

# Volume I - Technical Submission

GESA Project Consulting Services on a Guaranteed Energy Savings Project at: Pennsylvania Department of Human Services Wernersville State Hospital

Project No. GESA 2021-2(C)

09.08.2021

prepared for:



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

orepared by:



Entech Engineering, Inc. 201 Penn Street PO Box 32 Reading, PA 19603 1.800.825.1372 | www.entecheng.com



September 16, 2021

Becky Tomlinson, RFQ Coordinator DGS Energy Office - RFQ Coordinator 403 North Office Building 401 North Street Harrisburg, PA 17120

Re: Response to Request for Quotes for Consulting Services for a Guaranteed Energy Savings Project at:
Pennsylvania Department of Human Services
Wernersville State Hospital
Project No: GESA 2021-2C
Entech File P-11436

Dear Ms. Tomlinson:

Entech has been helping its clients with their energy conservation efforts for over 35 years. Our highly qualified team brings not only years of energy auditing experience, but also the expertise to combine energy conservation recommendations with deferred maintenance and capital renewal needs. We design energy projects, help secure grants for project funding, help manage the construction, assist with securing an Energy Service Company (ESCO), and provide energy consulting throughout the ESCO process. Our design professionals use their energy expertise to help our clients implement selected energy measures and realize measurable energy savings.

Entech is uniquely suited to support Wernersville State Hospital on this GESA project. The hospital is within 15 minutes of Entech's corporate headquarters, where the majority of our team is based. The Reading office houses the Principal-in-Charge (Bryan Haag), the project manager (Bruce Christman), specialists in lighting design (Chris Darosh), steam systems (Mark Feeg, Mark Ray), cooling systems (Mark Feeg, Mark Ray), and architecture (Bruce Christman). In addition, we have specialists in structural engineering (Mark Manowczak) and civil engineering (Kerry Good) to assist with ancillary issues that may arise during construction.

Entech's energy engineers (John Sirc, JP Kloske, and Royal Smith) have experience with all of the proposed ECMs within ESCO projects. Our energy engineers have been through the GESA process several times serving as both the energy consultant and as a part of the ESCO's team, giving us a unique perspective on the process. Our experience within the program allows us the ability to foresee and resolve problems that may otherwise slow down the project. Our proactive approach to the energy consultant role means the hospital will always have a member of our team ready to help. Between Entech's energy engineers and the system specialists, Entech has a deep bench of engineers and 5 Certified Energy Managers able to help with this project.



Aside from having experience in both the energy consultant role and design engineer in the GESA program, we also have experience working with DHS. We have worked with Ameresco (ESCO) on a coal boiler replacement project at Danville State Hospital, and PADEP National Discharge Elimination System Permit for Wernersville State Hospital. Currently, we are in contract negotiation on a project at Warren State Hospital where we are a sub-contractor for Zimmerman Studios on a boiler upgrade and condensate line replacement project.

Through our experience with hospitals and similar facilities, Entech understands the importance of minimizing the impact of construction on the hospital's operations. Planning is key when making changes to the central plant and essential utilities. We know how important it is for the hospital to continuously operate, ensuring the safety of the patience and staff. Further, Entech knows how to work effectively and efficiently within a secure facility.

As noted in our past GESA EC proposals, our team has deep experience in both the assessment of existing systems and the design of new systems, giving us first-hand knowledge of not only the systems themselves, but also the analysis and design processes being implemented, and we know what works and what doesn't. We have gained invaluable experience in managing all the components and entities that must cooperatively function to implement a successful energy project that is completed in the best interest of our client. We believe that this experience and expertise, especially within the GESA program and with State Correctional Institutes, will enable us to provide the leadership and guidance on this project that you have come to expect of us, and we look forward to this opportunity to develop a trusted partnership and successful project outcome with Wernersville State Hospital.

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

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# Appendix A Energy Consultant Information Form

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

### **APPENDIX A**

## **Energy Consultant Information Form**

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

### **DGS GESA-2021-2 Consultant**

LOCATION: Department of Human Services, Wernersville State Hospital, Berks County, 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 Bryan C. Haag, P.E., CEM, LEED AP TITLE OF PERSON: 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. Each person should be counted only once. Do not include Sub-Consultants. Discuss use of Sub-Consultants in Section "D" and "E", below.

