

Operation & Maintenance Plan

TEN's partnership approach continues throughout the contract term after the project's implementation to ensure that the savings guarantee and equipment operating parameters are realized. The ECM warranties will be well-documented in the project-specific operating manuals and TEN stands ready to assist DOc on any warranty issues. TEN's approach to cost-effective maintenance of the project is to train DOC staff whenever possible.

Training–

Training is an important aspect of TEN's offering. On-site personnel need to understand the objectives of the energy savings program and equipment operation to meet those objectives. In that light, comprehensive training is usually held on-site, during the construction phase to familiarize the staff with the new systems. Most training is focused on familiarizing the facility personnel with the new equipment being installed, the equipment / system operation and regular maintenance. Most of the training takes place during start-up of the equipment, the commissioning process or at project completion. All training is coordinated by the project manager(s) and the operations representative.

Measurement and Verification (M&V)

TEN will provide a customized M&V plan for new and existing equipment in accordance with the International Performance Measurement Verification Protocol (IPMVP). Our experience with all options (A, B, C and D) enables us to delineate the cost and benefits of each approach which will help DGS in determining the optimal structure of the M&V plan. In general, it's viewed as more cost effective to invest in comprehensive M&V strategies for those ECMs that pose the greatest overall savings risk to the customer and use straighter forward M&V strategies for those ECMs that pose the least overall savings risk to the customer to preserve available savings to support a greater number of project building system improvements.

ECM Opportunities

To verify the feasibility of the selected ECMs, experienced energy engineers, auditors, construction managers, project developers, and finance professionals from TEN all collaborate analyzing the energy/water efficiency opportunities and ultimately assuring DGS/DOC that the proposed ECMs have been explored in a prudent and professional manner and in accordance with Design Manuals. This then results in a detailed summary of the final ECM opportunities being recommended for each project. As you would expect, we review and solicit feedback on our findings and recommendations with DOC during pre-established progress meetings during the Investment Grade Energy Audit to ensure the final Audit Report is on target. **The following steps are integral to taking the proposal cost and savings from 90% and 95% accuracy to guaranteed contract values.**

TEN's methodology for selecting energy conservation measures (ECMs) begins with a meeting with the SCI Houtzdale and DGS/DOC to discuss their goals and objectives. In this case, DGS/DOC specifically identified the following core ECMs for inclusion in the project:

1. LED Lighting Upgrade
2. Lighting Controls
3. Central Heating Plant Upgrades:
   a. Compressed Natural Gas (CNG) Conversion
   b. Hot Water Boiler Conversion
4. Replace existing, buried hot water and chilled water piping
5. Water Conservation
6. Central Chilled Water Plant Upgrade
7. Building Automation System Upgrade
8. Roof Replacement/Insulation
9. Solar Panel Array

As such, our initial RFQ energy audit and analysis began by investigating and developing these ECM objectives for the Commonwealth. During this process the energy consuming systems, equipment, and provided documentation were analyzed to understand their potential for energy savings either by retrofitting or replacing the existing equipment, and by further developing equipment and recommissioning strategies to make the overall business operation of the facilities more financially solvent. TEN's cost structure and approach to business typically allow us to deliver a greater amount of scope for our customer's available savings opportunity. This has certainly been the case in each of Commonwealth GESA projects that have been awarded to TEN.

If selected for the Investment Grade Audit, TEN looks forward to reviewing our initial design recommendations with the Commonwealth and receiving your feedback to ultimately optimize the best value project to meet your objectives. Key to our work will be application of the standards contained in the **GESA Design Manual** as well as adherence to **DOC and GESA General Conditions and Administrative Procedures**. Similarly, we will conduct the investment grade audit and deliver the report as outlined in section 1.35 of the RFQ. Where acceptable to the Commonwealth we will also introduce tools that TEN has developed to aid our clients in more easily evaluating and communicating information about their projects. Many of these tools, some of which are discussed in this section, also streamline development and reduce project costs.

When TEN is invited to assist in optimizing equipment selection and system design, our team goal is purely to serve the end customer with a high-quality project implementation which saves operating costs (utilities and maintenance) while delivering optimal comfort and other required environmental conditions. TEN's independence from any particular manufacturer enables us to provide the most appropriate solutions that efficiently address specific needs.

In these instances, TEN's engineers have been able to diplomatically work with traditional MEP engineers and Building Automation System vendors to help in the selection of equipment and systems that can deliver lower life cycle cost as well as environmental controls sequences that go beyond the typical 'worst-case scenario' sequences we still find specified on some projects.

When all parties ensure the target is higher end-user satisfaction and lower operating costs then good dialog occurs and enhanced solutions are found.

RFQ Project Schedule (2-5.3)

Critical Aspects of the Schedule

Establishing a realistic and well thought out plan for construction is critical to delivering an economical and successful project to our clients and ensuring a profitable outcome and good reference for our company. TEN has demonstrated experience with both. While developing and flexibly adhering to the project schedule is critical to all our projects, the fast-tracked solutions delivered through our Allegheny County Community College-South Campus central plant and Penn State-Beaver Stadium projects are excellent examples of TEN's capability in planning and optimizing a schedule to meet critical client deadlines. Each of these projects is addressed in greater detail in the next section.

TEN's experience delivering timely projects ranges from complex central plants solutions, intricate Continuous Automated Commissioning (CAC) Strategies to relatively straightforward lighting retrofits for varied clients such as Temple University, City of Harrisburg, Carnegie Museums as well as industrial clients. Each rely on is to deliver projects on time so that projected savings are realized in advance of any required financing payments. Perhaps most importantly, TEN already has experience working within and meeting the timelines and objectives of DGS.

The previous section addressed the necessary steps of the work plan to achieve a successful project outcome. As not be repetitive, we'll focus our attention on areas of risk and opportunity that can arise during construction and how the TEN team works quickly with our clients to address each. Earlier, in the previous section, we also delineated important considerations in the areas of Design, Equipment and Material Procurement, Phasing, and Construction Planning. To the extent those items are also important to the scoring of this section, we would appreciate your referencing them.

Investment Grade Audit – Risks/Opportunities

- Too short an IGA period. The RFQ currently contemplates a 60-day IGA period. Though we commit to delivering in this timeframe per the RFQ, we recommend a slightly longer duration to ensure optimal final site evaluation / analysis / design as well as meaningful interaction / feedback with facility personnel.
- If selected, TEN looks forward to spending more time on site to thoroughly uncover project opportunities, optimize scope definition and maximize savings. An important component of this will be to verify consumption information to make sure all new systems are size properly
- TEN commits to coordinating site analysis among its team to maximize available escort time. We were careful to do this during the IGA and will continue to treat SCI Houtzdale's limited resources with respect.
- Sample areas. Installation of meaningful sample areas for both lighting and water conservation are a necessity. The increased lumen efficiencies of LED lighting are dramatic and continually increasing. As such, it is easy for less experienced lighting designers to over illuminate a space (causing discomfort) and miss the facilities full savings potential. We also want to ensure security personnel are invited to comment on any special lighting concerns that can be addressed in project. With regard to water conservation, it would be ideal to establish pre and post savings through sample installations and metered flow measurements during the IGA.
- Early discussion of M&V pre-measurements. It is important to discuss M&V options and DOC preferred approach for each ECM early in the IGA to insure sufficient time to collect necessary data to support those options. If this is left to late in the audit period, there may be less flexibility regarding approach or worst-case inaccurate savings projections.
- IGA review & approval of fast-track ECM submittals such as lighting and water conservation to support a quick start after contract execution. In this manner, sub-contracts and material purchase orders can be pre-negotiated while DOC is procuring financing and circulating the agreement for approval.
- Pre-determination of site access, laydown areas, permit jurisdictions & their contact information to prepare for construction commencement.

Progression of Critical Path

Execution of the GESA Contract – Risks/Opportunities

- IGA review & approval of fast-track ECM submittals such as lighting and water conservation to support a quick start after contract execution. In this manner, sub-contracts and material purchase orders can be pre-negotiated while DOC is procuring financing and circulating the agreement for approval.
- Early submission of preliminary incentive applications to local utilities will ensure available incentives are reserved for this project. At this stage, the project moving forward is relatively assured.
- Coordination and preliminary review of the financing RFP to insure the proposed project is easily financeable from multiple financing companies. Without a good response, DOC could get a higher than expected interest rate or have to re-procure delaying the contract up to six weeks.
- Focused attention & quick turnaround of questions and documentation requests during this period are critical to maintaining momentum. Each financing company has its own preferences that aren't entirely standardized in the financing RFP. TEN is accustomed to working through this drill quickly to meet the contract closing deadline.

Construction Kickoff – Risks/Opportunities

- Re-affirm clear and concise communication expectations and document meetings from the onset.
- Begin process of regular schedule review including focus on two-week look ahead schedules to anticipate potential changes or opportunities that may occur as a result of regular customer input.

Submittal Review & Approval as well as Permit submission and approval – Risks/Opportunities

- We will preliminarily prepare as much submittal and permit information as possible in advance of receipt of notice to proceed (NTP), however certain design-build submittal and permit activities will have to wait until the contract has been fully executed. Proper scheduling and review will insure this process moves along as quickly as possible.

Construction Coordination and Installation

- Our project schedule anticipates the seasonal nature of our scope of measures and the ECM construction requirements. Through careful coordination with DOC, we may be able to improve upon certain parts of the schedule to yield larger savings earlier during construction.
- One area we have already contemplated involves the sequencing of work within the central plant to maintain sufficient service to the prison under all weather conditions. This will begin with construction of the compressed natural gas (CNG) site work and interconnection to the central plant and building 5 in order to ensure dual fuel capability (with fuel oil) when the coal systems are decommissioned. This work will be followed closely or completed in conjunction with new steam boilers (inside the fence) in building 5. This will provide capacity for hot water converters while boiler #4 is converted from steam to hot water and a new 700 HP hot water boiler is installed to ensure N+1 capacity in the central plant. The Kewanee boiler being replaced by the steam boilers in building #5 will be the last boiler to be removed from the plant.
- Due to our breadth of expertise and sizable energy-specific team focus within the Pennsylvania region - including local management - TEN is able to quickly address issues that occur during construction. Our track record as a nimble ESCO demonstrates our ability to take advantage of opportunities which improve project outcomes when agreed to by both parties.

Start-up, equipment testing

- Where factory representative start-up, testing and balancing is required, it is critical to schedule these resources sufficiently in advance in or to maintain the schedule and resultant final commissioning and ECM acceptance.

Commissioning, training and post M&V measurements

- Efficient completion of post construction Act-129 submittals and required local utility inspections will expedite turn-around of incentives.
- At project completion, we can also submit the project for permanent capacity reduction payments through PJM. Optimal timing of the application can maximize the value of this market-based program.

