



RESPONSE TO REQUEST FOR QUOTES

Volume I – Technical Submittal

GESA 2021-2 Guaranteed Energy Savings Project

PA Department of Human Services
Wernersville Sate Hospital

October 12, 2021

SUBMITTED BY:

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

David Robb

VP, Principal-in-Charge
412.722.9845
David.robb@tensaves.com





Becky Tomlinson
403 North Office Building
401 North Street
Harrisburg, PA 17120

October 12, 2021

Dear Ms. Tomlinson:

The Efficiency Network, Inc. (TEN) is pleased to submit to the Department of Human Services our response to the Request for Quotes for a Guaranteed Energy Savings Project at Wernersville State Hospital (GESA 2021-2).

Our response, which is detailed in the attached volumes, features projects to convert the facility from reliance on coal to more efficient natural gas, lighting improvements throughout the facility, both control system equipment and programming upgrades and other infrastructure improvements that will increase the energy efficiency at Wernersville.

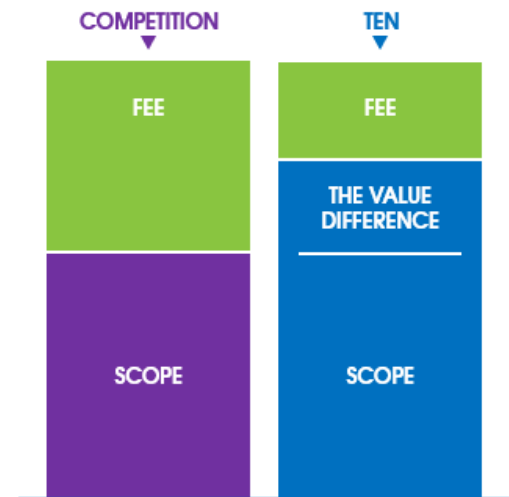
The TEN team has spent over 700 hours visiting the facility reviewing documents and developing options for this response. Our team, which includes both diverse and veteran’s owned businesses includes the technical, engineering and construction skills necessary to quickly and effectively develop the Investment Grade Audit (IGA) and just as quickly get started on delivering the final Energy Conservation Measures (ECM’s) so that the facility can capture savings as soon as possible.

Many of our TEN team members and partner companies are located within a 60-mile radius of Wernersville. Not only will that help to provide faster service to the project site it will also help to use the project to stimulate the local economy. One of our key partners will be Entech Engineering who will serve as our design consultant, providing they aren’t first chosen as DHS Agency consultant.

- ✓ **Department of Human Services & Commonwealth GESA Experience** –Having delivered many state projects through proposal, IGA, Design, Construction, Commissioning and M&V, TEN understands the Commonwealth’s program and expectations and has a proven track record of meeting those expectations.

Members of the TEN team have developed and delivered DHS projects at the Ebensburg Center, Torrance State Hospital, the Polk Center, and the Youth Development Center. With over 40 energy professionals based in Pennsylvania, TEN has successfully delivered over \$800 million worth of guaranteed performance contracts over the past 25 years. TEN has never failed to meet an energy savings guarantee.

- ✓ **Industry Leading Value Provider** - TEN was created to offer energy efficiency projects through a unique reduced cost structure. Our model is designed to deliver this project with lower development costs, lower “hard” costs, and more (savings) scope with a faster Rate of Return (ROI). TEN is not burdened by large corporate overhead cost and R&D expenses. This value differential allows our customers to add valuable scope with project savings and not have the savings allocated to fees and charges required by larger firms. The graphic above compares TEN to a competitor (larger firm ESCO) through a hypothetical scenario that assumes an identical contract value and identical projected annual savings levels.





- ✓ **Focus on Customer Satisfaction** – What truly distinguishes TEN from its competition is the ability to offer superior service, customer experience, and overall value. TEN is committed to meeting the customers goals, responding to your concerns, and making adjustments as necessary. We do not consider a project complete until all your concerns have been addressed.

Superior service starts with TEN’s regional staff of energy professionals that were hand-picked and recruited to TEN from many of the industry’s largest, and most recognized brand-name firms. Each of these individuals joined TEN for the opportunity to become a part of a truly customer-centric organization where the value of teamwork and customer satisfaction are the primary objectives.

We look forward to continuing our positive working relationship with the Commonwealth and deliver significant value to the Department of Human Services (DHS) at the Wernersville State Hospital facility. If you have any questions, please contact me by phone at 412.722.9845 or email at david.robb@tensaves.com.

Sincerely,

David Robb

Contact Person:

David Robb
Vice President, Major Accounts
1501 Reedsdale Street, Suite 401
Pittsburgh, PA 15233

412-722-9845 (phone)
412-429-8889 (fax)
david.robb@tensaves.com

TEN’s PA Vendor Number: 406246



Statements Regarding RFQ Requirements

- The Efficiency Network (TEN) has received and acknowledged all four (4) bulletins released by PA DGS pertaining to the Wernersville RFQ.
- TEN has not included any cost information in the Wernersville State Hospital 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 not less than Times New Roman, 11 pt. font



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Section 2-5.4	Qualification Forms

Electronic Copy (USB) Contains:
Technical Submission



Quote Signature Page

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.
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, Inc. (Name of Firm) 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 shall be treated as fraudulent concealment from the Department of General Services of the true facts relating to the submission of this Quote.

10/12/2021

Signature

Troy T. Geanopulos

Print Name Legibly

Chief Executive Officer

Title



NONCOLLUSION AFFIDAVIT

State of Pennsylvania:

DGS Project Number: GESA 2021-2

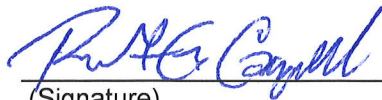
County of Allegheny: s.s.

I state that I am the President and COO (Title) of The Efficiency Network (Name of Firm) 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 an 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, Inc. (Name of Firm) 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:

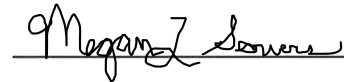
I state that The Efficiency Network, Inc. (Name of Firm) understands and acknowledges that the above representations are material and important and will be relied upon by the Department of General Services in awarding the contract(s) for which this Quote is submitted. I understand, and my firm understands, 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.


(Signature)

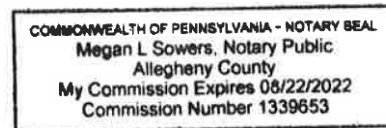
Robert G. Campbell
(Signatory's Printed Name)
Notary Public

President and Chief Operating Officer
(Signatory's Title)

SWORN TO AND SUBSCRIBED
BEFORE ME THIS 7th DAY OF
October, 2021.



My Commission Expires 08/22/2022





2-5.1 Project Management Team Overview

(Suggested number of sheets/pages: 2 sheets plus a single 11 x17 sheet, front only, for Organization Chart)

- A. Provide Project Team Organization Chart that graphically depicts the hierarchy and reporting structure of the Team members, with specific personnel, and their roles, identified.
 - 1. Personnel identified should include, as practical, executives, project managers, etc. down through field supervisors.

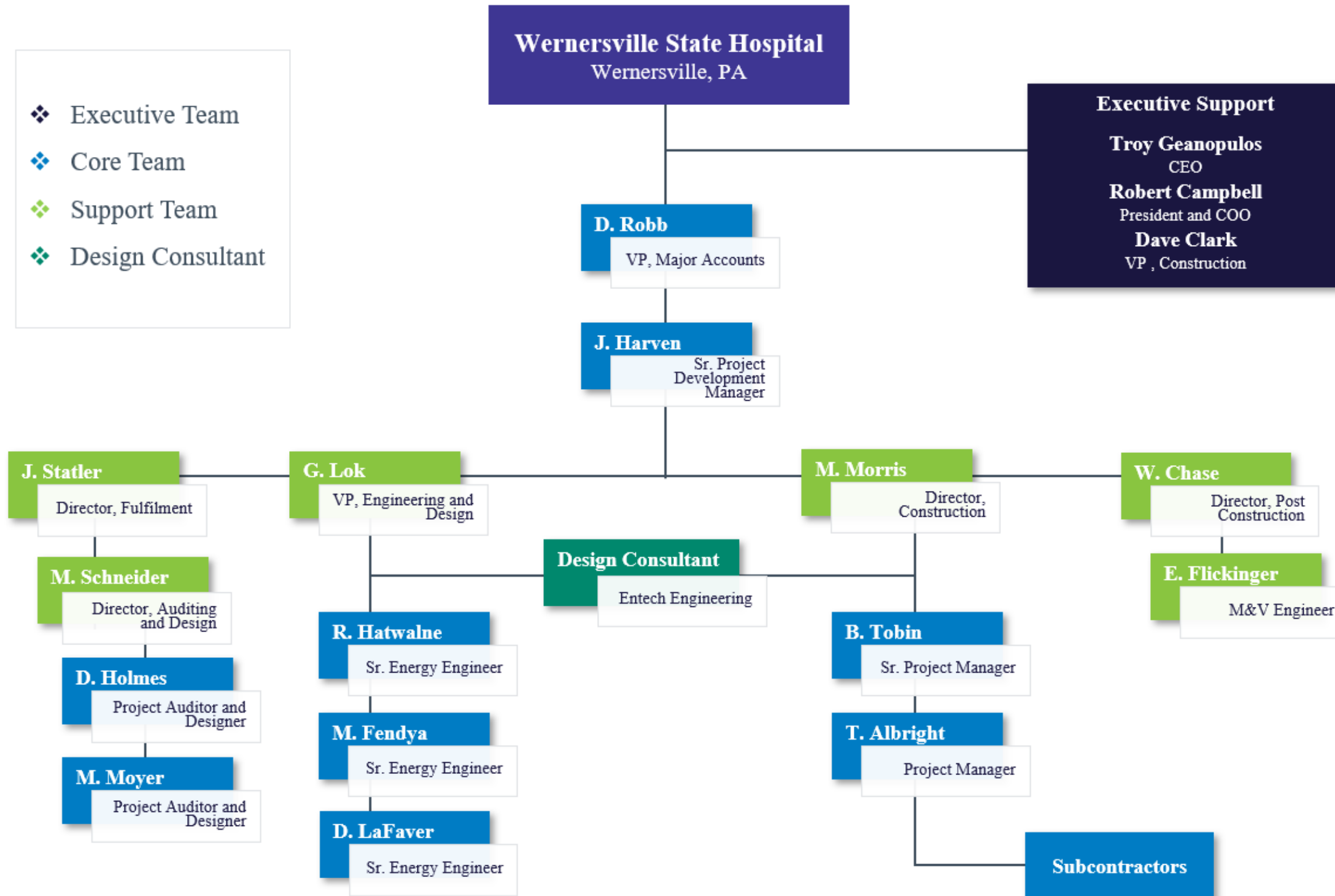
- B. Provide a brief description regarding the assignment of responsibilities for major tasks and the interrelationships and management structure of the overall Project Management Team. Describe the reporting hierarchy and the history, if any, of working relationships with other firms on the Project Management Team, including the process utilized in selecting subcontractors.

- C. The Evaluation Committee will consider the degree to which the proposed Management Team will effectively manage this Project. Information considered in this evaluation includes: the proposed management organization, roles and responsibilities, qualifications and experience of key personnel, and quality control of all subcontractors. Quotes should therefore discuss:
 - 1. A clear assignment of responsibility for various Project tasks to specific individuals and assignment of qualified individuals to fulfill designated responsibilities;
 - 2. The percentage of time that key personnel are assigned to this Project; and
 - 3. The ability to manage construction, repairs, regular service, and emergencies effectively.

- D. If awarded a contract, the GESA Contractor shall not substitute personnel identified on the Project Management Team and shall not alter the structure of the Project Management Team organization chart without prior written authorization by the DGS.



A. Organizational Chart3



- ❖ Executive Team
- ❖ Core Team
- ❖ Support Team
- ❖ Design Consultant

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 DHS and in keeping with small diverse business and Veteran Business Enterprise goals and commitments. In certain instances, we have identified multiple firms for each discipline to maintain the value of competitive pricing during the IGA.

