

Guaranteed Energy Savings Act



Department of General Services
Energy Office
Program Presentation



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 Capitol:** \$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

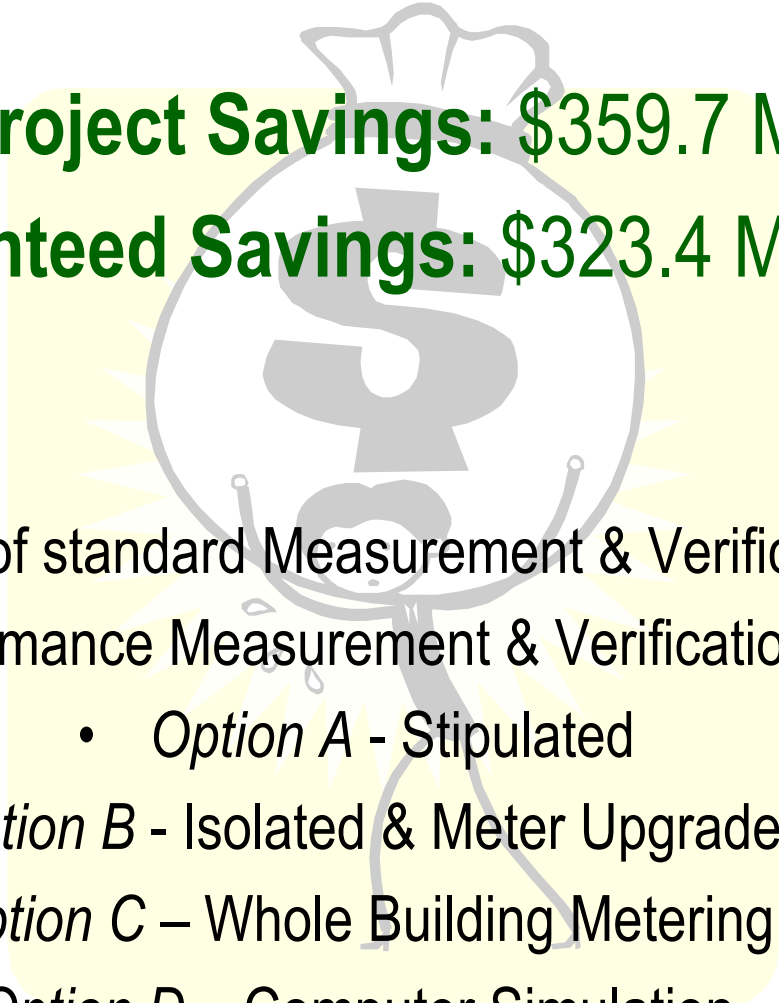




Project Savings

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

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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

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Renewable **GESA** Projects

Laurel Highlands

Landfill Gas

Governors Residence

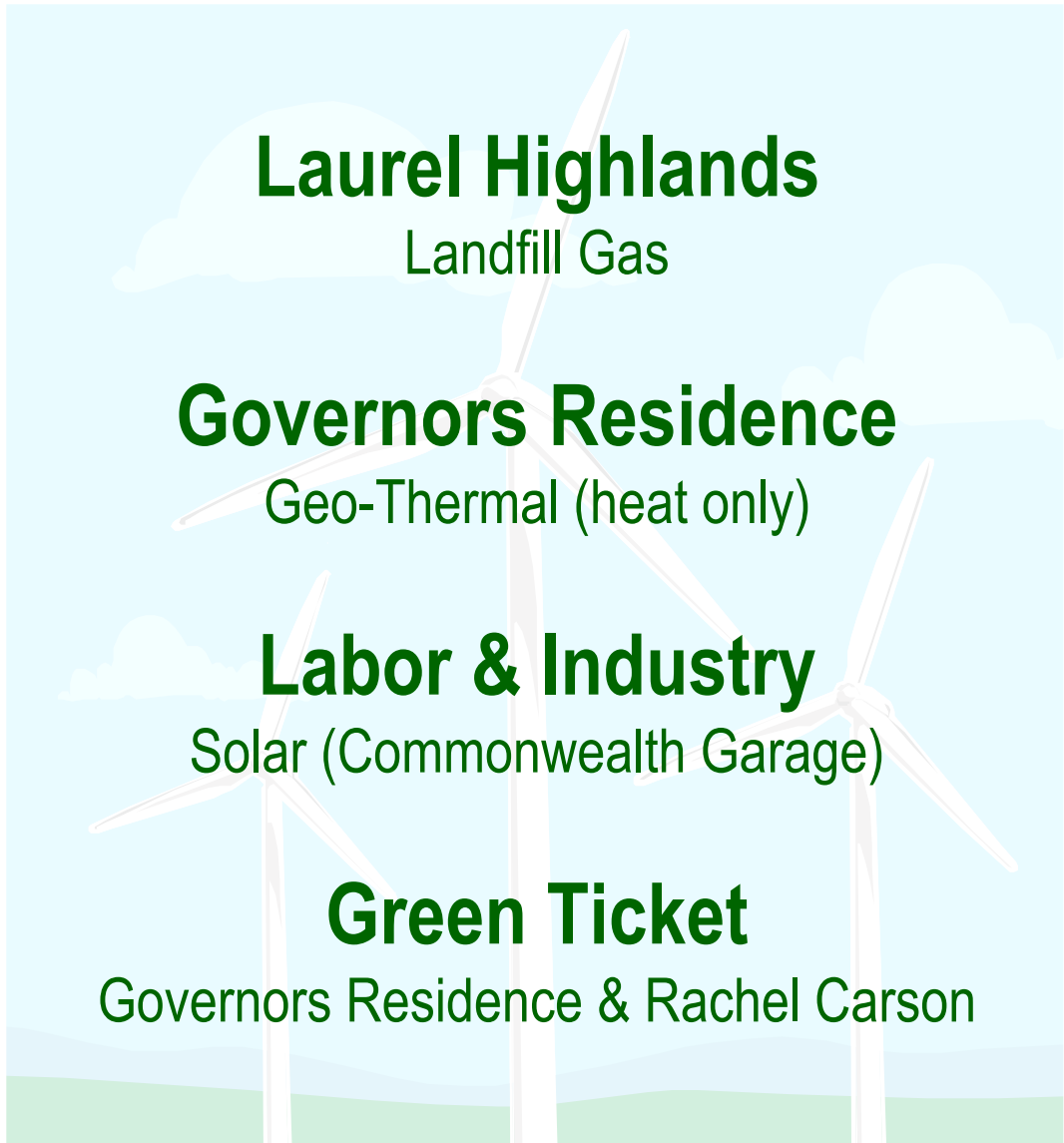
Geo-Thermal (heat only)

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



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

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Energy Office Reorganization

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