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# **Energy Trust of Oregon 2007 Annual Report**

April 15, 2008

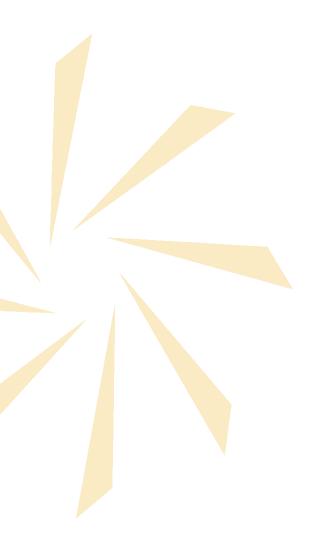


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## I Message from the Executive Director

Over five years ago Energy Trust of Oregon, Inc., issued its first incentive payment. A \$250 check, dated June 10, 2002, was delivered to a contractor to seal the heating ducts in a manufactured home. Since then, Energy Trust has cut thousands of incentive checks and provided personal assistance to help Oregonians make their homes and businesses more energy efficient and to generate clean energy.

In March 2007, five years after opening its doors, Energy Trust proudly celebrated the progress Oregonians are making toward a clean energy future. During this past year, we've reflected on the dramatic turnaround in public opinion about global warming, evidenced by the variety of actions taken to create a more energy independent and sustainable Oregon.

Propelled by the powerful "green wave," Energy Trust made great gains in 2007. Our electric efficiency programs saved 35 average megawatts in 2007, with cumulative results equal to 59% of our goal of saving 300 average megawatts by 2012. While 2007 gas savings remained constant compared to 2006, the three-year rolling average—the basis upon which the Oregon Public Utility Commission sets our minimum performance measures—increased by almost 40%.

Renewable energy programs also gained significant ground in 2007, with generation exceeding any previous year. Solar electric and solar water heating installations increased 40-50%, depending upon the type. One utility scale wind project, Biglow Canyon, was completed with PGE. Goodnoe Hills, our second utility scale wind project with PacifiCorp, is headed toward completion in mid-2008. When all projects committed and scheduled for completion by 2010 are tallied, our cumulative renewable energy generation is projected to equal 75% of our ambitious 2012 direct acquisition goal of 150 average megawatts.

In 2007 alone, total electric savings and generation is enough to power 64,000 homes, while we saved enough gas to heat 4,400 homes. Cumulatively, from 2002 through 2007 we have saved and generated enough clean electricity to power 173,000 homes and saved enough natural gas to heat 13,000 homes.

Remarkably, while both savings acquisition and generation grew in 2007, they did so at a lower cost. The levelized cost of electric savings decreased to 1.4 cents per kilowatt hour, compared to 1.6 cents per kilowatt hour in 2006. Earlier in 2007, the Oregon Public Utility Commission approved increasing the levelized cost per annual therm saved from 30 cents to 40 cents; actual cost for annual therms saved in 2007 was 33 cents.

While 2007 savings and generation topped all previous years, there was some foreshadowing of a weakening economy. For instance, while the number of ENERGY STAR® new homes certified in 2007 exceeded 2006 numbers, it fell short of the 2007 target. By contrast, results for existing homes, existing and new buildings, and industrial projects remained stable. With energy costs continuing to rise while access to capital falls, the business case for energy efficiency keeps getting stronger.

Energy Trust's operating model bodes well for Oregon's economy and our environment. Participation in our trade ally network increased to over 800 in 2007. Many trade ally businesses credit Energy Trust for their stability and growth. The millions of dollars Energy Trust has invested in clean energy have offset over 450,000 tons of carbon dioxide generated by fossil fuels<sup>1</sup>, the equivalent of taking over 80,000 cars off the road for a year.

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Source: Phil Carver, Oregon Department of Energy, 2.08 lbs in Pacific Power service territory and 1.06 lbs in PGE's service territory of carbon dioxide reduction per kWh of energy saved or generation using renewable resources, 11.7 lbs of carbon dioxide reduction per therm saved.

