Volume I - Technical Submission

Consulting Services
for a Guaranteed Energy Savings Project at:
Pennsylvania Department of Transportation
Districts 1, 2, and 10
Project No. GESA 2025-1(C)

04.15.2025

prepared for:

pennsylvania
DEPARTMENT OF GENERAL SERVICES

Becky Tomlinson, DGS Energy Office
RFQ Coordinator
401 North Street, Suite 403
North Office Building
Harrisburg, PA 17120-0500
retomlinso@pa.gov

prepared by:

ENTECH
ENGINEERING
be informed; be confident℠

Entech Engineering, Inc.
201 Penn Street, Suite 300
Reading, PA 19601
1.800.825.1372 | www.entecheng.com

Entech Submission: P-250182.000

Table of Contents

ENTECH ENGINEERING

April 14, 2025

Becky Tomlinson, RFQ Coordinator
Department of General Services
403 North Office Building
401 North Street
Harrisburg, PA 17120

Re: Response to Request for Qualifications for GESA 2025-1 (C)
Consulting Services on a Guaranteed Energy Savings Project for
PennDOT Districts 1, 2, and 10
Entech Proposal P250182.000

Dear Ms. Tomlinson:

Entech has been a leading provider of Energy Consulting and Owner's Representative services in the Commonwealth of Pennsylvania for over 40 years. **Our partnership value lies in our extensive experience with both the PA GESA program and PennDOT, coupled with our deep bench of highly qualified, multi-disciplined engineering professionals and our geographic presence in central and western PA.** Our qualifications include successful completion of six GESA projects as Energy Consultant, including PennDOT Districts 3 and 8. We have a strategic placement of staff within Pennsylvania and specifically within the project districts as well as proven multi-site GESA project management expertise across similar geographic regions.

Strategic Advantages for PennDOT Districts 1, 2, and 10

- **Proven PennDOT Experience**: Our work with PennDOT Districts 3 and 8 has established efficient processes that we can immediately implement and further refine for Districts 1, 2, and 10, drastically reducing learning curves and delivering key insight throughout the project.
- **Geographic Presence**: Entech is a Pennsylvania-based firm; 96% of our staff are located within the Commonwealth. Our team lives and works within the Districts covered by the proposed PennDOT project.
- **Multi-Site Project Management**: We successfully deliver projects that span multiple sites across broad geographies. A PA example is the Fish and Boat GESA project with sites in counties across the Commonwealth, including six counties that overlap PennDOT's proposed project area.
- **Extensive GESA Energy Consulting Experience**: We've successfully served as Energy Consultant for six GESA projects, including PennDOT Districts 3 and 8, State Correctional Institutes at Fayette and Frackville, PA Fish and Boat Commission, Wernersville State Hospital, and four DGS State Office Buildings in Reading, Scranton, and Harrisburg.
- **Additional GESA Project Involvement**: We completed SCI Dallas (the first GESA project under the Wolf Administration) and SCI Houtzdale GESA projects as part of the design team, and we provided consulting at SCI Muncy that was later incorporated into their GESA project.

Entech's proposed team would be led by:

Principal-in-Charge Bryan Haag and **Project Manager Royal Smith**.

This team of Pennsylvania-based leaders has successfully guided DGS through each of Entech's Energy Consultant-led GESA projects, beginning each effort with assisting in the careful selection of an ESCO, followed by the development of the Investment Grade Audit (IGA). This stage of the project needs a team that is:

- knowledgeable in the GESA requirements,
- equipped to interpret and analyze the proposed Energy Conservation Measures (ECMs), qualified to understand the cashflow, and
- has the experience and foresight to intercept issues during the planning stages that would otherwise arise during construction.

As the project transitions into construction, our design team takes on a more prominent role, as they support our Project Manager with design review, submittal approvals, and construction administration. In this way, we deliver consistently and efficiently managed projects under a single leadership team supported by a bench of highly qualified in-house engineering professionals.

