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Portland, Oregon 97204

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energytrust.org

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# Energy Trust of Oregon

## 2005 Annual Report



Dear Oregonians,

Rapid growth and unprecedented participation defined Energy Trust's third full year of operation. By the end of 2005, we acquired record electric savings of 39 average megawatts and 1.4 million annual therms of natural gas. This accomplishment exceeded our best-case goal and was nearly double the annual performance measure set by the Oregon Public Utility Commission.

We also continued our steady progress with renewable energy programs. Since Energy Trust programs began, we've supported installation of more than 300 new solar electric systems and have been instrumental in stimulating wind and biomass generation.

In a year marked by rising energy costs and growing concerns about global warming, Oregonians demonstrated a deepening commitment to conserving energy and reducing dependence on fossil fuels. Nearly 183,000 households and businesses tapped into Energy Trust programs for help investing in energy efficiency and renewable power.

Each year residential, commercial and industrial utility customers make Energy Trust programs possible through the public purpose fees they pay as part of their utility bills. In turn, Energy Trust works to ensure that investment is returned to ratepayers in the form of cost-effective services and incentives that benefit individuals, families, public organizations, private businesses and Oregon as a whole.

We are especially proud of our contributions to a robust Oregon economy. To deliver our programs, we rely on hundreds of Oregon businesses—our trade allies—to provide Energy Trust services and financial incentives to their customers. The measures they install—from high efficiency lighting and heating/cooling equipment to efficient manufacturing processes and solar energy systems—help Oregon businesses receive the greatest value from their energy use.

Moving into 2006, demand for our services and financial support has never been greater. To ensure we continue to serve needs equitably throughout Oregon, we're introducing new reservation systems and implementing other strategies to provide a steady flow of funds.

Thousands of new projects are already in process, moving us along the path to the clean energy future we envision for Oregon. On behalf of the Energy Trust volunteer board and our entire staff, we thank you for sharing in and supporting that vision.

Sincerely,



Margie Harris  
Executive Director



Tom Foley  
President, Board of Directors



## Creating Oregon's Energy Future

### Our Mission

Change how Oregonians produce and use energy by investing in efficient technologies and renewable resources that save dollars and protect the environment

### Goals

Energy Trust is working to fulfill the State of Oregon's vision to meet future energy needs through environmentally sound, clean energy sources. We are investing in energy efficiency and renewable energy to meet the following goals by 2012:

- Save 300 average megawatts of electricity—enough to power over one sixth of Oregon's housing stock
- Save 19 million annual therms of natural gas—enough to serve 40,000 gas-heated homes
- Meet 10 percent of Oregon's electricity needs through renewable resources
- Involve more underserved consumers in energy efficiency and renewable energy programs
- Help Oregon businesses succeed and thrive by providing them with energy efficiency and renewable energy resources
- Encourage Oregonians to integrate energy efficiency and renewable energy into their daily lives

### 2005 Accomplishments

- ✓ Helped over 180,000 Oregon homes and businesses save energy and money
- ✓ Saved and generated enough electricity to power 29,000 homes (39.63 average megawatts)
- ✓ Saved enough natural gas to fuel 3,000 gas-heated homes (1.4 million annual therms)
- ✓ Made significant progress in funding large, utility-scale wind and other renewable energy development
- ✓ Leveraged resources by collaborating with our utility partners, organizations with similar missions and utility customer advocates
- ✓ Powered the growth of 476 Oregon businesses and strengthened the state's economy by relying upon trade allies to deliver our programs
- ✓ Made significant progress toward 2012 energy saving and renewable energy generation goals
- ✓ Improved air quality by offsetting 223,000 tons of pollution generated by conventional fuels, the equivalent of over a half billion miles not driven
- ✓ Generated \$9.3 million in wages, \$1.52 million in new business income and created 187 new jobs