Mechanical, Electrical & General Contracting

- Heim Company
- Snelick Construction (VBE)

Building Automation System and Refrigeration

- Conexus
- Automated Logic
- Melink
- NRM

Lighting

- West Side Hammer Electric
- National Lighting and Maintenance Supply (SDB)

Steam System and Building Envelope

- I-Star
- H2O Applied Technologies (SBE)
- American Building Technologies



B. Assignments of Responsibilities by Core Team Members

Below is a list of TEN's Core Team Members that will be directly responsible for various aspects of the GESA 2021-1 Guaranteed Energy Savings Project. Their collective experience exceeds \$150 million in state hospital and secured facilities. All have worked together successfully on other Commonwealth GESA projects.

Assignments of Core Team Members

David Robb – Vice President, Principal-in-Charge

Mr. Robb is responsible for leading TEN's development efforts and serves as Program Manager for all of the company's DGS 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.

Jim Harven, PE, CEM, EBCP – Senior Development Manager

Mr. Harven will serve as development manager for the Wernersville project. Jim has over 35 years of experience in developing and delivering energy projects. Jim is a registered professional engineer in four states, has played an integral role in many key projects including Temple University and led the project development for SCI Houtzdale which is nearing the end of construction. Jim has completed over 200 projects in his career including projects in healthcare facilities.

Greg Lok, PE, CEM, CMVP – Vice President, 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.

Rajas Hatwalne, CEM – Senior Project Engineer

With over 15 years in the field, Mr. Hatwalne 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. For this project, Mr. Hatwalne will focus on the central plant and Building Automation System (BAS).

Mike Fendya, PE, CEM – Senior Project Engineer

With over 13 years in the field, Mr. Fendya is also responsible for performing on-site energy audits and for the design of solutions for commercial, industrial, and institutional buildings. His typical daily responsibilities and skills match that of Mr. Hatwalne above. For this project, Mr. Fendya will focus on ECMs inside the buildings and chilled water systems.

Mike Schneider, CPM, LC, CLEP – Director, Auditing and Design

Mr. Schneider researches, designs, and directs installations and testing of high-quality, cost-effective lighting and water conservation measures. His extensive field experience allows him to improvise and revise designs to best meet all situations. Having worked with nearly 60 lighting manufacturers during his 30 years in the energy field, he knows the products, how they work, and the best applications for each option.



Daric Holmes – Project Auditor and Designer

Mr. Holmes, with over 20 years experience in the lighting industry, 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.

Dave Clark – Vice President, Construction

Mr. Clark 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 TEN’s project health and safety program.

Bob Tobin – Senior Project Manager

Mr. Tobin is responsible for all onsite project management and subcontractor supervision during construction. Mr. Tobin 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. Mr. Tobin’s focus is complex design-build construction supervision. He is involved early in the project to ensure solution continuity from IGA project development through, design, installation, commissioning, and project close out.

Tony Albright – Project Manager

Mr. Albright 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. Albright will be the liaison between the owners, engineers, designers, subcontractors, and construction team.

Wayne Chase, CMVP – Director, Post Construction Services

Mr. Chase is an engineering and technical specialist with over 30 years of experience in energy modeling, HVAC and controls, utility data analysis, lighting design, field testing and inspection of buildings, and energy auditing. He leads post-construction customer site audits, verifying energy efficiency strategies, and calculating and reporting on project performance.

CI. Assignment of Responsibilities for Various Project Tasks

Listed below are detailed descriptions of the specific project tasks and which TEN team members will be responsible for each task.

Descriptions of Project Tasks

Account Executive – David Robb

Mr. Robb will be DHS’s program manager and executive level contact for the duration of the project. Mr. Robb’s responsibilities will include working with DHS Representatives throughout the entire project from development through construction and M&V and ensuring overall customer satisfaction.

Project Development – Jim Harven, PE, CEM, EBCP

Mr. Harven will be DHS’s development manager and main point of contact throughout the duration of the IGA. Mr. Harven’s responsibilities will include coordinating the engineers, design consultants, contract administrators, financial analysts, project managers and M&V specialists to execute deliverables and successful solutions for DHS/DGS.



Engineering Management – Greg Lok, PE, CEM, CMVP

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.

Construction Management – Dave Clark

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 Mechanical ECMs and experience in Commonwealth facilities.

Engineering – Mike Schneider, CPM, LC, CLEP

Mr. Schneider, with the support of Daric Holmes, will research, design, and oversee field installations and testing of high-quality, cost-effective lighting and water conservation measures. His extensive field experience allows him to improvise and revise designs in order to best meet all situations. Having worked with nearly 60 lighting manufacturers, he knows the products, how they work, and the best applications for each option.

Engineering –Rajas Hatwalne, CEM & Mike Fendya, PE, CEM

Mr. Hatwalne and Mr. Fendya 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. In consideration of the anticipated project timeline, Mr. Hatwalne will focus on central plant and Building Automation System ECMs and leading an initial feasibility study analysis and Mr. Fendya will focus on building ECMs and the chilled water system.

Project Management – Bob Tobin

Mr. Tobin is responsible for all aspects of project construction, including but not limited to cost-estimating, coordination of subcontractors, inspections and commissioning, quality assurance and quality control. He also manages relationships with suppliers and contractors.

Project Management – Tony Albright

Mr. Albright will be responsible for daily coordination of subcontractors, inspections and commissioning, quality assurance, and quality control.

Measurement and Verification – Wayne Chase, CMVP

Mr. Chase’s responsibilities include audit, analyze, and quantify building systems and energy consumption through the collection of site, system, and any other data required. He also performs energy engineering savings calculations, proposal development, and measurement and verification plans.

C2. Percentage of Time that Key Personnel are Assigned to this Project

Percentage of Time Assigned by Team Member	
David Robb – Vice President, Major Accounts	40% - Audit 5% - Construction
Greg Lok, PE, CEM, CMVP – Vice President, Engineering	10% - Audit
Dave Clark – Vice President, Construction	15% - Audit 10% - Construction



Jim Harven, PE, CEM, EBCP – Senior Development Manager	40% - Audit 5% - Construction
Mike Schneider, CPM, LC, CLEP – Director, Auditing and Design	15% - Audit 5% - Construction
Daric Holmes – Project Auditor and Designer	30% - Audit 5% - Construction
Rajas Hatwalne, CEM – Senior Project Engineer	70% - Audit 5% - Construction
Mike Fendya, PE, CEM – Senior Project Engineer	100% - Audit 5% - Construction
Bob Tobin – Principal Project Manager	25% - Audit 70% Construction
Tony Albright – Project Manager	100% - Construction
Wayne Chase, CMVP – Director, Post Construction Services	10% - Audit 5% - Construction

TEN’s Construction Management

C3. Ability to Manage Construction, Repairs, Regular Service, and Emergencies Effectively

TEN’s commitment to offering energy efficient solutions is supported by a group of professionals whose sole focus is energy efficiency with a particular focus on performance contracting. There are few, if any, energy, and utility situations TEN has not already encountered and successfully addressed. For this project, many of TEN’s key engineering and technical resources are based less than 60 miles from Wernersville with many of the team living even closer to the facility. We can be there is a few hours not a few days.

TEN’s dedicated staff of experienced project and construction managers specialize in delivering guaranteed, energy efficient solutions as planned. During the project, TEN’s *onsite* construction project managers will collaborate with our internal engineering team and design consultant 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 DHS. 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/DHS. 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. In the design and construction stages, we also consider equipment that is easily repaired and locally serviced. This includes parts availability. We have also placed a focus on selecting contractors that are largely within 60 miles of Wernersville to ensure they can arrive within the 2-hour and 4-hour RFQ required response time.

D. GESA Contractor will not Substitute any Personnel without Prior Consent by DGS/DOC

Committed Team

The Efficiency Network (TEN) commits the personnel identified on this project team to the GESA 2021-2 Wernersville project and shall not alter the organizational structure without prior written authorization by the DGS/DHS.



2-5.2 Work Plan for This Project

(Suggested number of sheets/pages: 4 sheets).

- A. The Offeror shall describe its technical plan for completing the Project. The Work Plan should outline and describe the steps necessary to successfully undertake the Project from the GESA Contract execution through completion of construction, including commissioning. This portion of the Quote discusses ECMs in general terms but shall not include any discussion on costs or savings. The Evaluation Committee will consider the degree to which the Quote addresses or discusses the following:
1. Demonstrate Offeror's understanding of the design process and if Project has Energy Consultant, how they will coordinate with Energy Consultant;
 2. Identify potential design issues;
 3. Describe how the Team will manage and execute the Project;
 4. Address early construction packages, long lead items and phases of construction;
 5. Identify critical material and equipment. Discuss/explain why these are critical and timing/lead times for acquisition;
 6. Address construction challenges and proposed solutions;
 7. Outline a construction plan that includes site operations, site layout, logistics, lay-down, field offices, parking areas, etc., including how the Offeror intends to accomplish the work within a fully occupied environment;
 8. Explain construction coordination and meetings and how they will be handled with Funding Agency, site(s) & DGS;
 9. Address Project Safety Plan, Management and Monitoring;
 10. Provide outline and effectiveness of QA/QC Plan;
 11. Describe closeout process for training of Funding Agency personnel, manuals, Occupancy Permits, commissioning, and final close-out.



1. Offeror's Understanding of 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/DHS objectives are addressed and that the solutions proposed are buildable. Close coordination with TEN's energy engineers and our design consultant under the supervision of our VP, Engineering and VP, Construction allows for early vetting of potential design issues and facilitates meaningful discussion with the client team. This process also includes gaining a clear understanding of phasing requirements and coordination of construction to minimize the effect on occupants. We also understand the careful scheduling that occurs in a secure government facility and will adjust construction activities as necessary to accommodate client and security needs. We understand that every state hospital facility is unique and needs a customized plan that meets the requirements of the administration.

TEN's cTEN mobile application (output to right) provides daily communication to key project participants. This tool is used in addition to regular site supervision, project meetings, meeting minutes, and look ahead schedules to keep our clients informed.

Steps to Successful Program Delivery and Contractor Quality Control

Critical Path Schedule: This planning tool sets forth the logical progression of the proposed project and includes 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/Wernersville facility personnel. Our construction team uses Microsoft Project for this scheduling process. (A draft Critical Path Method (CPM) schedule is attached further in the Technical Response.)

Initial Project Startup / Notice of Award

Immediately upon award of the project, TEN will mobilize the personnel required to efficiently execute this project. During detailed discussions with the Department of Human Services, we will identify the need for any additional team members and begin to identify DHS 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. Throughout the entire process, we will carefully coordinate with DHS on specific details such as site operational constraints and all implementation logistics, including material supply logistics and lay down areas during construction.

Investment Grade Audit (IGA)

The investment grade audit is intended for final due diligence of project cost and savings. It also initiates the design process which includes adherence to GESA Project Design Manual, General Conditions, and administrative procedures. Most importantly, it is the time when Wernersville, TEN, and our design consultant can work closely together to customize a set of solutions to thoroughly solve operational issues for the facility. Client input is critical to delivering the most successful projects which is why we will ask to begin the discovery process with your team immediately after ESCO selection in what is otherwise lost time while the audit agreement is being signed.

Design

After the IGA has been reviewed and accepted, DGS will procure the financing and begin the GESA signature process. While the project design process begins with the IGA and scope development, certain IGA ECMs may only have 35% drawings and specifications which are sufficient to guarantee savings and pricing. Finalizing the balance





of these details to produce construction drawings contractually occurs after the GESA has been fully signed. If time is of the essence, we recommend DHS consider a Letter of Intent (LOI) to allow the GESA design process to take place concurrent with the GESA signature process. This was the approach TEN & our design consultant took with SCI Houtzdale enabling us to have construction drawings and L&I approvals complete by the time the GESA was fully executed.

Procurement

As the project scope is approved by DHS 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 cost-effectively and efficiently address project specific needs and goals and maximize returns. This approach also gives DHS the flexibility to select Small Diverse Business (SDB) and Veteran Business Enterprise (VBE) contractors to optimize their desired participation goals.