Beyond Traditional Owner's Representative Services Experience

Entech brings additional relevant experience as an Energy Consultant for energy savings projects, including:

- **40+ years**: as an energy consulting firm helping clients implement effective energy programs, reducing energy costs while increasing reliability and addressing deferred maintenance.
- **State of NJ Energy Savings Improvement Program (ESIP) and P4P**: energy assessment, consulting, and measurement & verification services within these two NJ energy programs; ESIP is very similar to the PA GESA program.
- **U.S. Architect of the Capitol Energy Program**: energy/facility/utility studies and development of a model energy plan and Congressional reporting for sustainability, energy, and water conservation initiatives throughout the U.S. Capitol Complex and supporting facilities.
- **Alternate Energy Project and Financing Models**: examples include Energy Consultant Owner's Representative services for large rural and urban healthcare systems. For instance, we are helping a Philadelphia-based healthcare system identify the most advantageous financial models through which they can approach updates to their multi-campus health system's aging mission-critical equipment.

Due to confidentiality, we are unable to include some of our work as project examples; however, the reference for our Philadelphia-based healthcare project would be a great resource who has agreed to be available upon your request to discuss our work. As

exemplified through this project and others like it, Entech is at the forefront of energy savings project development.

Entech takes a proactive approach to the Energy Consultant role. We understand what works in energy projects and what doesn't. Our experience in managing all components and entities required for successful energy project implementation will ensure this project is completed in the best interest of DGS and PennDOT.

We look forward to developing a trusted partnership and delivering another successful GESA project outcome.

Entech acknowledges receipt of BULLETIN NO. 1, dated April 1, 2025, for Project No. GESA 2025-1C.

Sincerely,

Bryan C. Haag, P.E., CEM, LEED AP®
Principal
Entech Engineering, Inc.
201 Penn Street, Suite 300, Reading, PA 19601
610-373-6667/800-825-1372 Fax: 610-373-7537
BHaag@entecheng.com
Entech PA Vendor # 129535

Royal F. Smith, CEM
Project Manager

contents

1. **Appendix A - Energy Consultant Information Form**
2. **Appendix B - Quote Signature Page**
3. **Appendix C - Non-Collusion Affadavit**

1 Appendix A
Energy Consultant Information Form

"I commend Entech on your dedication to customer service, as you have been there each step of the way and have worked tirelessly to meet our goals."

Director
Office of the Architect of the Capitol | Washington, D.C.

ENERGY CONSULTANT INFORMATION FORM
(Complete in INK or TYPE only - DO NOT use pencil)

DGS GESA-2025-1C DOT Districts 1, 2, 10 Consultant
LOCATION: Department of Transportation, Districts 1, 2, and 10, PA

COMPLETE ALL APPLICABLE AREAS

Pa. Vendor ID Number: 129535 All GESA Consultants must be approved thru the DGS ITQ process: http://www.dgs.internet.state.pa.us/ITQ/Default.aspx	
ITQ CONTRACT NO.	4400016426
CONSULTANTS BUSINESS NAME: Entech Engineering, Inc.	
CONTACT AND TITLE OF PERSON:	Bryan C. Haag, P.E., CEM, LEED AP
ADDRESS:	201 Penn Street, Suite 300, P.O. Box 32, Reading, PA 19603
PHONE NUMBER:	717 .373.6667
E-MAIL ADDRESS:	bhaag@entecheng.com

A. **List the number of full-time personnel currently employed with the firm. Do not include Sub-Consultants. Discuss use of Sub-Consultants in Section "C" below.**

	REGISTERED	PROF. DEGREE	CEM	OTHER	TOTAL
Architect	2	1			3
Civil/Structural Engineer	25	3		5	33
Mechanical Engineer	6	8	2	5	21
Electrical Engineer	2	2		3	7
Account Manager	2		1	3	5
Project Managers	11	25	1	1	38
Site Inspectors				13	13
Measurement & Verification	1			1	2
Other/Specialist	7	17		17	41

B. **<u>Submit as a separate page to this form, on one (1) page</u>, identify no more than three (3) projects that best illustrate your firm's current qualifications to perform the review and construction services for this project. DO NOT list projects by consultants or by staff that will not be assigned to this project. Use the categories bulleted immediately below in describing identifying projects.**

- Project Name
- Location
- General Description of work performed by Consultant on this project
- Gross Const. Cost
- Duties Preformed
- Fee
- Comments
- Contact References (include Email and Telephone No.)