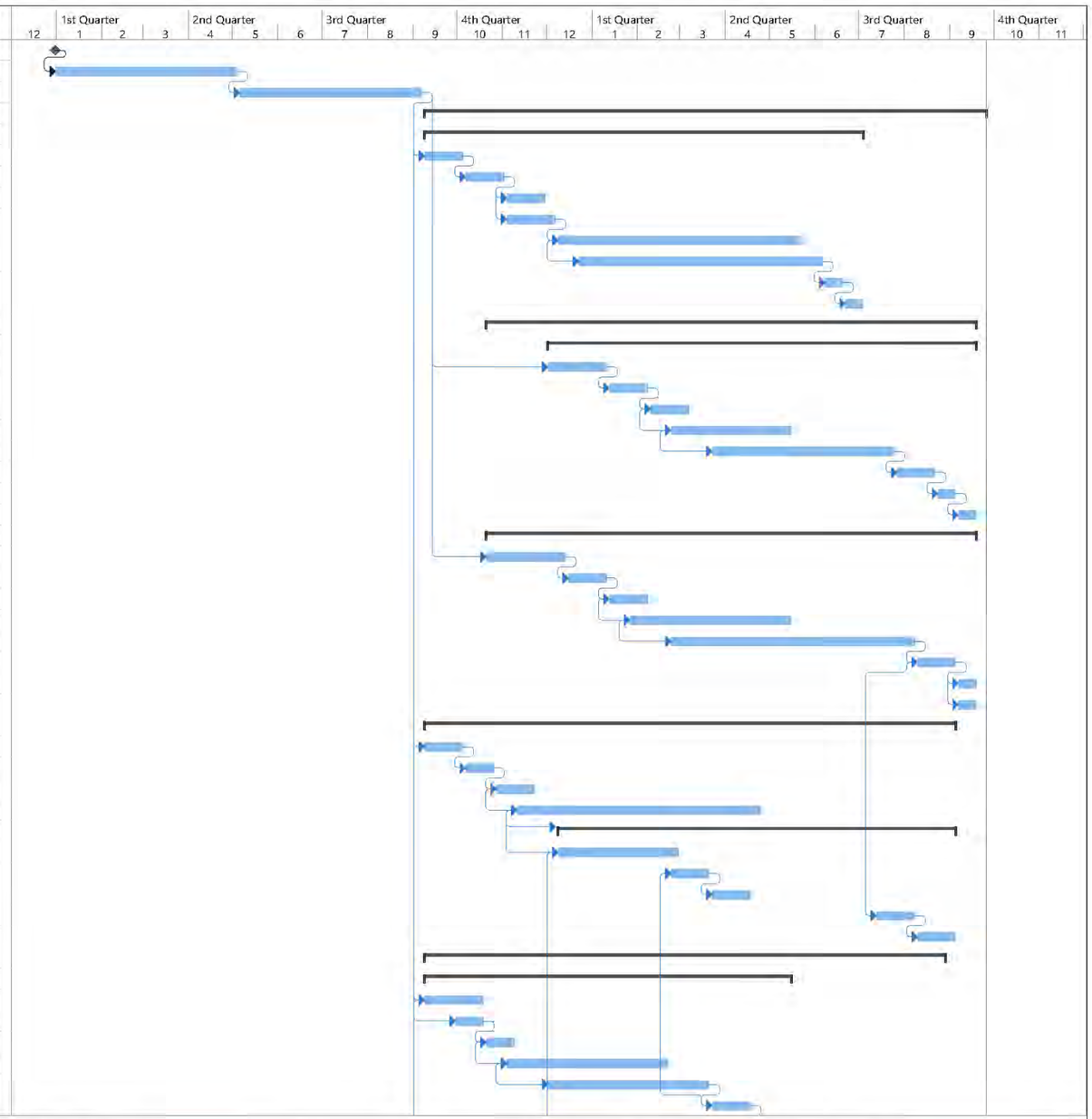
We at TEN value experience which has proven that challenges and risks, such as those that may prevail here, are positively impacted by good and frequent communication between TEN, DOC, DGS, building occupants, our subcontractors & material suppliers, local utilities, permitting jurisdictions such as L&I, DEP and Hartford Insurance. Weekly sub-contractor and bi-weekly client meetings address the big issues efficiently; however, we find that brief daily reports through our automated cTEN application are equally important to our clients, in the ongoing collaboration which produces the most refined and successful results.

Additional Opportunities for Innovation / Schedule Compression / Flexibility

Following are ways DOC, DGS and TEN can work together to compress the project schedule, if desired, and if all contractor clearances, security requirements have been addressed.

- Construction kick-off meeting details will be addressed during the Investment Grade Audit to expedite movement to final design and construction after the GESA has been fully executed.
- Prior to GESA contract execution, TEN plans to pre-negotiate sub-contracts, material purchase orders, and disposal / recycling agreements for solutions not requiring final design so they can immediately be issued upon receipt of the sign contract.
- Periodic material deliveries and installation can begin within two weeks of GESA contract execution (for readily available material such as lighting).
- Contemplated installation contractors can stage material and remove waste daily to an offsite location minimizing impact to site storage areas.
- Similarly, recycling will be structured for frequent pickups, however it is preferred that the lamps remain on site until removed by the recycling company to maintain the chain of custody and certifications for recycling.
- In the event construction needs to be accelerated we have verified that a potential installation contractor has 18-20 cleared installation personnel and is able to commit 12 to this project with the ability to add more, if needed.
- Concurrent commissioning and measurement & verification activities can be employed near project completion to compress the installation schedule as well.

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		NOTICE OF SELECTION	0 days	Mon 12/31/18	Mon 12/31/18	
2		INVESTMENT GRADE AUDIT	90 days	Mon 12/31/18	Fri 5/3/19	1
3		GESA CONTRACT EXECUTION	90 days	Mon 5/6/19	Fri 9/6/19	2
4		**PROJECT IMPLEMENTATION**	**275 days**	**Mon 9/9/19**	**Fri 9/25/20**	
5		**ECM 1&2 - FACILITY-WIDE LIGHTING & CONTROLS**	**215 days**	**Mon 9/9/19**	**Fri 7/3/20**	
6		FINAL DESIGN ENGINEERING	20 days	Mon 9/9/19	Fri 10/4/19	3
7		CUSTOMER SUBMITTALS FOR DESIGN APPROVAL	20 days	Mon 10/7/19	Fri 11/1/19	6
8		SUBMISSION/APPROVAL FOR PERMITS	20 days	Mon 11/4/19	Fri 11/29/19	7
9		MATERIAL / EQUIPMENT PROCUREMENT	25 days	Mon 11/4/19	Fri 12/6/19	7
10		INSTALLATION	120 days	Mon 12/9/19	Fri 5/22/20	9
11		COMMISSIONING (CONTINUOUS AS WORK IS COMPLETED)	120 days	Mon 12/23/19	Fri 6/5/20	10SS+10 days
12		FINAL INSPECTION	10 days	Mon 6/8/20	Fri 6/19/20	11
13		TRAINING	10 days	Mon 6/22/20	Fri 7/3/20	12
14		**ECM 3 - CENTRAL PLANT UPGRADES**	**240 days**	**Mon 10/21/19**	**Fri 9/18/20**	
15		**A. COMPRESSED NATURAL GAS CONVERSION**	**210 days**	**Mon 12/2/19**	**Fri 9/18/20**	
16		FINAL DESIGN ENGINEERING	30 days	Mon 12/2/19	Fri 1/10/20	3FS+60 days
17		CUSTOMER SUBMITTALS FOR DESIGN APPROVAL	20 days	Mon 1/13/20	Fri 2/7/20	16
18		SUBMISSION/APPROVAL FOR PERMITS	20 days	Mon 2/10/20	Fri 3/6/20	17
19		MATERIAL / EQUIPMENT PROCUREMENT	60 days	Mon 2/24/20	Fri 5/15/20	18SS+10 days
20		INSTALLATION	90 days	Mon 3/23/20	Fri 7/24/20	19SS+20 days
21		COMMISSIONING	20 days	Mon 7/27/20	Fri 8/21/20	20
22		FINAL INSPECTION	10 days	Mon 8/24/20	Fri 9/4/20	21
23		TRAINING	10 days	Mon 9/7/20	Fri 9/18/20	22
24		**B. HOT WATER BOILER CONVERSION**	**240 days**	**Mon 10/21/19**	**Fri 9/18/20**	
25		FINAL DESIGN ENGINEERING	40 days	Mon 10/21/19	Fri 12/13/19	3FS+30 days
26		CUSTOMER SUBMITTALS FOR DESIGN APPROVAL	20 days	Mon 12/16/19	Fri 1/10/20	25
27		SUBMISSION/APPROVAL FOR PERMITS	20 days	Mon 1/13/20	Fri 2/7/20	26
28		MATERIAL / EQUIPMENT PROCUREMENT	80 days	Mon 1/27/20	Fri 5/15/20	27SS+10 days
29		INSTALLATION	120 days	Mon 2/24/20	Fri 8/7/20	28SS+20 days
30		COMMISSIONING	20 days	Mon 8/10/20	Fri 9/4/20	29
31		FINAL INSPECTION	10 days	Mon 9/7/20	Fri 9/18/20	30
32		TRAINING	10 days	Mon 9/7/20	Fri 9/18/20	30
33		**ECM 4 - BURIED CHILLED & HOT WATER PIPING REPLACEMENT**	**260 days**	**Mon 9/9/19**	**Fri 9/4/20**	
34		FINAL DESIGN ENGINEERING	20 days	Mon 9/9/19	Fri 10/4/19	3
35		CUSTOMER SUBMITTALS FOR DESIGN APPROVAL	15 days	Mon 10/7/19	Fri 10/25/19	34
36		SUBMISSION/APPROVAL FOR PERMITS	20 days	Mon 10/28/19	Fri 11/22/19	35
37		MATERIAL / EQUIPMENT PROCUREMENT	120 days	Mon 11/11/19	Fri 4/24/20	36SS+10 days
38		**INSTALLATION**	**195 days**	**Mon 12/9/19**	**Fri 9/4/20**	**37SS+20 days**
39		OVERHEAD RACKS, CHW, HW AND FIBER OPTIC CONDUITS	60 days	Mon 12/9/19	Fri 2/28/20	37SS+10 days
40		BLDG TIE-INS / CHILLED WATER	20 days	Mon 2/24/20	Fri 3/20/20	59SS-20 days
41		COMMISSIONING	20 days	Mon 3/23/20	Fri 4/17/20	40
42		BLDG TIE-INS / HOT WATER	20 days	Mon 7/13/20	Fri 8/7/20	30SS-20 days
43		COMMISSIONING	20 days	Mon 8/10/20	Fri 9/4/20	42
44		**ECM 5 - WATER CONSERVATION**	**255 days**	**Mon 9/9/19**	**Fri 8/28/20**	
53		**ECM 6 - CHILLED WATER PLANT UPGRADE**	**180 days**	**Mon 9/9/19**	**Fri 5/15/20**	
54		FINAL DESIGN ENGINEERING	30 days	Mon 9/9/19	Fri 10/18/19	3
55		CUSTOMER SUBMITTALS FOR DESIGN APPROVAL	15 days	Mon 9/30/19	Fri 10/18/19	54SS+15 days
56		SUBMISSION/APPROVAL FOR PERMITS	15 days	Mon 10/21/19	Fri 11/8/19	55
57		MATERIAL / EQUIPMENT PROCUREMENT	80 days	Mon 11/4/19	Fri 2/21/20	56SS+10 days
58		INSTALLATION	80 days	Mon 12/2/19	Fri 3/20/20	57SS+20 days
59		COMMISSIONING	20 days	Mon 3/23/20	Fri 4/17/20	58