Construction

Regular meetings will be held with the DGS/DHS to establish construction guidelines and TEN will work with each DHS representative to minimize the impact of the construction activities on the facility's operations. TEN has worked in varied challenging settings, including "after-hours" installations in offices and public areas, and special access situations in restricted zones. Beginning with the IGA and in advance of construction, we will have initiated a tracking process for submitting and receiving clearances for all ESCO and contracting personnel planning to work on site. A disciplined submittal process is key to managing the IGA and construction schedule.

Construction services will be sourced through mutually agreed upon installation subcontractors who are additionally vetted based on DHS requirements. All subcontractors will perform their work under the direction of our in-house construction project manager(s). Our project management team will also be responsible for providing DHS with appropriate training and operating and maintenance (O&M) manuals and overseeing project commissioning.

2. Potential Design Issues

Potential Complications and Areas to Minimize DHS Risk

- Careful consideration should be given to maintaining steam service to the buildings and kitchen equipment during construction of the central plant fuel switch or decentralization ECMs. While there is an opportunity to reduce steam pressure once the equipment supporting the coal fired boilers is decommissioned, 50 psi steam will still be required for certain kitchen equipment unless it is replaced, retrofitted or a standalone steam generator installed to serve that specific load.
- Decentralization is an attractive solution for buildings 34, 35 and 37 as they are already designed with heating hot water (HHW) systems and could be efficiently served directly from new condensing hot water boilers. The economics of this, however, must be evaluated with the need to continue steam service to the kitchen and other buildings on campus, including the DOC facilities excluded from the GESA proposal.
- TEN commits to completing an expedited feasibility study upon ESCO selection in coordination with all relevant stakeholders to facilitate decision making on the most expedient solution for the coal to natural gas with oil backup fuel switch ECM. We have evaluated multiple options including decentralization. While one solution fits within the RFQ required Self-Funding cashflow without O&M savings, DHS may prefer another of the scenarios with a slightly longer payback. This feasibility study will also weigh the potential site functionality and economics of decentralization or a hybrid approach to verify that the current set of required core ECMs are preferred by DHS before completing detailed IGA pricing. The TEN team will bring our experience from other Commonwealth facilities and our familiarity with DHS and DGS requirements that should allow us to easily accelerate this process.
- An additional area of consideration includes potential replacement or renewal of the boiler feed water system and domestic hot water tube bundles.



3. Managing and Executing the Project

Project Management Approach

TEN takes a unique approach that creates a better and more predictable outcome for DHS, at a lower cost. At TEN, all design, equipment procurement, and construction management is performed by TEN employees and an occasional strategic hire such as design consultants. 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 technology decisions. It is important to make the right, informed decisions about LED design and we believe that our approach is both better and more cost-effective.

The key elements to manage and execute a successful project include:

Accurate Reporting - Reporting to The Efficiency Network's (TEN) Director, Construction Services, TEN's on-site Project Manager is accountable for the management of all assigned project construction activities taking place at the facility. The Project Manager (PM), through our on-site management, will ensure that the worksite is safe, supervised and managed in an effective and efficient manner. 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 DGS/DHS project representatives as another real-time means to communicate and to monitor quality control.

Timely Delivery and Quality Assurance - 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 all 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. TEN achieves this by utilizing **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). Our customer approved vendors and contractors ensure that the design intent is met, the project / system can be installed properly and maintained, and the construction team and DGS/DHS are familiar with the project before installation begins. This 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.

TEN also uses the project management software Procore to organize the many steps in the GESA process and to facilitate instant communication and feedback within the multiple disciplines of our internal team, design consultants and subcontractors. It also helps to streamline and ensure continuity through the process of design, procurement, construction, commissioning, and closeout. While many of our customers prefer and will continue to receive traditional client communication, we can also provide them with additional project visibility with access to this system. The ProCore system also coordinates with eBuilder and other project reporting systems, if preferred by DHS.

On-Cost Delivery – As described above, integration of TEN's engineering and construction teams from the onset of development ensures that TEN's projects can be built on time and on budget.

Technical Excellence - TEN is comprised of professional staff, most of whom have been active in the development and delivery of energy solutions within existing facilities for more than twenty years. TEN has a staff of experienced professionals who are familiar with the unique aspects of designing and constructing energy services projects in numerous settings, including secure government facilities and, have collective project experience of more than \$800 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 highly competitive 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 and sustainable 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. In addition, with respect to our internal design capability for mechanical ECMs, we collaborate with DHS experienced design-build mechanical contractors. For more design intensive applications, like the central plant at SCI Houtzdale, we will engage a specialized firm.

4. Early Construction Packages, Long Lead Items, and Phases of Construction

Construction Packages and Planning

- Our current Gantt Schedule reflects a preliminary approach to implementing the numerous measures at Wernersville. 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. These discussions may result in adjustments to the project schedule.
- Additionally, we will work with the facility's administrative staff establishing locations and procedures for mobilizing/demobilizing mobile lifting equipment, dumpsters, recycling, etc.
- Anticipating the contract will incorporate the required core ECMs, we will focus on early construction of the new boilers and interconnections which we plan to build in the winter months.
- We will work with DGS/DHS to gain early submittal review and approval of these steam system improvements to maximize winter installation. Similar early lighting approvals will facilitate early installation to maximize construction period savings. Consideration will also be given to final design concurrent with the GESA signature process in order to maximize the available construction period. As a result, submittal packages may be grouped as follows:
 - HVAC (fast track early design for Fuel Switch/ boiler plant, steam and hot water system upgrades)
 - HVAC (normal track AHU and chilled water system upgrades anticipating cooling season commissioning)
 - Lighting and lighting controls
 - Weatherization and Building Envelope
 - Building Automation System (BAS), control optimization, motors and VFDs

Long Lead Time

Boilers, pumps, and steel will be critical path items, but the anticipated timing of the project should allow for procurement after contract signature. We anticipate a potential Letter of Intent (LOI), if allowed by DGS/DHS would merely facilitate early design or potential shop drawings for an optional medium load steam boiler.

Phases of Construction

Upon Notice to Proceed (NTP) from DGS, TEN will move into project construction that includes the following key steps some of which are not always linear and could be concurrent depending on the complexity of ECM, seasonality of construction, and opportunity to maximize construction period savings.

- **Initial Project Startup** – Including project kickoff meeting to affirm the scope of work with stakeholders; submit, review, and solicit feedback on the updated CPM schedule stemming from the date of NTP; verify security protocols, planned laydown & storage areas along with establishing the regular progress meeting schedule.
- **Design** – Initiate final design for all ECMs that haven't already been finalized during the IGA or concurrent with the GESA signature process and deliver submittal packages to DGS/DHS for review. When approved by DGS/DHS, ensure timely submission to L&I and secure necessary permitting.
- **Procurement** – Issue pre-negotiated subcontracts and order material as submittals are approved. Long lead time equipment may have separate early submittals to facilitate timely delivery.
- **Mobilization** of office/ trailer, site personnel, and key construction storage / lay-down and recycling areas, including detailed safety and security meetings with all employees and subcontractors.
- **Installation** of ECMs per the CPM schedule and regularly updated 2-week look ahead schedule.
- **Safety Plan, Management and Monitoring** throughout the project.



- **Inspections & Reporting** for QA/QC throughout the project.
- **Commissioning** – Begins with design and continues through construction and start-up.
- **Project Acceptance** – Any deficiencies tracked and resolved through punch list before final acceptance, start of warranties and guaranteed savings.
- **Operation & Maintenance Plan** – Including well documented manuals and warranty service information
- **Training** – Held on-site with facility personnel and can be video recorded for O&M manual inclusion.
- **Measurement and verification** – Customized use of IMPVP to the objectives of DGS/DHS and administered by TEN’s CMVP certified team

5. Critical Material and Equipment and Long Lead Times for Acquisition

- Based on the current set of core ECMs identified by DHS, and anticipated September 2022 contract, we don’t anticipate the need to order long lead time equipment through an LOI. Rather we would prefer to focus a potential LOI on allowing TEN and our design consultant to complete design documents during the contract signature process, so they are ready for permit submission upon final contract signature, and actual site work soon after. At SCI Houtzdale, this process facilitated TEN on site mobilization within 2-weeks of contract signature. While the boiler and feed water system components are also long lead items, they can be accommodated in the currently anticipated contract period.
- Given the seasonal impact on the requirements for operation of the heating and cooling systems, accelerated design and shop drawing approval for the boiler replacement, and steam system upgrades will help in expediting the installation and commissioning of these systems at the optimum time which may be partially on and off season.
- Review and approval of key lighting and water conservation design and materials during the IGA so as to facilitate on-site work proceeding within 20 calendar days of execution of contract.

6. Addressing Construction Challenges

With our experienced site project managers and accessible local team and, if necessary, executive leadership that stay close to the progress of the projects, TEN is uniquely positioned to handle any inevitable challenges that may arise.

An example of our team’s capability to tackle incoming challenges can be seen at the Community College of Allegheny County project. 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 online in May (two months later).

7. Outline a construction plan that includes site operations, site layout, logistics, lay-down, field offices, parking areas, etc., including how the Offeror intends to accomplish the work within a fully occupied enviro

The Wernersville project will include full-time project management, to ensure TEN personnel are on site whenever work is taking place to ensure that work is completed according to all site specific requirements and that all safety and quality issues are addressed. For this project, we will provide more than one project manager to accommodate both daylight and evening construction.

Site Operations

The TEN team will work closely with DHS and its stakeholders (DGS, PSFEI, Agency consultant) to establish a site plan and operations narrative for DHS review and approval. This included secure storage and lay down areas.

Our initial evaluation indicates that the parking area behind the central plant would be a good site for storage, laydown, and an office trailer.

Currently we anticipate being able to park at Wernersville, but our subcontractors can also carpool to minimize parking impact on site. Where possible, mechanical, electrical, and control work in mechanical spaces could be undertaken during normal business hours or on a four-10 hour/week basis but work in occupied spaces can be



scheduled for 2nd or 3rd shift. Equipment changeovers will be scheduled sufficiently in advance to minimize disruption and to allow for adequate preparation by all parties.

Working in Occupied Environments

Most of our projects are 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 hospitals, correctional facilities, government facilities, universities, school districts, housing authorities, and office buildings. 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), SCI Houtzdale, Penn State University, Temple University, University of Pittsburgh, UPMC and others – the typical challenges included minimizing disruptions in occupied buildings, tight timeframes, seasonal/weather concerns, coordinating cranes/lifts/equipment deliveries, etc. 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, correctional facilities, classrooms, research areas, and even patient rooms without any issues due to the coordination and communication used by our site project managers. Our team is also used to working off shifts to minimize disruptions.

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.

8. Explain construction coordination and meetings and how they will be handled with Funding Agency, site(s) & DGS

The project will include full-time on-site 30-hour OSHA Certified Project Managers. TEN personnel will be in proximity to site work whenever it is taking place to ensure proper coordination, quality work and to quickly address and communicate any issues that may arise. TEN will provide more than one project manager to accommodate both daylight and evening construction.

We anticipate bi-weekly progress meetings with DHS to occur at Wernersville, or via a web meeting if preferred by DHS. Meeting minutes will be prepared and distributed by TEN. Interim progress reports will also be delivered to stakeholders by email. At certain milestones and when activity is taking place in their buildings, expanded or site-specific meetings with the agency representatives will be warranted. This will be particularly important during the IGA planning stage.

9. Address Project 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 safety 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 DHS's and Commonwealth's general and specific safety concerns with the Project;
- H. Provide regular communication and coordination with the Facility Manager's office to make sure that security procedures are included in the regular job site safety discussions.

10. Provide outline and effectiveness of QA/QC Plan.

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 over time and to meet environmental expectations. 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 for greater quality control, and where a design consultant is warranted, fully integrates them into team meetings to ensure effective communication and a seamless client experience.

Our design, engineering, and construction teams work closely with each other to develop the scopes of work that are competitively priced by 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 for safety. TEN's project managers and engineers along with the DGS/DHS 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 DGS/DHS 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 DHS. Maintaining and managing daily communications with and directing the activities of all subcontractors is key to the success of the project.

11. Describe closeout process for training of Funding Agency personnel, manuals, Occupancy Permits, commissioning, and final close-out.

Project Commissioning Process

TEN 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.