C. **<u>Submit as a separate page to this form, on one (1) page</u>, listing the Key Sub-Consultant(s) (if needed) who will be retained to assist in the consultant's process. Sub-Consultants Basic Service work in sum-total must be less than 50% of Total Basic Service Fees. Use the categories bulleted immediately below in listing Key Sub-Consultants.**

- Name of Sub-Consultant
- Address
- Specialty/Discipline
- Number of Projects Worked together
- Value of Projects Worked Together

D. **<u>In the space provided below</u>, indicate and list driving distances (in miles) from the office where the majority of the on-site personnel will be located to the project site. Use actual street addresses and Google or MapQuest to determine driving distance.**

40 **Miles** From Entech's Pittsburgh Office to District 10 Headquarters.

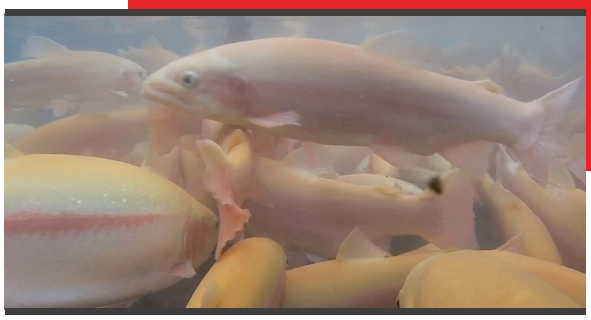
E. **<u>Submit as a separate page to this form, on one (1) page</u>, provide any additional comments or description of relevant information supporting your selection for Consulting Services on this Project. Information specifically related to this project is preferred over boilerplate or general marketing material. Why should your firm be selected for this assignment?**

PA Fish & Boat Commission | Harrisburg HQ & 13 Hatcheries

PA GESA Program Energy Consultant

Construction Cost: $6 M
Fee: $470,000
Contact: Kathryn Bashear
kbashear@pa.gov
717.705.7941

We are providing Energy Consulting services for the PA Fish and Boat Commission GESA project, where we are assisting the State to implement Energy Conservation Measures (ECMs) at the Harrisburg headquarters and thirteen fish hatcheries to meet the Commission's goals of a reduction of energy consumption. We assisted the Commission in completing ESCO interviews, reviewing the IGA, reviewing the design documents, and conducting construction administration visits. The project has had approximately 90% of the ECMs installed to date. Recommended ECMs include replacement of window A/C units with heat pump systems, insulation improvements, thermal isolation of the headquarters server room, retro-commissioning of the headquarters HVAC controls, boiler replacements, variable frequency drives and transformer replacements. The guaranteed annual savings for the project is $230,000.



PennDOT Districts 3 & 8 | 22 offices, 6 rest stops, 90 stockpiles in PA

PA GESA Program Energy Consultant

Construction Cost: $27M
Fee: $1.1M
Contact: Terry Pearsall
tpearsall@pa.gov
717.787.0466

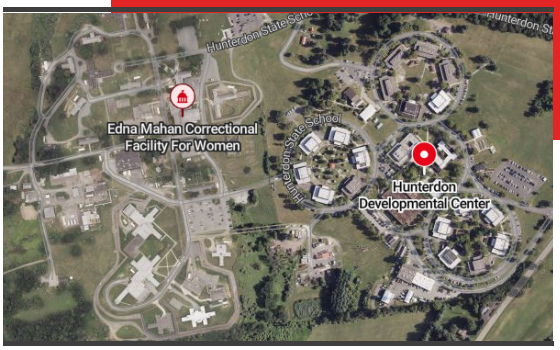
We are providing Energy Consulting services for the PennDOT GESA project, where we are assisting the State in implementing ECMs at 22 offices, 6 rest stops, and 90 stockpiles to reduce energy consumption. We assisted PennDOT in completing ESCO interviews, reviewing the IGA, reviewing the design documents, and providing construction administration services. The construction on the project is almost complete. The ESCO is currently finishing the list of remaining items developed by Entech. The ECMs focused on lighting, upgrades to the HVAC systems, and the addition on HVAC controls, hot water heaters, and emergency generators. The guaranteed annual savings for the project is $550,000.

