SB 447: New resources for school districts

- Passed by Oregon legislature in 2015
- $125 million in state matching funds for 2015–2017
- Dollar-for-dollar match up to $8 million per district
- Facility assessment and long-range plan required after 2015–2017
- Technical assistance grants up to $25,000
Turning rust into gold

- **RUST**: Deferred maintenance backlog costing districts more money every year
- **GOLD**: Savings and other benefits from a systems-based asset management approach


Energy Trust of Oregon

- 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

Energy Trust service territory
How Energy Trust helps small school districts

- New Energy Trust initiative helps districts turn their rust into gold
- High-touch assistance to identify, develop, fund and implement energy-efficiency projects
- Coordinated with Oregon Department of Energy and Energy Trust trade ally contractors

Participating school districts

- Athena-Weston #29RJ
- Milton-Freewater #7
- Pendleton #16R
- Jefferson County #14J
- North Wasco County #21
- Vale #84
- Morrow County #3

Energy efficiency projects for Oregon K–12 public schools

<table>
<thead>
<tr>
<th></th>
<th>Incentives Paid</th>
<th>Energy Saved (kWh)</th>
<th>Energy Saved (Therms)</th>
<th>Number of Districts</th>
<th>Number of Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>RETROFITTED</td>
<td>$4,220,030</td>
<td>20,557,611</td>
<td>1,112,136</td>
<td>102</td>
<td>1,199</td>
</tr>
<tr>
<td>NEW CONSTRUCTION/RENOVATION</td>
<td>$2,812,388</td>
<td>12,810,561</td>
<td>708,577</td>
<td>51</td>
<td>180</td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td>$7,032,418</td>
<td>33,368,172</td>
<td>1,820,712</td>
<td>153</td>
<td>1,379</td>
</tr>
</tbody>
</table>
Solar projects for Oregon K–12 public schools

<table>
<thead>
<tr>
<th>Incentives Paid</th>
<th>Energy Generated (kWh)</th>
<th>Number of Districts</th>
<th>Number of Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>RETROFITTED</td>
<td>$1,117,732</td>
<td>990,658</td>
<td>13</td>
</tr>
<tr>
<td>NEW CONSTRUCTION/RENOVATION</td>
<td>$873,473</td>
<td>451,492</td>
<td>10</td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td>$1,991,205</td>
<td>1,442,150</td>
<td>23</td>
</tr>
</tbody>
</table>

Small districts: Rust

- Aged and inefficient facilities consume more scarce resources every year
- Staff cuts reduce maintenance, making the situation worse
- Costs keep going up while available funding keeps going down

Challenges

- Many districts lack internal expertise
- Staff wear multiple hats and have other jobs
- Combined, these factors create a seemingly unbreakable cycle
- How to best use SB 1149 funds
- How to maximize Energy Trust incentives
Solutions
• Energy audits and studies
• Technical support
• Joint cooperative procurement
• Project funding
• Construction support
• Post-construction support
• Building internal capabilities for future projects

Small districts: Gold
• Reduce:
  • Utility costs
  • Maintenance costs
  • Deferred maintenance backlog
  • Improve learning environment
  • Demonstrate good stewardship of taxpayer monies
  • Set the stage for successful bond measures

Morrow County School District
HVAC tune-up and equipment
• $941 project investments
• $12,207 Energy Trust incentives
• 14,093 estimated therms savings
• $20,965 estimated annual savings

“We realize the direct benefit this will have on students in enhancing their learning environment.”
— Dirk Dirksen, superintendent
Oregon Department of Energy
Energy Planning and Innovation
JON BELMONT

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Oregon Department of Energy Schools Programs

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Oregon Department of Energy

- Statewide
- Fuel-blind
- Technical assistance
- Small-scale Energy Loan Program
- Energy Incentive Program
SB 1149 Schools Program

- Eligibility
- Energy audits
- Reimbursement
- Schools interactive database
- Program changes
- Stakeholder opportunities

Public Purpose Charge

- What is it?
- What does it fund?
  - Energy conservation in K–12 schools
  - Low-income housing energy assistance
  - Energy efficiency and renewable energy programs for school, residential and business customers (Energy Trust)

Oregon Department of Energy and Energy Trust

- Common goals
- Complementary services and offerings
- Increased opportunities, increased savings
- Communication, communication, communication!
Philomath High School

- Efficiency features:
  - Efficient condensing boilers
  - Variable speed chiller
  - Occupancy sensors
  - Energy-efficient lighting with occupancy and daylighting controls
  - Efficient gas water heater
  - $29,000 Energy Trust incentives
  - $15,780 estimated annual savings

“Our goal was to shave at least 10 percent off our electric bill. We expect to hit that mark, thanks to the efficient solutions we included in the building.”
— Dan Forbess, superintendent

Market solutions: Incentives for schools

<table>
<thead>
<tr>
<th>REQUIREMENT</th>
<th>INCENTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEST &quot;Good&quot; requirements + six electives</td>
<td>$0.50/sq ft</td>
</tr>
<tr>
<td>BETTER &quot;Good&quot; requirements + four to five electives</td>
<td>$0.40/sq ft</td>
</tr>
<tr>
<td>GOOD 15% reduction in lighting power density above current code requirements + 10% reduction in fan static pressure + two electives</td>
<td>$0.30/sq ft</td>
</tr>
</tbody>
</table>
Path to Net Zero

- Increased incentives for early design, technical assistance, installation and post-occupancy
- Technical resources and assistance from kickoff through occupancy
- Incentives for net-zero certification

Hood River Middle School

- Net-zero science and music building
- Radiant floor with geothermal heat pumps
- 35 kW solar electric array
- Daylighting
- Heat recovery and natural ventilation
- $85,379 in Energy Trust incentives
- $3,121 estimated annual savings

"Since the very start, the project’s focus has not been just the cool building, but having a program that instructs, that teaches while it houses kids."

-- Brent Emmons, principal

Athena-Weston

School District #29RJ

SCOTT ROGERS
Case study: Athena-Weston

• Small rural district in Umatilla County
• 551 K–12 ADM
• 3 buildings:
  • K–3 elementary school (1976) — 34,500 square feet
  • 4–8 middle school (1925) — 67,221 square feet
  • 9–12 high school (1949) — 44,500 square feet

Our rust

• Deferred maintenance backlog
• Increasing:
  • Utility budgets
  • Maintenance costs
• Limited staff
• Unspent SB 1149 funds
• Current bond expires June 2016

Unique opportunity to leverage external resources

Our gold

What we are receiving:

• Energy Trust funded studies
• Joint cooperative procurement
• Project management and other support
• Access to financial resources:
  • SB 1149
  • Energy Trust incentives
• Developing internal capabilities
• Information for capital and bond planning
Current projects

- Energy service performance contract:
  - Middle school HVAC controls
  - High school lighting upgrade
- Utility savings over next 10 years > $250,000
- Facilities staff savings

Future gold

- Long-range facilities plan
- Energy Trust studies
- Overlay EEMs with deferred maintenance projects
- Prioritize (ROI, asset replacement schedule)
- Leverage external resources (again)
- SB 447
- Energy Trust incentives and support
- Future SB 1149 monies

How can Energy Trust and Oregon Department of Energy help turn your RUST into GOLD?
Thank You!

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