2007 was a pivotal year for Energy Trust. The 2007 Oregon Legislature passed an aggressive Renewable Energy Act, shifting Energy Trust efforts to smaller scale renewable projects of 20 average megawatts or less. This same act paved the way for significant infusions of additional energy efficiency funds in 2008. Going forward, Energy Trust will be able to serve even more Oregonians with our programs.

We thank all those we have worked with this past year to successfully deliver our programs. In addition, we wish to acknowledge our program participants, who demonstrate how to save, use and produce energy in a way that is better for us all. We look forward to building upon the momentum created in 2007, making the energy future for our state ever brighter.

Margie Harris, Executive Director

## II Background, Mission and Goals

#### A. Background

On March 1, 2007, Energy Trust marked five years of investing utility public purpose funds to help Oregonians benefit from energy efficiency improvements and renewable energy generation. We are funded by and provide services to Oregon customers of Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas and Avista.

Of Energy Trust's 10 programs, six are managed internally and four—the residential and commercial efficiency programs—are managed by contractors. Within most programs, services are delivered by specialized providers who represent a network of over 800 business trade allies from around the state. Our work is shaped by two advisory councils and is led by a diverse board of directors who volunteer their time and expertise. Via contract with the Oregon Public Utility Commission, we also comply with minimum requirements they establish for our performance.

#### B. Mission

The Energy Trust mission is to "change how Oregonians produce and use energy by investing in efficient technologies and renewable resources that save dollars and protect the environment."

#### C. Vision

Imagine meeting the future energy needs of Oregonians in a way that lowers energy cost, adds comfort to homes, strengthens our economy and leaves our environment healthier for generations to come. This will happen when we choose to use energy more efficiently and develop renewable energy resources. The people at Energy Trust are committed to this future.

#### D. 2012 Goals<sup>2</sup>

- 1. Save 300 average megawatts of electricity.
- 2. Save 21 million annual therms of natural gas.
- 3. Help Oregonians meet 10 percent of their electricity needs from renewable resources.
- 4. Expand participation by customers that have been hard to reach historically.
- 5. Help businesses thrive by promoting energy efficiency and renewable energy.
- 6. Encourage Oregonians to integrate energy efficiency and renewable energy in daily life.

# III 2007 Highlights

#### A. General

- Helped over 48,000 Oregon homeowners, renters and businesses save energy and money about even with the number served in 2006. In addition to these numbers, over 920 thousand compact fluorescent light bulb packages were sold at retail outlets, installed during home energy reviews or otherwise provided—up threefold from 2006, and influenced by efforts of the Northwest Energy Efficiency Alliance.
- Saved 35 average megawatts of electricity at a levelized cost of 1.4 cents per kilowatt hour—significantly exceeding OPUC minimum performance measures. Electric savings in 2007 were over one-third higher than in 2006.

<sup>&</sup>lt;sup>2</sup> The 2012 goals were adopted as part of Energy Trust's strategic plan and reflect the term of Energy Trust's funding agreement with the Oregon Public Utility Commission. In 2007 the Oregon Legislature extended the public purpose charge, Energy Trust's principal funding mechanism, through 2025. Anticipating its funding agreement to be extended, in 2008 and 2009 Energy Trust will establish and adopt new goals.