Occupancy Permits

It is anticipated that all the buildings in this project scope have existing occupancy permits, and that TEN will facilitate all code required inspections for continued legal compliance throughout the project.



Project Acceptance / Close-out

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 DHS and the TEN 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 will be provided to help optimize facility operation to continue to provide the 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 and return on investment.

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 DHS on any warranty issues. TEN's approach to cost-effective maintenance of the project is to train DHS staff whenever possible.

Training

On-site personnel need to understand the objectives of the energy savings program and equipment operation to meet and sustain 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 TEN Project Manager(s) and the operations representative and will be video recorded when warranted for future review by facility personnel and O&M manual inclusion.

Measurement and Verification (M&V)

TEN will provide a customized M&V plan for new and existing equipment, referencing 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/DHS 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 straightforward 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.



2-5.3 RFQ Project Schedule

(Suggested number of sheets/pages: 2 sheets, plus a maximum of 2 single-sided 11x17 sheets).

This RFQ Project Schedule shall not be construed as the Final CPM Schedule. Do not submit a full and complete detailed CPM Schedule in the Technical Submission. DGS does not accept the logic or durations of the activities in this RFQ Project Schedule. The purpose of this RFQ Project Schedule is only to allow DGS to evaluate and score the Offeror's scheduling ability. After the GESA Contract is executed, the successful GESA Contractor shall submit a full and complete project schedule per the requirements of the General Conditions and Project Administrative Procedures.

- A. The Evaluation Committee will consider the degree to which the Quote addresses or discusses the following:
1. A narrative for the schedule that discusses the challenges of the schedule and proposed solutions. Address critical aspects of the schedule, associated risks, and the Team process to ensure achievement of critical milestone dates.
 2. Submit an executive level graphic schedule commencing at Notice of Selection, showing estimated overall project duration and milestone dates. At a minimum, milestone dates should include: commencement and completion of the IGA and submission of the resulting Report, full execution of the GESA Contract (a minimum of 60 calendar days), submission and approval of all required permits from every entity having jurisdiction, procurement of all major equipment, commencement of on-site work (at least 10 but no more than 20 calendar days from execution of contract), final inspection of all construction, commissioning of the project and training of Funding Agency personnel.
 3. The ability to coordinate project construction with local utilities, subcontractors, equipment suppliers and Funding Agency facility personnel.



1. A narrative for the schedule that discusses the challenges of the schedule and proposed solutions. Address critical aspects of the schedule, associated risks, and the Team process to ensure achievement of critical milestone dates.

While careful project scheduling requires more detail than presented here, we have focused the enclosed schedule on the following milestones. It is important to note that while the RFQ contemplates calendar days, the MS Project durations refer to work/business days.

- Notice of ESCO Selection
- Commencement and completion of the IGA
- Submission of the DGS/DHS reviewed and TEN revised final IGA report
- Full execution of the GESA contract - (60 calendar days has been modeled to begin after financing installment purchase agreement (IPA) preparation)
- Final Design
- Submission and approval of required permits
- Procurement of major equipment
- Commencement of site work
- Final inspection
- Commissioning and training of personnel

As a frame of reference, on the GESA 2017-1 project, the final two-part (primary and central plant specific) CPM schedule(s) totaled 1100 lines.

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 SCI Houtzdale, Temple University, the City of Harrisburg, the Carnegie Museums as well as industrial clients. Each relied on us to deliver projects on time so that projected savings are realized in advance of any required financing payments. Perhaps most importantly, the TEN team already has experience working within and meeting the timelines and objectives of DHS. Our staff's and consultant's experience with the DGS GESA program and more specifically the Ebensburg Center, Torrance State Hospital, Polk Center and YDC GESA projects will help facilitate efficient review and response to questions in order to maintain construction momentum.

The previous section addressed the necessary steps of the work plan to achieve a successful project outcome. This section will focus 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

- Typically, 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 typically recommend a slightly longer duration to ensure optimal final site evaluation / analysis / design as well as meaningful interaction / feedback with facility personnel. From a practical standpoint, if selected, we will begin a feasibility analysis immediately while the audit agreement is being signed. This combined with current knowledge of similar ECMs delivered at other Commonwealth facilities will enable TEN to deliver an IGA w/in the shorter time period and be prepared to quickly respond to the Q&A / revision period that follows. Very few ESCOs invest as much of their own staff time on RFQ site investigation instead relying on their sub-contractors. This early investment of TEN internal resources provides us unique momentum to quickly develop and deliver a feasibility study and IGA.
- During the IGA phase, the TEN team will spend additional 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 sized properly.
- TEN commits to coordinating site analysis among its team to maximize available escort time. We were careful to do this during the proposal stage and will continue to treat the Wernersville's limited resources with respect.
- Sample areas. Installation of meaningful sample lighting areas 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.
- Early discussion of M&V pre-measurements. It is important to discuss M&V options and DGS/DHS preferred approach for each ECM early in the IGA to ensure 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 boilers, lighting, and chilled water system upgrades to support a quick start after contract execution. In this manner, sub-contracts and material purchase orders can be pre-negotiated while DGS/DHS 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

- Concurrent with the signature, review & approval of fast-track and long lead time ECM submittals such as boilers, pumps, and lighting will support a quick start after contract execution. In this manner, sub-contracts and material purchase orders can be pre-negotiated while DGS/DHS is procuring financing and circulating the agreement for approval.
- Similarly, final design of project ECMs facilitated by an LOI during the signature process could ease construction timeline pressure of long duration or seasonal ECMs.
- Early submission of preliminary incentive applications to local utilities will ensure available incentives are reserved for this project.
- Coordination and preliminary review of the financing solution to ensure the proposed project is easily financeable. DGS has recently procured a financing program / facility for GESA projects. The rates are based on an index which eliminates a project specific procurement and significantly reduces the time required for this step.
- 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. TEN is accustomed to working with various financing entities and can anticipate and quickly respond to questions to assist in meeting the contract closing deadline.

Construction Kickoff – Risks/Opportunities

Re-affirm clear and concise communication expectations and document meetings from the onset. TEN's senior project manager endeavors to run efficient progress meetings to respect stakeholder availability.



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

Start-up, equipment testing

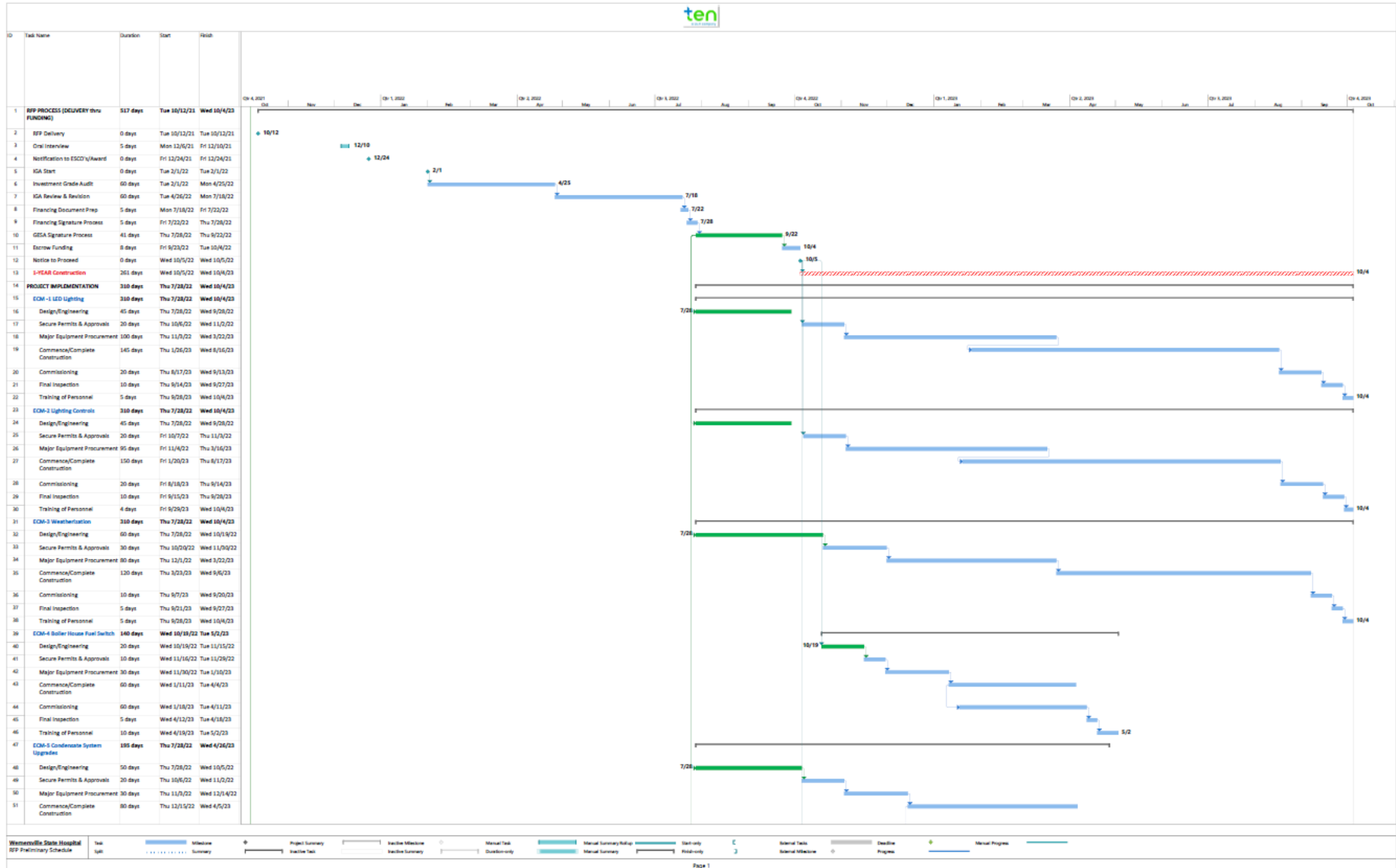
Where factory representative start-up, testing, and balancing is required, it is critical to schedule these resources sufficiently in advance to maintain the schedule and resultant final commissioning and ECM acceptance.

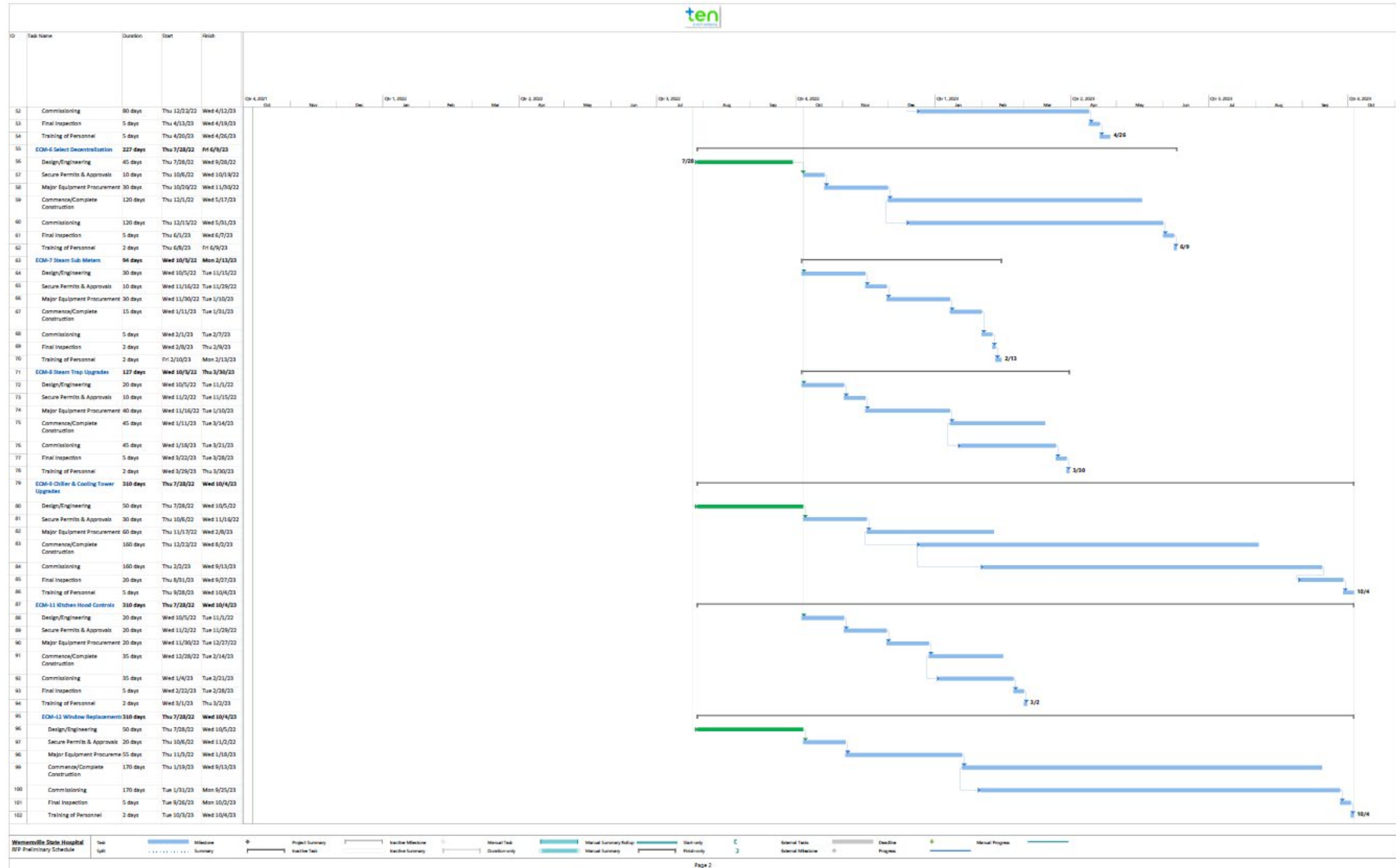
Commissioning, training, and post M&V measurements

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.

