Production Efficiency

Harvesting energy savings from Industries in Oregon

May 15, 2014
About

• Independent nonprofit
• Serving 1.5 million customers of Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas
• Providing access to affordable energy
• Generating homegrown, renewable power
• Building a stronger Oregon and SW Washington
The Production Efficiency program serves:

• Industrial + manufacturing facilities of all sizes

• Agriculture: nurseries, dairies, irrigators

• Water + wastewater treatment facilities
How We Go to Market

Easy to work with...one-stop shop

Industrial energy efficiency experts assigned to your facility work with you to reduce energy costs and optimize use

Long-term perspective with incentives and services for capital projects, O&M and strategic energy management
Implementation: the PE Team

1. Energy Trust
2. Program Delivery Contractors
3. Technical contractors
4. Vendors/Trade Allies
Gas Savings by Track, Historical

2009
Custom
Streamerlined Industrial

2010
Custom
Streamerlined Industrial

2011
SEM
Custom
Streamerlined Industrial

2012
SEM
Custom
Streamerlined Industrial

2013
SEM
Custom
Streamerlined Industrial

therms (working)
Projects Completed *(track)*

**TRENDS**

Volume growth from small, simple projects

Diversification benefits
Unified Grocers

High Speed Door Installation

$13,000 Project cost
$ 6,500 Energy Trust incentive

74,000 Annual kWh savings

$4,800 estimated annual savings

“The information and training we get from Energy Trust provides us with ideas and options that help us improve efficiency and save money.”

-Joe Gomez, manager of plant services, Unified Grocers
DPI Lighting Upgrade

- LED Fixtures and lamps
- High-performance T8 fluorescent fixtures and lamps
- Bi-level ballast and fixture controls

$194,000 Project cost
$113,881 Energy Trust incentive

536,319 Annual kWh savings

$37,000 estimated yearly savings

“Workers are telling us the lighting is better inside and out. They can see better and we’ve noticed that accuracy has improved.”
Roseburg Urban Sanitary Authority

- ACWA’s Sustainable Energy Management Systems Training
- Created Energy Team
- Development of energy management plan
- Implemented energy projects (no-cost and lighting)
- Tracked and reported on progress
- $29,000 annual savings

“Today, our staff members are much more aware of the plant’s energy use. At the end of day, it means lower fixed costs, which is better for our
Strategic Energy Management (SEM) Program Objectives

Increase awareness of energy use and efficiency opportunities; Increase commitment and capacity to manage energy

Energy Savings
  – Direct energy savings from low and no cost actions (behavioral, O&M) to reduce energy waste.
  – Increased ability to implement capital efficiency projects in the future

Persistence of SEM practices in the organization and persistence of savings
SEM: An Emerging Source of Savings

NW region programs leading in this area past 7 years

- Northwest Energy Efficiency Alliance (NEEA), Energy Trust, Bonneville Power Administration (BPA), BC Hydro

National and International

- Superior Energy Performance – US DOE
- ISO 50001
- CEE and a growing number of its members
How Can SEM be a Game-changer?

Enables/ equips customers to take a deep, comprehensive approach to energy use now.

Improves their ability to tackle complex process efficiency projects, emerging technologies, DR, CHP in the future.

Energy models/ SEM could change how programs are designed or savings evaluated in the future – performance based vs measures.
Thank You

Kim Crossman
Industry & Ag Sector Lead
Kim.Crossman@energytrust.org
503.459-4074
Back-up Slides
PE Cash Incentives

- **Custom Capital**
  - $0.25/kWh
  - $2/therm
  - Capped at 50% project cost

- **Custom O+M**
  - $.08/kWh
  - $.40/therm
  - Capped at 90% project cost if complete in 90 days

- **Strategic Energy Management**
  - $.02/kWh
  - $.20/therm

- **Equipment Rebates**

- **Custom Lighting**
  - $.25/kWh
  - Capped at 50% project cost

- **Calculated equipment incentives**
Predictability yields consistent savings
Volume growth from small, simple projects
Savings growth from large, complex projects
Streamlined still major source of gas savings
Savings are shifting across sectors
Diversification benefits continue to drive growth and hedge portfolio risk
2013 kWh Savings by Industry Sector

TRENDS

Savings are shifting across sectors
Diversification benefits
2013 Gas Savings by Industry Sector

TRENDS

- Savings growth from large, complex projects
- Diversification benefits
- Volume growth from small, simple projects
50 HP VFD Air Compressor

Project Cost: $51,000
Incentive: $25,500
Payback: 2.8 Years
Energy Savings: 116,000 kWh / year

Estimated Yearly Savings
$8,000 Utility Bill
+ $1,200 Maintenance
$9,200 Estimated Total
CalPortland

Participated in Energy Trust’s Industrial Energy Improvement SEM training and tech support

Completed six energy-efficiency projects
  – Received $28,169 in Energy Trust incentives

Estimated annual savings
  – $54,676 per year
  – 729,014 kilowatt hours
  – 277 tons of carbon dioxide

"The energy team is now a fixture within the organization. Operational management is performed with energy as a driving factor."

Bill Jerald, CEM
Energy Manager
We offer:

Well qualified Program Delivery Contractors (PDCs) make participation easy
- Customer outreach, engagement and long term support
- Facility assessments – identify opportunities and verify savings
- Project application and documentation

No-cost technical assistance
- Technical and economic analysis of potential capital projects
- Enhanced technical services to reduce energy waste in O&M
- Training of site leadership and staff for continuous energy improvement

Cash incentives to buy down costs of energy saving projects