SCI Houtzdale
RFQ Preliminary Schedule

Task | Summary | Inactive Milestone | Duration-only | Start-only | External Milestone | Manual Progress
Split | Project Summary | Inactive Summary | Manual Summary Rollup | Finish-only | Deadline
Milestone | Inactive Task | Manual Task | Manual Summary | External Tasks | Progress

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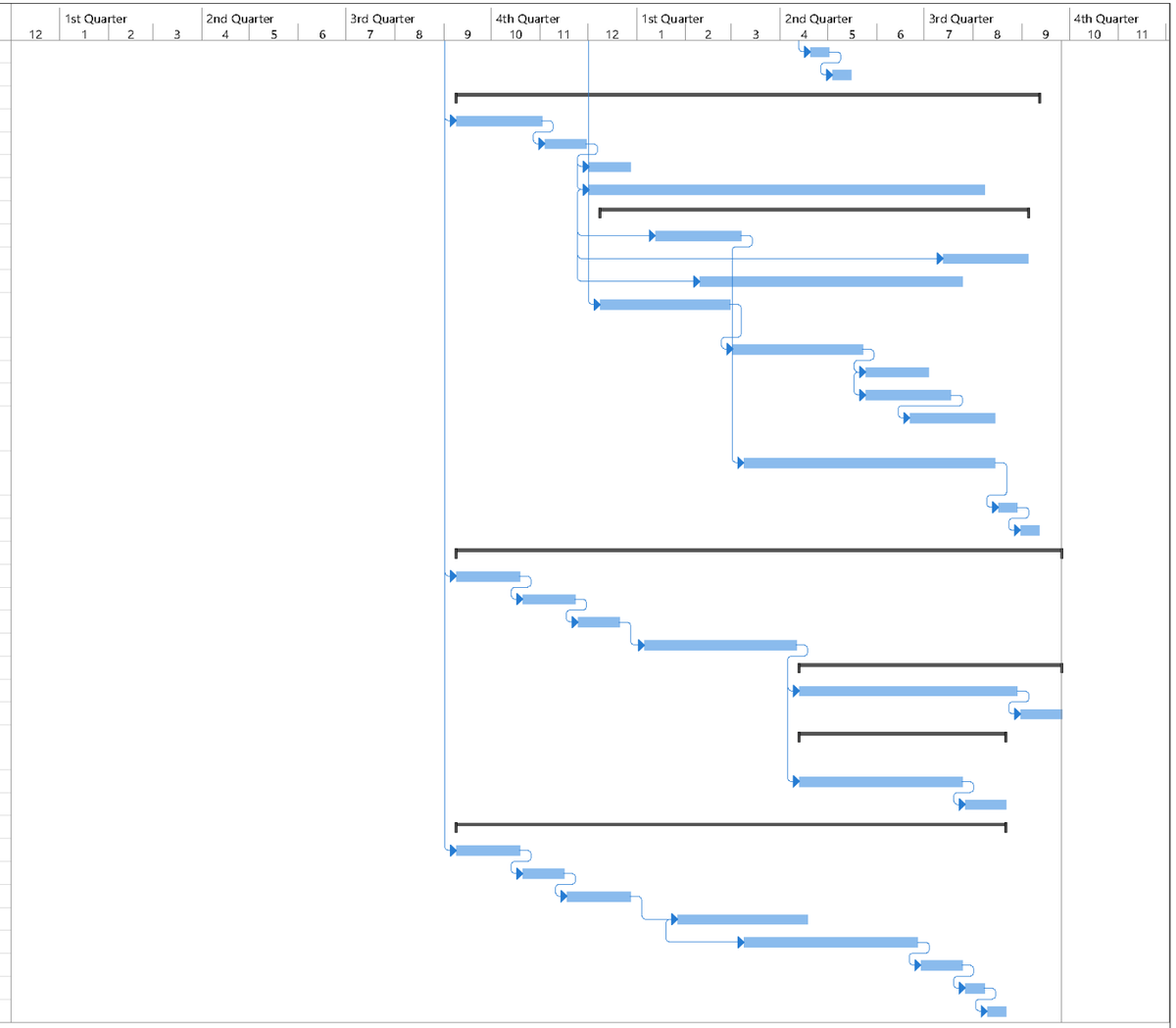
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
60		FINAL INSPECTION	10 days	Mon 4/20/20	Fri 5/1/20	59
61		TRAINING	10 days	Mon 5/4/20	Fri 5/15/20	60
62		**ECM 7 - BUILDING AUTOMATION SYSTEM UPGRADES**	**265 days**	**Mon 9/9/19**	**Fri 9/11/20**	
63		FINAL DESIGN ENGINEERING	40 days	Mon 9/9/19	Fri 11/1/19	3
64		CUSTOMER SUBMITTALS FOR DESIGN APPROVAL	20 days	Mon 11/4/19	Fri 11/29/19	63
65		SUBMISSION/APPROVAL FOR PERMITS	20 days	Mon 12/2/19	Fri 12/27/19	64
66		MATERIAL / EQUIPMENT PROCUREMENT	180 days	Mon 12/2/19	Fri 8/7/20	64
67		**INSTALLATION**	**195 days**	**Mon 12/9/19**	**Fri 9/4/20**	
68		NEW CHILLED WATER SYSTEMS AUTOMATION CONTROLS	40 days	Mon 1/13/20	Fri 3/6/20	66SS+30 days
69		BOILER CONVERSION AUTOMATION CONTROLS	40 days	Mon 7/13/20	Fri 9/4/20	66SS+160 days
70		BLDG LEVEL CHILLED & HOT WATER BTU METERS (30 UNITS)	120 days	Mon 2/10/20	Fri 7/24/20	66SS+50 days
71		REPLACE OUTDATED FIBER OPTIC NETWORK (on new H/C water pipe racks)	60 days	Mon 12/9/19	Fri 2/28/20	39SS
72		EXPAND BACnet INFRASTRUCTURE TO ALL BLDG. (EXISTS IN C.P.)	60 days	Mon 3/2/20	Fri 5/22/20	71
73		UPGRADE FRONT-END SOFTWARE & GRAPHICS TO Tridium N4	30 days	Mon 5/25/20	Fri 7/3/20	72
74		REPLACE DX CONTROLLERS W/BACnet CONTROLS	40 days	Mon 5/25/20	Fri 7/17/20	73SS
75		CONTROL SEQUENCE MODIFICATIONS (DCV, RESET, ECON, SCHED.ETC...	40 days	Mon 6/22/20	Fri 8/14/20	74FS-20 days
76		COMMISSIONING (OCCURS IN CONJUNCTION WITH INDIVIDUAL SYSTEMS COMMISSIONING)	115 days	Mon 3/9/20	Fri 8/14/20	68
77		FINAL INSPECTION	10 days	Mon 8/17/20	Fri 8/28/20	76
78		TRAINING	10 days	Mon 8/31/20	Fri 9/11/20	77
79		**ECM 8 - ROOF REPLACEMENT**	**275 days**	**Mon 9/9/19**	**Fri 9/25/20**	
80		FINAL DESIGN ENGINEERING	30 days	Mon 9/9/19	Fri 10/18/19	3
81		CUSTOMER SUBMITTALS FOR DESIGN APPROVAL	25 days	Mon 10/21/19	Fri 11/22/19	80
82		SUBMISSION/APPROVAL FOR PERMITS	20 days	Mon 11/25/19	Fri 12/20/19	81
83		MATERIAL / EQUIPMENT PROCUREMENT	70 days	Mon 1/6/20	Fri 4/10/20	82FS+10 days
84		**HSG UNITS A-F, G, J & I / BLDG 3 - PROGRAM SERVICES**	**120 days**	**Mon 4/13/20**	**Fri 9/25/20**	
85		INSTALLATION (APPROX. 247,000 SQ FT)	100 days	Mon 4/13/20	Fri 8/28/20	83
86		FINAL INSPECTION	20 days	Mon 8/31/20	Fri 9/25/20	85
87		**HSG UNIT H & K, FACULTY ADMIN, HLTH SRV,DNG SRV, INTAKE...**	**95 days**	**Mon 4/13/20**	**Fri 8/21/20**	
88		INSTALLATION (APPROX. 177,000 SQ FT)	75 days	Mon 4/13/20	Fri 7/24/20	83
89		FINAL INSPECTION	20 days	Mon 7/27/20	Fri 8/21/20	88
90		**ECM 9 - SOLAR PANEL ARRAY**	**250 days**	**Mon 9/9/19**	**Fri 8/21/20**	
91		FINAL DESIGN ENGINEERING	30 days	Mon 9/9/19	Fri 10/18/19	3
92		CUSTOMER SUBMITTALS FOR DESIGN APPROVAL	20 days	Mon 10/21/19	Fri 11/15/19	91
93		SUBMISSION/APPROVAL FOR PERMITS	30 days	Mon 11/18/19	Fri 12/27/19	92
94		MATERIAL / EQUIPMENT PROCUREMENT	60 days	Mon 1/27/20	Fri 4/17/20	93FS+20 days
95		INSTALLATION	80 days	Mon 3/9/20	Fri 6/26/20	94SS+30 days
96		COMMISSIONING	20 days	Mon 6/29/20	Fri 7/24/20	95
97		FINAL INSPECTION	10 days	Mon 7/27/20	Fri 8/7/20	96
98		TRAINING	10 days	Mon 8/10/20	Fri 8/21/20	97



SCI Houtzdale
RFQ Preliminary Schedule

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Progress | Manual Progress

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Qualification Forms (2.5-4)

TEN's Experience with GESA Projects

The Efficiency Network (TEN) is an industry-leading provider of technologically advanced energy and water efficiency solutions designed to maximize value for our customers delivered through guaranteed energy savings agreements (GESAs). Our team has collectively audited, evaluated and implemented **over $700 million in guaranteed energy savings projects over the past 30+ years.** Our portfolio of clients includes state and municipal governments, major universities, health systems, museums, commercial facilities and the United States government. Most notably and most recently, **TEN is currently delivering an $18 million, comprehensive guaranteed energy savings project (GESA) for the PA Department of General Services.**

