Performance Contracting: Rethinking the Benefits

PASBO Facilities Conference

September 26, 2008

Tom Schneider

- Manager of Energy and Operational Efficiencies – North Penn School District
- Have been involved in two GESA, performance contracting projects
  - One project was a campus wide performance contract
  - One was a large lighting replacement project

Bruce Stultz

- **BRUCE STULTZ, SENIOR VICE PRESIDENT ENERGY CONSULTING SERVICES**
- Mr. Stultz oversaw the Commonwealth of Pennsylvania's Guaranteed Energy Savings Program (GESA) since 2005. During his time of his leadership, the Pennsylvania GESA program was considered to be a National and International best practice. Initiating 60+ State Energy Performance Contract Projects and over $500,000,000 in guaranteed savings, Mr. Stultz brings to Pro-Tech extensive experience from the customer perspective. Mr. Stultz was also responsible for the qualification of the State's Energy Service Contractor (ESCO) approved list and changes to the GESA procurement process.
- During his career with the Commonwealth, Bruce created a utility database of State Agency usage, a demand response system for all Department of General Services facilities and implemented an aggressive utility procurement strategy, which ultimately lowered the ongoing cost of electricity. During his last year with the Commonwealth, Bruce oversaw the completion of three LEED-EB certification and two ENERGY STAR buildings.
- For the last two years Bruce has served as the Public Sector Co-Chair of the Pennsylvania Energy Service Coalition and the original founder.

What is GESA?

(Guaranteed Energy Savings Act)

- GESA is better known as Performance Contracting.
- Applicable Laws: Act 57 of 1998. Act 77 of 2004 and Act 39 of 2010.
- A GESA program allows governmental agencies to utilize an Energy Services Company (ESCO) to evaluate, finance, install or construct energy savings projects.
- The financing is for any period up to 20 years with most 15 years.

What is GESA?

- The law allows for the ESCO to investigate “Energy Conservation Measures” (ECM) through an “Investment Grade Audit” (IGA) to prove that the financial savings over the term of the lease will pay the lease.
- Most ESCOs will combine short and long return on investment ECMs to benefit the needs of the owner.
- GESA is another procurement or financing tool for school districts to utilize.

ECM Examples

Shorter Term ECMs

- Lighting Retrofits
- Lighting Controls
- Motor VFDs
- HVAC Controls
- Alternative Fuel Conversions (NG)
- Heat Recovery Systems
- Behavioral Programs

Longer Term ECMs

- Boilers
- Chillers and Towers
- Windows & Doors
- Envelope Repairs
- Insulation
- Roofing Replacement
- Alternative Energy: Solar, Wind or Gene

GESA Program

Why consider and what has changed?

- As budgets tighten and capital funds dwindle; as capital needs increase.
- How will you find the money to maintain your infrastructure for the next 5 or 10 years?
- For the foreseeable future funding capital projects will become more difficult.
- Financing and procurement options need to be explored.
- The PA GESA program is nothing more than a financing and procurement tool.

Performance Contracting History

- Through the years school districts have had mixed results with this program. Concerns include:
  - Value of the project verses competitive bidding.
    - ESCOs mark-up and profit sometimes is excessive.
    - Lack of cost clarity.
  - To much time enforcing the guarantees.
  - Finish product quality concerns and contractor experience.
    - Limited control of equipment quality.
  - Did the project save what it was supposed to?
  - Not considering lifecycle and maintenance in decision making of ECMs.

What caused some of these problems?

- The ESCOs handled all aspects for an uninformed and uninvolved Owner.
- The IGA is a complicated process which most Owners do not understand.
- The ESCO sometimes seemed to keep a vail of secrecy and seemed to complicate the process so the Owner would not want to be involved.
- The Owner had no idea the real return on investment or payback of each ECM and did not understand how the GESA program worked.
- Owners paid more for energy a few years after the project was completed and didn’t understand why.