	REGISTERED	PROF. DEGREE	CEM	OTHER	TOTAL
Architect	2	1		1	4
Civil/Structural Engineer	21	8		8	37
Mechanical Engineer	8	2	3	5	18
Electrical Engineer	1	3		4	8
Account Manager	2			2	4
Project Managers	5	13		1	19
Site Inspectors				15	15
Measurement & Verification	1		2	1	4
Other/Specialist	7	15		11	33

- 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. In the space provided below, 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.

9.8	Miles

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?

## projects

### PA Department of General Services - GESA Program | Harrisburg, PA

### PA Fish and Boat Commission

We are providing Energy Consulting services for the PA Fish and Boat Commission GESA project, where we are assisting the State in implementing Energy Conservation Measures (ECMs) at the Harrisburg headquarters and numerous fish hatcheries to meet the Commission's goals of a reduction of real energy consumption. We assisted the Commission in completing ESCO interviews, through which DGS selected ESG as the ESCO for the project. We are currently in the final stages of the IGA review, addressing all comments and finalizing the IGA. Recommended ECMs include replacement of window A/C units with heat pump systems, insulation improvements, thermal isolatation of the headquarters server room, retro-commissioning of the headquarters HVAC controls, boiler replacements, and transformer replacements.

**Construction Cost:** \$5.9M **Fee:** \$241,700 **Contact:** Bernie Matscavage bmatscavag@pa.gov

717.705.7822

### PA Department of Corrections - GESA Program | Harrisburg, PA

### State Correctional Institution - Fayette, PA

The SCI Fayette project is centered around upgrading a central utilities plant at a secured facility. The facility is completing a fuel switch from steam to natural gas and installing high temperature hot water boilers. Entech has ensured that the ESCO meets the high standards required by the Department of Corrections and the Department of General Services. Entech worked with the facility and ESCO to maximize the savings to allow the site to address several areas of deferred maintenance. Deferred maintenance has included hot water generators, the fire alarm system, lighting inverters, and an emergency generator.

To date, Entech has assisted SCI Fayette with the:

- Selection of an ESCO
- Determining energy conservation measures
- Equipment Sizing

- ► Review of the utility bills
- Review of the Investment Grade Audit
- Review of the design documents

Currently, the project is about to finalize the investment grade audit. Once the IGA has been signed, Entech will assist with construction management, close out services and the measurement and verification process.

Construction Cost: \$43M Fee: \$1.7M Contact: John Peters johpeters@pa.gov

717.728.2573

State of New Jersey | Bridgeton, Cumberland County, NJ

### Energy Savings Improvement Project (EISP)

Entech was selected by the State of New Jersey to provide 3rd Party Measurement and Verification services as part of their energy savings improvement project, similar to Pennsylvania's GESA program. Entech was tasked to verify the energy savings projects and estimates produced by the Energy Service Company (ESCO) and engineer of record, review construction drawings, review the ESCO's energy savings measurement and verification (M&V) plan, serve as an on-call advisor during design and construction, and execute the M&V Plan for this project, which is nearing substantial completion of construction.

The energy project included two sites adjacent to each other. The first was Hunterdon Developmental Center (HDC), a 650-bed residential facility for adults with neurodevelopmental disorders. The other site was for The Edna Mahan Correctional Facility, a 1,000 inmate women's prison. These two sites were part of a \$45M ESIP, which is NJ's largest ESIP project to date.

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

609.292.5210

# 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

As outlined in the cover letter, Entech has extensive consulting experience within the energy industry that will be directly relevant to the project at Wernersvile State Hospital. Specifically, we have experience with the Guaranteed Energy Savings Act (GESA) program and within Pennsylvania Department of Human Services, including and along with the following:

We've played a role in several GESA projects in Pennsylvania, including the first GESA project under the Wolf Administration for Pennsylvania's Department of General Services (DGS) at SCI-Dallas. Here we completed a Utility Master Plan (UMP) and then teamed with Energy Systems Group (ESG) to conduct an Investment Grade Audit (IGA) and subsequent design of the steam plant as well an upgrade to the wastewater treatment plant. We are also working on the SCI-Houtzdale GESA Project, where we completed a UMP, performed an IGA, and are currently serving as the lead design engineer, having completed the design and are working with The Efficiency Network (TEN) to provide updates to the central heating and central cooling plants.