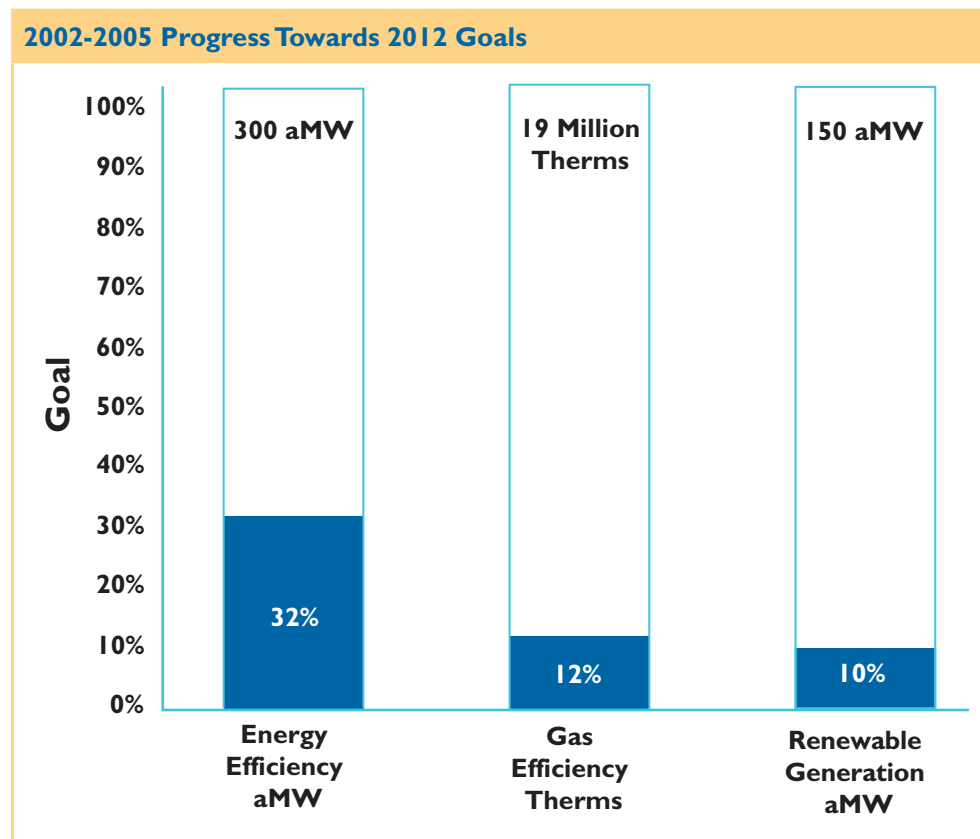
One average megawatt of electricity powers 750 homes each year. A gas-heated home uses 450 therms of natural gas a year.

## Energy Savings and Generation

2005 Electricity Savings & Costs		
Sector	Savings/average megawatts	Levelized cost/kilowatt hours
Residential	11.67 aMW	.8¢
Commercial	7.00 aMW	1.8¢
Industrial	20.50 aMW	1.4¢
<b>Total</b>	<b>39.17 aMW</b>	<b>1.3¢ average</b>

2005 Natural Gas Savings & Costs		
Sector	Savings/therm	Levelized cost/therm
Residential	931,603 therms	30.1¢
Commercial	467,515 therms	24¢
<b>Total</b>	<b>1,399,118 therms</b>	<b>28.2¢ average</b>

2005 Renewable Energy Generation & Costs		
Program	Average megawatts generated	Levelized cost/kilowatt hours
Solar Electric	0.0551	22¢
Open Solicitation	0.0015	131¢
Biopower	0.4053	.9¢
<b>Total</b>	<b>0.4619</b>	<b>4.6¢ average</b>



## Energy Efficiency Programs

### Results

During 2005, Energy Trust managed eight major efficiency programs serving the residential, commercial and industrial sectors. Our volume of business more than tripled compared to 2004, measured in projects completed. Incentive payments increased by 50 percent.

