

## Energy Savings Performance Contracting



General Administration  
Energy Efficiency Program

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## Energy Savings Performance Contracting (ESPC)

- ▶ Background
- ▶ Experience
- ▶ Procedure



## ESPC Background

- ▶ Legislative Authority
- ▶ Definition
- ▶ Benefits
- ▶ Qualifying Projects
- ▶ Financing



## Legislative Authority

- ▶ **RCW 39.35A.050**
  - ▶ The state department of general administration shall maintain a registry of energy service contractors and provide assistance in identifying available performance-based contracting services.



## Legislative Authority

- ▶ **RCW 39.35C.020**
  - ▶ The department shall assist state agencies and school districts in identifying, evaluating, and implementing cost-effective conservation projects at their facilities.



## ESPC Definition

- ▶ A method of identifying, constructing and financing energy and utility conservation projects.
- ▶ Uses energy utility dollars saved and utility rebates to pay for the project costs.
- ▶ Eliminates most of the risks associated with the design, bid, build (DBB) process.



## ESPC Benefits

- ▶ Low bid acceptance not required.
- ▶ Owner involved with subcontractor selection.
- ▶ Owner involved with equipment selection.
- ▶ **GUARANTEED:**
  - ▶ Maximum project cost
  - ▶ Energy savings
  - ▶ Equipment performance



## ESPC Benefits (cont'd)

- ▶ Maintenance costs reduced.
- ▶ Funds available through the State Treasurer.
- ▶ Improved indoor environmental conditions.
- ▶ Positive cash flow over measure life.
- ▶ GA has over 20 years of performance contracting experience.



## ESPC Benefits (example)

- ▶ Replace T-12 lights with T-8 lamps and energy efficient ballasts.
- ▶ Lower energy consumption, lower costs.
- ▶ Replacing magnetic ballasts with electronic eliminates flicker issues.



## ESPC benefits vs. DBB Methods

	Conventional DBB Method	ESPC Method	Benefits
A&E Selection	Required competitive	Competition Completed by State, Firms pre-qualified	Save time and cost
Contracts	Contracts have to define materials and product in detail	Contracts define <b>Performance</b> and <b>Guarantees</b>	Save time and cost No surprises <b>Fair state documents</b>
Pricing	Not "open book" – Low Bid + Change Orders	All pricing open book Fees pre-negotiated and guaranteed	Know what you are paying for Know what you get
Financing	Capital or Operating Budgets – Up Front	State Treas, Bonds, ESCO or 3 <sup>rd</sup> party, <b>Paid out of savings</b>	No legal fees Power of state buying Low interest rates



## Qualifying Projects

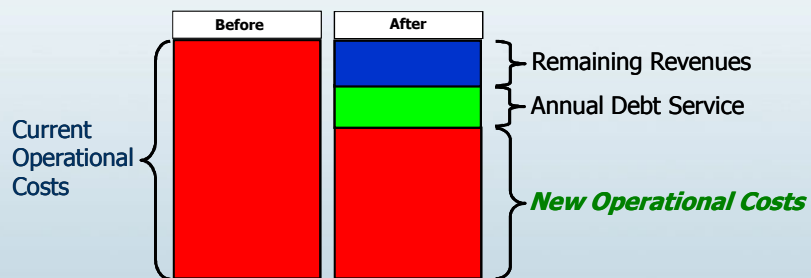
### Energy, Water, Sewer and Waste Disposal saving projects such as:

- ▶ Lighting projects – lamps, ballasts & fixtures
- ▶ HVAC modifications
- ▶ Steam & condensate piping systems
- ▶ Boiler & chiller systems
- ▶ Energy management control systems
- ▶ Buildings and grounds water conservation
- ▶ Waste reduction
- ▶ State funding option for projects with 7 year simple payback



## Financing

### Budget Neutral Approach



## Financing Options

- ▶ **Energy Service Company (ESCO) Financing**
- ▶ **State Financing**
  - ▶ State Treasurer's LOCAL Program
    - ▶ 3.15% - 5.11% interest rate
    - ▶ 5 to 10 year loan
    - ▶ OSPI grants, Dept. of Commerce
- ▶ **Federal grants**



## GA Experience

- ▶ **Energy Conservation in Public Facilities (since 1991):**
  - ▶ \$175 million in total projects
  - ▶ \$25 million in grant funds brought to the projects
  - ▶ \$13 million in annual energy cost savings



## Case Study 1:

### ▶ South Kitsap School District

#### ▶ Project Included:

- ▶ Swimming pool heat recovery system
- ▶ Phase 1: New lighting in the High School and Administrations Buildings
- ▶ Phase 2: New lighting in the remainder of the district's facilities



## Case Study 1:

### ▶ South Kitsap School District

#### ▶ Project benefits:

- ▶ Improved pool facility conditions (temperature and relative humidity)
- ▶ Improved lighting levels and removal of PCB ballasts.

