

ENERGY SAVINGS PERFORMANCE CONTRACTING (ESPC)

*Through Pennsylvania's
Guaranteed Energy
Savings Act (GESA)*



**Delivering successful energy efficiency projects
across the Commonwealth since 2015**



pennsylvania

DEPARTMENT OF GENERAL SERVICES



MESSAGE FROM THE DIRECTOR

Energy Savings Performance Contracting provides Commonwealth Agencies with a way to achieve large-scale facility improvements – and energy savings – with no upfront costs and in a timely manner.

Energy Savings Performance Contracting was established in Pennsylvania in 2004, under the Guaranteed Energy Savings Act, or GESA. The GESA program has matured over the years, undergoing various program enhancements and legislative updates in 2010 and 2016. Our DGS team is experienced and professional in using GESA to meet agency expectations for facility performance, functionality, and financial benefit.

Facility managers appreciate GESA for the measurable and documented facility energy savings and overall reduced operating funds achieved from implementing facility improvements.

Simply put, the GESA program is the best way to improve energy performance and overall functionality of your facility portfolio. I encourage you to review the enclosed projects we have completed. You will see the savings realized and verified through our peer reviewed measurement and verification of project's performance.

Doug Hatcher - Director



What is *Energy Savings Performance Contracting*?

Energy Savings Performance Contracting (ESPC) is a budget-neutral approach to making facility improvements that reduce energy and other utilities' usage, increase operational efficiency and create energy savings. By contracting with a qualified energy service company, the commonwealth can pay for today's facility upgrades with tomorrow's energy savings—**without tapping into capital budgets!**



ESPC is authorized under Pennsylvania Procurement Code Title 62: Chapter 37, Subchapter E, referred to as the Guaranteed Energy Savings Act (GESA).

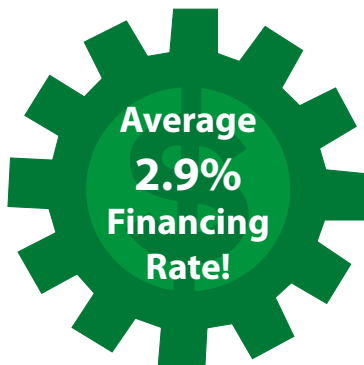
THE PROCESS

- 1. Project Scoping:** DGS and Penn State Facilities Engineering Institute (PSFEI) will visit your facility and propose energy-saving strategies. The team will work with you to develop a scope of work and solicit proposals from qualified energy services companies (ESCOs).
- 2. Site Surveying:** ESCOs will survey your location(s) and formally propose upgrades.
- 3. Selecting a Contractor:** The DGS team will work with you to review the project, solicit proposals and select an ESCO.
- 4. Surveying and Engineering:** The awarded ESCO will return to your location(s) to take detailed measurements and gather all the information necessary to make an Investment Grade Audit (IGA). (See below for more detail).
- 5. Finalizing the Scope of Work:** The DGS team will assist you with final plans, the IGA process, and project sign-off.
- 6. Soliciting Financing:** The DGS team will solicit banks for the best project financing. Financing is then awarded to the bank offering the lowest interest rate. You agree to the financing terms and sign-off.
- 7. Investment Grade Audit:** The ESCO will perform an in-depth study of the building(s) for energy efficiency improvement purposes. Energy usage, building characteristics, weather data, and typical usage of the building are all analyzed during the IGA study. The IGA report will detail each energy conservation measure and identify the savings, payback period, financial impact and environmental benefits. Financing will be based upon the finalized IGA.
- 8. Construction:** The ESCO will begin the project, purchasing and installing the equipment. The construction phase is typically completed in one year (typical range 6 to 18 months).
- 9. Acceptance:** The ESCO will train your staff on operations and maintenance of the new equipment. DGS conducts a final inspection ensuring proper startup and documentation.
- 10. Measurement & Verification:** DGS works with you to review monitoring reports for three years to ensure actual savings are achieved.

FINANCING

Energy Savings Performance Contracting projects require NO Capital Funding dollars or any other agency out-of-pocket costs! How do we do it? Project costs are paid for by future operational savings yielded through your project's energy reduction. In other words, YOU save operational money as a result of your ESPC project's energy reduction. That money, which is no longer spent on your agency's utilities, is used to pay the cost of the project from design to construction.

How it works: To obtain financing for your project, experienced DGS staff work with your agency to develop and issue a comprehensive Invitation for Bid (IFB) to the banking community. Once responses are received, DGS analyzes all potential financing offers to identify the best fit for your project. Project repayment schedules can vary up to an 18 year payback period.



This financing model gives your agency the means to pay for the project's design and construction as the project is completed, then as the savings roll in, the project pays for itself!