A good portion of our experience has been in developing and delivering these GESA projects for corrections and other secured facilities. Of the $700 million stated above, **more than $115 million are related to corrections and secured state hospital institutions.**

Locally based, knowledgeable, agile team - TEN's project team, with 35 energy professionals based in Pennsylvania, is unmatched in this region, with our core business delivering energy efficiency projects safely and efficiently. TEN's team has extensive experience delivering guaranteed energy savings projects for corrections facilities at: SCI-Rockview, Jessup Correctional Complex, PA Youth Development Centers, Torrance State Hospital, Spring Grove State Hospital, Lehigh County, Youth Services System to name a few. *TEN is currently implementing a project for Cambria County to address, among other things, deficiencies with their prison's geothermal system.*

As it relates to our collective, **many decades of GESA experience**, our engineering, development and project management staff offer customers significant depth and breadth of experience that allows us to deliver successful projects quickly and effectively. This experience working in the industry has created many lessons learned. Lessons that have forged our approach to delivering projects with the best outcomes possible. The TEN team will not only provide SCI-Houtzdale the comprehensive and value driven services it needs to make this project a success, but will also provide the following:

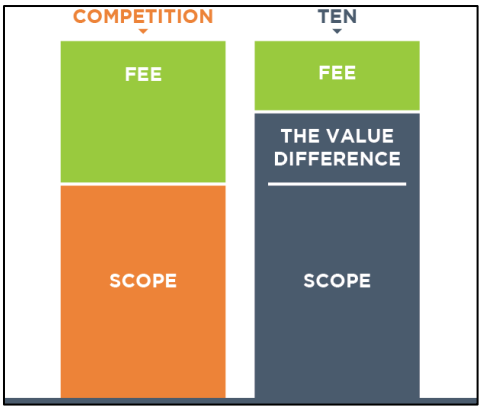
- **Quality** - Careful attention will be paid to design and installation of high-quality technology that is easy to operate and performs as expected in the unique corrections environment.

- **Efficiency and Quickness to Cost Savings** – Working with corrections facility staff, TEN will quickly prioritize projects and develop a decision-making process that will launch projects quickly while more complicated projects are designed and delivered in areas where there may require more oversight and time to complete. Cost savings and environmental improvements will be achieved faster and with more consistency.

- **Reduction in Customer Effort and Anxiety** – The TEN team will consistently communicate with corrections facility staff on all aspects of the project plan. The goal of the TEN team is to integrate quickly with facility leadership and staff and become a valued and trusted advisor.

- **Motivation to do more** - The TEN strategy will allow SCI-Houtzdale to achieve early "wins" that will not only save money but will motivate the staff to explore more opportunities. Our unique reporting platforms will allow the County to share the status and results of the program with facility leadership, and officials.

Created and operated to maximize customer value - TEN was created to develop energy efficiency projects with a unique reduced cost structure. TEN is not burdened by large corporate overhead costs, allocated R&D expenses and requirements to use non-competitive partner services. Our operating model is designed to deliver GESA projects with lower development costs, lower "hard" costs, and more savings and scope which deliver a faster Rate of Return (ROI) to the customer. Often this difference allows TEN to deliver 15%-20% in additional scope and equipment. The graphic to the right compares TEN to a competitor (larger firm ESCO) through a hypothetical scenario that assumes an identical overall contract value and identical projected annual savings levels.



Equipment and system supplier neutral that partners with local resources - TEN maintains neutrality for equipment, systems and contractors. We do not burden our customers with an internal requirement to sell and install specific equipment but, rather allow our customers to make decisions, educated and unencumbered, selecting and then having installed the best solutions. In addition, TEN uses local contractors. These contractors know your buildings, know the building inspection processes and reflect the diversity of the local community. Maximizing the use of local resources delivers the greatest local economic development and, we believe, ensures the greatest success as these resources are most inclined to want to do a good job to secure future business from the facility.

A company that measures company success by the success of our customers - TEN measures success on a project by measuring the actual results provided to each client. **TEN has never had to pay a client as a result of missing an energy savings guarantee.** Across our project portfolio, we are currently exceeding energy savings projections by 15.7% .

We have also partnered with ENTECH Engineering which had an integral role in the success of the SCI Dallas GESA project. ENTECH's capabilities complement those of TEN who has been similarly successful in delivering other GESA projects under the state's GESA program. ENTECH is not only an outstanding engineering firm with an impressive breadth of experience, they are also qualified as an energy consultant under the GESA program which places them in a unique position to efficiently address the design expectations of DOC and DGS. We encourage you to review the qualifications of our potential sub-contractors as well as their local experience delivering projects to the Department of Corrections and other Commonwealth agencies.

Entech Engineering, a well-respected engineering firm with **design experience at corrections facilities**. They also **understand the uniqueness of the environment and what impact it has on sustainable design**; design that includes the selection of equipment and the changes to operation that will generate the projected savings over the entire term of the contract. Both ENTECH and TEN are **Pennsylvania-based** and stand ready to support this important project.

It would be a true privilege to join the team at SCI-Houtzdale working toward the strategic vision for the project outlined in the RFP. Our project will deliver more efficient, less expensive, and comprehensive building and building system upgrades to Houtzdale buildings, **deploying vetted technology** and **prudent solutions**, that are expected to deliver cost and operational savings to the corrections facility for decades to come.

Management Team Individual Qualifications

In addition to the TEN's core project team outlined in Section 2.5.1, Project Management Team Overview, TEN's executive team is outlined below. All of TEN's personnel have extensive experience with GESA projects.

David Robb, Vice President for Project Development

Mr. Robb is responsible for leading TEN's development efforts and will serve as Program Manager for all Pennsylvania DGS/DOC GESA projects. With over 25 years of energy efficiency experience, he has a valuable combination of skills and expertise: a master's degree as well as hands-on experience in building construction management. He has extensive knowledge of facility auditing, performance measurement and verification, payback analysis and project development. Mr. Robb has over $300 million of direct experience developing GESA projects, including $80 million in correctional facilities. That experience, including industry lessons learned are truly valuable to ever improving project outcomes for TEN's customers

Time with TEN – 6 years
Years of Experience – 25 years

Education

- M.S. in Construction Management, Michigan State University
- B.A. in Business Administration, Michigan State University
- Member, Association of Energy Engineers

Selected Project Experience

- PA Capitol Complex - $18 million
- Thaddeus Stevens College - $2.7 million
- PA Keystone/PJC GESA - $2.9 million
- Cambria Co (incl. prison) - $1.3 million
- The Bradley Center (youth) - $$1.8 million
- WV Youth Services - $250,000
- CCAC South - $3.9 million
- MD Jessup Correctional Complex - $14 million
- SCI Rockview - $31 million
- SCI Huntingdon & Smithfield - $19 million
- PA Youth Development Centers - $2.6 million
- Kentucky DOC - $5 million
- Spring Grove State Hospital - $21 million
- Torrance State Hospital - $4.3 million
- Ebensburg Center - $14 million

LEED Project Experience

- Rachel Carson State Office Building
- United Steel Workers Headquarters

Greg Lok, Vice President for Engineering

Greg Lok, (P.E., CEM, CMVP), Vice President of Engineering, Mr. Lok's responsibilities include managing the engineering group including design and M&V, developing the scope, cost and savings. As an industry-recognized energy efficiency engineering expert he is a proven team leader and project manager, adept at developing creative and cost-effective engineering solutions for a broad range of building types. In additional to his current responsibilities, Mr. Lok previously managed Constellation's MUSH (Municipal Governments, Universities, Schools, Hospitals) Energy Services team with over 35 professional designers and engineers encompassing projects from coast to coast.

Time with TEN – 5 years
Years of Experience – 23 years

Education

- B.S Mechanical Engineering, Queen's University; Kingston, Ontario, Canada
- Professional Engineer (PE) in Ohio, Pennsylvania, West Virginia, Delaware, Virginia, Maryland, Massachusetts and Ontario
- Certified Measurement & Verification Professional (CMVP)
- Certified Energy Manager (CEM)
- Certified Project Manager (CPM)
- Member, Association of Energy Engineers (AEE)

Selected Project Experience

- PA Capitol Complex - $18 million
- Thaddeus Stevens College - $2.7 million
- PA Keystone/PJC GESA - $2.9 million
- Cambria Co (incl. prison) - $1.3 million
- The Bradley Center (youth) - $$1.8 million
- WV Youth Services - $250,000
- CCAC South - $3.9 million

LEED Project Experience

- United Steel Workers Headquarters
- DCAMM - North Central Correctional Institute Gardner Massachusetts, MA - $3.4 million
- DCAMM – Massachusetts State Police Energy Performance Contracting Project, MA - $3.4 million
- Temple University - $11 million to date
- Trenton Housing Authority - $13.6 million
- Lawrence Co. Housing Authority - $5.4 million
- Westmoreland Co. Housing Authority – 3.7 million

Dave Clark, Vice President of Construction

Mr. Clark is responsible for directing the project management staff, working on the development of new project design concepts and constructability, preparing scopes of work and bid specifications, and overseeing the project health and safety program.

Time with TEN – 5 years
Years of Experience – 35 years

Education

- In addition to Mr. Clark's 30+ years of experience working in commercial and industrial facilities, he has accumulated more than 2000 hours of related education and training in professional management; building construction; mechanical, electrical and energy management systems and services; numerous college courses in business management. He also retains a national certification for General Contractor licensing in the states of AL, AK, GA, LA, MS, NC, SC, TN & WV.

Selected Project Experience

- PA Capitol Complex - $18 million
- Thaddeus Stevens College - $2.7 million
- PA Keystone/PJC GESA - $2.9 million
- Cambria Co (incl. prison) - $1.3 million
- The Bradley Center (youth) - $$1.8 million
- WV Youth Services - $250,000
- CCAC South - $3.9 million
- Temple University -$11 million to date
- Allegheny County Jail - $5 million
- SCI Camp Hill $6 million
- Westmoreland County Jail - $8 million
- Armstrong County Co (incl. prison)
- Dauphin County Co (incl. prison)
- Fayette County Prison

Bill Bunton, Senior Energy Engineer

Mr. Bunton is responsible for the performing on-site energy audits for commercial, industrial, and institutional buildings. His responsibilities include the analysis of building systems, complete engineering and economic evaluation of energy cost reduction measures, project costing, and conceptual design of thermal systems including air handlers, chillers, boilers, geothermal, control systems and efficiency optimization.