#### Residential

**180,667 projects completed**

Oregonians who participated in Energy Trust programs are saving energy at home thanks to these and other actions:

- 15,526 efficient clothes washers
- 4,002 home energy reviews
- 95 solar water heating systems
- 139,171 compact fluorescent lightbulbs and fixtures
- 491 ENERGY STAR® new homes
- 20,744 home improvement projects, including duct sealing, insulation, high efficiency heating and energy efficient windows

#### Commercial

**1,830 projects completed**

Oregon businesses that worked with Energy Trust programs operate more efficiently as a result of these and other actions:

- 1,715 energy efficiency projects, including energy efficient lights, heating/cooling equipment and controls
- 9 solar water heating systems
- 96 highly efficient new commercial buildings

#### Industrial

**207 projects completed**

Oregon manufacturing firms are more competitive as a result of process upgrades supported by Energy Trust.

### Programs

- Efficient New Homes** – Incentives for builders and developers to build ENERGY STAR qualified new homes **1,129 households served**
- Home Energy Savings** – Valuable financial incentives and access to approved trade ally contractors to help make your home more energy efficient **25,810 households served**
- Efficient Home Products** – Cash incentives for purchase of ENERGY STAR qualified clothes washers and lighting **153,633 households served**
- Building Efficiency** – Energy surveys and cash incentives for qualified energy efficient improvements in existing commercial buildings, plus contractor referrals, project management and post-installation assistance **1,715 businesses served**
- New Building Efficiency** – Financial incentives, technical assistance and other services for new commercial buildings **96 buildings built/renovated**
- Production Efficiency** – Technical assistance to improve the efficiency of manufacturing processes, water and wastewater treatment and agriculture **207 businesses served**
- Solar Water Heating** – Financial incentives, services and support for solar water heating systems **95 households and 9 businesses served**
- Light-Emitting Diode (LED) Traffic Signals** – Cash incentives for communities replacing green incandescent traffic signals with energy efficient LED bulbs **2,649 signals installed in 10 communities**



**BEAVERTON**  
EDWARD AND NANCY DOUGHERTY

“During our Home Energy Review, we learned we could save energy by adding ceiling and attic insulation and installing a high efficiency furnace. We’re very happy with the results. The house is quieter and not as drafty, and our gas bill was cut almost in half.”

– NANCY DOUGHERTY, homeowner

The Dougherty family installed a high efficiency gas furnace, ceiling and wall insulation and water-saving aerators.

Annual energy savings 1,201 kilowatt hours and 133.4 therms	Estimated annual energy cost savings \$300	Energy Trust incentives \$660
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**MEDFORD**  
ROGUE VALLEY MEDICAL CENTER

“By focusing on conserving resources and maximizing efficiency, we’ve built a better building and reduced energy costs dramatically. Our energy costs dropped from \$1.20 per square foot to just \$1.08 per square foot. That adds up to tremendous savings.”

– MARK HETZ, Asante Health System

Rogue Valley Medical Center designed its 80,000 square foot renovation and 250,000 square foot addition with a high efficiency envelope and high performance lighting, controls, and HVAC systems.