- Saved nearly 2.3 million therms of natural gas at a levelized cost of 33 cents per therm, significantly exceeding OPUC performance measure. Gas savings fell slightly in 2007 compared to 2006.
- Completed the 47 average megawatt PGE Biglow Canyon Wind Project and Energy Trust's first small hydro project.
- Nearly doubled the number of solar water heating installations over 2006, and increased the number of solar electric projects over 2006 by 40%.
- Launched a small wind program and dairy biogas initiative.
- Maintained low administrative costs, well within the OPUC performance measure.
- Supported the growth of over 800 Oregon businesses that are strengthening the state's economy as trade allies, many of which are small businesses in local communities.
- Generated \$35 million in wages, \$7.5 million in new business income and created 850 new jobs<sup>3</sup> as a result of 2007 program activity.
- In addition, Energy Trust participants continue to save money from the energy-savings measures they installed between 2002 and 2006. The cumulative effects of these savings generated an additional \$43 million in wages, \$6.9 million in new business income and over 1,300 new jobs.
- Cumulatively saved 178 average megawatts of electricity and 6.7 million annual therms of natural gas, equivalent to 59 percent and 32 percent of our respective, and ambitious, 2012 electric and gas saving goals.
- Cumulatively generated 64 average megawatts of renewable energy, approximately 43 percent
  of the aggressive 2012 goal of 150 average megawatts, continued construction of 30 more
  average megawatts, and have an additional 18.9 average megawatts already committed between
  2008 and 2010. All these projects combined are equal to 75 percent of the 2012 goal.
- Improved air quality by offsetting over 450,000 tons of carbon dioxide generated by fossil fuels<sup>4</sup>, the equivalent of taking over 80,000 cars off the road for a year.

#### B. Residential efficiency programs

- Conducted 5665 energy reviews, installing 37,674 compact fluorescent light bulbs, 3,484 showerheads, and 7,278 aerators in these homes.
- Supported over 40,087 internet users employing the online Home Energy Analyzer.
- Helped fund the purchase of 19,878 energy efficient clothes washers in 8,761 homes with electric hot water and 11,117 homes with gas hot water.
- Installed energy efficient measures such as sealed ducts, insulation, high efficiency space heating equipment and energy efficient windows in 10,478 single family homes, 5,921 multifamily units, and 874 manufactured homes. Of these, 7,673 homes received electric efficiency measures and 8,442 received gas efficiency measures, with 1,158 sites saving both gas and electricity.
- Installed solar water heating systems in 144 homes with electric hot water and 92 homes with gas hot water.

#### C. Commercial efficiency programs

• Installed high efficiency measures such as energy efficient lights and efficient heating, ventilating and air conditioning equipment in 1,901 commercial buildings, resulting in an average incentive payment per site of nearly \$1,392. Of this total, 1,120 buildings received electric efficiency

<sup>&</sup>lt;sup>3</sup> Source: ECONorthwest 2007. Economic impact numbers are in addition to what would have occurred without Energy Trust's investment of public purpose funds. This economic impact for 2007 includes a one time, large impact from construction of a utility scale wind farm project.

<sup>&</sup>lt;sup>4</sup> Source: Phil Carver, Oregon Department of Energy, 2.08 lbs in Pacific Power service territory and 1.06 lbs in PGE's service territory of carbon dioxide reduction per kWh of energy saved or generation using renewable resources, 11.7 lbs of carbon dioxide reduction per therm saved.

measures, 726 buildings received gas efficiency measures, and 55 buildings saved both gas and electricity.

- A total of 200 highly efficient new commercial buildings were completed, with an average incentive payment per site of \$13,520.
- Installed solar water heating systems in 11 businesses with gas hot water.

#### D. Industrial efficiency programs

- Completed electric energy saving projects at 226 manufacturing firms, with an average incentive payment of \$29,109.
- This included one "megaproject," SP Newsprint.

#### E. Renewable energy programs

- Provided incentives to help install solar electric systems in 175 homes and 51 commercial buildings. Since 2002 Energy Trust has funded over 3 megawatts of new solar installations for Portland General Electric and Pacific Power in Oregon.
- Provided financial support to Portland General Electric's Biglow Canyon Wind Farm and our first small hydro project.
- Diversified our offerings by designing niche offerings and marketing strategies serving the dairy industry and promoting small-scale wind development.

## IV Revenues and Expenditures

- Received \$63.3 million during 2007.
- Spent \$56.53 million (including carryover funds from prior years).
- Paid \$31.56 million in incentives to end users.