Time with TEN - 4 years
Years of Experience – 22 years

Education

- A.S – Hartford State Technical College, Hartford, Connecticut
- Fundamentals of Refrigeration – New England Technical Institute, New Britain, Connecticut
- AEE Certified Energy Manager (CEM)
- AEE Certified Carbon Reduction Manager (CRM)
- Member, Association of Energy Engineers
- Member, U.S. Green Building Council
- Member, Green Building Alliance

Selected Project Experience

- Cambria Co (incl. prison) - $1.3 million
- The Bradley Center (youth) - $$1.8 million
- DCAMM – Massachusetts State Police Energy Performance Contracting Project, MA - $3.4 million
- Fayette County Prison
- Lawrence Co. Housing Authority - $5.4 million
- Dauphin County Prison

Troy Geanopulos, Chief Executive Officer

Mr. Geanopulos is responsible for company growth strategies and the overall performance of the company including customer satisfaction. He is also responsible for the continued growth of TEN's network of partners including identifying local resources for each project. Mr. Geanopulos has over 20 years of energy related experience and has been employed with TEN for 6.9 years.

Mr. Geanopulos has founded and co-founded several energy efficiency companies over the past 20+ years, including TEN. The foundation for each of these companies has been customer satisfaction, performance, and value. At TEN, Mr. Geanopulos leads the company's strategic direction and the executive management team.

Time with TEN – 6.9 years
Years of Experience – 23 years

Education

- BA Dickinson College, Carlisle, PA
- Tepper School of Business – Entrepreneurial Leadership Forum
- Member, U.S. Green Building Council
- Member, Green Building Alliance

Selected Project Experience

- PA Capitol Complex - $18 million
- Thaddeus Stevens College - $2.7 million
- PA Keystone/PJC GESA - $2.9 million
- Cambria Co (incl. prison) - $1.3 million
- The Bradley Center (youth) - $$1.8 million
- WV Youth Services - $250,000
- CCAC South - $3.9 million
- Temple University - $11 million to date
- Allegheny County Jail - $5 million
- SCI Camp Hill $6 million
- Westmoreland County Jail - $8 million
- Armstrong County Co (incl. prison)
- Dauphin County Co (incl. prison)
- Fayette County Prison

LEED Project Experience

- United Steel Workers Headquarters

Rob Campbell, President and Chief Operating Officer

Mr. Campbell has more than 30 years of energy efficiency industry experience. Rob is responsible for all internal operations, systems, and processes. He provides oversight to the financial, engineering, information technology and construction teams. Before TEN, Rob was the Vice President of Constellation New Energy's Projects and Services Group. Mr. Campbell has more than 25 years of energy related experience and has been employed with TEN for 6.5 years.

Time with TEN – 6.9 years
Years of Experience – 35 years

Education

- Master of Business Administration – Carnegie Mellon University
- B.S. in Mechanical Engineering – University of Toronto
- Professional Engineer, Association of Professional Engineers of Ontario

Selected Project Experience

- PA Capitol Complex - $18 million
- Thaddeus Stevens College - $2.7 million
- PA Keystone/PJC GESA - $2.9 million
- Cambria Co (incl. prison) - $1.3 million
- The Bradley Center (youth) - $$1.8 million
- WV Youth Services - $250,000
- CCAC South - $3.9 million
- Temple University - $11 million to date

LEED Project Experience

- United Steel Workers Headquarters

LEED Accredited Project

United Steelworker Headquarters LEED Certification

The United Steelworkers (USW) proudly represents 1.2 million members and retirees who work in nearly every industry. The USW works for working families around the world. USW members are community, workplace and government leaders.

The USW pledged to improve the efficiency of their headquarters building as part of their Pittsburgh 2030 District commitment. Working with TEN, the USW achieved a 40% reduction in building energy and water consumption and earned LEED certification. As you would expect, 40% savings encompassed a full complement of ECMs including deep central retrofits and even included elevator modernization.

LEED certification is an official recognition that a project complies with the requirements prescribed within the LEED rating systems as created and maintained by the U.S. Green Building Council - the LEED certification program is administered by the Green Business Certification Inc. The United Steelworkers Headquarters (USW) in Pittsburgh, PA was officially recognized as LEED Certified in April 2017. TEN aided USW to achieve a score

of 44, which grants them the 'Certified' label in the Existing Buildings: Operations and Maintenance program. USW accomplished points in all categories which included; sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation in operations.

TEN's Financial Ability to Provide Guarantee

TEN has provided their 2017 audited financials at the end of this document.

TEN's bonding program is provided by Great American Insurance Company which is A+ rated by A.M. Best. In the event of an award, TEN has reserved sufficient capacity for this project under its current program. Our current individual project limit is $15 million dollars and our aggregate project limit is $30 million dollars, however this is further evaluated on a case by case basis

Project Guarantee History		**Dollar Amount**
1.	PA DGS GESA 2017-1 (Capitol Complex)	$18,044,436
2.	PA DGS Small GESA #1 (Keystone/PJC)	$ 2,917,900
3.	PA DGS Small GESA #2 (Thaddeus Stevens College)	$ 2,706,993
4.	United Steelworkers Headquarters	$ 3,552,748
5.	Community College of Allegheny County	$ 3,761,442

TEN's Resource Availability (Capacity)

(Average of the last 3 years gross sales) minus (the average of next 3 years committed backlog).
$24.8 million – $12.5 million = $12.3 million

It should be noted that TEN continues to grow and employs some of the most experienced professionals in our specialized business. All of whom are based in Pennsylvania. Further, final completion of the $18 million Capitol Complex project will finish at least one month before the potential start of the SCI Houtzdale contract. TEN will be able to solidly resource the SCI Houtzdale project with qualified personnel regardless of its potential project size. Below is a summary of all our current ESCO specific personnel based in Pennsylvania and their years' experience.

Name	Years of Experience	Title
Troy Geanopulos	23	Chief Executive Officer
Rob Campbell, PE	32	President and Chief Operating Officer
David Robb	25	Vice President, Project Development
Greg Lok, PE, CEM, CMVP	20	Vice President, Engineering & Innovation
Dave Clark	30	Vice President, Construction
Chris Niemiec	20	Chief Financial Officer
Jim Schriver	20	Director, Smart City Solutions
Tim Mahaney	30	Commercial Sales
Alex Calder	7	Business Development Manager
Chris Howe	15	Business Development Manager
Chris Hainsworth	30	Senior Energy Engineer
Eric Johnson, PE, CEM	25	Senior Energy Engineer
Bill Bunton, CEM, CRM	25	Senior Energy Engineer
Nikhil Singh, CEM, CMVP, LEED GA	5	Project Engineer (M&V)
Mike Schneider, LC, CLEP, CPM	30	Manager of Project Design
Daric Holmes	20	Project Designer
Jay Ballough	11	Lighting Designer
Marty Moyer	21	Auditor/Designer
Renee Gaston	25	Director, Program Development

Jim Harven, PE, CEM	36	Senior Development Engineer
Joe Statler	20	Director of Construction
Robert Hall	20	Senior Project Manager
Greg Brown, LEED GA	20	Senior Project Manager
Shawn Deegan, PE, CEM, DGCP	17	Senior Project Manager
Anthony Albright	25	Project Manager
Robert Tobin, CBCP	18	Project Manager
Joe Richards	10	Project Manager
Adam Trosko	5	Project Manager
Brinton Goettel	1	Project Manager

TEN's Statement of Readiness and Commitment of Resources

This serves as TEN's statement confirming the persons identified in this RFQ are available and will be committed to the Project for the time period(s) referenced in the above RFQ Project Schedule, and that the Resource Availability reported above will be committed to the Project, as referenced in the RFQ Project Schedule and Work Plan.

The core team members assigned and available to support the SCI Houtzdale project are:

David Robb - TEN, Vice President for Project Development
Greg Lok, PE – TEN, Vice President for Engineering
Bill Bunton – TEN, Senior Energy Engineer
John Divelbiss, PE - ENTECH, Senior Mechanical Engineer
Mike Schneider – TEN, Manager of Project Design
Daric Holmes – TEN, Auditor / Project Designer
Dave Clark – TEN Vice President of Construction
Shawn Deegan – TEN Senior Project Engineer
Joe Richards – TEN, Project Manager

TEN's Notification of Default and Debarment

TEN has never had a contract default or has been debarred since its existence.

Contractor Qualification Forms

Key Subcontractors

TEN has initially pre-qualified the following design firms and sub-contractors for DOC's consideration on this project. We have worked with Hunt Consulting, Lighting Services, McCrossin, Gunning Mechanical, ICON, NRG and Zerodraft on numerous other projects. Per the RFQ, we will continue to evaluate potential sub-contractors during the IGA phase in order to make a final selection of the installation team in consultation with DOC and with adherence to small and diverse business participation rules and commitments.

- ENTECH Engineering – (IGA Design & Construction/Commissioning)
- NRG – Controls (Construction)
- Snelick Construction – General and Mechanical (Construction)
- GM McCrossin – General and Mechanical (Construction)
- Gunning Mechanical Contractors – General and Mechanical (Construction)
- Intelligent Conservation Systems (ICON Solution) – (Construction)
- Blair Roofing – Roofing (Construction)
- Marcon Roofing – Roofing (Construction)
- Munn Roofing Corp – Roofing (Construction)
- Hunt Consulting – Lighting & Solar Installation (Construction)

Entech Engineering, Inc. – Design Consultant

1 (a)

Experience with GESA Projects
SCI Dallas

Date: 2016	**Location:** State Correctional Institute, Dallas, PA
Owner/Owner Contact: Energy Systems Group (ESCO) Scott Gracely, Sr. Project Manager 610-906-9484	**Project Amount:** $19.9 M

(b)

Description/Completed as Originally Scheduled:
The project, completed with Energy Systems Group (ESG), evaluated central utilities, wastewater treatment, lighting, and water conservation for the Department of Corrections, State Correctional Institution Dallas (SCI-Dallas). We were employed by ESG to provide an investment-grade energy audit and associated Energy Conservation Measures (ECMs) for SCI-Dallas' central heating utility and wastewater treatment plants respectively. We identified 15 ECMs, of which 7 were selected for full design and implementation, at a cost of $11M, with annual energy savings of $1.8M. The selected ECMs replaced SCI-Dallas' existing coal with new natural gas and oil-fired boilers and modified their wastewater treatment plant to improve sludge dewatering. A total project cost of $19.9M, with annual energy savings of $2.25M, results in a total energy savings of $34.5M over the next 15 years. Completed on schedule.