2. Submit an executive level graphic schedule commencing at Notice of Selection, showing estimated overall project duration and milestone dates.

On the following pages is an Executive-Level Graphic Schedule.







3. The ability to coordinate project construction with local utilities, subcontractors, equipment suppliers and Funding Agency facility personnel.

Challenges and risks, such as those that may occur during the Wernersville project, are managed by good and frequent communication between TEN, DHS, DGS, building occupants, our subcontractors and material suppliers, local utilities, and permitting jurisdictions such as L&I, and DEP. 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, to ensure ongoing collaboration.

- Our project schedule anticipates the seasonal nature of our scope of measures and the ECM construction requirements. Through careful coordination with DGS/DHS, we may be able to improve upon certain parts of the schedule to yield larger savings earlier during construction.
- Due to our breadth of expertise and sizable energy-specific team focus within the Pennsylvania region - including local management - TEN can quickly address issues that occur during construction. Our track record demonstrates our ability to take advantage of opportunities which improve project outcomes when agreed upon by both parties.
- Team continuity extends beyond the assigned TEN personnel. We have also identified Entech Engineering in Reading as our design consultant for the boiler plant and steam system ECMs. We have worked together in a similar role on the successful SCI Houtzdale project and both firms are well familiar with DGS expectations. Should DHS instead select Entech as its agency consultant, we will collaborate with DHS on a suitable replacement for our design consultant role. In either case, significant team continuity will be available to DHS. We have a good, respectful relationship with Entech having successfully worked together on projects for state, local government, education, and healthcare. You will find the interaction collaborative and NOT managed strictly as a prime and subcontractor. Our design consultants are included in our internal development meetings to ensure a cohesive project throughout.

Additional Opportunities for Innovation / Schedule Compression / Flexibility

The following are ways DHS, 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 signed contract. This will allow periodic material deliveries and installation to begin within two weeks of GESA contract execution (for readily available material such as lighting).
- 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.
- Concurrent commissioning and measurement & verification activities can be employed near project completion to compress the installation schedule as well.



2-5.4 Qualification Forms

(See specific suggested sheets/pages below. Note also that “Entity’s Resource Availability” shall be as of the date of the Technical Submission)

- A. The Evaluation Committee will consider the degree to which the Quote provides experienced and qualified personnel capable of designing and implementing the scope of work on the project, including training Funding Agency staff once the work is complete.

GESA Contractor (Suggested number of sheets/pages: 10 sheets, or if GESA Contractor is a Joint Venture, no more than 5 sheets per joint partner. Also, one single-sided 11x17 sheet for organization chart plus 1 sheet per person.)

1. Provide clear and concise information that will demonstrate the following qualifications:
 - a. Management Team Individual Qualifications (6-person limit)
 - (1) Describe project responsibilities, time with firm, experience with GESA projects, educational or technical training, LEED accredited projects, and any other information relevant to the evaluation of the individual.
 - b. Offeror’s Financial Ability to Provide Guarantee
 - (1) Offeror shall provide: most recent available independently audited financial statements for private corporations and/or Form 10-K on file with the Securities and Exchange Commission (SEC); Annual Shareholder’s report for public companies, as applicable, to demonstrate their financial ability to provide guarantees of energy savings of at least \$5,000,000 (no third party insurance will be permitted); and a history of at least five (5) other project guarantees and the dollar amount of those projects. Offeror should not include any ECM or cost information on the Project in this portion of the Technical Submission; if ECMs or costs are included, the Quote will be rejected, and there will be no opportunity to correct the Quote.
 - c. Offeror’s Resource Availability (Capacity)
 - (1) As defined by the following equation, reported in US Dollars: (average of the last 3 years gross sales) minus (the average of next 3 year committed backlog). Committed backlog is defined as all committed contract balances for the next 3 years as of the date of the Technical Submission.
 - (2). If the Offeror is a legally combined entity, the formula shall represent the pro-rata share of each member per the legal agreement.

Example: If A and B are a Joint Venture, A is 60% and B is 40%, then the reported availability should be $0.6 * A's\ availability + 0.4 * B's\ availability$.
 - d. Offeror’s Statement of Readiness and Commitment of Resources
 - (1).Provide a written 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.
 - e. Offeror’s Notification of Default and Debarment.
 - (1).Provide a listing including owner, project, date, and explanation of any contract default or debarment within the last 5 years.



Offeror's Experience with GESA Projects

The Efficiency Network (TEN) is an industry-leading provider of technologically advanced energy and water efficiency solutions that utilize guaranteed energy savings agreements (GESA) to maximize value for our customers. Our team has collectively audited, evaluated and implemented **over \$800 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, **TEN has completed a successful \$18 million, comprehensive guaranteed energy savings project (GESA) for the PA Department of General Services and is construction is nearly complete on the \$30 million SCI Houtzdale project. Of the \$800 million in projects delivered by the TEN team more than \$150 million are related to healthcare and secured government facilities.**

Locally based, knowledgeable, flexible team - TEN's project team includes 40 energy professionals based in Pennsylvania. TEN's team has extensive experience delivering guaranteed energy savings projects for healthcare and government facilities at: Ebensburg Center, Torrance State Hospital, Polk Center, PA Youth Development Centers, WV Youth Services System, Spring Grove State Hospital-MD, Lehigh and Cambria County Nursing Homes, St. Lukes, Temple Heath, and Jefferson Health System.

Continuity and Resource Capacity

TEN has created a team that will leverage their experience on recent Commonwealth projects to provide the continuity and resource capacity necessary for the Wenersville project. We have assembled a strong team of design consultants, and contractors to leverage the knowledge and momentum of the SCI Houtzdale's project while also ensuring capacity to customize and deliver an outstanding project for Wenersville. The Wenersville State Hospital project will include local contractors already experienced with DHS/DGS/DOC such as Conexus, Heim Company, Snelick Construction, and West Side Hammer Electric.

While we can build on the continuity and experience of the Houtzdale project, we have also added to our team to ensure the proper resources are available to focus on Wenersville and other projects. In particular, TEN's team is now supplemented by our new Director of Construction, Matt Morris. Matt has over 20 years' experience with large design-build construction management and estimating. Similarly, we have assigned Rajas Hatwalne and Mike Fendya as senior energy engineers to provide the bandwidth to work closely with our design consultant to expedite an initial feasibility study of the various central plant fuel switch options while concurrently developing the IGA of the other ECMs. The concurrent feasibility study analysis will facilitate DHS decision making on their preferred fuel switch and / or decentralization approach before finalizing design and cost for that ECM in the IGA. In this manner, we will simultaneously focus on multiple areas to help expedite the IGA review and design phases so that we can begin construction more quickly and coordinate effectively with all stakeholders.





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 Wernersville the comprehensive and value driven services it needs to make this project a success but will also provide the breadth of experience illustrated on the following pages.

a. Management Team Individual Qualifications

Please see the following pages for the TEN management team’s individual qualifications (limited to 6 per the RFQ). The following list depicts each team member and how many years of energy-related experience they currently have. Please see page nine for a full copy of the Organizational Chart for this project.

Team Member	Years of Experience	Certifications
David Robb	28	M.S. Building Construction Management
Jim Harven	35	PE, CEM, EBCP
Greg Lok	24	CEM, CPM, PE
Dave Clark	35	RPA, BOMA
Bob Tobin	18	OSHA 30-Hour, OSHA Electrical Safety Training
Wayne Chase	30	CMVP



David Robb

VP, Principal-in-Charge



Education

M.S. Building Construction Mgmt.

Michigan State University

B.A. Marketing

Michigan State University

Professional/Technical

Association of Energy Engineers

Member

Borough of Rosslyn Farms

Vice-President

Carlynton Education Foundation

Vice President

As TEN’s Vice President of Major Accounts, Mr. Robb will address the Department of Corrections’ needs and objectives as he coordinates the engineers, contract administrators, financial analysts, project managers and M&V specialists to execute deliverables and successful solutions for DHS.

Current Role at TEN

VP Major Accounts

8 years

Mr. Robb is responsible for leading TEN’s development efforts and will serve as Program Manager for all Pennsylvania DGS GESA projects. With over 27 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 multi-site installations.

Employment History

NORESCO

9 yrs.

As Group Sales Director and Senior Account Executive, Mr. Robb was responsible for account management of guaranteed energy savings contracts for clients in the mid-Atlantic region.

LEED Project Experience

Rachel Carson State Office Building

United Steelworkers Headquarters

Relevant Energy-Related Experience:

28 years

Energy Performance Contracting Project Experience		
SCI Houtzdale	Correctional Facility	\$30M
PA Capitol Complex	Government	\$18M
Thaddeus Stevens College	University	\$2.7M
Ebensburg Center	State Hospital	\$14M
Torrance State Hospital	State Hospital	\$4.2M



James Harven, PE, CEM
 Sr. Project Development Manager



As one of TEN’s Senior Development Managers, Mr. Harven will be managing the development phase for the project. He will be responsible for coordinating deliverables and overseeing development of efficiency goals.

Current Role at TEN
Sr. Project Development Manager

5 years
 Since 1981, Mr. Harven has been involved in building energy efficiency in several capacities. As a trained engineer, he has developed numerous projects across the nation, and has also managed the installation of associated projects. Mr. Harven has also managed the ongoing performance of projects as well as been responsible for the business development of such projects.

Education
B.S. Enviro. Engineering - HVAC Concentration
 Cal Poly San Luis Obispo

Professional/Technical
 American Society of Heating, Refrigerating and Air-Conditioning (ASHRAE)
Certified Energy Manager (CEM)
Professional Engineer (PE)
 Association of Energy Engineers (AEE)
Certified Existing Building Commissioning Professional (EBCP)
 PM Professional

Employment History
Constellation

5 years
 As Supervisor of Project Development, Mr. Harven managed the development of projects at Constellation.

Relevant Energy-Related Experience:
 35 years

Energy Performance Contracting Project Experience		
SCI Houtzdale	Correctional Facility	\$30M
Temple University	University	\$13.4M
Lancaster County, PA	Governmental	\$6.6M
Trenton Housing Authority, NJ	Public Housing	\$7M
Lehigh County	Nursing Home and Hi-Rise Apartments	\$5M



Greg Lok, PE, CEM, CMVP

VP – Engineering and Design



As TEN’s Vice President of Engineering and Design, Mr. Lok will review engineering design and structuring projects so that the Customer receives professional and quality services, maximizing their return on investment, and satisfaction on the overall project.