Conventional vs. GESA Project

Conventional Construction and Renovation Project

- Engage Architect & Engineer
- Develop scope of work
- A&E designs project
- Owner secures funding
- A&E and Owner bids project
- Contractors are awarded contract
- Contractor procures specified equipment

Traditional Performance Contracting Project (GESA)

- Prepare an “Expression of Interest” for an energy savings project
- Preselect 3 or 4 ESCOs
- Request an RFP which includes:
  - Performs IGA of the project
- Take all responses and pick and choose ECMs
- Engage a contract with the selected ESCO
- ESCO secures funding
- ESCO procures contractors and equipment

What will you see today?

- A new, a cost based, GESA request for proposal process has been developed to eliminate many of the problems with the traditional method and to bring transparency to the GESA process.
- This cost based GESA RFP will eliminate many of the concerns expressed by many Boards, Superintendents, Business Administrators and Facility Managers.
- But it is not without the need for the Owner to become educated and involved.

GESA Program

Why consider and what has changed?

- The GESA program had certified contractors that limited competition.
- The certification process was not renewed this year.
- Smaller experienced companies are interested in the PA market developing competition.
- PA DGS is in the process of defining the GESA program to match their internal resources.
- This presentation will propose changes to the RFP process.

Current Standard Program

- Benefits
  - One stop shop approach
  - Minimizes customer involvement
  - ESCO's which specialize in modifications to existing infrastructure
  - Holistic approach to project scope
  - Best value approach
  - Step by Step process
  - Capture capitol and deferred maintenance needs
  - Budget neutral approach to funding projects

Current Standard Program

ESCO Risk

- ESCO's are required to invest capital up front to perform an investment grade audit to respond to RFP. 2 or 4 firms may invest $100,000 or more each in the preparation of an RFP.
  - This limits competition and eliminates smaller firms.
  - This increases the cost to all potential projects.
- The ESCO shoulders all risk for the performance of the project for the duration of the contract term.
  - This adds significant costs to the project.
  - Performances based contracting eliminates change orders

Current Standard Program

- Shortcomings
  - Most ESCO's are large corporations and highly capitalized
  - Lack of cost clarity (ESCO Margins & Costs)
  - Lack of customer experience in GESA procurement model
  - Difficulty in comparing proposed projects during RFP phase
  - Long-term debt service
  - Lack of customer involvement adds cost to project and missed scope opportunities

Current Standard Program
Customer Risk

- Did I really reduce energy savings, report said I did?
- Can I maintain savings relying on my current staff and tenants (students)
- Why did my expenditures go up when the ESCO's performance was confirmed?
  - Increasing utility costs
  - Change of use of building from baseline

Soft Cost Comparison

Apples to Apples ?

Standard Procurement

- A & E 5%-9%
- Bond Funding 1%-3%
- General Conditions 5%-10%
  (Contractor's General Conditions)
- Construction Mgt 1%-4%
- Contingency 5%-10%

  - 17% - 36% of project costs

GESA Procurement

ESCO offers an all in price with cost breakouts

- Investment Grade Audit 1%-5%
- Design Engineering Fees 5%-15%
- Construction Management 3% - 15%
- System Commissioning 1%-10%
- Equipment Initial Training 1%-3%
- Project Contingency Costs 5%-10%
- Measurement & Verification 3%-10%
  - 19% - 68% of project costs
  - No change orders (ESCO Risk)
  - Funding costs are imbedded in total funding package

Cost Based GESA Addressing Standard GESA

Shortcomings

- Lack of cost clarity
  - Elements of ESCO costs defined during 1st procurement step
    - Hard & Soft costs
    - Development Costs
    - Risk
  - Separate margins for each Energy Conservation Measures (ECM) categories
  - Establishes known margins for further development of ECMs
  - Scoring criteria allows for best value vs. low first cost approach

Cost Based GESA
Addressing Standard GESA

Shortcomings

- Lack of Customer Experience in GESA Procurement
  - Defining a process comparable to established procurement modeling.
  - Preparation before releasing GESA project (reduces risk to ESCO, reduces cost)
    - Knowledge of existing operations
    - Short and Long Term Goals
  - Review of customer panel resources
  - Third Party Consultant

