

ENERGY SAVINGS PERFORMANCE CONTRACTING

An Overview



Energy Savings Performance Contracting Overview

BACKGROUND

Energy Savings Performance Contracting was established in Pennsylvania in 1998 under Act 62 Pa.C.S. § 3752 and later § 3758 with the 2004 Amendment Act 77 and the 2016 Act 163.

The program provides Pennsylvania Governmental Entities with a procurement method designed to achieve large-scale capital improvements and energy savings with no upfront costs and in a timely manner. By contracting with a qualified energy service company (ESCO), Governmental Entities are able to pay for facility upgrades today with tomorrow's energy and operational savings.

The Guaranteed Energy Savings Act (GESA) process is unlike the typical "design-bid-build" process in which the lowest responsible bidder wins. The GESA procurement process enables Governmental Entities to select the ESCO who is best qualified, provides the best value, and is the best fit for the agency. Selection of the ESCO is through a formal RFP process.

TERMINOLOGY

Guaranteed Energy Savings Act (GESA)

This refers to the Pennsylvania Act which provides for a Request for Proposals (RFP) procedure that allows the governmental unit to award a contract to any entity whose proposal is timely and meets the requirements of the governmental unit. The purpose of the Act was to decrease growing utility costs and fast track upgrades to building systems and infrastructure.

Energy Conservation Measure (ECM)

An individual energy improvement item that an ESCO will propose. Typical ECMs would be lighting upgrades, mechanical system replacement / repair, building automation systems, building envelope improvements, etc.

Energy Services Company (ESCO)

Service providers who enter into the GESA contract.

Energy Savings Performance Contract (ESPC)

Term for energy saving projects used in many states. Similar to GESA in Pennsylvania.

Investment Grade Audit (IGA)

A rigorous examination of the operating conditions, review of building systems and allocation of energy use in the buildings investigated and the proposed plan for energy savings. The IGA is the basis for securing financing of a defined project scope and the basis of the resultant GESA Agreement.

Measurement and Verification (M&V)

The process of quantifying the energy and cost savings resulting from improvements made to energy-consuming systems and equipment.



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PROCESS

Initial Assessment

Whether through an Architectural and Engineering Firm and/or an internal Facilities Committee, an initial list of project scope and goals is identified by the Governmental Entity that could be included in the GESA project. This list may also incorporate previously identified Capital Needs that reside within the 5 Year Capital Budget. Often, non-energy related scope can be included in the project for economies of scale in an effort to minimize cost and disruption to the facilities. During the initial surveys, opportunities may present themselves that were not previously identified and can be added to the project goals. All of this provides a broad-based starting point for merging priorities with opportunities.

RFP and Partner Selection

The School District or Governmental Entity advertises an RFP, soliciting technical and cost proposals for the project. Interested ESCOs survey the location(s) and perform a comprehensive analysis of the building(s) for energy efficiency improvement purposes.

Energy usage, building characteristics, weather data, and typical usage of the building are analyzed. This is known as the IGA phase. The IGA report details each energy conservation measure and identifies the savings, payback period, financial impact and environmental benefits. Financing will be based upon the finalized IGA. Once the report is accepted by both parties, it becomes the technical and cost basis of the final Energy Savings Agreement.

The ESCOs then submit their proposals for review, which also can include an oral presentation. Evaluation of the proposals include past performance and experience, technical approach and capabilities, and cost approach. One ESCO is selected, final project scope and cost are agreed upon, and project is approved.

Design and Construction Phase

The ESCO begins the project, purchasing and installing the equipment. The duration of this phase varies based on complexity of scope and timing of contract execution. Most projects can fall within a 2–18-month window of time. Upon completion of construction, the ESCO trains facility staff on operations and maintenance of the new equipment.

Performance Period

The ESCO provides regular monitoring reports to ensure actual savings are achieved. During this time, the ESCO has guaranteed a certain amount of energy savings, which are measured and verified by the M&V method outlined in the Agreement. If the energy savings fall short of what has been guaranteed, the ESCO reimburses the agency for the costs associated with the shortfall.



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TYPICAL TIMELINES

Timelines for an ESCO project can vary from 2-18 months depending upon the scale of the project, as well as equipment and construction lead times. Additionally, certain construction is best planned for school/ municipal holidays to minimize disruption to students and staff.



BENEFITS

Overcome the Barrier of Limited Budgets - Limited capital budgets present a barrier to funding energy efficiency projects. ESPC/GESA projects can remove the financial barrier by using savings to pay for upgrades today instead of waiting for a capital budget allocation. Postponing infrastructure improvements due to lack of funding can lead to more expensive solutions because the cost of continuing to pay high utility bills coupled with the cost of maintaining inefficient / poor performing equipment during the waiting period exceeds the interest cost of financing the improvements today.

Improve Facilities and Systems Quickly – ESPC/GESA’s comprehensive approach can upgrade some or all of an owner’s systems or facilities at once, capturing synergies and economies of scale. It modernizes infrastructure, improves the health / safety / and comfort of the work environment, and streamlines maintenance practices to sustain savings and effective operations.