Here's a little more detail: DGS's in-house engineers help you develop the scope of your project, then our staff administers IFB solicitations for your agency's ESPC project financing. We'll review the responses to ensure the best rate possible based on project parameters and requirements. Once financing is secured, the awarded financial institution makes payments to the Energy Savings Company– through an escrow agent – as construction progresses, usually a 6-18 month timeframe.

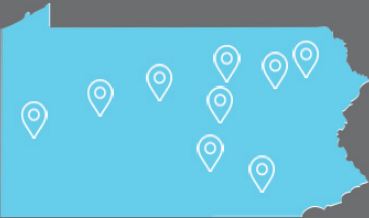
Payments for the completed project don't kick in until 12 months, at which point, your agency begins issuing payments to the awarded financial institution based on the contracted interest rate and repayment schedule. The benefit of this process is that you already have a year's worth of savings to use for the first payment!

So to sum it all up, no up-front costs; low financing rates currently averaging 2.9%; the design and construction get paid for as they are completed; no payments for 12 months; the project continues to pay for itself and you have the expertise and experience of the DGS Staff throughout the process!

Environmentally & Fiscally Beneficial

Pennsylvania's goal is to reduce greenhouse gas emissions 80% by 2050. Agencies must lead-by-example and reduce energy use in buildings. ESPC will play a primary role in achieving your energy efficiency goals.

13 GESA Projects



Total Project Investment



\$125M

Minimum Annual Savings



\$6.7M

"The GESA program is the best tool for Commonwealth Agencies to efficiently deliver energy-saving projects at multiple locations with little budget commitment that return years of savings through lower operational costs in addition to reducing environmental effects. With the project site and scope bundling advantage offered by the program, agencies are able to combine multiple facility needs into larger projects, yielding greater administrative savings not possible through other procurement processes."



pennsylvania
GREENGOV COUNCIL

ESPC PROJECT CASE STUDY



pennsylvania
DEPARTMENT OF GENERAL SERVICES

SCI Dallas 2 Year Savings



\$20 Million



Project
Investment

Actual Savings
Exceeded by

22%

Guaranteed
Annual Savings

\$2.2 MILLION

Actual Year 2
Savings

\$2.7 MILLION

WATER



GUARANTEED
SAVINGS

29%

ACTUAL
SAVINGS

43%

TOTAL SAVINGS

\$437,768

170,321 mGallons

ELECTRICITY



GUARANTEED
SAVINGS

8%

ACTUAL
SAVINGS

35%

TOTAL SAVINGS

\$238,649

1,926,707 kWh

FUEL



GUARANTEED
SAVINGS

66%

ACTUAL
SAVINGS

68%

TOTAL SAVINGS

\$1.8 M

54,174 mmBtu

SLUDGE



GUARANTEED
SAVINGS

37%

ACTUAL
SAVINGS

79%

TOTAL SAVINGS

\$197,102

723,600 mGallons

Successful GESA Project Exceeds Projected Savings

ESPC PROJECT CASE STUDY



pennsylvania
DEPARTMENT OF GENERAL SERVICES

Keystone/Judicial Project 2019 Yearly Savings



\$2,918,000



**Project
Investment**

Actual Savings
Exceeded by

7.8%

Guaranteed
Annual Savings

\$367,000

Actual Year 1
Savings

\$395,000

LED Lighting



**ENERGY CONSERVATION
MEASURES (ECMs)**



**Building Controls
Optimization**



ELECTRICITY



STEAM

\$ SAVINGS \$

5.2%

5.5%

- Guaranteed -

- Actual -

11.3%

11.2%

TOTAL SAVINGS

\$157,433

TOTAL SAVINGS

\$187,910

2,535,153 kWh

7,306 Mlb

ESPC PROJECT CASE STUDY



pennsylvania
DEPARTMENT OF GENERAL SERVICES

State Police Project 2019 Yearly Savings



\$5 Million



Project
Investment

Actual Savings
Exceeded by

20%

Guaranteed
Annual Savings

\$300,000

Actual Year 1
Savings

\$360,000

ENERGY CONSERVATION
MEASURES (ECMs)



LED
Lighting



Boiler
Optimization



Water
Conservation



ELECTRICITY



WATER

\$ SAVINGS \$

50%
62%

- Guaranteed -
- Actual -

23%
30%

TOTAL SAVINGS

\$251,599

TOTAL SAVINGS

\$19,129

3,569,855 kWh

1,510,000 Gallons

BENEFITS

1. Does not impact operating or capital budgets.
2. Ability to address deferred maintenance and comprehensive upgrades to your facility's systems.
3. Full support of DGS GESA team with administration, engineers and certified energy managers.
4. Peer review support for verification of savings.
5. Includes facility maintenance staff in "scope" development.
6. Low cost loan 2.9%, on average, finances the entire project.
7. Measurable energy savings and offsets to increase your facility's sustainability.



NOTES

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www.dgs.pa.gov/Facilities/Energy-Savings-Program