Edna Mahan Correctional Facility / Hunterdon Developmental Center | Clinton, NJ

State of New Jersey Energy Savings Improvement Project (ESIP) Energy Consultant

Construction Cost: $45 M
Fee: $424,000
Contact: William Golubinski
william.golubinski@treas.nj.gov
609.292.5201

Entech provided 3rd Party Measurement and Verification (M&V) services as part of an ESIP project, similar to Pennsylvania's GESA program. We verified the energy savings projects and estimates produced by the ESCO and engineer of record, reviewed construction drawings, reviewed the ESCO's energy savings M&V plan, served as an on-call advisor during design and construction, and executed the M&V Plan. The energy project included two sites adjacent to each other: Hunterdon Developmental Center is a 650-bed residential facility for adults with neurodevelopmental disorders; Edna Mahan Correctional Facility is a 1,000 inmate women's prison. This was NJ's largest ESIP project to date.



key sub-consultants

Not Applicable. Entech will not be using any subconsultants for this project. We have the internal capacity to perform the scope of work proposed.

relevant information

Entech has over 40 years of experience in providing energy consulting and owner's representative services in the state of Pennsylvania, throughout the Mid-Atlantic region, and beyond. Most directly relevant to the proposed project, Entech has completed Energy Consulting projects throughout the region mapped below and specifically within the geographic scope of the PennDOT Districts 1, 2, and 10 project.

- PennDOT Districts 3 and 8 - PennDOT and Entech worked together to develop efficient processes for each stage of the project, including the review of the investment grade audit and design components, construction administration, and close-out.
- PA Fish and Boat Commission - With hatcheries located throughout the state, Entech was able to effectively work with each hatchery to ensure that our key technical team members would be present at each site as important work was being completed there.
- State Correctional Institutes (SCI) at Fayette and Frackville - Entech was able to identify long-term equipment issues during the design and submittal phases to limit the impact on the overall project, which was especially valuable to the work being done on mission critical equipment in secure, 24-7 operational locations.
- Wernersville State Hospital - Entech identified and helped diagnose boiler issues early in construction that allowed for simpler repairs than if the issues were found after completing the project. Once again, this was especially valuable in mission critical spaces where planning and careful staging were of utmost importance to accommodate uninterrupted service to residents.
- DGS State Office Buildings in Reading, Scranton, and Harrisburg - With several locations of this project undergoing changes in operations, Entech worked as a go-between for the ESCO and the site contractors to communicate with staff as to what changes would be needed to support the new operations and new use of spaces.

Owner's Representative Energy Consulting

Energy Savings Project Locations

PA GESA
1. SCI Fayette
2. Reading/Scranton/Harrisburg Offices
3. PennDOT Districts 3 & 8
4. Fish and Boat
5. SCI Frackville
6. Wernersville State Hospital

PA Pre-GESA (CHP/Cogen Study)
7. SCI Muncy

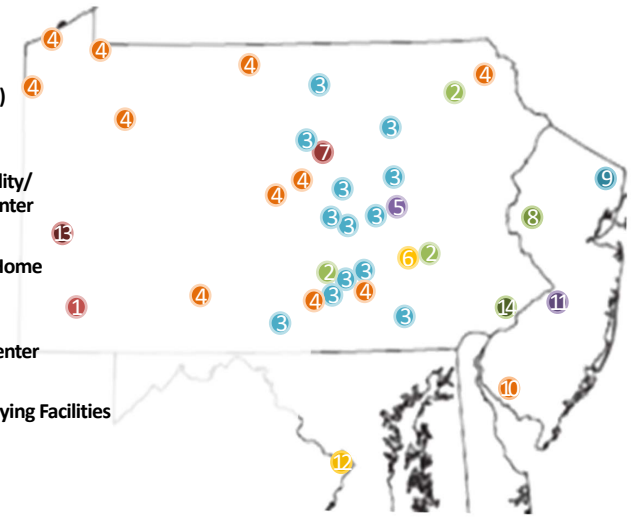
NJ ESIP M&V
8. Edna Mahan Correctional Facility/ Hunterdon Developmental Center