Current Role at TEN VP Engineering and Design

7 years

Mr. Lok is an energy management specialist experienced in developing projects, understanding Customer expectations, and managing the TEN engineering and design teams to make sure the project design goals are achieved while properly mitigating project and company risks.

Education

B.S. Mechanical Engineering
Queen’s University

Professional/Technical

CEM - Certified Energy Manager

CMVP - Certified Measurement and Verification Professional

CPM - Certified Project Manager

Professional Engineer (PE)
PA, OH, WV, DE, VA, MA, MD, ME, KY, TX, NM, Ontario

Employment History

Constellation

7 years

As Executive Director of Project Development, Mr. Lok managed Constellation's MUSH (Municipal Governments, Universities, Schools, Hospitals) and Public Housing Energy Services team with over 35 professional designers and engineers encompassing projects from coast to coast.

Relevant Energy-Related Experience:

24 years

Energy Performance Contracting Project Experience		
PA Capitol Complex	Government	\$18.5M
Dauphin County	Government	\$13M
Polk Center	State Hospital	\$7M
Pennsylvania State University	Higher Education	\$11M+
University of Pittsburgh	Higher Education	\$10M+
Lawrence County Housing Authority	Public Housing	\$7.5M



Dave Clark

VP, Construction



Mr. Clark will be 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.

Current Role at TEN

VP, Construction

6 years

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.

Professional/Technical
Real Property
Administrator– RPA
Building Owners and
Managers Association -
BOMA

Relevant Energy-Related
Experience:
35 years

Employment History

Constellation

8 yrs.

As Executive Director of Construction Services, Mr. Clark was 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.

Energy Performance Contracting Project Experience		
SCI Houtzdale	Correctional Facility	\$30M
PA Capitol Complex	Government	\$18.5M
Indiana County	Municipal Government	\$1.1M
Allegheny County Community College (South)	Higher Education	\$3.8M
Polk Center	State Hospital	\$7M



Bob Tobin

Sr. Project Manager



Education

B.S. HVAC Design
Penn State University

Professional/Technical
AEE, CBCP, OHSA 30-hour Training, Electrical Safety Training, NFPA 70E/Arc Flash

Relevant Energy-Related Experience:
18 years

As one of TEN’s Sr. Project Managers, Mr. Tobin 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. Tobin will be the liaison between the owners, engineers, designers, subcontractors, and construction team.

Current Role at TEN

Senior Project Manager

4 years

Mr. Tobin is responsible for all onsite project management and subcontractor supervision during construction. He ensures the worksite is safe and supervised in an effective and efficient manner. Mr. Tobin 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 18 years of experience in construction. Mr. Tobin is adept at project supervision, customer service, project development and management, building and installing. In conjunction with the Director of Construction, Mr. Tobin plans, coordinates, implements, and concludes projects per specifications, deadlines, and budget, with an overall objective of customer satisfaction.

Employment History

CMS Viron/Chevron Energy Solutions/OpTerra Energy Services

14 yrs.

As a Project Manager, Mr. Tobin was responsible for overseeing all aspects of project construction, including cost-estimating, coordination of subcontractors, inspections and commissioning.

Project Experience		
PA Capitol Complex	Government	\$18M
Thaddeus Stevens College	University	\$2.7M
Temple University	University	\$13.4M
Dauphin County	County Government	\$6.6M
Zambarano Hospital	State Hospital	\$4.5M



Wayne Chase, CMVP

Director, Post Construction Services



Education

M.B.A.

Syracuse University

B.S. Electrical Engineering

Clarkson University

Professional/Technical

Association of Energy Engineers (AEE)

Certified Measurement and Verification Professional (CMVP)

LEED AP

NYS Engineer in Training

Mr. Chase is an engineering and technical specialist with over 29 years of experience in energy modeling, HVAC and controls, utility data analysis, lighting design, field testing and inspection of buildings, and energy auditing. He leads post-construction customer site audits, verifying energy efficiency strategies, and calculating and reporting on project performance.

Current Role at TEN

Director, Post Construction Services

3 years

Mr. Chase’s responsibilities include auditing, analyzing, and quantifying building systems and energy consumption through the collection of site, system, and any other data required. He also performs energy engineering savings calculations, proposal development, and measurement and verification plans.

Employment History

ENGIE Services U.S.

20 years

As a Risk Manager, Mr. Chase reviewed and approved all customer proposals, construction contracts, and change orders by analyzing and reporting on the financial risk of each project’s energy savings guarantee and pricing for post construction M&V services for all projects in the U.S.

Relevant Energy-Related Experience:

30 years

Energy Performance Contracting Project Experience

Temple University	Higher Education	\$13.4M
PA Capitol Complex	Government	\$18M
Riverview School District	K12 Education	\$1,214,928
Lawrence County Housing Authority	Public Housing	\$5,389,950
Zambarano Hospital	State Hospital	\$4.5M



b. Offeror’s Financial Ability to Provide Guarantee

TEN, backed by the financial strength of Duquesne Light Holdings, will guarantee the energy savings projected from the proposed projects. TEN has never failed to meet an energy guarantee.

TEN is part of the Duquesne Light Holdings (DLH) family of companies that includes the Duquesne Light Company, DQE Communications, and TEN. Duquesne Light has been providing electric utility services in Pennsylvania since 1884. DLH, with over \$5.4 billion in assets, provides the financial resources necessary for TEN to provide service to customers seeking to save money, improve operations, and make improvements on an aggressive schedule, all while guaranteeing performance.

The financials of TEN’s parent company are available through Intralinks. To obtain access to Intralinks and the private financials of DLH, please click the following link, fill out the form, and choose “Submit.”

<https://www.duquesnelight.com/customer-support/contact?ref=investor>

TEN’s bonding program is provided by AON Surety 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. Since TEN’s acquisition by DLH, our current aggregate bonding limit has been increased to \$250 million dollars.

TEN’s Project Guarantee History	
Project	Project Value
PA DGS GESA 2018-1 (SCI Houtzdale)	\$30,562,832
PA DGS GESA 2017-1 (Capitol Complex)	\$18,044,436
PA DGS Small GESA #1 (Keystone/PJC)	\$ 2,917,900
United Steelworkers Headquarters	\$ 3,552,748
Community College of Allegheny County	\$ 3,761,442

c. Offeror’s Resource Availability

In our view, the capacity calculation is not really reflective of GESA construction capacity. Several reasons include; the long period between selection and actual construction, and the fact that a large portion of the construction work is sub-contracted. In fact, our capacity is a snapshot of today, whereas the Wernersville project won’t become a contract and enter backlog, potentially, for another 10 months. Further, final completion of several large projects will finish before the potential start of the Wernersville contract. TEN will be able to solidly resource the GESA 2021-2 Wernersville project with qualified personnel regardless of its potential project size. As noted, we have also, supplemented our team with additional resources to address any capacity concerns.

Capacity Calculation	
3 Year Average Sales	\$39.9M
Current Committed Backlog	\$22.4M
Capacity	\$17.5M



It should be noted that TEN continues to grow and recruits and retains some of the most experienced professionals in our specialized business. The majority of our team, and all of our senior leadership is based in Pennsylvania. Despite our positive value above, we would still argue that this is not reflective of a company's capability to effectively deliver a project. For instance, if a company is growing, their 3-year average sales against committed backlog will be more narrow. In contrast, where a company has declining sales and a poor backlog, their calculation may reflect a lot of capacity but in truth they may have laid off staff or be underperforming. We believe availability of assigned experienced resources is much more accurate measure of our ability to perform as required by the Commonwealth. In addition, the calculations above do not account for the utilization of local subcontractors who supplement the TEN team and add to the team's ability to successfully deliver this project.

d. Offeror's Statement of Readiness and Commitment of Resources per the RFQ Project Schedule

All staff 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.

e. Offeror's Notification of Default or Debarment

TEN has never had a contract default or has been debarred.



2-5.4 Qualification Forms

2. Design – Consultant(s), including SDB and VBE consultants, if any (Suggested number of sheets/pages: 4 sheets, plus 1 sheet per person)

a. Firm's Experience on GESA projects.

(1). Include date(s), location, owner, owner contact, project amount, and description. Complete and/or incomplete projects may be submitted. Discuss status of project and if completed as originally scheduled.

b. Individual Qualifications (4-person limit)

(1). Describe project responsibilities, time with firm, and experience with GESA projects, educational or technical training, and any other information relevant to the evaluation of the individual.

c. Entity's Statement of Readiness and Commitment of Resources per the RFQ Project Schedule

(1). Provide a written statement confirming the person(s) identified in this RFQ are available and will be committed to the Project for the time period(s) as described in the RFQ Project Schedule.

d. Entity's Notification of Default or Debarment.

(1). Provide a listing including owner, project, date, and explanation of any contract default or debarment within the last 5 years.



2. Design – Consultant(s)

We have identified a potential design consultant experienced with DHS expectations to support the project. We have worked closely with Entech Engineering on the SCI Houtzdale project, which has similar central plant upgrades to Wernersville. Our collective experience and positive working relationship will significantly expedite our ability to deliver the Wernersville project. In this manner, we can ensure the continuity required to develop, design & deliver the project under a timeline that will provide continuity of service and maximize savings to the Commonwealth. Should DHS instead select Entech as its agency consultant, we will collaborate with DHS on a suitable replacement for our design consultant role. In either case, significant team continuity will be available to DHS.

Entech Engineering, Inc.

1. Experience on GESA Projects Greater than \$5 Million

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown reflect **the subcontractor’s** portion of the overall GESA project.

Danville State Hospital – Boiler Replacement	
Date	2013
Location	Danville, PA
Owner	Energy Systems Group (ESCO)
Contact	Michael Warchol – 508-661-2262
Amount	\$75,000 – Entech Contract Value
Description	Removed two boilers and replaced them with new gas-fired boiler.
Status	Completed
New Lisbon Developmental Center	
Date	2010
Location	New Lisbon, NJ
Owner	State of NJ, Department of Treasury, Division of Property Mgmt and Construction
Contact	Richard Flodmand - (609) 984-3629
Amount	\$14.1M
Description	Performed an energy audit to identify ECMs, 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.
Status	Completed



Edna Mahan Correction Facility and Hunterdon Development Center	
Date	2018
Location	Clinton, NJ
Owner	State of New Jersey
Contact	William Golubinski – 609-292-5210
Amount	\$45M total, \$424,000 – Entech contract value
Description	Served as an on-call advisor during design and construction and will execute the energy/savings measurement & verification (M&V) plan once all ECMs are constructed.
Status	Ongoing

2. Subcontractor’s Superintendent’s Qualifications

Bryan C. Haag, PE, CEM, LEED AP	
Responsibilities	Principal
Time with Firm	20 years
Experience with GESA Projects	Yes: SCI Dallas, New Lisbon, Danville Hospital, LaSalle College
Education/Technical Training	B.S. Architectural Engineering, Professional Engineer, LEED Accred.
Other Information	
Mark A. Feeg, PE, LEED AP	
Responsibilities	Senior Mechanical Engineer
Time with Firm	3 years
Experience with GESA Projects	Yes: SCI Houtzdale
Education/Technical Training	B.S. Mechanical Engineering Technology
Other Information	
Mark D. Ray, CEM	
Responsibilities	Senior Mechanical Designer
Time with Firm	39 years
Experience with GESA Projects	Yes: SCI Houtzdale
Education/Technical Training	A.S. Mechanical Engineering
Other Information	
John J. Sirc, PE, MBA	
Responsibilities	Senior Project Manager/Energy Engineer
Time with Firm	<1 years
Experience with GESA Projects	Yes: SCI Fayette
Education/Technical Training	MBA, B.S. Mechanical Engineering
Other Information	



David E. Mace, PE	
Responsibilities	Manager, Electrical Engineering
Time with Firm	9 years
Experience with GESA Projects	Yes
Education/Technical Training	B.S. Electrical Engineering
Other Information	

3. Statement of Readiness and Commitment of Resources

Entech Engineering, Inc. personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. Subcontractor's Workman's Compensation Experience

2017: .942

2018: .944

2019: .938

5. Notification of Default or Debarment

Entech Engineering, Inc. has neither defaulted on any contract nor faced debarment.