Date: 2010	**Location:** New Lisbon Developmental Center, New Lisbon, NJ
Owner/Owner Contact: State of New Jersey, Department of Treasury, Division of Property Management and Construction Richard Flodmand, Deputy Director, Contract Administration 609-984-3629	**Project Amount:** $14.1 M

Description/Completed as Originally Scheduled:
When the State of New Jersey noticed its New Lisbon Developmental Center (NLDC) was incurring higher energy bills than other facilities of similar size and type, they selected Entech to perform an energy audit to identify energy conservation measures (ECM), savings projections, implementation/construction costs, and payback calculations. Furthermore, oversight of design and implementation of selected ECMs and measurement and verification of actual energy savings one year after ECM implementation was included in the project. After the energy audit, we recommended projects with an estimated cost of over $14.1M, which would save the NLDC over $2.3M annually, resulting in a 6.1-year payback period. After the audit, the NLDC implemented all recommended energy projects. Final construction costs were lower than anticipated, and annual energy savings were confirmed slightly higher than our $2.3M per year estimate, reducing their annual energy costs by 58.5%. Completed on schedule.

(c)

Date: 2000	**Location:** Tobyhanna Army Depot, Northeast, PA
Owner/Owner Contact: Tobyhanna Army Depot/None available (Project contacts are no longer associated with the owner entity.)	**Project Amount:** $14 M

Description/Completed as Originally Scheduled:
Entech prepared two comprehensive studies that evaluated the site's degrading high-pressure steam distribution and the coal-fired steam generation systems to determine options for the most economical way of extending the depot's operations for an additional 20 years. Upon completion of the study, Tobyhanna enlisted Entech to design the $14 million decentralization of the steam system. Entech's design consisted of each

major area on site having its own heat source, either boiler room or air rotation furnace. This dramatic concept included six boiler plants with a combination of 18 boilers, ranging in size from less than 100 hp to as high as 600 hp. Where life cycle costs and mission requirements warranted, an air rotation furnace concept was implemented for most warehouses. Air rotation furnace units were designed for heating six buildings of 200' x 1200'. This combination of 38 units is capable of circulating over 3 M cubic feet of air per minute, the rough equivalent of completely changing the air in the Astrodome every 15 minutes. Above-ground storage tanks were also designed to fuel the heating system. These tank systems were to hold a thirty-day supply or up to 500,000 gallons of oil. Provisions for a natural gas alternative were also designed and were eventually adopted over oil. Entech developed the conceptual site layout for the natural gas piping, which ESCO would install following the completion of the 15-mile site feed. Entech assisted the UGI design team with developing the 15- mile routing to the plant. This fast-track project was completed in just five months with the creation of 190 drawings and over 4,000 pages of technical documentation. The project was reviewed thoroughly, several issues were challenged, and the project was on hold until an ESCO company (HEC/First Energy) took it over and hired Entech to modify and repackage the project for their needs. The project later received the Energy User News Retrofit Project of the Year for the best energy project in the country.

Entech has extensive experience with GESA projects. Our energy consulting services are performed in a variety of ways. For example, for some facilities where we complete a comprehensive energy audit, we help our clients implement our energy recommendations through a GESA contract. We help our clients solicit proposals from GESA contractors, help them review the proposals and award the contract, and oversee the construction work and the follow-up Energy Measurement & Verification services.

There are also times where we directly support GESA contractors with analyzing energy measures as they prepare their GESA proposal for potential contracts. We help the GESA contractor identify Energy Conservation Measures, and then estimate the project construction cost and projected energy savings. If the GESA proposal is accepted by the client, Entech assists with the necessary engineering services to implement the proposed energy project.

The following table demonstrates some of Entech's past experience with GESA, including the three projects noted previously, as well as additional projects for which we provided services in the manner described above:

Facility	ESCO	Services Provided	Team			
			Haag	Euclide	Divelbiss	Hannum
SCI Dallas	ESG	Preliminary Audit, Investment Grade Audit, Engineering and Design	**X**	**X**	**X**	**X**
New Lisbon Developmental Center	Multiple	Investment Grade Audit, Manage Pay for Performance Contractors	**X**	**X**	**X**	
Danville Hospital	Ameresco	Engineering and Design	**X**	**X**	**X**	
Architect of the Capitol	Multiple	Energy Measurement and Verification	**X**	**X**	**X**	
Tobyhanna Army Depot	Ameresco	Investment Grade Audit, Engineering and Design		**X**	**X**	
Kutztown University	CES/Way	Investment Grade Audit, Engineering and Design		**X**	**X**	
West Chester University	IMS	Investment Grade Audit		**X**		
Lock Haven University	IMS	Investment Grade Audit		**X**		

	Schering Plough	General Electric	Preliminary Energy Audit		X	X		
	LaSalle College	Siemens	Preliminary Energy Audit	X		X		

2 (a) **Subcontractor's Superintendent's Qualifications (4-person limit)**

Name:

Bryan C. Haag, PE, LEED AP®

Project Responsibilities:
Principal/Project Manager/Energy Engineer

Time with Firm:
17 years

Experience with GESA projects:
Please refer to table above

Educational or technical training:
Drexel University | B.S. Architectural Engineering – Mechanical Engineering Focus
Registered Professional Engineer in PA
LEED® Accredited Professional

Any other information relevant to the evaluation of the individual:
Bryan focuses on the opportunities to combine deferred maintenance and energy reduction projects in order to help clients accomplish more with their financial resources. His background in building energy audits and master planning allows him to integrate building condition data with the central systems in order to achieve a comprehensive view of how potential building upgrades impact central systems and can reduce costs. He also understands cost-effective approaches to upgrading both building HVAC and campus central utility systems.

Name:

Jeffrey C. Euclide, PE, CEM

Project Responsibilities:
Principal-in-Charge

Time with Firm:
34 years

Experience with GESA projects:
Please refer to table above

Educational or technical training:
The Pennsylvania State University | B.S., Mechanical Engineering
Kutztown University | MB
Registered Professional Engineer in PA, NJ, MD, DC
Certified Energy Manager

Any other information relevant to the evaluation of the individual:
Jeff has been instrumental in developing Entech's focus on energy efficiency and conservation. Throughout his 38-year career, he has helped institutions reduce energy costs, with central utilities at the core of many of those projects. Jeff led the development of Entech's proprietary software, Energy Planner, a database that allows energy reduction plans to be translated into a dynamic comprehensive planning tool that campus

facilities directors and management staff can use to better navigate and implement their short and long-term energy goals. As President of the firm, Jeff also oversees all aspects of business operations and helps guide the organization.

Name:
John E. Divelbiss, PE

Project Responsibilities:
Senior Mechanical Engineer

Time with Firm:
23 years

Experience with GESA projects:
Please refer to table above

Educational or technical training:
The Pennsylvania State University | B.S.M.E.T.
Registered Professional Engineer in PA

Any other information relevant to the evaluation of the individual:
John is responsible for providing diverse mechanical engineering support for a variety of systems. Specialties include the design and/or evaluation of plant process, utility plants, all varieties of piping and pumping systems, and heating, ventilation, and air conditioning systems. In addition to his 35+ years of consulting and construction experience, John had initially spent nine years in the design, construction, and start-up of large power plants. Many of his projects have either evaluated energy use and opportunities or were a result of a past recommendation to improve energy reduction. John has been with Entech since 1995.

Name:
Christopher M. Hannum, PE

Project Responsibilities:
Principal/Water, Wastewater Engineer

Time with Firm:
6 years

Experience with GESA projects:
Please refer to table above

Educational or technical training:
Villanova University | M.S. Water Resources and Environmental Engineering
Virginia Military Institute | B.S. Mechanical Engineering
Registered Professional Engineer in PA

Any other information relevant to the evaluation of the individual:
Chris has 30 years of experience in water and wastewater engineering. He is experienced in project management, project execution, and construction management. His project responsibilities include engineering design, technology selection, project execution, and coordinating with other disciplines. Chris's client-based responsibilities include meeting representation, negotiating with regulatory agencies, and general administrative support.

3 (a)	**Statement of Readiness and Commitment of Resources** I, Bryan C. Haag Confirm the person(s) identified in this RFQ are available and will be committed to the Project for the time-period(s) referenced in the attached RFQ project schedule.
4 (a)	**Subcontractor's Workman's Compensation Experience** 2015: .847 2016: .841 2017: .942
5 (a)	**Notification of Default or Debarment** Entech Engineering, Inc. has neither defaulted on any contract nor faced debarment.

Snelick Construction Services

1 (a)	**Experience with GESA Projects** **Penn State University Phase 1A**	
	Date: Completed 2017	Location: University Park, PA
	Owner/Owner Contact: Penn State University Prime Contractor – The Efficiency Network Renee Gaston – 412-551-4362	Project Amount: $1,160,624
	Description/Completed as Originally Scheduled: Misc. Rough Carpentry & Labor Status: Completed	
1 (b)	**Experience with GESA Projects** **Penn State University Phase 1B**	
	Date: Summer of 2017 thru March of 2018	Location: University Park, PA
	Owner/Owner Contact: Penn State University Prime Contractor – The Efficiency Network Renee Gaston – 412-551-4362	Project Amount: $3,642,554
	Completed as Originally Scheduled: Misc. Rough Carpentry & Labor Status: Completed	
1 (c)	**Experience with GESA Projects** **Penn State University Phase 1B Cabinet Masters**	
	Date: Fall of 2017 thru March of 2018	Location: University Park, PA
	Owner/Owner Contact: Penn State University Prime Contractor – The Efficiency Network Renee Gaston – 412-551-4362	Project Amount: $206,400
	Description/Completed as Originally Scheduled: Installation of casework & sills Status: Completed April 2018	
2 (a)	**Subcontractor's Superintendent's Qualifications (4-person limit)** **Name: Scott D Snelick** Project Responsibilities: Project Manager - maintain schedules, inspection of work Time with Firm: 10 Experienced with GESA projects: no Educational or technical training: Bachelor of Science in Construction Management Any other information relevant to the evaluation of the individual:	
	Name: Chad Gummo Project Responsibilities: Project Manager/Foreman, supervise field personnel, maintain schedules, inspection of work, insure safety on job sites Time with Firm: 4 Experience with GESA projects: no	

	Educational or technical training: Certified Carpenter Journeyman & Foreman Any other information relevant to the evaluation of the individual:
3 (a)	**Statement of Readiness and Commitment of Resources** Snelick Construction Services, LLC stands ready and able to provide manpower and expertise to complete this Project. Snelick Construction Services, LLC has the ability to pull additional manpower as needed to augment our permanent workforce from the Greater Pennsylvania Regional council of Carpenters/Keystone Contractors Association union.
4 (a)	**Subcontractor's Workman's Compensation Experience Modification Rating** 2016 – 0. 2017 – 1. 2018 – 0.868
5 (a)	**Notification of Default or Debarment** N/A Snelick Construction Services, LLC has never been disbarred or had any defaults levied against it or any of its entities.