NJ Pre-ESIP
9. Paramus Veterans Memorial Home
10. South Woods State Prison

NJ P4P
11. New Lisbon Developmental Center

U.S. Congressional Energy Plan
12. U.S. Capitol Complex and Outlying Facilities

Energy Consulting
13. Western PA Health System
14. Eastern PA Health System



Team Experience

Team Member	Project Role	Total Exp.
Bryan Haag, PE, LEED AP, CEM	Principal-in-Charge	22
Royal Smith, CEM	Project Manager	17
Michael Bayesa, CEM	Certified Energy Manager	37
Matthew Webber, CEM	Certified Energy Manager	11
David Mace, PE	Senior Electrical Engineer	30
Nick Bloom, PE	Senior Electrical Engineer	8
Craig Snyder, PE	Senior Mechanical Engineer	38
Chris Darosh, LC	Lighting Specialist	28
Mark Manowczak, PE	Senior Structural Engineer	40
Kerry Good, PE	Senior Civil Engineer	41
Michael Joppy, PE	Mechanical Engineer	10
Brett Flory, EIT	Energy Engineer	2
	Total Years	**284**

Entech's engineers are licensed in over 25 states. We are proudly Pennsylvanians, incorporated in Pennsylvania and headquartered in Reading. We have six brick and mortar offices across the Commonwealth, a regional presence in the Mid-Atlantic and surrounding states, and a portfolio that spans the U.S. We provide services to an array of local/state/federal government, education, healthcare, industrial, and commercial clients.

Our energy services division has valuable applicable experience from both the energy consulting and design services sides of the table, bringing an unmatched perspective to GESA and Energy Savings Performance Contract models, as well as Energy Plan development and Energy as a Service projects. Our Energy Engineers, CEMs, and engineers in various disciplines bring significant first-hand knowledge of GESA project development, stakeholder coordination, critical design considerations, energy-efficient systems, deferred maintenance challenges and opportunites, and M&V best practices.

2

Appendix B

Quote Signature Page

"The work you presented looked great. I appreciate your attention to "the process" of performing the energy audit, it had a lot to do with why we selected your firm. You have stuck to your approach!"

Manager of Energy Initiatives
New Jersey Treasury | Trenton, NJ

Quote Signature

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

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

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

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

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

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 DGS Energy Consultant 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 DGS Energy Consultant 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 20 years.)

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

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

I am authorized to sign this Quote on behalf of the Offeror and I agree and state that Entech Engineering, 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.

Signature

Bryan C. Haag, PE, CEM, LEED AP
Print Name Legibly

Principal
Title

3

Appendix C
Non-Collusion Affadavit

"Entech was an important team member who identified 15 ECMs for consideration. These projects included new lighting, a new boiler plant, water reduction measures, and wastewater treatment plant improvements. Seven projects, totaling $20 million were designed and constructed, with an annual energy savings of $2.25 million."

Director, Resource & Energy Management
Pennsylvania Department of General Services | Harrisburg, PA

NONCOLLUSION AFFIDAVIT

DGS Project Number: GESA 2025-1 (C)

State of Pennsylvania :

County of Berks : s.s.

I state that I am the Principal (Title) of Entech Engineering, Inc. (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 a Offeror or potential Offeror, and they will not be disclosed before the Quote submission date.
3. No attempt has been made or will be made to induce any firm or person to refrain from proposing on this contract, or to submit a Quote higher than this Quote, or to submit any intentionally high or noncompetitive Quote or other form of complementary Quote.
4. The Quote of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive Quote.
5. Entech Engineering, 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:
   None

I state that Entech Engineering, 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)

Bryan C. Haag, PE, CEM, LEED AP
(Signatory's Printed Name)

Notary Public
Principal
(Signatory's Title)

SWORN TO AND SUBSCRIBED
BEFORE ME THIS 18 DAY OF
March, 2025.

Commonwealth of Pennsylvania - Notary Seal
Dana M. Boyer, Notary Public
Berks County
My Commission Expires October 28, 2028
Commission number 1383632
Member, Pennsylvania Association of Notaries

My Commission Expires