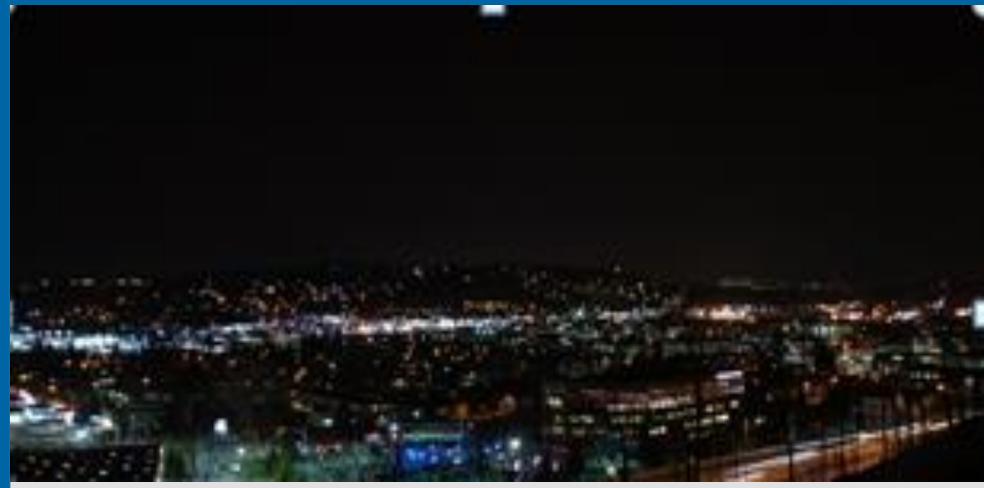
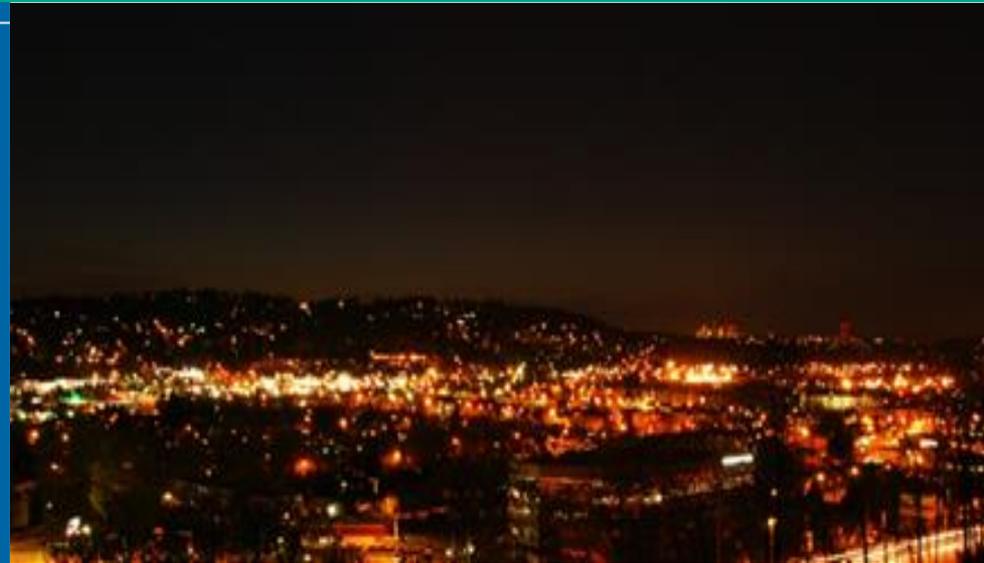


Let's Talk Energy Efficiency in Local Government

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Presenting Today

Fritz Feiten

Manager, Business Development, Ameresco

Jeff Cameron

Public Works Director, City of Longview

Agenda

- Where to Look for Energy Savings
- Energy Savings Performance Contracting
- ESPC Benefits
- Financing an ESPC
- How to Select an ESCO
- ESPC Process
- WA State Energy Efficiency Grants
- Project Examples:
 - City of Aberdeen
 - Grays Harbor County
 - City of Longview

This is a conversation, so please ask questions and offer your own experiences and comments as we go.