Annual energy savings 3,160,803 kilowatt hours and 1,398 therms	Estimated annual energy cost savings \$160,000	Energy Trust incentives \$200,000
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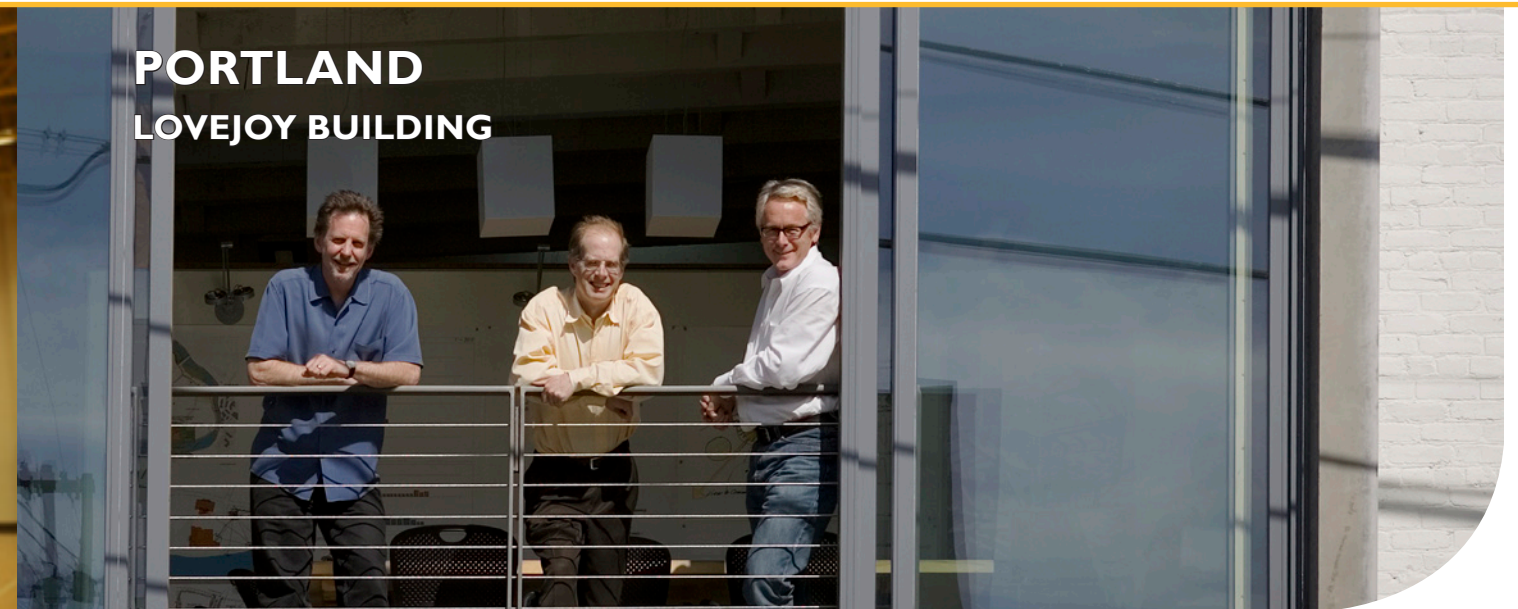


**PENDLETON**  
BLUE MOUNTAIN COMMUNITY COLLEGE

“From the time we began design, we made energy savings and sustainability a priority for the project. In all our projects, we seek to minimize environmental impacts and conserve resources.” – STEVE PLATT, Blue Mountain Community College

Blue Mountain Community College installed high efficiency lighting in four campus buildings.

Annual energy savings 154,833 kilowatt hours	Estimated annual energy cost savings \$8,200	Energy Trust incentives \$10,400
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**PORTLAND**  
LOVEJOY BUILDING

“Sustainability is an integral part of the culture of Opsis, so it was exciting to put our values to work as we developed a building for ourselves. Our goal was to achieve the highest levels of efficiency and still be commercially viable.” – JAMES MEYER, Opsis Architecture

Opsis Architecture designed its 18,650 square foot building with high performance windows, high efficiency ventilation, radiant slab heating and cooling, daylighting, energy efficient lighting and controls, and low-flow water fixtures. They also incorporated a solar electric system.

Annual energy savings 178,362 kilowatt hours and 2,037 therms	Estimated annual energy cost savings \$11,300 (not including solar)	Energy Trust incentives \$18,173 (not including solar incentive)
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**OREGON CITY**  
BLUE HERON PAPER COMPANY



**BEAVERTON**  
RE/MAX STREET OF NEW BEGINNINGS

“This investment makes us more competitive in a global market, creates living-wage jobs and delivers a host of environmental benefits for us all.” – MIKE SIEBERS, Blue Heron Paper Company

Blue Heron increased the efficiency and size of its de-inking system, which allows it to recycle an additional 100 tons of paper every day using 25 percent less energy. Energy Trust acquired the savings at the very low rate of 1/2 cent per kilowatt hour.