#### A. Revenues

Total 2007 revenues received from each utility were very close to projections.

Source	Actual revenues received	Budgeted revenues Annual
Portland General Electric	\$32,414,944	\$28,952,915
Pacific Power	\$20,196,049	\$19,569,605
NW Natural	\$9,622,649	\$9,247,863
Cascade Natural Gas	\$934,266	\$889,636
Avista	\$160,163	\$278,000
Conservation Rate Credit, PGE	\$550,000	\$1,100,000
Conservation Rate Credit, PAC	\$0	\$800,000
Total	\$63,878,071	\$60,838,019

#### **B.** Expenditures

Electric efficiency spending fell below budget by about 19% for the year. Despite under-spending, programs were able to exceed the best case savings goal, demonstrating our ability to acquire more electric savings at a lower cost. In addition, some project completions, along with carryover funds to support them, were transitioned into 2008. Gas spending was under budget by only 7%, with savings shy of the best case goal, suggesting gas savings cost slightly more to obtain than was budgeted.

Renewable program spending was also below budget for the year, as was corresponding generation. Renewable incentives (above market costs) and corresponding generation are reported for programs upon completion. The Goodnoe Hills wind project, expected to be completed by year end 2007, was delayed until summer 2008. Despite the delay, the renewables programs were able to achieve their highest ever annual generation.

Type Actual Expenditures Annua		Budgeted Expenditures Annual
Energy Efficiency programs	\$44,143,106	\$52,947,134
Renewable Energy programs	\$9,928,524	\$12,027,478
Administration	\$2,461,718	\$2,982,708
Total	\$56,533,348	\$67,957,320

	Incentives Paid 2007							
		Energ	gy Efficiency	Renewal	ole Energy	Total		
		Pacific	NW	Cascade Natural			Pacific	
Quarter	PGE	Power	Natural	Gas	Avista	PGE	Power	
QI	\$712,751	\$808,544	\$548,707	\$32,144	\$6,181	\$390,541	\$182,368	\$2,681,236
Q2	\$1,607,257	\$1,252,064	\$1,049,745	\$60,097	\$5,954	\$150,549	\$233,167	\$4,358,833
Q3	\$3,920,123	\$1,727,066	\$1,170,782	\$54,197	\$9,099	\$216,900	\$295,061	\$7,393,228
Q4	\$4,765,811	\$3,586,467	\$1,884,071	\$133,107	\$16,812	\$6,460,315	\$276,796	\$17,123,379
Total	\$11,005,942	\$7,374,141	\$4,653,305	\$279,545	\$38,046	\$7,218,305	\$987,392	\$31,556,676

## V Savings and Generation

#### A. Electric efficiency savings

In 2007, Energy Efficiency programs saved 35 average megawatts, achieving 107 percent of Energy Trust's 2007 "best case" projection of 33 average megawatts. Since March 1, 2002, these programs have cumulatively saved 178 average megawatts, or 59 percent of Energy Trust's 2012 goal<sup>5</sup>. The totals reflect the annual "true up" that takes into account evaluation results, market research and other factors. 6

The cost of acquiring the 35 average megawatts was \$1.03 million per average megawatt—a significant improvement over our best case target of \$1.4 million per average megawatt.

Electric Efficiency Savings Annual 2007		Pacific Power aMW	Total Savings aMW	Expenses	mil \$ / aMW	Levelized Cost/kWh
Residential	7.50	5.30	13.00	14,710,094	\$1.20	I.60 ¢
Commercial	4.00	2.10	6.20	9,462,730	\$1.50	I.80 ¢
Industrial	11.00	5.60	16.00	12,226,518	\$0.75	I.10 ¢
Total Energy Efficiency programs	23.00	13.00	35.00	36,399,342	\$1.00	I. <del>4</del> 0 ¢

<sup>\*</sup> Includes transmission and distribution savings

#### B. Gas efficiency savings

In 2007, efficiency programs saved 2.3 million annual therms of natural gas, falling slightly short of our 2007 best case projection of 2.4 million annual therms. Since gas programs began in 2003, cumulative savings of 6.7 million annual therms have been realized, accounting for 32 percent of the 2012 goal.