We were selected to serve as the Energy Consultant for the PennDOT Districts 3 and 8 GESA project. We assisted DGS in the ESCO selection for this project; the scoring committee selected McClure Company to perform the IGA, which is in the final stages of review and ready to transition to design oversight. As the State's representative, we will validate the Energy Conservation Measures (ECMs) developed by McClure, oversee the implementation of selected projects, and provide Measurement and Verification (M&V) services to confirm the realization of the guaranteed savings. We are also providing similar Energy Consulting services for the PA Fish and Boat Commission GESA project, where we are assisting the State in implementing ECMs at the Harrisburg headquarters and numerous fish hatcheries. We completed ESCO interviews, through which DGS selected ESG to perform the IGA; we are currently in the final stages of IGA review and ready to transition to design oversight. Most recently, we were selected to provide similar energy consulting services for SCI-Fayette, where ESG has been selected as the ESCO.

We have also provided energy assessment and consulting services for the State of New Jersey, specifically with State Correctional and Developmental facilities, and specifically within their Energy Savings Improvement Program (ESIP), which is very similar to Pennsylvania's GESA program. We are currently working with the State on their largest ESIP project to date at the Edna Mahan Correctional Facility and the adjacent Hunterdon Developmental Center. Serving as the M&V Professional, we were tasked to verify the

energy savings projects and estimates produced by the ESCO so that the State could be confident in securing the loan for the project and proceeding with the ESCO. Our work involved review of construction drawings and the M&V plan, serving as an on-call advisor during design and construction, and executing the M&V Plan for the project, which is nearing substantial completion of construction.

At the New Jersey New Lisbon Developmental Center, we performed an energy audit, which recommended \$14 million in ECMs and projected an annual savings of \$2.3 million. As part of this effort, we became a "P4P Partner" and oversaw the design and construction of the project, including the post-retrofit M&V necessary to apply for the rebates through the P4P program. New Lisbon reduced their energy by 45% and was awarded \$2 million through the P4P program.

We have also assisted the State of New Jersey with pre-ESIP efforts by completing energy audits and creating energy use models to determine how and where energy is used and to estimate savings associated with proposed ECMs. We have completed a pre-ESIP energy audit of the South Woods State Prison, where we recommended approximately \$25 million in ECMs with an annual savings of \$3.4 million and a 7.2 year payback. We have also completed and submitted a draft report for a pre-ESIP audit of Paramus Veteran's Home.

Our energy consulting work with PA GESA and NJ ESIP and P4P was preceded by the extensive work that we performed for the U.S. Architect of the Capitol (AOC). Having directed and conducted facility condition assessments, energy audits, historic preservation surveys, and utility performance studies throughout the U.S. Capitol Complex and supporting facilities, we provided the AOC with a holistic view of their sustainability, energy, and water conservation initiatives. We supported them in carrying out those initiatives through the development of a model energy management plan, and we guided them in communicating their initiatives and results to Congress through our annual energy reports over a five-year period.

### **Project Team Experience**

Team Member	Title	Project Role	Entech Exp.	Total Exp.
Bryan Haag, PE, LEED AP, CEM	Principal	Principal-in-Charge	20	20
C. Bruce Christman, Jr., AIA, LEED AP, GAC	Director of Sustainablity	Project Manager/Architect Specialist	1	29
John Sirc, PE, MBA	Sr. Project Manager/Energy Engineer	Project Manager/Senior Energy Engineer	1	42
Royal Smith, CEM	Project Manager	Energy Engineer	1	14
David Mace, P.E.	Manager, Electrical Engineering	Senior Electrical Engineer	9	27
Mark Feeg, PE, LEED AP	Senior Project Manager	Senior Mechanical Engineer	2	21
Chris Darosh, LC	Lighting Specialist	Lighting Specialist	26	26
Mark Ray, CEM	Senior Mechanical Designer	Senior Mechanical Designer	39	39
Mark Manowczak, P.E.	Structural Engineering Manager	Senior Structural Engineer	28	37
Kerry Good, P.E.	Senior Civil Engineer	Senior Civil Engineer	11	39
James Kloske, CEM	Senior Mechanical Engineer	Energy Engineer	1	21
		Total Years	139	315

# Appendix B Quote Signature Page

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.