Cost Based GESA
Addressing Standard GESA

Shortcomings

- Difficulty in comparing proposed projects during RFP phase
  - Defined and Comparable ECM Scope
  - Cost clarity establishes comparable ECM savings
  - Having an expectation of project scope (customer goals)brings clarity to project comparisons

Cost Based GESA Addressing Standard GESA

Shortcomings

- Long-term debt service
  - Added cost clarity supports best business case approach
  - Cost neutral approach
  - Project fits into short and long range goals
    - Energy Savings
    - Deferred Maintenance
    - Capitol Improvements

Cost Based GESA Addressing Standard GESA Shortcomings

- Lack of facility knowledge adds cost to project
  - Establish base of operations prior to GESA release
    - Utility usage
    - Facility equipment survey
    - Maintenance History
    - Equipment at end of life
  - Use of Energy Star Portfolio Manager
  - ESCO's view risk as a cost
    - Knowledgeable customers lower risk

Procurement Step Comparison

Standard GESA Program

- Expression of Interest
  - Company Experience
  - Staff Experience

Cost Based GESA Program

- Expression Of Interest
  - Company Experience
  - Staff Experience
  - ESCO Cost Margin by ECM (See example)
  - Qualifications
  - Defined Customer Goals
    - No Qualifies Pool of ESCO

RFP ESCO Margin Example

Requested percentage margins should be based on all ESCO fee's excluding costs incurred for the following services: training, measurement & verification, project contingency and commissioning as these fees will be negotiated during the Investment Grade Audit.

Also requested are the percentages of engineering to be completed by ESCO and included in ESCO's soft cost.

_____% Lighting, Lighting Controls and Water Efficiency Improvements

____% of engineering to be completed by ESCO

_____% Building Management System, Control, RXC

____% of engineering to be completed by ESCO

<u>HVAC Duel Approach</u>

____% Direct replacement, assuming proper existing operational capacity

____% of engineering to be completed by ESCO

____% Retrofit & design (e.g. boiler, chiller, geothermal)

____% of engineering to be completed by ESCO

Procurement Step Comparison

Standard GESA Program

- Request for Proposal
  - Scoring Criteria
    - Technical Approach
    - Understanding of Existing Facilities
    - Experience
    - Project Management
    - Financial Approach
      - Project ROI comparison

Cost Based GESA Program

- Request for Proposal
  - Scoring Criteria
    - Technical Approach
    - Approach to addressing customer goals
    - Understanding of Existing Facilities
    - Experience
    - Project Management
    - Cost Approach
      - Best and Final Offers
    - Financial Approach
      - Project ROI comparison

Summary

- Cost GESA is another procurement tool
- Designed for those who want to be involved and impact project scope
- Allows for clear understanding of proposed project offerings
- Reduces risk on both sides (Customer / ESCO)
- Higher probability of customer satisfaction
- Decision makers have clearer vision of project impact and savings
- More clarity of project and project performance.

Comparing Options

Project Phase	Traditional	GESA	Cost GESA
Energy Audit	Separate contract	Included	Included
Selection of ECMs	Based on audit, by payback period	Short and longer paybacks combined	
Procurement	Public bid	Veil of secrecy	Pricing provided
Financing	Bond or 10 year loan	15 to 20 years, short paybacks fund needed capital improvements	
Construction Mgt.	Separate contract	Included or negotiated	
Performance Guarantees	None	Included	Terms Negotiated

Cost Based GESA

- Known Margins
- Known ROI
- Negotiated Guarantee Period
- Negotiated M&V
- Negotiated CM
- Negotiated term of financing

- Known construction cost
- More Competition of ESCOs
- Shared risk
  - Reduce financial risk of ESCO
  - Reduced time and cost enforcing unrealistic guarantees.

Remember the cost of Risk