

Guaranteed Energy Savings Act



Department of General Services
Energy Office
Program Presentation

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GESA Program Overview

- Market as a fiscal tool
- Savings pay for projects (utility, operational, capital avoidance)
- Third Party Lenders (7)
- Maximum 15 year project payback (*3rd party lender*)
- Budget neutral to Agency
- Agency project – *No* Public Works involvement
- **RFP** procurement process
- Qualified Energy Service Companies (***ESCO's***)



Current GESA Program Status

- 11 participating agencies
- 18 Qualified Energy Service Companies (*ESCO's*)
- 45 projects
- 26 projects under contract
 - Project scope repayment: \$286 Million
- **Guaranteed savings: \$323.5 Million**
 - Operational Savings: \$25.2 Million
 - Utility Savings: \$306.9 Million
 - Avoided Capital: \$53.1 Million
 - Net Savings: \$44.1 Million (*savings, repayment, annual ESCO payment*)

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Agency Involvement (45 Projects)

- State System of Higher Education (15)
- Department of Military and Veterans Affairs (8)
- Department of Corrections (7)
- Department of General Services (5)
- Labor and Industry (2)
- Pennsylvania Department of Transportation (2)
- Department of Public Welfare (2)
- Department of Agriculture (1)
- Pennsylvania Higher Education Assistance Agency (1)
- Pennsylvania Historical and Museum Commission (1)
- Pennsylvania State Police (1)



Energy Service Companies (ESCO's)

18 companies are currently qualified in the DGS pool.

They are re-qualified every 3 years.

The *DGS* pool of *ESCO's* is used extensively by municipalities.





Project Costs

Hard Cost: *\$179 Million*

**Combined Total project cost to be financed:
*\$208.5 Million***

Repayment Cost: *\$286.1 Million*

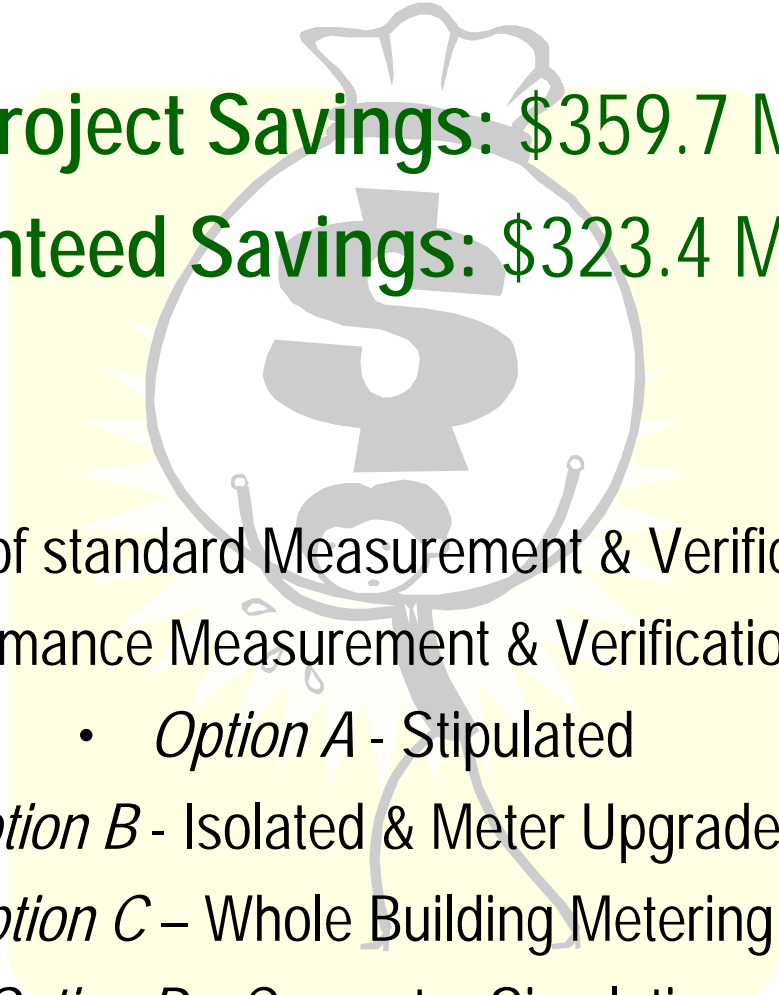





Project Savings

Total Project Savings: \$359.7 Million

Guaranteed Savings: \$323.4 Million

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- Use of standard Measurement & Verification
 - International Performance Measurement & Verification Protocol (IPMVP)
 - *Option A* - Stipulated
 - Option B* - Isolated & Meter Upgrade
 - Option C* – Whole Building Metering
 - Option D* – Computer Simulation

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Types of Savings

Utility Savings

Electric, Steam, Water, etc.

Operational Savings

Labor, Material, Maintenance Contracts

Capital Avoidance

Deferred Maintenance, Replacement



Continued:

Emissions (26 Projects)

Annual Avoided CO₂: **111,442 Tons**

(The avoided CO₂ would be the equivalent of removing 19,634 passenger vehicles from the road per year.)

Annual Avoided Greenhouse Gas: **112,406 Tons**

Annual Avoided MMBTU: **857,354**

(The avoided MMBTU's would power 23,574 average residential homes per year.)

Renewable / Green Energy

Payback often longer than 15 years

Supported by Standard *ECM's*

Support by User Agency



Renewable GESA Projects



Laurel Highlands

Landfill Gas

Governors Residence

Geo-Thermal (heat only)

Labor & Industry

Solar (Commonwealth Garage)

Green Ticket

Governors Residence & Rachel Carson

Commonwealth Agency Participation



Incentive / Barriers

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Agency Motivation

Facility Operations (Current Beneficiary)

- New Equipment
- Deferred Maintenance
- Staff Commitment

Executive Level (Key to Agency Future Commitment)

- Emission Goals
- Energy Goals
- Quality of Air Goals

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Agency Barriers

- Staff Commitment
- Unaware of *GESA* Program
- Agency Based Talent
 - Engineering, Performance Contracting
- Narrow Focus (Agency Mission Only)
- Commitment to Energy and Emission Goals
- Loss of Funds Saved (General Funds)

DGS Energy Office GESA Services





Outreach

Promote and Service Commonwealth Agency GESA
Projects

Task Force: DGS, DEP, GGGC, PSFEI

Quality of Air

LEED

Energy Star

Baseline Commonwealth Facilities

Commonwealth Energy Policies

Education

New Build & EB Operational Efficiencies



Energy Office Reorganization

- Added Staff
- Service Based
- Agency Energy Coordinator
- Consultants