### **APPENDIX B**

### **Quote Signature Page**

#### **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.
- 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
  - o Contractor Responsibility Provisions
  - Environmental Statement
  - o 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, P.E., CEM, LEED AP®

Print Name Legibly

Principal

Title

# 3 Appendix C Non-Collusion Affidavit

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

### APPENDIX C

### Non-Collusion Affidavit

#### INSTRUCTIONS FOR NONCOLLUSION AFFIDAVIT

- 1. This Noncollusion Affidavit is material to any contract awarded pursuant to this Quote. According to §4507 of the Commonwealth Procurement Code, 62 Pa.C.S. §4507, governmental agencies may require Noncollusion Affidavits to be submitted with Quotes.
- 2. This Noncollusion Affidavit must be executed by the member, officer, or employee of the Offeror who makes the final decision on prices and the amount quoted in the Quote.
- 3. Bid rigging and other efforts to restrain competition, and the making of false sworn statements in connection with the submission of Quotes are unlawful and may be subject to criminal prosecution. The person who signs the affidavit should examine it carefully before signing and assure himself or herself that each statement is true and accurate, making diligent inquiry, as necessary, of all other persons employed by or associated with the Offeror with responsibilities for the preparation, approval or submission of the Quote.
- 4. In the case of a Quote submitted by a joint venture, each party to the venture must be identified in the Quote documents and an affidavit must be submitted separately on behalf of each party to the joint venture.
- 5. The term "complementary Quote" as used in the affidavit has the meaning commonly associated with that term in the Quote process, and includes the knowing submission of Quotes higher than the Quote of another firm, any intentionally high or noncompetitive Quote, and any other form of Quote submitted for the purpose of giving a false appearance of competition.
- 6. Failure to submit an affidavit with the Quote in compliance with these instructions may result in disqualification of the Quote.





### Non Collusion Form\_Wernersville.pdf

DocVerify ID: C281F14C-BB39-4803-8245-9E499E42C825

Created: August 27, 2021 08:12:58 -8:00

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Electronic Notary: Yes / State: PA

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#### **E-Signature Summary**

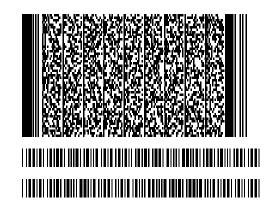
#### E-Signature 1: Bryan Haag (BH)

August 27, 2021 08:14:27 -8:00 [8CBD9AB50B87] [73.13.72.212] bhaag@entecheng.com (Principal)

### E-Signature Notary: Catherine Montano (cm)

August 27, 2021 08:14:27 -8:00 [8802190DBE28] [73.13.72.212] cmontano@entecheng.com

I, Catherine Montano, did witness the participants named above electronically sign this document.



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	DHS - Wernersvi DGS Project Number: State Hospital
State of Pennsylvania	:
County of Berks	: s.s.
	(Title) of Entech Engineering, Inc. (Name make this affidavit on behalf of my firm, and its owners, son responsible in my firm for the prices(s) and the amount
consultation, communication Offeror.  2. Neither the price(s) nor the a nor approximate amount of th who is a Offeror or potential of submission date.  3. No attempt has been made of proposing on this contract, or intentionally high or noncomp 4. The Quote of my firm is made discussion with, or induceme other noncompetitive Quote.  5. Entech Engineering, Inc. directors, and employees are agency and have not in the la prohibited by state or federal	nis Quote have been arrived at independently and without or agreement with any other contractor, Offeror, or potential mount of this Quote, and neither the approximate price(s) his Quote, have been disclosed to any other firm or person Offeror, and they will not be disclosed before the Quote or will be made to induce any firm or person to refrain from to submit a Quote higher than this Quote, or to submit any petitive Quote or other form of complementary Quote. The in good faith and not pursuant to any agreement or not from, any firm or person to submit a complementary or (Name of Firm) its affiliates, subsidiaries, officers, and currently under investigation by any governmental ast four years been convicted or found liable for any act law in any jurisdiction, involving conspiracy or collusion d/or bidding on any public contract, except as follows:
I state that Entech Engineering, Incomplete the above representations are mater of General Services in awarding the and my firm understands that any my fraudulent concealment from the Desubmission of this Quote.  (Signature)  Bryan C. Haag, P.E., CEM, LEED AP® (Signatory's Printed Name) Notary Public Principal	ial and important, and will be relied upon by the Department contract(s) for which this Quote is submitted. I understand isstatement in this affidavit is and shall be treated as partment of General Services of the true facts relating to the  SWORN TO AND SUBSCRIBED BEFORE ME THIS DAY OF
(Signatory's Title)	My Commission Expires
Commonwealth of	of Pennsylvania - Notary Seal

Commonwealth of Pennsylvania - Notary Seal Catherine J Montano, Notary Public Berks County My Commission Expires Jul 16, 2022 Commission Number 1191348