2-5.4 Qualification Forms

3. Construction – Key Subcontractors, including SDB and VBE subcontractors, if any (Suggested number of sheets/pages: 8 sheets, plus 1 sheet per person)

- a. Offeror shall provide clear and concise information that will demonstrate the following qualifications for any Key Subcontractors that will be used on the Project:
- (1) Each Key Subcontractor’s Experience on GESA Projects greater than \$5 million.
 - (a) include date(s), location, owner, owner contact, project amount, and description. completed as originally scheduled.
 - (2).Each Key Subcontractor’s Superintendent’s Qualifications (4-person limit)
 - (a).Describe project responsibilities, time with firm, and experience with GESA projects, educational or technical training, and any other information relevant to the evaluation of the individual.
 - (3).Each Key Subcontractor’s Statement of Readiness and Commitment of Resources per the Project Master Schedule.
 - (a).Provide a written statement confirming 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).Each Key Subcontractor’s Workman’s Compensation Experience Modification Rating for the calendar years 2017, 2018, 2019.
 - (5).Each Key Subcontractor’s Notification of Default or Debarment.
 - (a).Provide a listing including owner, project, date, and explanation of any contract default or debarment within the last 5 years.



3. Construction – Key Subcontractors

TEN has initially pre-qualified the following sub-contractors for DHS’s consideration on this project. We have worked with all these firms on other projects and have given additional consideration to those who have previously delivered successfully for Wernersville. DHS and site familiarity and proximity will be especially helpful to expediting the IGA, design and delivery of this time sensitive project. 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 DHS and with adherence to Small Diverse Business (SDB) and Veteran Business Enterprise (VBE) participation rules and commitments.

Subcontractors for GESA 2021-2	
Heim Company	
Snelick Construction	VBE
Conexus	
Automated Logic	
West Side Hammer Electric	
National Lighting & Maintenance Supply	SDB
I-Star	
H2O Applied Technologies	SDB
American Building Technologies	



Edwin L. Heim Company

1. Experience on GESA Projects Greater than \$5 Million

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown reflect **the subcontractor's** portion of the overall GESA project.

ELCO Middle & High School	
Date	2019-2020
Location	Myerstown, PA
Owner	ELCO School District
Contact	Doug Dresch (717) 866-7447
Amount	\$6,100,000.00
Description	Designed and installed fresh air systems for all classrooms. Replaced central heating and cooling plants. Converted 3-pipe system to 4-pipe system. installed VAV systems for office areas. Converted middle school boiler plant to natural gas.
Status	completed

East Pennsboro High School & Middle School	
Date	2018-2019
Location	Enola, PA
Owner	East Pennsboro School District
Contact	Elizabeth Holley (717) 732-3601
Amount	\$2,996,000.00
Description	Designed and installed fresh air systems throughout high school. Replaced air handlers & rooftop units. Upgraded central heating & cooling plants. Added air conditioning to middle school gym. Completed HVAC & plumbing renovations for MS natatorium.
Status	Completed

Highmark Corporate Office	
Date	2016-2017
Location	Camp Hill, PA
Owner	Highmark
Contact	Brad Amon (717)302-9751
Amount	\$2,298,000.00
Description	Designed and install a decentralized 2,000 ton chiller plant to serve 4 buildings. Included the replacement of cooling towers and pumps. Converted complex to variable flow chilled water.
Status	Completed



McNees, Wallace, & Nurrick Corporate Office	
Date	2014, 2017
Location	Harrisburg, PA
Owner	McNees, Wallace, & Nurrick
Contact	Nancie Hart (717)237-5345
Amount	\$2,153,000.00
Description	Converted building heat from steam to hot water. Replaced the penthouse air handlers and return air fans with building fully occupied. Upgraded 3-pipe system to 4-pipe system. Installed new high efficiency chiller plant & hot water boiler plant.
Status	Completed

2. Subcontractor’s Superintendent’s Qualifications

Tim Bortner	
Responsibilities	Project Superintendent
Time with Firm	15 years
Experience with GESA Projects	10 years
Education/Technical Training	Plumbing & Pipe fitters Local 520
Other Information	
Corey Snavelly	
Responsibilities	Project Manager
Time with Firm	12 years
Experience with GESA Projects	18 years
Education/Technical Training	Plumbing & Pipe fitters Local 520
Other Information	

3. Statement of Readiness and Commitment of Resources

The Edwin L. Heim Company has the necessary staff & resources to complete the project for the time period referenced in the RFP Project Schedule.

4. Subcontractor’s Workman’s Compensation Experience

2017: 0.725
2018: 0.712
2019: 0.714

5. Notification of Default or Debarment

The Edwin L. Heim Company has never been disbarred or had any defaults levied against it or any of its entities.



Snelick Construction Services

1. Experience on GESA Projects Greater than \$5 Million

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown may reflect **the subcontractor’s** portion of the overall GESA project.

SCI Houtzdale	
Date	2020
Location	Houtzdale, PA
Owner	Pennsylvania Department of Corrections
Contact	Joe Richards – 814-380-4341
Amount	\$30,562,832
Description	Construction Services
Status	Under construction

Penn State University – Phase 1A	
Date	2017
Location	University Park, PA
Owner	Penn State University
Contact	Renee Gaston – 412-551-4362
Amount	\$1,160,624
Description	Misc. Rough Carpentry & Labor
Status	Completed

Penn State University – Phase 1B	
Date	2017 – March 2018
Location	University Park, PA
Owner	Penn State University
Contact	Renee Gaston – 412-551-4362
Amount	\$3,642,554
Description	Misc. Rough Carpentry & Labor
Status	Completed



Penn State University – Phase 1B Cabinet Masters	
Date	2017 – March 2018
Location	University Park, PA
Owner	Penn State University
Contact	Renee Gaston – 412-551-4362
Amount	\$206,400
Description	Installation of casework & sills
Status	Completed

2. Subcontractor’s Superintendent’s Qualifications

Scott D. Snelick	
Responsibilities	Project Manager
Time with Firm	10 years
Experience with GESA Projects	Yes
Education/Technical Training	Bachelor of Science in Construction Management
Other Information	
Brandon Goodwin	
Responsibilities	Project Manager/Foreman
Time with Firm	4 years
Experience with GESA Projects	Yes
Education/Technical Training	Certified Carpenter Journeyman & Foreman
Other Information	

3. Statement of Readiness and Commitment of Resources

Snelick Construction Services personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. Subcontractor’s Workman’s Compensation Experience

2017: 1
 2018: .868
 2019: .812
 2020: .780

5. Notification of Default or Debarment

Snelick Construction Services has never been disbarred or had any defaults levied against it or any of its entities.



Conexus

1. Experience on GESA Projects Greater than \$5 Million

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown reflect **the subcontractor's** portion of the overall GESA project.

SCI Muncy, Guaranteed Energy Savings Act (GESA)	
Date	2017
Location	Muncy, PA
Owner	PA Department of Corrections
Contact	Robert Harding, SCI Muncy - 570-546-3171
Amount	Controls Contract: \$909,000
Description	Upgrade DDC HVAC controls, de-centralize heating system
Status	Ongoing
Cumberland Prison ESCO Project	
Date	2020
Location	Cumberland, MD
Owner	MD Department of Public Safety & Correctional Services
Contact	(301) 729-7000
Amount	Controls Contract: \$1.6M
Description	Install a campus wide energy management system with wireless network connectivity
Status	Completed
Letterkenny Army Depot – ESPC Project	
Date	2017
Location	Chambersburg, PA
Owner	Department of Defense
Contact	Dean Stouffer
Amount	Controls Contract: \$1.8M
Description	Update controls in 16 building and connect to a secure server
Status	Completed
Danville State Hospital	
Date	2005
Location	Danville, PA
Owner	PA Department of Human Services
Contact	Andrew Catflich
Amount	Controls Contract: \$550,000
Description	Install a campus wide energy management system with a web based interface
Status	Completed



2. Subcontractor’s Superintendent’s Qualifications

Seth Mills	
Responsibilities	Director of Operations / Project Manager
Time with Firm	13 years
Experience with GESA Projects	Yes, as Director of Operations for Conexus Seth has led the teams for all GESA project performed over the last 10 years.
Education/Technical Training	Lincoln Technical Institute, Leadership Management Institute – Achieving Manager, OSHA 10, Journeyman Electrician
Other Information	
Georg Panol	
Responsibilities	Foreman
Time with Firm	19 years
Experience with GESA Projects	Yes, worked on Danville State Hospital GESA Project, SCI Huntingdon, Letterkenny and Carlisle War College.
Education/Technical Training	Electrical Occupations Degree from Pennsylvania College of Technology, OSHA 30.
Other Information	
Keith Gard	
Responsibilities	Application Engineer
Time with Firm	10 years
Experience with GESA Projects	Yes, Is currently working on SCI Muncy, Cumberland Prison, Letterkenny.
Education/Technical Training	Associates Degree in Business Administration Associates Degree in Electronic Engineering Technology
Other Information	

3. Statement of Readiness and Commitment of Resources

Conexus personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. Subcontractor’s Workman’s Compensation Experience:

2017: .847
2018: .890
2019: .880
2020: .981

5. Notification of Default or Debarment

Conexus has neither defaulted on any contract nor faced debarment.



Automated Logic

1. Experience on GESA Projects Greater than \$5 Million

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown reflect **the subcontractor's** portion of the overall GESA project.

Shippensburg University	
Date	2004
Location	Shippensburg, PA
Owner	Shippensburg University
Contact	William Lensie
Amount	Total project amount: 14M, Controls portion: 960K
Description	Retrofit exiting pneumatic and outdated DDC HVAC controls to new DDC controls
Status	Completed
Rachel Carson State Office Building	
Date	2006
Location	Harrisburg, PA
Owner	PA Department of General Services
Contact	Nike Clark
Amount	Total Project Cost: 8.3M, Control Cost: 204K
Description	Retrofit obsolete building control system to the new Web-Based state of the arts control system.
Status	Completed
East Stroudsburg University	
Date	2006
Location	East Stroudsburg, PA
Owner	East Stroudsburg University
Contact	Scott Heinrick
Amount	Total Project Cost: 9.1M, Controls Cost: 645K
Description	Update to new Web-based control system
Status	Completed
PA State Office Complex Buildings	
Date	2007
Location	Harrisburg, PA
Owner	PA Department of General Services
Contact	Nike Clark
Amount	Controls Cost: 577K
Description	Retrofit obsolete building controls to new Web-Based state of the arts control system
Status	Completed



2. Subcontractor's Superintendent's Qualifications

Randy Robertson	
Responsibilities	Project Manager
Time with Firm	12 years
Experience with GESA Projects	Yes
Education/Technical Training	25 years in HVAC controls business, Project Management training, JCI and ALC programing training.
Other Information	
Dave Drake	
Responsibilities	Project Manager
Time with Firm	13 years
Experience with GESA Projects	Yes
Education/Technical Training	30 years in HVAC controls business, Project Management training, several control system programing trainings.
Other Information	
Brad Thal	
Responsibilities	Project Manager
Time with Firm	12 years
Experience with GESA Projects	Yes
Education/Technical Training	Associated Degree in Mechanical Engineering Technology, Job Specific; ALC Engineering I/O ALC Graphics Submittal, ALC View Builder and Microsoft Projects.
Other Information	
Norm Hockley	
Responsibilities	Project Manager
Time with Firm	16 years
Experience with GESA Projects	Yes
Education/Technical Training	20 years in controls business. Attended Penn Tech for Electrical technology, Job Specific; Design programming in John Controls, Delta Controls and Automated Logic.
Other Information	

3. Statement of Readiness and Commitment of Resources

Automated Logic personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. Subcontractor's Workman's Compensation Experience

2017: .656

2018: .679

2019: .693

5. Notification of Default or Debarment

Automated Logic has never been disbarred or had any defaults levied against it or any of its entities.



West Side Hammer Electric

1. Experience on GESA Projects

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown reflect **the subcontractor's** portion of the overall GESA project.