Where to Look for Energy Savings

- City buildings
 - HVAC improvements (RTUs, boilers, chillers, etc.)
 - DDC controls (scheduling, demand control ventilation)
 - Lighting (interior and exterior)
 - Water conservation (aerators, low-flow urinals and water closets)
 - Envelop (windows, insulation, leak sealing, roofs)
- Street and area lighting
 - Street lighting, parking facilities, parks, play fields
- Water and wastewater treatment facilities
 - High efficiency pumps, blowers & diffusers
 - Dissolved oxygen control
 - UV disinfection
 - Bio-solids & methane processing
- Water distribution systems & wastewater lift stations

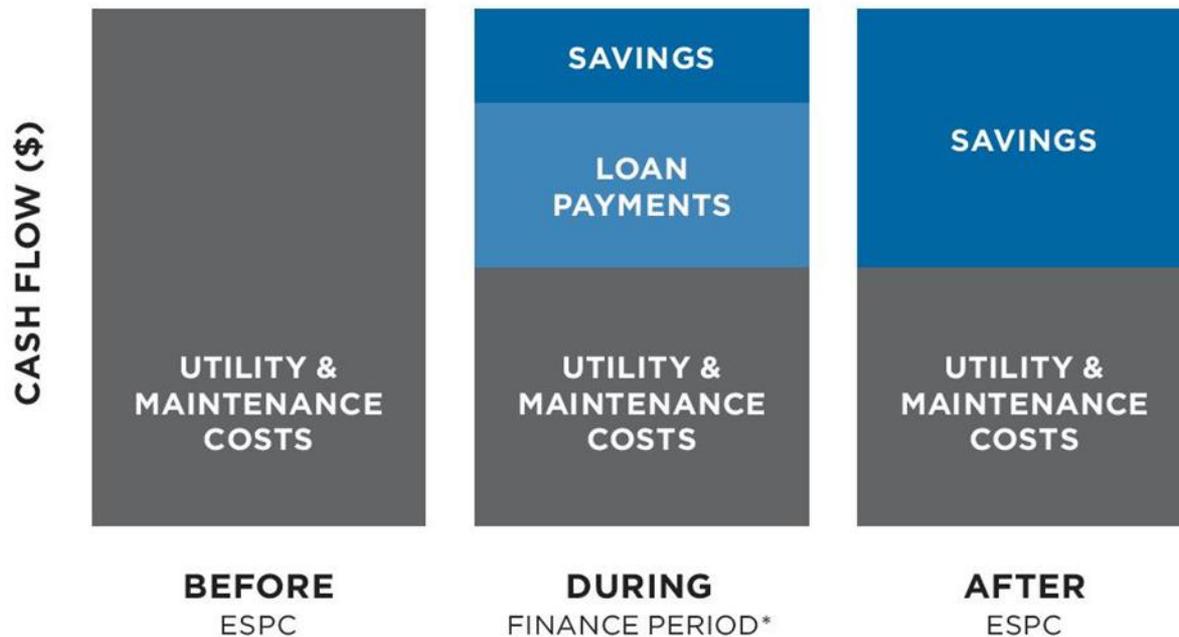
Energy Savings Performance Contracting

- ESPC is a public procurement approach in which an energy services company (ESCO) :
 - Performs energy audits
 - Identifies energy, water, solid waste & operational savings opportunities
 - Designs infrastructure improvements that reduce resource consumption
 - Implements the improvements as the general contractor
 - Provides a guaranteed not-to-exceed cost
 - Guarantees equipment performance and energy savings
 - Performs energy audit after implementation to confirm energy savings

ESPC Benefits

- Budget neutral
 - No capital required, most projects are financed
 - Reduces future energy costs and uses savings to pay for improvements today
- Shifts project risk from customer to ESCO
 - ESCO guarantees construction cost & is responsible for overruns
 - ESCO guarantees equipment performance
 - ESCO guarantees energy savings & reimburses owner for shortfalls
 - ESCO provides measurement & verification of savings
- More control over equipment and sub-contractor selection
 - The equipment you want, installed by the people you trust
- Single-source accountability
 - ESCO is responsible for the entire project

Financing an ESPC



* The "During Finance Period" bar assumes the ESPC is paid for with debt financing and that a portion of the guaranteed savings is used to retire that debt. If capital funds are used instead of a loan, all the savings in the "After ESPC" bar are available on project completion.

Your ESCO can help identify cost-effective financing sources. Commonly, that is the WA State Treasurer's LOCAL program.