Estimated annual energy savings 106 million kilowatt hours	Estimated annual energy cost savings \$5.3 million	Energy Trust incentives \$5.4 million
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“Every home we build is ENERGY STAR, including our Street of New Beginnings Home. We’re committed to sustainability and energy efficiency, but we also believe it will be a competitive advantage as energy prices rise.” – RYAN OLSEN, Ryan Olsen Development, Inc.

The 10 homes featured in the 2005 RE/MAX Street of New Beginnings, sponsored by Energy Trust, were built to ENERGY STAR standards with energy efficient features, including lighting, appliances, heating, windows and insulation.

Annual energy savings 10,677 kilowatts and 1,977 therms (10 homes)	Estimated annual energy cost savings \$3,000	Energy Trust incentives \$7,300
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**BEND**  
MT. VIEW HEATING

“As an Energy Trust trade ally, we’re able to offer our customers incentives that allow them to invest in energy efficient heating, cooling and ventilation systems that they might not be able to afford otherwise.” – BUFFY BUSIK, Mt. View Heating

In 2005, Mt. View Heating—an Energy Trust trade ally—helped its residential and commercial customers lower their energy costs with high efficiency heating equipment and duct sealing.

Annual energy savings 64,808 kilowatt hours and 214 therms	Energy Trust incentives \$15,732
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**WILLAMETTE VALLEY**  
BURGERVILLE USA

“Burgerville is committed to sustainability and saving energy in many ways, including using high efficiency pre-rinse sprayers in our dish rooms. Our employees and guests appreciate our commitment. When they feel good about what we do, it impacts our bottom line in a positive way.” – JACK GRAVES, Burgerville

Energy Trust installed high performance dishwashing pre-rinse sprayers in 19 Burgerville restaurants in Clackamas, Multnomah and Washington counties.

Annual energy savings 4,862 kilowatt hours and 3,168 therms	Estimated annual energy cost savings \$7,600	Energy Trust incentives Sprayers installed at no cost to Burgerville
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## Renewable Energy Programs

### 2006 Results

Since Energy Trust programs began, we've supported installation of more than one megawatt of new solar generation and helped spur an eight-fold increase in the number of grid-tied solar electric systems in Oregon. In 2005, Energy Trust launched a biopower program, supported small-scale wind applications and continued working with utilities on large-scale wind development.

#### Residential

##### 70 projects completed

70 home solar electric systems

#### Commercial

##### 35 projects completed

33 commercial solar electric systems | biopower project at Gresham's Wastewater Treatment Plant

| Bergey wind turbine (10 kilowatt) installed at a City of Portland facility

Expanded the wind program to include technical assistance for feasibility studies and secured matching funds for federal grants to six rural landowners

#### Utility Scale

##### Projects in progress

Concluded a master agreement with Portland General Electric to provide \$12.5 million in funding and acquire large-scale renewable energy projects for their customers

Negotiated on a similar master agreement with Pacific Power for their Oregon customers

Celebrated start-up of the 75 megawatt Klondike II wind project near Wasco, Oregon

### Programs

**Solar Electric** – Financial incentives, services and support for residential, farm and business solar energy systems

**Biopower** – Financial assistance for projects that use organic waste as fuel for electric power generation

**Wind** – Support for single or small clusters of wind turbines, and also for loaned anemometers for assessing wind quality at proposed sites

**Open Solicitation** – Financial assistance for innovative renewable energy projects that are not eligible for other Energy Trust renewable energy programs

**Utility Scale Generation** – Multiyear effort working with electric utilities to develop large-scale renewable energy projects

70 households and 33 businesses served

1 city served

1 city served and 8 anemometers installed

1 city served



## GRANTS PASS PACIFIC BOTANICALS

ENERGY MAKERS

“I always wanted to install solar, but Energy Trust incentives, tax credits and Oregon's net metering law really put it over the top for us. We have systems for the business and home, and they're both working out great. Eventually we may add a second system for Pacific Botanicals.”  
– MARK WHEELER, Pacific Botanicals

Mark Wheeler installed solar electric systems at his herb farm, Pacific Botanicals, and at his home.

