

Energy Savings Performance Contracting



General Administration
STATE OF WASHINGTON

May 14, 2010

What does an Energy Savings Performance Contract (ESPC) do?

- ▶ Identifies, constructs and finances energy and utility conservation projects
- ▶ Uses energy and utility dollars saved to pay for the project costs
- ▶ Guarantees total project cost, performance and energy savings before construction starts

GA Energy Team Experience

- ▶ **Energy Conservation in Public Facilities (since 1986):**
 - ▶ \$185 million in total projects completed
 - ▶ Almost \$30,000,000 in grant funds brought to the projects
 - ▶ Nearly \$15 million in annual energy cost savings

Who Can Use GA Energy Services Performance Contracting?

- ▶ **School Districts**
- ▶ **Cities, Counties and Ports**
- ▶ **Universities and Community Colleges**
- ▶ **State Agencies**
- ▶ **Public Hospitals**

Clients

▶ School Districts

- ▶ Bremerton School District
- ▶ Camas School District
- ▶ Central Kitsap School District
- ▶ Clarkston School District
- ▶ East Valley School District
- ▶ Federal Way School District
- ▶ Highline School District
- ▶ Mount Vernon School District
- ▶ North Kitsap School District
- ▶ Oroville School District
- ▶ Pasco School District
- ▶ Pateros School District
- ▶ Peninsula School District
- ▶ Port Angeles School District
- ▶ Prosser School District
- ▶ Seattle School District
- ▶ Selah School District
- ▶ South Kitsap School District
- ▶ Spokane School District
- ▶ Yakima School District

Clients

▶ Cities, Counties and Ports

- ▶ Benton County
- ▶ Clark County
- ▶ King County
- ▶ City of Kirkland
- ▶ City of Olympia
- ▶ Pend Oreille County
- ▶ Port of Seattle, SeaTac Airport
- ▶ City of Spokane
- ▶ City of Vancouver
- ▶ Walla Walla County
- ▶ City of Washougal

Clients

▶ Universities and Community Colleges

- ▶ Central Washington University
- ▶ Eastern Washington University
- ▶ Evergreen State College
- ▶ Washington State University
- ▶ Western Washington University

▶ Community and Technical Colleges

- ▶ Bates Technical College
- ▶ Edmonds Community College
- ▶ Seattle Central Community College
- ▶ Community Colleges of Spokane
- ▶ South Puget Sound Community College
- ▶ Olympic Community College
- ▶ UW Bothell/Cascadia Community College
- ▶ Walla Walla Community College

Clients

▶ State Agencies

- ▶ Department of Corrections
- ▶ Department of Transportation
- ▶ Department of Veterans Affairs
- ▶ Washington State Patrol
- ▶ Department of Social and Health Services

▶ Public Hospitals

- ▶ Evergreen Hospital Medical Center
- ▶ North Valley Community Hospital
- ▶ Valley Medical Center Hospital

▶ Others

- ▶ LOTT Alliance
- ▶ Northwest Museum of Arts and Culture

Sequence of an ESPC Project

1. **Project initiated by an Interagency Agreement**
2. **ESCO selection**
3. **Preliminary audit**
4. **Investment grade audit**
5. **Design and construction**
6. **Measurement and verification**

GA Energy Team Advantage

- ▶ **Contracting and project management expertise:**
 - ▶ Public works selection is done by GA
 - ▶ GA engineers understand performance contracts
 - ▶ Contracting staff manage the paperwork
 - ▶ GA fee is set in advance

GA Energy Team Advantage

- ▶ **Experienced energy engineers:**
 - ▶ Your GA engineer is independent of the ESCO and is available to you throughout the project
 - ▶ The GA engineer is responsible to ensure the contract conditions are met
 - ▶ The GA engineer observes measurement and verification

GA Energy Team Advantage

- ▶ **Proven construction delivery method:**
 - ▶ Performance contracts guarantee first costs and energy savings
 - ▶ The more energy savings the ESCO finds, the bigger the project can be
 - ▶ Performance contracting enables the ESCO to maximize energy savings
 - ▶ Measurement and verification enables the client to have confidence in energy savings

GA Energy Team Advantage

- ▶ **Long term business relationships with Energy Services Companies (ESCOs):**
 - ▶ GA Energy contracts and procedures provide reliable conditions for ESCOs to do business
 - ▶ ESCOs maintain a good working relationship with GA Energy and our clients
 - ▶ The ESCO on your GA Energy project is looking forward to many more projects with us

Success Stories

**All our completed projects are success stories,
because every project saves energy that
would otherwise be wasted**

**There is no reason to keep burning cash, when
you can put it to work**

**Here are a few projects that were especially
successful:**

Case Study

- ▶ **South Kitsap School District**

- ▶ **Project Scope:**

- ▶ Heat recovery chiller and cooling tower for pool space, insulate two roofs, replace heat pumps at one school, lighting replacements in all facilities

- ▶ **Benefits:**

- ▶ Energy savings, comfort, improved lighting, and maintenance savings

Case Study (continued)

▶ South Kitsap School District

▶ Cost:

▶ \$2,873,400

▶ State Treasurer loan \$1,460,000

▶ Puget Sound Energy grant \$686,000

▶ School District capital \$727,400

▶ Savings:

▶ \$262,300 annual savings

More Examples

- ▶ Oroville Elementary

- ▶ Ground Source Heat Pump resulted in more than 50% savings on utility bills

- ▶ City of Edmonds Library

- ▶ Improvements to the library HVAC and controls reduced energy use by +40%

- ▶ CWU

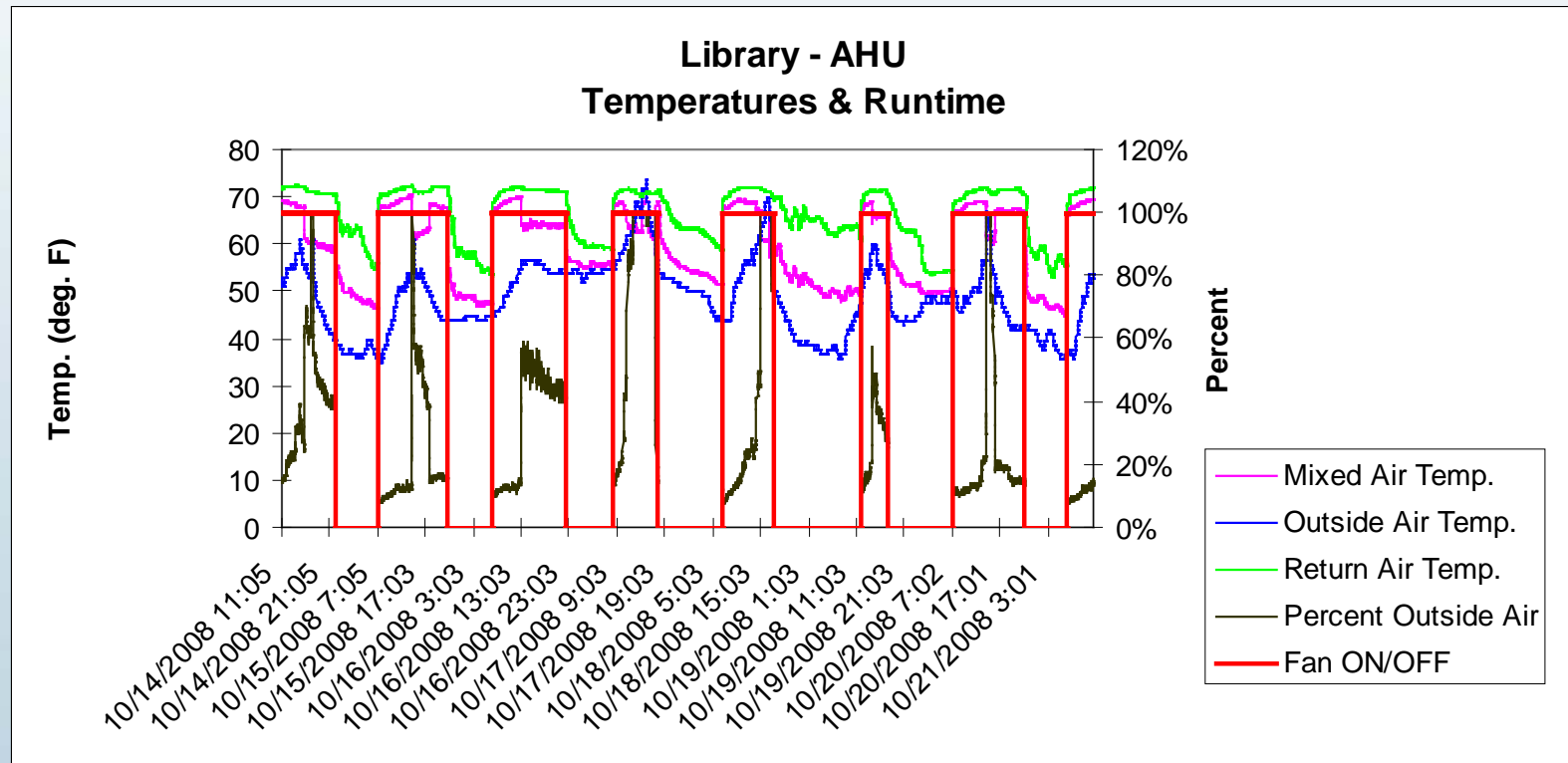
- ▶ A series of steam loop improvements and other projects have kept heating energy use flat as the campus expanded

More Examples

- ▶ Edmonds Community College
 - ▶ Lighting replacement
 - ▶ Controls upgrades
 - ▶ New boiler
 - ▶ Other efficiency measures
 - ▶ Servers virtualized
 - ▶ Electrical submeters
 - ▶ Facilities will be put into Portfolio Manager

Measurement and Verification Example

City of Edmonds Library



Thank You



General Administration
STATE OF WASHINGTON

Donna Albert, PE, MCE,
CEM, LEED-AP

GA Energy Program

360-902-7248

donna.albert@ga.wa.gov