How to Select an ESCO

- Request for Qualifications
 - RCW: *“Each municipality shall publish in advance its requirements to procure water conservation services, solid waste reduction services, or energy equipment and services under a performance-based contract. The announcement shall state concisely the scope and nature of the equipment and services for which a performance-based contract is required, and shall encourage firms to submit proposals to meet these requirements.”*
- Use Washington Department of Enterprise Services Program
 - Enables use of state contract and DES’ list of pre-qualified ESCOs
 - DES assigns a Project Manager with energy efficiency expertise for added project oversight
 - Sliding scale fee based on project value
 - Initiated with an interagency agreement

An estimated 95% of ESPCs in WA use the DES process.

- Customer selects an ESCO
- ESCO completes no-cost preliminary audit
 - Identifies cost-effective energy conservation measures
- Customer selects measures for Investment Grade Audit (IGA) and establishes their cost-effectiveness criteria
- ESCO prepares IGA fee proposal
- ESCO completes IGA, which provides
 - Guaranteed not-to-exceed cost
 - Guaranteed energy savings
 - Estimates utility incentives and identifies grant opportunities
- Customer selects measures for implementation

- ESCO issues final Energy Services Proposal
- Contracts finalized, Notice to Proceed issued
- ESCO finalizes preliminary design & equipment selection in concert with Customer
- ESCO prepares bid packages for installation
- Customer/ESCO select sub-contractors
- ESCO manages entire construction process
- ESCO provides Customer training in use of new equipment
- Project closeout
- **Measurement and verification process begins**

WA State Energy Efficiency Grants

- Administered by the WA Department of Commerce
- Have been available to local government, higher education & state agencies
- Most recent grant metrics:
 - Maximum grant of \$500,000
 - Energy Savings Performance Contracting preferred procurement method
 - Investment Grade Audit required
- Commerce has requested \$80M for the 2016/2017 biennium

Project Examples: City of Aberdeen

- Project scope
 - Upgraded WWTP aeration system by replacing the diffusers in both aeration basins with ultra-fine diffusers
 - Replaced 125 HP centrifugal blower with a high efficiency hybrid rotary screw blower
- Project financials
 - Total project cost: \$458,500
 - Estimated utility incentive: \$97,451
 - Commerce grant: \$154,000
 - Net cost: \$210,049 (financed over 10 years)
 - Annual savings: \$33,965 (energy)

Savings \$ exclude maintenance savings.

Project Examples: Grays Harbor County

- Project scope
 - Lighting retrofit (all county buildings used regularly)
 - Plumbing retrofit at Administration Building, Fairground Pavilion and maintenance shops
 - Building envelope sealing at Administration Building
- Project financials
 - Total project cost: \$686,176
 - Estimated utility incentive: \$117,329
 - Commerce grant: \$170,000
 - Net cost: \$398,847 (financed over 10 years)
 - Annual savings: \$47,139 (energy, water and sewer)

Savings \$ exclude maintenance savings.

Project Example: City of Longview

City Hall	Installed building-wide Variable Refrigerant Flow (VRF) heat pump system w/dedicated outside air system. New Low-E windows. Complete lighting & plumbing retrofit.		
Other City Buildings:	HVAC upgrades and DDC controls with demand control ventilation	Lighting Retrofit	Plumbing Retrofit
Public Library	Economizer control, RCx, new duct work	X	X
Police Department	Add VFDs	X	
Fire Station #81	Install infrared heaters in shop	X	X
McClelland Center		X	
Racquet Complex		X	X
Golf Pro Shop		X	
Water & Sewer Operations Center	Convert truck fleet to LED safety lights	X	X
City Shops		X	X
Parks Maintenance		X	
Parks & Recreation Office	Balance HVAC, RCx	X	
Golf Maintenance Shop			X
Elks Memorial Building	Electric furnace to split-system HP	X	X
Seniors Center		X	X
Street Lights throughout City	Converted HPS street lights to LED.		

Project Example: City of Longview

- Financials
 - Total project cost: \$4,000,024
 - Estimated utility incentive: \$392,553
 - Commerce grant: \$500,000
 - Net cost: \$3,107,471 (financed over 15 years)
 - Annual savings: \$223,241
- Annual energy and water savings
 - Electricity: 2,614,081 kWh
 - Natural gas: 3,465 Therms
 - Water: 1,1563 CCF
 - Fleet fuel (gasoline): 3,038 gallons
- **Savings \$ exclude maintenance savings.**
- **Deferred upgrades accomplished with savings**

Longview Project: Under the Hood

- Payback criteria
- Financing issues
- Use of local contractors
 - Acceptable cost premium to hire local
- Upgrades that don't meet payback criteria
- Adding scope with savings from low bids

Thank You!

Questions?