#### ▶ Project savings:

- ▶ 3.9 million kWh or \$240,000 annually

#### ▶ Project cost:

- ▶ \$1.56 million, with \$466,000 utility grant



## Case Study 2:

### ▶ South Seattle Community College

#### ▶ Project Included:

- ▶ Replaced heating systems in seven buildings
- ▶ New lighting systems in Main and Duwamish campuses
- ▶ Expanded energy management system
- ▶ Water and irrigation system upgrades

#### ▶ Project benefits:

- ▶ Improved comfort
- ▶ Better visibility
- ▶ Energy & maintenance savings



## Case Study 2:

### ▶ South Seattle Community College

#### ▶ Project savings:

- ▶ \$177,000 annual energy savings

#### ▶ Project cost:

- ▶ \$1.58 million
- ▶ \$146,000 in grant funds from Seattle City Light



## Case Study 3:

- ▶ **Washington Corrections Center for Women (Purdy)**
  - ▶ **Project included:**
    - ▶ Replaced central heating with distributed condensing boilers
  - ▶ **Project benefits:**
    - ▶ Energy and maintenance savings
    - ▶ Distributed generation
  - ▶ **Project savings:**
    - ▶ \$271,00 annual energy savings
  - ▶ **Project cost:**
    - ▶ \$6 million, with \$1 million utility grant



## Experience

- ▶ **Clients include state agencies, colleges and universities, cities and towns, counties, school districts, port districts, libraries, hospitals, health districts and more.**
- ▶ **Current clients include:**

▶ Olympic College	▶ Valley Medical Center
▶ King County	▶ Department of Corrections
▶ Washington State University	▶ General Administration
▶ City of Kirkland	▶ Veterans Administration
▶ Evergreen Hospital	▶ North Kitsap School District
▶ Harborview Medical Center	▶ ...and dozens more



## Procedure

### 1. Agreement established between GA and your agency, school district, hospital district, county etc.:

- ▶ GA initiates an Interagency Agreement (IAA)
- ▶ Both parties (owner & GA) sign the IAA
- ▶ Owner publishes notice of agreement in the newspaper



## Procedure

### 2. ESCO Selection:

- ▶ GA has pre-qualified Energy Service Companies (ESCOs).
- ▶ Owner reviews the qualifications and chooses the ESCO that is a good fit for its needs.
- ▶ Owner may also interview the ESCOs to choose the right one for its needs.



## Procedure

### 3. Audit Phase:

- ▶ Select facilities and systems to study.
- ▶ Conduct preliminary walk-thru to develop audit proposal.
- ▶ Owner establishes payback criteria.
- ▶ ESCO and GA sign agreement for investment grade audit.
- ▶ Owner signs funding authorization.



## Procedure

### 3. Audit Phase (cont'd):

- ▶ ESCO develops investment grade audit – first cost and savings guarantee.
- ▶ Owner may list favored and disfavored subs and equipment!
- ▶ GA reviews and comments on draft audit.
- ▶ ESCO presents audit results.



## Procedure

### 4. Design & Construction Phase:

- ▶ ESCO and GA sign construction contract
- ▶ Owner signs funding authorization
- ▶ GA issues notice to proceed
- ▶ GA and owner review design documents
- ▶ Bid documents prepared by ESCO
- ▶ Sub-contractors and equipment selected
- ▶ GA manages ESCO project construction
- ▶ GA and ESCO verify first costs and savings

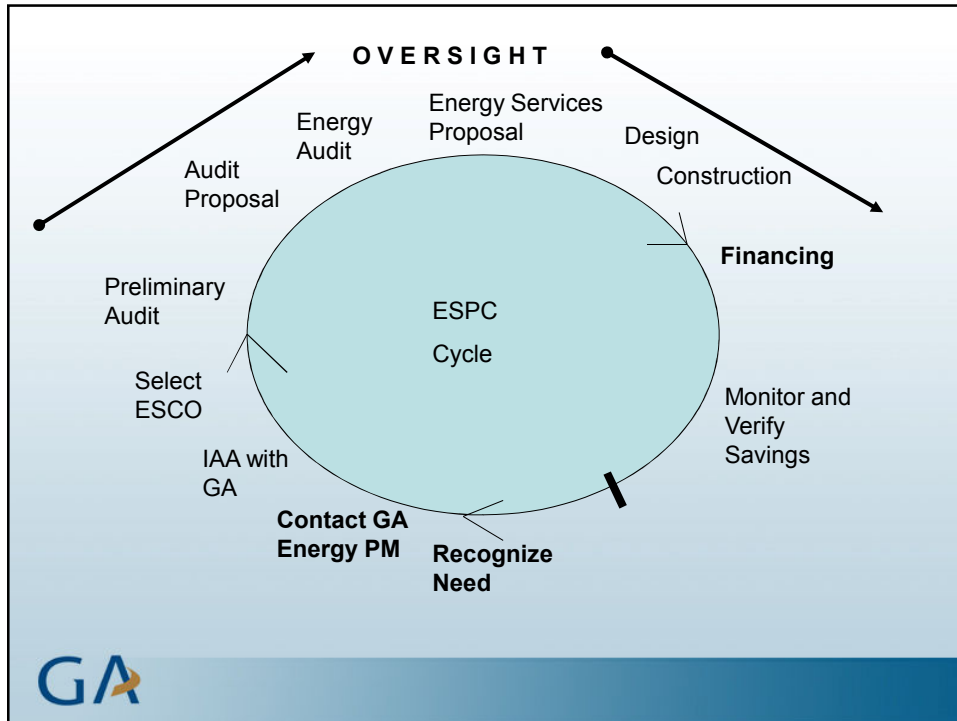


## Procedure

### 5. Monitoring and Verification:

- ▶ First year monitoring and verification (M&V) is part of the project cost.
- ▶ M&V in years 2 thru 10 are covered under a separate agreement, authorized by the owner.





## For More Information

- ▶ Visit GA's Website at [www.ga.wa.gov/eas/energy](http://www.ga.wa.gov/eas/energy)
- ▶ State Treasurer's LOCAL Program <http://tre.wa.gov/LOCAL/local.htm>
- ▶ Questions?

**Thank You**



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