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<sup>&</sup>lt;sup>5</sup> Savings from self-directed efficiency projects also count toward the goal of achieving 300 aMW of savings by 2012. To date, 18.9 aMW of savings have been achieved by industrial consumers via self-directed funding.

<sup>&</sup>lt;sup>6</sup> Uncertainty remains about savings for some larger industrial projects and will be resolved in the 2008 true-up.

		Cascade		Total			Levelized
Gas Efficiency Savings	NWN	Natural		Savings		\$ /	Cost/
Annual 2007	Therms	Gas	Avista	Therms	Expenses	Therm	Therm
Residential	970,000	130,000	8,200	1,100,000	7,298,841	\$6.60	46 ¢
Commercial	1,100,000	19,000	0	1,100,000	2,412,365	\$2.10	19 ¢
Industrial	3,100	0	0	3,100	39,307	\$13.00	79 ¢
Total Energy Efficiency Programs	2,100,000	150,000	8,200	2,300,000	9,750,513	\$4.30	33 ¢

#### C. Renewable energy generation

Renewable energy programs progressed well during 2007. Total generation for the year of 47 average megawatts greatly exceeded past years while falling short of 2007 goals. To date, cumulative renewable energy generation totals 64 average megawatts, or 43% percent of the 2012 aggressive direct acquisition goal of 150 average megawatts. Energy Trust's final utility scale project, Pacific Power's Goodnoe Hills wind project, will come on line in 2008, producing 30 average megawatts. Another 19 average megawatts will be generated when commitments to projects come on line between 2008 and 2010.

Renewable Energy Generation Annual 2007	PGE aMW	Pacific Power aMW	Total Generation aMW	Annual 2007 Expenses	mil \$ / aMW	Levelized Cost/kWh
Biopower	0.00	0.00	0.00	491,732	n/a	n/a
Open Solicitation	0.01	0.00	0.01	544,321	\$54	n/a
Solar Electric Program	0.06	0.08	0.14	2,497,003	\$18	16 ¢
Utility Scale	47.00	0.00	47.00	6,434,926	\$0.14	0.10 ¢
Wind Program	0.00	0.00	0.00	415,511	n/a	n/a
Total Renewable Programs	47.00	0.08	47.00	10,383,493	\$0.22	0.20 ¢

<sup>\*</sup> Projects completed and were operating in 2007.

### VI 2007 Performance Measures

Each year the Oregon Public Utility Commission establishes minimum performance measures for Energy Trust. Performance measures for energy efficiency programs and renewable energy programs are set at an aggregated level rather than at a sector level. This allows Energy Trust to pursue different program strategies in different sectors as market forces and technological advances change.

The following minimum performance measures apply in 2007.

#### **Electric Efficiency Performance Targets**

 Electricity efficiency savings of at least 20 average megawatts, computed on a three-year rolling average

Exceeded, with 2005-2007 average annual electric efficiency savings = 34 average megawatts

Average levelized life-cycle cost should be less than 2 cents per kilowatt hour
 Exceeded, with 2007 average levelized life-cycle cost = 1.4 cents per kilowatt hour

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<sup>&</sup>lt;sup>7</sup> In 2007 the Oregon Legislature passed renewable portfolio standard legislation requiring utilities to meet renewable generation goals and limiting Energy Trust support to renewable projects to 20 MW or less.