1 (a)	**Experience with GESA Projects** **County of Berks (Prison, Service Center, Courthouse, Agriculture Building, Steam Plant, and Misc. Bldgs.)**	
	Date: 2011 - 2014	Location: Berks County, PA
	Owner/Owner Contact: Jim Hall (610-478-6201)	Project Amount: $2,205,250
	Description/Completed as Originally Scheduled: HVAC Control System upgrades, Lighting Controls, replacement of pneumatic controls and retro-commissioning. Status: Completed	
1 (b)	**Experience with GESA Projects** **Palmyra Area School District (4 Elementary Schools, Middle School, and High School)**	
	Date: 2017	Location: Center Valley, PA
	Owner/Owner Contact: Palmyra Area School District Heath Dresch (717-838-3144)	Project Amount: $1,083,500
	Description/Completed as Originally Scheduled: Status: This project included EPDM roof restoration and a complete elastomeric roof coating system.	
1 (c)	**Experience with GESA Projects** **DGS Annex (13 State Office Buildings)**	
	Date: 2011 -2014	Location: Harrisburg, PA
	Owner/Owner Contact: Commonwealth of Pennsylvania Greg Flickinger (717-772-7690)	Project Amount: $1,377,000
	Description/Completed as Originally Scheduled: HVAC Control System software upgrades, new HVAC controls, system retro-commissioning, integration to existing controls, VFD's, and equipment repairs Status: Completed	
1 (d)	**Experience with GESA Projects** **Lancaster County (Prison, Courthouses, EMS Training Rifle Range, Hazmat Building, and Youth Detention Center)**	
	Date: 2014-2016	Location: Lancaster, PA
	Owner/Owner Contact: Lancaster County Bob Devinshire (717-299-8323)	Project Amount: $630,000
	Description/Completed as Originally Scheduled: Status HVAC Control System software upgrade, New HVAC controls, prison smoke purge, integration to	

	Johnson, Siemens, and Trane Control Systems
2 (a)	**Subcontractor's Superintendent's Qualifications (4-person limit)** **Name: Darrell Frey** Project Responsibilities: Engineer Time with Firm: 9 years Experience with GESA projects: yes Educational or technical training: • Education or Training: Bachelor of Science, Mechanical Engineering, Drexel University. Registered Mechanical Engineer in Pennsylvania (PE 012716E) Any other information relevant to the evaluation of the individual: Performs Building Automation System design and engineering
2 (b)	**Name: Don Forker** Project Responsibilities: Project Manager Time with Firm: 9 years Experience with GESA projects: yes Educational or technical training: HVAC Technician Certified, Gateway Technical Institute Any other information relevant to the evaluation of the individual: Writes programs for HVAC controls based on design criteria, set up trending and alarming, assist in balancing and commissioning.
3 (a)	**Statement of Readiness and Commitment of Resources** All NRG Building Services, Inc. personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.
4 (a)	**Subcontractor's Workman's Compensation Experience** 2018: 0.867 2017: 0.913 2016: 0.794 2015: 0.776
5 (a)	**Notification of Default or Debarment** NRG Building Services, Inc. has not been debarred and is not in default of any contract.

G. M. McCrossin, Inc.

Name of Subcontractor: G. M. McCrossin, Inc.		
1 (a)	**Experience with GESA Projects** **SCI Rockview**	
	Date: 2009	Location: Bellefonte, PA
	Owner Contact: Andrew Ball (Noresco) Phone: 585-733-5514 Email: aball@noresco.com	Project Amount: $2,895,696 (Water ECM portion)
	Description/Completed as Originally Scheduled: Existing Water Pipeline Repair; Steam and Condensate Line Replacement, Steam and Condensate Line Leak Repair, New Piping Insulation, Building Envelope- Improvements & VFDs.	
1 (b)	**Experience with GESA Projects** Bellefonte Borough Authority WWTP	
	Date: September 2013	Location: Bellefonte, PA
	Owner Contact: Bob Cook (Bellefonte Borough) Phone: 814-353-2327 Email: bcook@bellefonte.net	Project Amount: $315,497 (Water ECM portion)
	Description/Completed as Originally Scheduled: Bellefonte Energy Saving Project – Chiller, Unit Heater and chlorination, Boilers, Instantaneous Water Heater	
1 (c)	**Experience with GESA Projects**	
	Date: March 2011	Location: SCI Pine Grove
	Owner Contact: DGS Daniel Weinzierl Phone: 717-787-6330 Email: dweinzierl@state.pa.us	Project Amount: $2,895,696
	Description/Completed as Originally Scheduled: New 128 Cell L-3 Close Security Housing Unit	
2 (a)	**Subcontractor's Superintendent's Qualifications (4-person limit)**	
	Name: Terry Robinson Project Responsibilities: Mr. Robinson is responsible for overall supervision of large multi- craft crews on construction projects. Time with Firm: 29 Years Experience with GESA projects: Yes Educational or technical training: • Altoona Vo-Tech • Carpenters Joint Apprenticeship Credentials:	

	• OSHA 30 Hour Certification • MSHA Surface Part 48 • Forklift/Material Handler • Bloodborne Pathogens • Fall Protection • Lock Out/Tag Out • Confined Space • SDS Hazard Communications • CPR/AED/First Aid • Trenching/Excavation • Scaffold User and Erection Training • Rigging • Qualified Crane Signaling • PPE Training • RRP Lead Certified Renovator Any other information relevant to the evaluation of the individual: He assists clients with regulatory compliance and process operational issues. With nearly 40 years of experience, Terry's extensive knowledge and experience has proven to be influential in several McCrossin projects. He has been involved in numerous prison and correctional facility projects, where he participated actively in remodeling and completing renovations and correctional work. His projects have also included the remodeling of more than 100 historical buildings, where the responsibilities incorporated gutting, shoring of moldable floors and foundations, and installing mill work, doors, hardware, and security.
3	**Statement of Readiness and Commitment of Resources**
(a)	I, Robert Leahey President of G.M. McCrossin, Inc. confirm the person(s) identified in the RFQ are available and will be committed to the Project for the time period(s) referenced in the RFQ project schedule.
4	**Subcontractor's Workman's Compensation Experience**
(a)	2015: 0.805 2016: 0.730 2017: 0.701 2018: 0.673
5	**Notification of Default or Debarment**
(a)	G.M. McCrossin, Inc. has never been disbarred or had any defaults levied against it.

Gunning Mechanical Contractors

1 (a)	**Experience with GESA Projects** **Community College of Allegheny County – South Campus**	
	Date: 2015	Location: Pittsburgh, PA
	Owner/Owner Contact: Community College of Allegheny County Elaine Sadowski, CEM Facilities Management 412-237-3157	Project Amount: $3,746,595
	Description/Completed as Originally Scheduled: Status: Completed	
2 (a)	**Subcontractor's Superintendent's Qualifications (4-person limit)** **Name: David Zydel** Project Responsibilities: Manage field and shop manpower on a day to day basis to maintain project schedules, man-hours, and purchase miscellaneous hardware & materials. Time with Firm: 12 years Experience with GESA projects: Yes, Community College of Allegheny – South Educational or technical training: Completed Sheet Metal Workers Local-12 Apprentice program and has been Journeyman Sheet Metal Worker for 25 years Any other information relevant to the evaluation of the individual: No	
3	**Statement of Readiness and Commitment of Resources** I, Michael P. Gunning Confirm the person(s) identified in this RFQ are available and will be committed to the Project for the time-period(s) referenced in the attached RFQ project schedule.	
4	**Subcontractor's Workman's Compensation Experience** 2015: .821 2016: .804 2017: .791 2018: .989	
5	**Notification of Default or Debarment - None**	

Intelligent Conservation Systems, Inc.

1 (a)

Experience with GESA Projects
SCI Dallas

Date: 2015	Location: Luzerne County, PA
Owner/Owner Contact: Pennsylvania Department of Corrections	Project Amount: $7,049,043 (Water ECM portion)

Description/Completed as Originally Scheduled:
The scope of work for SCI Dallas was the retrofit of more than 1,100 inmate toilet and lavatory valves and over 290 inmate shower valves with I-CON electronic plumbing controls and touchscreen officer control with an I-CON computer system. Existing staff water fixtures were also upgraded. The ECM is currently saving over $1,000,000 in water, sewer, and gas costs annually.

2 (a)

Subcontractor's Superintendent's Qualifications (4-person limit)

Name: Chris Peterson

Project Responsibilities: Vice President of Construction

Time with Firm: 6 Years

Experience with GESA projects: Yes

Educational or technical training: Bachelor of Science in Building Science, 35 Years Plumbing/Construction Experience; is a Licensed Class A General Contractor; is a Licensed Plumbing Contractor; and maintains various specialty licenses.

Any other information relevant to the evaluation of the individual: Responsible for total job operations, supervise all in field Project Managers. Has managed multiple correctional projects for all types of government and security levels.

2 (b)

Name: Michael Campbell

Project Responsibilities: Project Development Engineer

Time with Firm: 6 Years

Experience with GESA projects: Yes

Educational or technical training: Bachelor of Science in Mechanical Engineering (ABET Accredited) with Energy Concentration, OSHA 30, Certified Water Efficiency Professional (CWEP)

Any other information relevant to the evaluation of the individual: Has developed water conservation systems for correctional projects at the county, state, and federal levels; Proficient in the IPC, upon which the Pennsylvania Plumbing Code is based.

2 (c)	**Name: Argerous Filosofos** Project Responsibilities: Project Manager Time with Firm: 4 Years Experience with GESA projects: No Educational or technical training: Certified & licensed General Contractor 40+ years in 8 states. Certified Facility Manager, (20+ yrs., AIPE, BOMA, others); Certified Asbestos Contractor, Certified FEMA inspector; 4 Years in water conservation installation for correctional projects. Any other information relevant to the evaluation of the individual: Supervise field personnel, handle material and equipment logistics, conduct subcontractor and safety meetings, perform M&V, conduct training with facility staff and complete O&M Documentation.
2 (d)	**Name: Bruce Ware** Project Responsibilities: Project Manager Time with Firm: 8 Years Experience with GESA projects: No Educational or technical training: OSHA 30 Certified. 20 Years in Construction Industry, 8 years in water conservation installations on correctional projects. Any other information relevant to the evaluation of the individual: Supervise field personnel, handle material and equipment logistics, conduct subcontractor and safety meetings, perform M&V, conduct training with facility staff and complete O&M Documentation.
3 (a)	**Statement of Readiness and Commitment of Resources** I, Intelligent Conservation Systems, Inc. Confirm the person(s) identified in this RFQ are available and will be committed to the Project for the time-period(s) referenced in the attached RFQ project schedule. Signature: Intelligent Conservation Systems, Inc.
4 (a)	**Subcontractor's Workman's Compensation Experience** 2015: .88 2016: .89 2017: 1.61 2018: 1.59
5 (a)	**Notification of Default or Debarment** Intelligent Conservation Systems, Inc. has not been debarred and is not in default of any contract.