Annual energy generated 35,172 kilowatt hours	Estimated annual energy cost savings \$2,500	Energy Trust incentives \$41,387
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## SALEM WARREN AND ELIZABETH GRIFFIN

“Before we built our home, our vision was to take a sustainable approach. Part of that vision is using solar and wind energy. In the long-run, fossil fuels aren't a viable option, so we want to help lead the way by using alternatives.” – ELIZABETH GRIFFIN, homeowner

The Griffins tapped the clean, renewable power of the sun with solar electric panels and a solar water heating system. They also are installing a wind turbine that will provide about 55% of the Griffin's electricity and serve as a demonstration project for small wind systems in low-wind areas.

Annual energy generated 9,894 kilowatt hours (combined)	Estimated annual energy cost savings \$400	Energy Trust incentives \$17,390 (combined)
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**GRESHAM**  
GRESHAM WASTEWATER

“Creating a clean energy resource from a waste product is a sustainable business practice that allows us to further reduce our energy costs and control costs for our ratepayers.” – GUY GRAHAM, City of Gresham Wastewater Services

The City of Gresham installed a system that converts methane gas from its wastewater treatment plant into electricity—enough to supply 55 percent of the plant’s power needs.

Annual energy generated 3,355,000 kilowatt hours	Estimated annual energy cost savings \$200,000	Energy Trust incentives \$82,379
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**PORTLAND/BEND**  
ENVIRONMENTAL BUILDING SUPPLIES

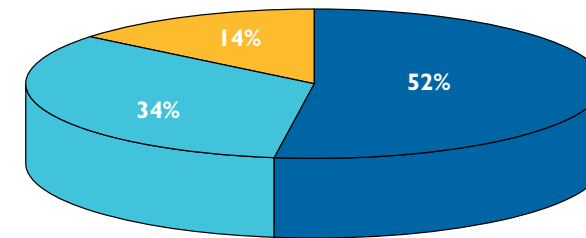
“Reducing dependence on energy is the best thing you can do in your home or business, and solar is a great next step after improving energy efficiency. Thanks to Energy Trust incentives, we’ve been able to help more customers invest in solar.” – AQUILA VELONIS, Environmental Building Supplies

In 2005, Environmental Building Supplies—an Energy Trust trade ally—installed solar energy systems to help its residential and commercial customers gain a measure of energy independence.

Annual energy generated 20,500 kilowatt hours	Energy Trust incentives \$56,000
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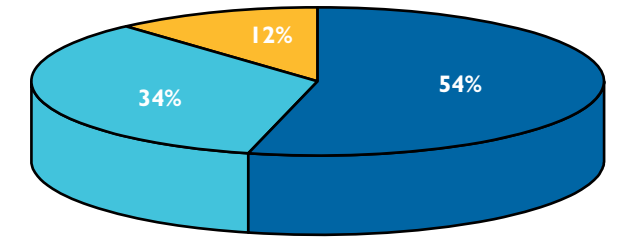
**Financial Highlights**

**Public Purpose Revenue by Service Territory**  
\$52,602,527



■ PGE ■ Pacific Power ■ NW Natural

**Expenses by Service Territory**  
\$53,957,825

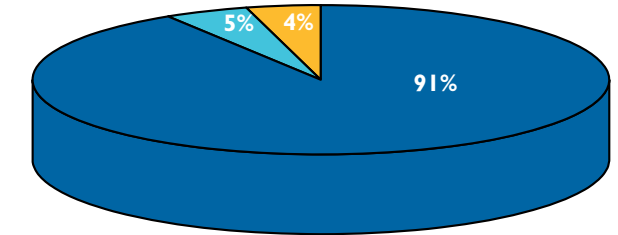


■ PGE ■ Pacific Power ■ NW Natural

Balance Sheet at December 31, 2005	
Assets	\$38,646,124
Liabilities	2,102,211
Net Assets	36,543,913