#### **Natural Gas Efficiency Performance Targets**

 Natural gas efficiency savings of at least 700,000 therms, computed on a three-year rolling average

Exceeded, with 2005-2007 average annual gas efficiency savings = 2.0 million annual therms

Average levelized life-cycle cost should be less than 40 cents per therm
 Exceeded, with 2007 average levelized life-cycle cost = 33 cents per therm

#### **Renewable Resource Development Targets**

 From new utility-scale renewable resources, develop 9 average megawatts, computed on a three-year rolling average, and consistent with each utility's acknowledged Integrated Resource Plan

Exceeded, with 2005-2007 average annual renewable resources = 16 average megawatts. This is consistent with each utility's acknowledged Integrated Resource Plan

• From a variety of smaller-scale projects, secure at least 3 average megawatts of new renewable resources per year, computed on a three-year rolling average

Behind 2007 target (0.9 AMW). Additional large-scale development more than exceeding this small-scale project shortfall; between 2008 and 2010 projects in the excess of 19 average megawatts have been committed at this time

#### **Financial Integrity**

• Demonstrate financial integrity by obtaining an unqualified financial audit opinion annually Full compliance, with an unqualified financial audit opinion for 2007.

#### **Program Delivery Efficiency**

• Keep administrative and program support costs<sup>8</sup> below 11 percent of annual revenues

Exceeded, with 2007 administrative and program support costs at 6 percent of annual public purpose revenues.

#### **Customer Satisfaction**

Demonstrate reasonable customer satisfaction rates with Energy Trust services<sup>[1]</sup>

In 2007 and early 2008, evaluations incorporating customer satisfaction measures were completed for Building Efficiency, New Building Efficiency, Production Efficiency, Multifamily Home Energy Savings, Efficient New Homes and Home Energy Solutions.

In 2007, evaluations showed satisfaction with our commercial and industrial programs was high. Eighty-five percent of participants in the Building Efficiency and New Building Efficiency programs indicated they were satisfied or extremely satisfied. Ninety-four percent of Production Efficiency program participants indicated they were satisfied with their overall experience.

In the residential sector, 91 percent of participants in the Multifamily Home Energy Savings program reported being satisfied or extremely satisfied. Builders participating in the Efficient New Homes

<sup>&</sup>lt;sup>8</sup> Program support costs are defined as all program costs except the following accounts: program management, program incentive, program payroll and related expenses, call center and program outsource services.

program were extremely satisfied; only one builder surveyed indicated an overall satisfaction rating of less than 8 on a scale of 1 to 10. Eighty-six percent of participants in the Home Energy Solutions program reported being satisfied or extremely satisfied with the overall program experience.

Energy Trust recorded 7 customer complaints in 2006, and 34 since beginning operations in 2002.

#### **Benefit/Cost Ratios**

Report benefit/cost ratios for larger conservation acquisition programs for 2007.<sup>9</sup>

Program	Utility system benefit-cost ratio	Societal benefit-cost ratio
I. Existing Homes	2.7	1.5
2. New Homes and Products	2.8	2.6
3. Existing Buildings	4.3	1.4
4. New Buildings	6.4	2.8
5. Production Efficiency	7.7	3.0
6. NW Energy Efficiency Alliance	12.0	4.0

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<sup>&</sup>lt;sup>9</sup> By law, Oregon public purpose funds may be invested only in cost effective energy efficiency measures—that is, efficiency measures must cost less than acquiring the energy from conventional sources.