Demonstrate Environmental Stewardship - Reducing long-term energy use through efficiency and renewable energy solutions conserves natural resources, reduces air and water pollution, and reduces our dependence on fossil fuels. Many Government Entities have climate and energy savings goals or long-term sustainability plans. ESPC/GESA projects provides the financial means and technical expertise



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to achieve those goals, comply with environmental standards, replace antiquated systems, improve processes and operations, and reduce waste.

Use Capital Budget Dollars Wisely - Capital budgets are limited and often stretched across many priorities. With ESPC/GESA projects, utility and O&M dollars that are redirected from their original purpose and are invested in infrastructure improvements. Reducing energy and water use helps stabilize the utility budget, reducing the risk of future volatility in energy prices and reducing the associated taxpayer burden.

Support Economic Development – ESPC/GESA projects create jobs, and some ESCOs report anecdotally that as much as 70% of the project cost remains in the local economy. ESCOs often use local contractors that are familiar with the facility and already have a good working relationship with the Governmental Entity. Many owners have challenged ESCOs to buy locally and contract with local companies as much as feasible—an objective stated in the ESCO solicitation.

Streamlined Project Plan - By using this method of procurement, Public / Governmental entities can accomplish and address more of their needs under one umbrella project with a single source of execution responsibility, as an alternative to the traditional bid and spec method with multiple low-bid prime contractors. This saves time and manpower during the installation and minimizes disruption to building occupants, activities, and schedules.

Maximized Rebate / Grant Programs - Performance Contracting allows for greater leverage in maximizing potential utility rebate programs to help fund these projects. The ESCO will also look to include any and all available grants associated with specific scope measures further offsetting cost to the customer.

Contractor/ Manufacturer Control - Performance Contracting provides Public / Governmental entities the freedom to dictate which equipment manufacturers and contractors are used to upgrade / modernize their facilities. This eliminates the low bid “...and or equal” aspects of the bid and spec procurement method, resulting in customers having to settle for substandard work and equipment. Owner’s Reps and engineering firms have also found this approach beneficial in serving the Owner for the speed, flexibility, and end results this provides following identification of necessary facility improvements

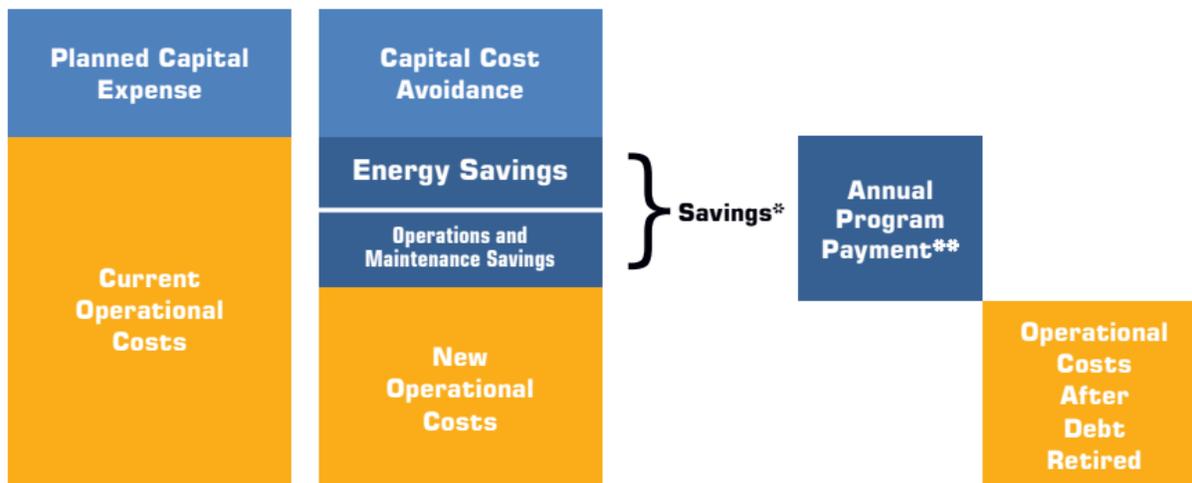
Guaranteed ROI - One of the most valuable aspects of Performance Contracts over traditional bid/spec projects is the project guarantee. The guarantee provides for a defined energy / operational savings to the customer while maintaining or improving comfort. This minimizes the entity’s financial risk associated with the installation by guaranteeing a ROI. Providing a turnkey solution guarantees that the finished project will meet the customer’s agreed upon expectations.

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FINANCIAL OVERVIEW

The below figure depicts how the energy savings and operational and maintenance savings enable a budget neutral approach to the capital investment. Additionally, excess savings are retained by the owner, whereas any shortfall in project energy savings is paid for by the ESCO.

A Budget Neutral Approach



* Excess savings are retained by the owner. Any shortfall is paid for by the ESCO.

** Performance Guarantee ensures that savings will at least be sufficient to pay debt service.

TYPICAL PROJECTS

Common facility modernization projects include:

- Lighting, lighting controls, and daylighting
- Modernized heating, cooling, ventilation, and temperature control systems
- Envelope components such as: windows, doors, roofs, insulation, and weatherization
- Installation of renewable energy sources such as: photovoltaics (PV), geothermal, oil/coal to natural gas conversion and more.
- Indoor air quality systems / improvements
- Security systems
- IT/ Communications infrastructure