Net Assets	
Unrestricted	\$23,817,227
Board Designated-PGE	12,500,000
Temporarily Restricted-PGE Wind	226,686
Total	36,543,913

**Expenses by Division**  
\$53,957,825



■ Energy Efficiency Programs ■ Renewable Energy Programs  
■ Administrative

Energy Trust Performance Against Oregon Public Utility Commission Performance Measures	
2005 Energy Trust Performance	2005 OPUC Performance Measure
27.15 aMW of saved electricity at 1.3 cents per kWh (3-year average)	At least 20 aMW of saved electricity at maximum 2 cents per kWh (3-year average)
752,807 annual therms of natural gas at 28 cents per therm (3-year average)	At least 700,000 annual therms of saved natural gas at maximum 30 cents per therm (3-year average)
4.95 aMW of new renewable energy (3-year average)*	15 aMW of new renewable energy (3-year average)
Unqualified financial audit opinion for 2005	Unqualified financial audit opinion
Administrative costs = 6.8% of 2005 revenues	Administrative costs below 11% of annual revenues
High levels of customer satisfaction documented in evaluation results	Reasonable customer satisfaction rates
Value of energy saved exceeded cost	Value of energy saved must exceed cost

\* Utility-scale renewable energy acquisition was delayed due to uncertainty about federal tax credits and the unavailability of wind turbines.

## Board and Councils

Our work is shaped by two advisory councils and by a volunteer citizen board of directors, with oversight from the Oregon Public Utility Commission.



### Board Members

[L-r: Debbie Kitchin](#), InterWorks, LLC; Secretary, [Julie Hammond](#), Sage Insurance Center; Vice President, [John Reynolds](#), University of Oregon; Special Advisor, [William Nesmith](#), Oregon Department of Energy; President, [Tom Foley](#), Tom Foley Consultants; [Al Jubitz](#), Jubitz Family Foundation; [Jason Eisdorfer](#), Citizens' Utility Board of Oregon; [Preston Michie](#), Bonneville Power Administration (consultant); [Vickie Liskey](#), Liskey Farms  
[Not pictured: Rick Applegate](#), City of Portland Bureau of Environmental Services; Treasurer, [John Klosterman](#), Rejuvenation, Inc.; [Caddy McKeown](#), Oregon Student Assistance Commission; [Alan Meyer](#), Weyerhaeuser Company; Ex-officio, [John Savage](#), Oregon Public Utility Commission

