



Energy Trust of Oregon

Industrial Sector Production Efficiency Program

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[Agenda]

- Energy Trust background
- Energy Trust Production Efficiency Program
 - Resources
 - How to participate
 - Case study

[Energy Trust Mission]

- To change how Oregonians produce and use energy by investing in efficient technologies and renewable resources like:
 - Develop new sources of clean energy
 - Help Oregonians manage energy costs
 - Stimulate the economy
 - Protect the environment

[Energy Trust of Oregon]

- We serve:
 - Industrial, retail, hospital, offices, governmental, commercial, agricultural facilities and residential programs
 - Renewable programs
 - PGE or Pacific Power customers in Oregon
 - Separate arrangements to serve customers of NW Natural, Cascade and Avista gas utilities residential and commercial (approx \$11M/yr)
- How?
 - Recipient of the majority of 3% public purpose fund collected from Oregon customers of PGE and Pacific Power (\$50.4M in 2008)

[Energy Trust of Oregon]

- Production Efficiency Program (industrial)
 - Unique nature of projects
 - Compressed air, refrigeration, chilled water, pumps & fans
 - Incremental – new construction
 - Incentive above code or industry standard
- New Buildings Program (commercial)
 - Purchasing and installing energy efficient equipment
 - EnergyStar, LEED

[Resources]

- Production Efficiency Program
 - Tricia McGuire – Industrial Technical Mgr
 - 503-459-4062
 - PDC (Production Delivery Contractor)
 - PGE: Doug Findlay – 503-464-7696
 - PacificPower (south): Buzz Thielemann – 541-770-5884
 - PacificPower (north): Rob Morton – 503-287-8488
- Building Efficiency Program
 - Greg Stiles – Sr. Business Sector Mgr
 - PECl – New Buildings and Major Renovation
 - Lockheed Martin – Retrofits to Existing Buildings

Incentives

- Production Efficiency Projects
 - \$0.20/kWh saved up to 50% of the project cost
 - Energy Study
- Lighting Efficiency
 - Rebates – fixtures & sensors
 - Custom
 - \$0.17/kWh up to 35% of the project cost
- Premium Efficiency Motor Rebates
 - \$10 per horsepower

[Economic Development Benefit]

- Incentives available for:
 - Process better than standard practice
 - Building better than code
- Operating costs are lower
- Business positioned for business variations, rate changes
- Leveraged optimization (ETO & BETC)

[Case Study]

- Henningsen Cold Storage – 2008 project
 - Location: Gresham, OR
 - Industry: Cold Storage facility
 - Systems: Ammonia Refrigeration, Lighting
 - Size: 132,500 square feet
 - Incremental incentives available

[Case Study: Services]

- Energy Trust services to Henningsen
 - Engage in process during the design phase
 - Energy study on ammonia refrigeration and lighting systems
 - Incremental baseline
 - Henningsen chose energy measures
 - Extra cost to Henningsen – incentive to become energy efficient
 - Capital cost, energy saved and incentive known upfront
 - Verification of project
 - Commissioning study, verification report
 - Incentive check

[Incentives & Savings]

■ Ammonia Refrigeration

- Computer control system, VFDs on compressor, evaporators & condenser, premium efficiency motors
- \$82,200 saved per year (1,294,174 kWh/yr)
- \$165,795 incentive from Energy Trust

■ Lighting

- T5HO fluorescent lighting, occupancy sensors
- 584,447 kWh saved per year
- \$27,494 incentive from the Energy Trust