St. Luke's University Health Network	
Date	2019
Location	Easton, PA
Owner	St. Luke's
Contact	Lend Lease, 215-564-1616
Amount	\$6,500,000
Description	New Electrical Construction for Health Care Facility
Status	Completed

St. Luke's Bucks County Hospital	
Date	2019
Location	Quakertown, PA
Owner	St. Luke's
Contact	IMC Construction, 610-889-3600
Amount	\$5,135,448
Description	New Electrical Construction for Health Care Facility
Status	Completed

Lehigh University Southside Commons	
Date	2019
Location	Bethlehem, PA
Owner	Lehigh University
Contact	Kane Builders, 215-517-5511
Amount	\$3,530,000
Description	New Electrical Construction for Multi-Purpose Educational Facility
Status	Completed

Lafayette College – Duct Bank	
Date	2018
Location	Easton, PA
Owner	Lafayette College
Contact	Lafayette College, 610-330-5000
Amount	\$1,143,418
Description	New High Voltage Duck Bank for Campus Infrastructure Upgrades
Status	Completed



Kutztown University – Rothermel Hall	
Date	2018
Location	Kutztown, PA
Owner	Kutztown University
Contact	Kutztown University, 610-683-4000
Amount	\$2,086,375
Description	Electrical Construction Remodel of Educational Academic Facility
Status	Completed

City of Harrisburg, PA	
Date	2017
Location	Harrisburg, PA
Owner	City of Harrisburg
Contact	Jim Schriver, 412-992-1397
Amount	\$569,881
Description	LED Lighting Upgrade
Status	Completed

Moravian College Health Science Building	
Date	2017
Location	Bethlehem, PA
Owner	Moravian College
Contact	Iron Hill Construction Management, 610-332-0550
Amount	\$1,431,465
Description	New Electrical Construction for Educational Academic Facility
Status	Completed

Lehigh Valley Health Network	
Date	2021
Location	Bethlehem, PA
Owner	Lehigh Valley Health Network
Contact	Whiting Turner, 610-366-0600
Amount	\$1,097,184
Description	New Electrical Construction for Health Care Facility
Status	Completed



2. Subcontractor’s Project Manager & Superintendent’s Qualifications

Matt Krapf	
Responsibilities	Project Manager
Time with Firm	16 years
Experience with GESA Projects	Yes
Education/Technical Training	IBEW Local 375 Apprenticeship Program, Lehigh County Vocational Technical School, 15-hour OSHA Training, Confined Space Training, MSHA Training, Underground Electric Locating Training, Electrical Safety and Hazards Training, Infrared Thermography Electrical/Mechanical Level 1 Certification, NFPA 70E Arc Flash Training, PPL Electric Fast Track Program Installer Certified.
Other Information	20+ years’ experience, 10+ years as foreman. Extensive experience managing lighting retrofit projects.
Robert Yankowy	
Responsibilities	Overall Project Administration
Time with Firm	29 years
Experience with GESA Projects	Yes
Education/Technical Training	IBEW Local 375 Apprenticeship Program, Lehigh County Vocational Technical School, MSHA Training, NECA Training, OSHA 30 Hour Training, Supervisory Training, Master Systems – Job Management Workshop and Estimating Take-off Workshop.
Other Information	Responsibilities include overseeing all active jobsites from the startup of the job, until it is complete. Supporting the foreman in the field, and gaining maximum efficiency for field staff in communication, scheduling, DHSumentation, material ordering, and anything else which is required. Responsible for developing and maintaining consistency, flow, and timeliness of information and communication.

3. Statement of Readiness and Commitment of Resources

West Side Hammer Electric personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. Subcontractor’s Workman’s Compensation Experience Modification Rate

2017: 0.692
 2018: 0.811
 2019: 0.815

5. Notification of Default or Debarment

West Side Hammer Electric has never been disbarred or had any defaults levied against it or any of its entities.



National Lighting and Maintenance Supply Corporation

1. Experience on GESA Projects Greater than \$5 Million

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown reflect **the subcontractor's** portion of the overall GESA project.

SCI Houtzdale	
Date	2020
Location	Houtzdale, PA
Owner	Pennsylvania Department of Corrections
Contact	Joe Richards – 814-380-4341
Amount	\$902,191
Description	Replacing existing inefficient lighting with new L.E.D. energy efficient fixtures, lamps, and drivers- subcontractor for TEN Inc.
Status	Under construction

Indiana County Courthouse, Airport, Correctional Facility, Nursing Home & Parks	
Date	2019
Location	Indiana County, PA
Owner	Indian County Commissioners
Contact	Joe Richards – TEN – (412) 429-8888
Amount	\$236,000
Description	Replacing existing inefficient lighting with new L.E.D. energy efficient fixtures, lamps, and drivers- subcontractor for TEN Inc.
Status	Completed

The Bradley Center	
Date	2015-2016
Location	Pittsburgh, PA
Owner	The Bradley Center
Contact	Joe Statler – TEN – (412) 429-8888
Amount	\$41,122
Description	Replacing existing inefficient lighting with new L.E.D. energy efficient fixtures, lamps, and drivers- subcontractor for TEN Inc.
Status	Completed



Sheetz Inc. (not GESA – but funded with rebate funds)	
Date	2017-2018
Location	200+ locations in PA, MD, OH, WV
Owner	Sheetz Inc
Contact	Eric McCrum – Energy Engineer - (814) 239-6021
Amount	\$3,100,000
Description	Replacing existing inefficient lighting with new LED lighting – rewiring in required area. Over 200 stores, completing both indoor and outdoor lighting. We completed all rebate paperwork for all the stores and managed all material and general logistics along with providing all installation labor.
Status	Completed

2. Subcontractor’s Superintendent’s Qualifications

Rick West	
Responsibilities	Project Management & Safety
Time with Firm	25 years
Experience with GESA Projects	Over
Education/Technical Training	Bethany College, 25 years electrical and project management / safety experience
Other Information	IBEW local 5 electrician
Justin Thorpe	
Responsibilities	Project Management, Union liaison & estimating
Time with Firm	1 year
Experience with GESA Projects	19 years as electrician on various projects
Education/Technical Training	IBEW Local 5 apprentice program
Other Information	Pittsburgh Licensed, certified mater electrician

3. Statement of Readiness and Commitment of Resources

National Lighting Maintenance Supply Corp. has project management and foreman available and committed to the project for the time period referenced in the RFP Project Schedule. We are signatory to IBEW Local #5 and have been assured by them that we will be able to have journeymen and apprentices as needed for this and other projects.

4. Subcontractor’s Workman’s Compensation Experience

2017: 1.369

2018: 1.711

2019: 1.58 (safety improvements established and ongoing)

5. Notification of Default or Debarment

National Lighting and Maintenance has never been disbarred or had any defaults levied against it or any of its entities.



I-Star Energy Solutions

1. Experience on GESA Projects Greater than \$5 Million

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown reflect **the subcontractor's** portion of the overall GESA project.

GSA-Reagan Building ESPC	
Date	2016-2017
Location	Washington, DC
Owner	GSA
Amount	\$6,856,365
Description	Installing Thermolite Window System throughout multi-story structure, while building was 100% occupied.
Status	Completed

Marshall Islands ESPC	
Date	2018-2019
Location	Marshall Islands
Owner	Military Base
Amount	\$2,935,803
Description	Installation of building envelope measures (door weather strip/sweeps, window sealant; penetration sealant), on over 400 buildings, on a remote military base in the Pacific Ocean, just past the International Date Line.
Status	Completed

VAMC ESPC	
Date	2021-Current
Location	Brooklyn/Manhattan, NY
Owner	VAMC
Amount	\$2,747,510
Description	Installation of mechanical insulation on VAMCs. Multiple story hospitals in NYC.
Status	Current



2. Subcontractor’s Superintendent’s Qualifications

Andrew Martin	
Responsibilities	Project Manager
Time with Firm	24 years
Experience with GESA Projects	11 years
Mike Gantz	
Responsibilities	Construction Manager
Time with Firm	12 years
Experience with GESA Projects	10 years

3. Statement of Readiness and Commitment of Resources

I-Star Energy Solutions personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. Subcontractor’s Workman’s Compensation Experience

2017: .55
 2018: .55
 2019: .62
 2020: .61

5. Notification of Default or Debarment

I-Star Energy Solutions has never been disbarred or had any defaults levied against it or any of its entities.



H2O Applied Technologies

1. Experience on GESA Projects Greater than \$5 Million

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown reflect **the subcontractor's** portion of the overall GESA project.

SCI Muncy Water Conservation	
Date	2020
Location	Muncy, PA
Owner	Commonwealth of PA Dept. of Corrections
Contact	
Amount	\$1.1 Million
Description	Low flow plumbing fixtures, penal fixture controls, steam traps, cooling
Status	In Progress
Philadelphia Housing Authority Water Conservation	
Date	2018-2019
Location	Philadelphia, PA
Owner	Philadelphia Housing Authority
Contact	
Amount	\$2.2 Million
Description	Low flow plumbing fixtures
Status	Completed

2. Subcontractor's Superintendent's Qualification

Justin Clark, CEM	
Responsibilities	Senior Project Engineer
Time with Firm	12 years
Experience with GESA Projects	Yes
Education/Technical Training	Bachelor of Science Mechanical Engineering Worcester Polytechnic Inst.
Other Information	Mr. Clark has developed over 75 projects (\$38 Million) comprising various water and energy conservation measures.
James Allen Hurley	
Responsibilities	Senior Project Manager
Time with Firm	6 years
Experience with GESA Projects	Yes
Education/Technical Training	Licensed Electrician, North Carolina; I-CON Systems Certified Installer



Other Information	Mr. Hurley has performed work in over 50 correctional facilities throughout the US in various roles including auditor, project developer, installer, and project manager.
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3. Statement of Readiness and Commitment of Resources

H2O Applied Technologies LLC (H2O) team members identified are available and will be committed to the project for the time period referenced in the RFQ Project Schedule.

4. Subcontractor’s Workman’s Compensation Experience

2017: .92
2018: .92
2019: .92
2020: .89

5. Notification of Default or Debarment

H2O has not defaulted on any of its contracts and has never been debarred.



American Building Technologies

1. Experience on GESA Projects Greater than \$5 Million

Note: As Subcontractors, the total value of the projects is not always common knowledge, therefore amounts shown reflect **the subcontractor's** portion of the overall GESA project.

Pennsylvania State Parks – Phase 1	
Date	2018
Location	Pennsylvania, USA
Owner	PA State Parks
Contact	Tony Prelec - ESG
Amount	\$485,213
Description	Building Envelope upgrades on 27 state park and forest district sites.
Status	Complete
Pennsylvania State Parks – Phase 2	
Date	2020
Location	Pennsylvania, USA
Owner	PA State Parks
Contact	Shawn Skethway - McClure
Amount	\$436,901
Description	Building Envelope upgrades on 40 state park and forest district sites.
Status	95% Complete
Rochester School District	
Date	2019
Location	Beaver County, PA
Owner	Rochester School District
Contact	Ron Krhovsky - Constellation
Amount	\$383,323
Description	Building Envelope upgrades in school including over 700 new windows
Status	Complete



2. Subcontractor’s Superintendent’s Qualification

Frank Buchanan	
Responsibilities	President and CEO
Time with Firm	1 years
Experience with GESA Projects	Yes
Education/Technical Training	BPI Envelope Professional and Building Analyst. Many lighting training classes including CLEP and CEM.
Other Information	Project sales, auditing, engineering and development, supervision of field personnel, material procurement and handling, equipment logistics, project reporting and project close-out
Richard Valway	
Responsibilities	Vice President of Operations
Time with Firm	1 years
Experience with GESA Projects	No
Education/Technical Training	Executive Leadership Certificate from the Stanford Graduate School of Business.
Other Information	More than 30 years of career experience in contract management across a broad spectrum of markets including hospitals and healthcare, senior living services, higher education, K-12 schools, and businesses.

3. Statement of Readiness and Commitment of Resources

American Building Technologies, LLC personnel identified are available and will be committed to the project for the time period referenced in the RFP Project Schedule.

4. Subcontractor’s Workman’s Compensation Experience

American Building Technologies is not yet rated.

5. Notification of Default or Debarment

American Building Technologies has not been debarred and is not in default of any contract.