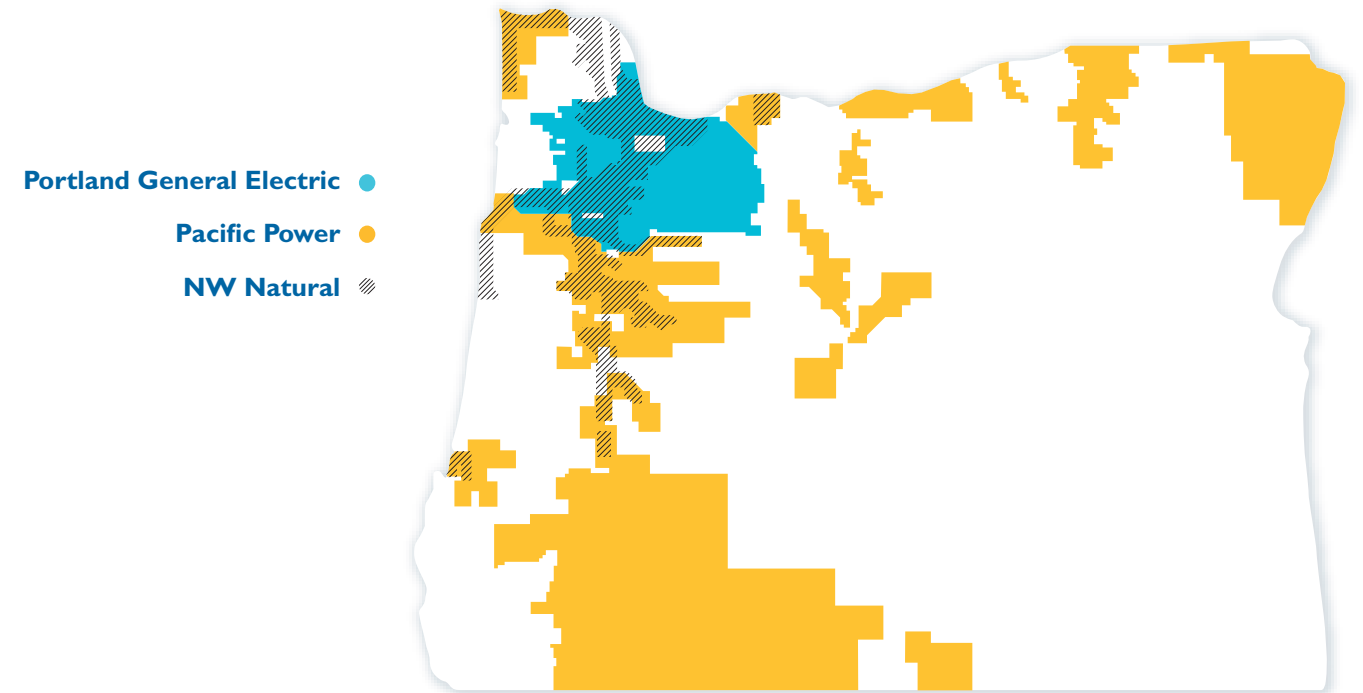
### Conservation Advisory Council

[Susan Anderson](#), Portland Office of Sustainable Development; [Steve Bicker](#), NW Natural; [Jeff Bissonnette](#), Fair and Clean Energy Coalition; [Julie Brandis](#), Associated Oregon Industries; [Gary Curtis](#), D&R International; [Suzanne Dillard](#), Oregon Department of Energy; [Thomas Eckhart](#), UCONS LLC; [Tom Eckman](#), Northwest Power and Conservation Council; [Terry Egnor](#), Micro Grid; [Margie Gardner](#), Northwest Energy Efficiency Alliance; [Don Jones](#), Pacific Power; [Ken Keating](#), Bonneville Power Administration; [Mat Northway](#), Eugene Water & Electric Board; [Paul Olson](#), Oregon Remodelers Association; [Stan Price](#), Northwest Energy Efficiency Council; [Syed Rezvi](#), Oregon Public Utility Commission; [Lauren Shapton](#), Portland General Electric; [Steve Weiss](#), Northwest Energy Coalition

### Renewable Resources Advisory Council

[Doug Boleyn](#), Cascade Solar Consulting; [Angus Duncan](#), Bonneville Environmental Foundation; [Troy Gagliano](#), Renewable Northwest Project; [Thor Hinkley](#), Portland General Electric; [Jeff King](#), Northwest Power and Conservation Council; [Justin Klure](#), Oregon Department of Energy; [Debra Malin](#), Bonneville Power Administration; [Lisa Schwartz](#), Oregon Public Utility Commission; [Virinder Singh](#), Pacific Power; [Chris Taylor](#), Horizon Wind Energy; [Frank Vignola](#), Solar Monitoring, University of Oregon

## Energy Trust Service Territory



## The Staff at Energy Trust



We manage our programs with a small staff, deliver the majority of our programs through contracts with service providers, and provide services through a network of several hundred business trade allies around the state.