Blair Roofing

1 (a)	**Experience with GESA Projects** **Defense Logistics Agency Headquarters**	
	Date: 2016	Location: Cumberland, PA
	Owner/Owner Contact: Rayni Defillippo, Penntex Ventures 724-420-5367 x 107	Project Amount: $1,128,494
	Description/Completed as Originally Scheduled: Status: Completed on schedule.	
1 (b)	**Experience with GESA Projects** **Radio Park Elementary School**	
	Date: 2018	Location: State College, PA
	Owner/Owner Contact: Nate Walker, Lobar, Inc. 717-432-9728	Project Amount: $985,000
	Description/Completed as Originally Scheduled: Status: Completed on schedule.	
1 (c)	**Experience with GESA Projects** **CATA Bus Station**	
	Date: 2018	Location: State College, PA
	Owner/Owner Contact: Tim Phipps, Lobar, Inc. 717-432-9728 x4208	Project Amount: $760,000
	Description/Completed as Originally Scheduled: Status: Completed on schedule.	
1 (d)	**Experience with GESA Projects** **Penns Valley High School**	
	Date: 201	Location: Spring Hills, PA
	Description/Completed as Originally Scheduled: Status: Completed.	

2 (a)	**Subcontractor's Superintendent's Qualifications (4-person limit)** **Name: James Wallace** Project Responsibilities: Oversee the installment of the roofing system, identify and correct any complications that may develop. Monitor and enforce all safety guidelines set forth in the safety program. Time with Firm: 14 years Experience with GESA projects: Educational or technical training: • Annual Lancaster safety training • Commercial Roofing and Panels Applications Training Any other information relevant to the evaluation of the individual:
2 (b)	**Name: Michael Smith** Project Responsibilities: Oversee the installment of the roofing system, identify and correct any complications that may develop. Monitor and enforce all safety guidelines set forth in the safety program. Time with Firm: 14 years Experience with GESA projects: Educational or technical training: • Annual Lancaster safety training • Commercial Roofing and Panels Applications Training Any other information relevant to the evaluation of the individual:
3 (a)	**Statement of Readiness and Commitment of Resources** I, Michael R. Barton Confirm the person(s) identified in this RFQ are available and will be committed to the Project for the time-period(s) referenced in the attached RFQ project schedule.
4 (a)	**Subcontractor's Workman's Compensation Experience** 2015: 0.785 2016: 0.652 2017: 0.697 2018: 0.702
5 (a)	**Notification of Default or Debarment - None**

Munn Roofing

1 (a)	**Experience with GESA Projects** **Community College of Philadelphia**	
	Date: 2016	Location: Philadelphia, PA
	Owner/Owner Contact: Harry Moore Edward Orner, Mgr. of Technical Crafts and Construction Services 215-751-8190	Project Amount: $196,000
	Description/Completed as Originally Scheduled: Status: This project included a roof replacement with a new 2 ply modified bitumen roof system, skylight restoration and metal copings that was completed on schedule.	
1 (b)	**Experience with GESA Projects** **Hopewell Elementary**	
	Date: 2016	Location: Center Valley, PA
	Owner/Owner Contact: Tod Bergey, Director Support Services 610-282-1030 x 5301	Project Amount: $985,000
	Description/Completed as Originally Scheduled: Status: This project included EPDM roof restoration and a complete elastomeric roof coating system.	
2 (a)	**Subcontractor's Superintendent's Qualifications (4-person limit)** **Name: Chad Munn** Project Responsibilities: Vice President with 16 years of roofing industry experience; nine years of supervisory experience. Time with Firm: 14 years Experience with GESA projects: Educational or technical training: • OSHA certified • Safety Manager – GSA Hazard Comm. Any other information relevant to the evaluation of the individual:	
2 (b)	**Name: Edward Munn** Project Responsibilities: Construction manager with 40 years of experience in the roofing industry. Manages $4 million jobs including scheduling and delivery/labor. Time with Firm: 12+ years	

	Experience with GESA projects: Educational or technical training: • Fall protection • GSA hazard comm. Any other information relevant to the evaluation of the individual:
2 (c)	**Name: James Wiberley** Project Responsibilities: Job foreman, experienced in all types of roofing. Superior knowledge of construction methods and materials. Oversees multiple projects Time with Firm: 12+ years Experience with GESA projects: Educational or technical training: • Rough terrain • Aerial platform, aerial scissorlift • OSHA certified • Fall protection • GSA hazard comm. • Crane safety Any other information relevant to the evaluation of the individual:
2 (d)	**Name: Gerald Moms** Project Responsibilities: Job foreman, oversees multiple project with superior knowledge of construction methods and materials Time with Firm: 12+ years Experience with GESA projects: Educational or technical training: • Rough terrain • Aerial platform, aerial scissorlift • OSHA certified • Fall protection • GSA hazard comm. • Crane safety Any other information relevant to the evaluation of the individual:
3 (a)	**Statement of Readiness and Commitment of Resources** I, Chad Munn, Vice President Confirm the person(s) identified in this RFQ are available and will be committed to the Project for the time-period(s) referenced in the attached RFQ project schedule.

4 (a)	**Subcontractor's Workman's Compensation Experience** 2015: 0.855 2016: 0.737 2017: 0.717 2018: 0.796
5 (a)	**Notification of Default or Debarment – N/A**

Hunt Consulting

Note: As a Subcontractor, we do not always know the total value of the project, therefore amounts shown reflect **our** portion of the overall GESA project.

1 (a)

Experience with GESA Projects
Thaddeus Stevens College of Technology

Date: Completed 2017	Location: Lancaster, PA
Owner/Owner Contact: Prime Contractor – The Efficiency Network Robert Tobin PM - cell: (267) 254.2122	Project Amount: $392,376
Description/Completed as Originally Scheduled: More than 3,820 interior and exterior fixtures Status: Completed	

1 (b)

Experience with GESA Projects
Keystone Building and PA Judicial Center

Date: 4/2017 – 3/2018	Location: Harrisburg, PA (2 Buildings)
Owner/Owner Contact: PA DGS Prime Contractor – The Efficiency Network) Bobby Hall, Sr. PM, (412) 429-8888 x 168	Project Amount: $1,471,708
Description/Completed as Originally Scheduled: More than 11,500 interior and exterior fixtures Status: Completed	

1 (c)

Experience with GESA Projects
Jefferson Memorial Hospital

Date: COMPLETED 2013	Location: Pittsburgh, PA
Owner/Owner Contact: Jefferson Memorial Hospital Prime Contractor – Limbach Company Kevin Conley, Sr. PM (412) 616-1425	Project Amount: $1,009,137
Description/Completed as Originally Scheduled: More than 13,000 interior and exterior fixtures Status: Completed	

2 (a)

Subcontractor's Superintendent's Qualifications (4-person limit)

Name: Talbert Simpson

Project Responsibilities: Supervisor

Time with Firm: 7

Experienced with GESA projects: not with GESA, but managed similar seven figure projects nationwide

Educational or technical training: Master Electrician, OSHA-30, First Aid, CPR, Confined Space, High Reach, Forklift Training, DALI Controls Certified, Procore and E-Builder certified. Relevant information: QC/ME, Critical Path Scheduling, Inventory Control

Any other information relevant to the evaluation of the individual:

	Name: Mark Davis Project Responsibilities: Project Manager Time with Firm: 12 Experience with GESA projects: 30 years, Master Electrician, 15+ years in energy efficient lighting upgrade projects. Educational or technical training: Master Electrician, OSHA-30, First Aid, CPR, Confined Space, High Reach, Forklift Training, DALI Controls Certified, Procore and E-Builder certified. Relevant information: QC/ME, Critical Path Scheduling, Inventory Control Any other information relevant to the evaluation of the individual:
3 (a)	**Statement of Readiness and Commitment of Resources** HUNT Consulting personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.
4 (a)	Subcontractor's Workman's Compensation Experience Modification Rating Chesapeake Employers Insurance Company Policy Number: 4696043 2014 – 0.76 2015 – 0.76 2016 – 1.07 2017 – 1.22 2018 – 0.95
5 (a)	Notification of Default or Debarment N/A HUNT Consulting has never been disbarred or had any defaults levied against it or any of its entities.

2017 Financials

THE EFFICIENCY NETWORK, INC. AND SUBSIDIARY

AUDITED CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2017

THE EFFICIENCY NETWORK, INC. AND SUBSIDIARY

CONSOLIDATED BALANCE SHEET

December 31, 2017

ASSETS

Current assets	
Cash	$ 780,049
Accounts receivable	3,054,947
Inventory	60,470
Prepaid expenses and other current assets	1,045,275
Costs and estimated earnings in excess of billings (Note 3)	569,785
Total current assets	5,510,526
Property and equipment, net (Note 4)	41,543
Deferred tax asset, net (Note 9)	372,370
	$ 5,924,439

LIABILITIES AND STOCKHOLDERS' EQUITY

Current liabilities	
Accounts payable, including retention payable of $595,132	$ 1,797,284
Current portion of settlement payable (Note 6)	100,000
Accrued expenses	288,707
Billings in excess of costs and estimated earnings (Note 3)	259,477
Total current liabilities	2,445,468
Long-term liabilities	
Settlement payable, net of current portion (Note 6)	150,000
Total liabilities	2,595,468
Stockholders' equity (Notes 7 and 8)	
Series A convertible preferred stock, $0.000001 par value, 2,064,859 shares authorized, 1,893,359 shares issued and outstanding	2
Series B convertible preferred stock, $0.000001 par value, 2,982,104 shares authorized, issued and outstanding	3
Common stock, $0.000001 par value, 8,500,000 shares authorized, 3,320,466 shares issued and outstanding	3
Additional paid-in capital	8,985,943
Accumulated deficit	(5,656,980)
Total stockholders' equity	3,328,971
	$ 5,924,439

The accompanying notes are an integral part of this consolidated financial statement.

THE EFFICIENCY NETWORK, INC. AND SUBSIDIARY

CONSOLIDATED STATEMENT OF OPERATIONS

Year ended December 31, 2017

Revenue	$ 24,101,356
Cost of revenue	20,198,853
Gross profit	3,902,503
Operating expenses	
Employee wages and benefits	2,507,478
Consulting	310,458
Legal and accounting	232,489
Travel	180,851
Information technology	149,048
Advertising and promotion	111,943
Office	90,878
Rent	88,444
Insurance	80,848
Education and seminars	35,843
Depreciation	10,262
Miscellaneous	9,481
Amortization	1,926
Total operating expenses	3,809,949
Income from operations	92,554
Other income	12,862
Net income before income taxes	105,416
Income taxes (Note 9)	--
Net income	$ 105,416

The accompanying notes are an integral part of this consolidated financial statement.