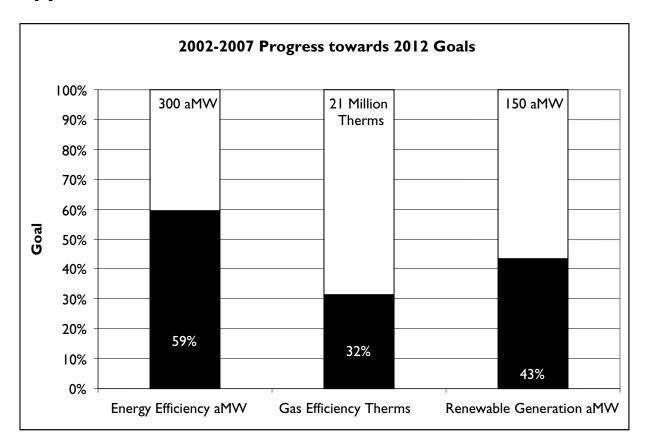
# **VII** Projects Completed

	Total	Electric-only	Gas-only	Both
ENERGY EFFICIENCY				
Residential projects				
ENERGY STAR new homes constructed	974	178	68	728
ENERGY STAR new homes enhanced	1,721	12	396	1,313
Efficient new manufactured homes purchased	191	165	16	10
Home energy reviews conducted	5,665	2,861	374	2,430
Single family homes retrofitted	10,478	2,027	8,226	225
Manufactured homes retrofitted	874	853	19	2
Multifamily units retrofitted	5,921	4,793	197	931
New multifamily units enhanced	0	0	0	0
Residential solar water heating installations	236	144	92	0
ENERGY STAR clothes washer rebates	19,878	8,761	1,777	9,340
Refrigerator exchange pilot	213	211	0	2
CFL packages sold/provided	923,714	923,714	0	0
Commercial projects				
Existing buildings retrofitted	1,901	1,120	726	55
Efficient new buildings constructed	200	102	11	87
Solar water heating commercial installations	11	5	6	0
Industrial projects	226	225	I	0
TOTAL EFFICIENCY	972,203	945,171	11,909	15,123
RENEWABLE ENERGY INSTALLATIONS				
Biopower project installations	0	0	0	0
Open solicitation project installations	I	I	0	0
Solar electric residential installations	175	175	0	0
Solar electric commercial installations	51	51	0	0
Utility scale project installations	I	I	0	0
Wind project installations	0	0	0	0
TOTAL RENEWABLES	228	228	0	0

We define "projects" to be completed installations or services at one location, with certain exceptions:

- A Home Energy Review, with CFL installation, counts as one project. If that home subsequently installs one or more measures, this installation counts as a separate project.
- Each apartment unit treated counts as one project.
- Each manufactured home counts as one project.
- Measures installed in separate facilities within a large industrial complex count as separate projects.

# **Appendix**



# **Energy Efficiency Program Descriptions**

**Existing Homes.** Residential utility customers can take advantage of energy-saving recommendations, referrals to qualified contractors and cash incentives for qualified improvements from insulation to duct sealing to energy efficient electric, gas and solar water heaters, furnaces and heat pumps. Other offerings include Home Performance with ENERGY STAR®, a diagnostic audit conducted by Building Performance Institute-certified contractors, as well as energy efficiency improvements targeting multifamily and manufactured home dwellings. The program also offers the web-based Home Energy Analyzer to help residential customers learn how they can improve the efficiency of their homes. The program started in March 2003 and is implemented by Conservation Services Group.

New Homes and Products. The new homes track seeks to expand the market share of ENERGY STAR qualified homes in Oregon by creating homebuyer demand for them and supporting contractors who build them. The program utilizes whole-house and stand-alone incentives to aid builders in overcoming some of the larger hurdles, performance testing incentives and training, and overall marketing support. The program also promotes the sale of energy efficient manufactured homes. The products track offers cash incentives for purchase of ENERGY STAR qualified clothes washers and lighting, provides compact fluorescent light bulbs to electric ratepayers who complete the online Home Energy Analyzer, and promotes the "Change a Light, Change the World" compact fluorescent light bulb fundraiser for schools and nonprofits. The program began in April 2004 and is implemented by Portland Energy Conservation, Inc.

**Building Efficiency.** This program provides a range of electric and gas energy-saving services and incentives for existing Oregon commercial and institutional facilities. Incentives are offered for qualified improvements such as lighting, HVAC, motors, controls, energy efficient electric, gas and solar space and water heaters, restaurant equipment and insulation. Services include energy surveys and technical analysis, contractor referrals, project facilitation and post-installation assistance. The program began in February 2003 and is implemented by Lockheed Martin.

**New Building Efficiency.** Financial incentives for high efficiency electric and gas equipment, energy modeling and design assistance help customers maximize efficiency of commercial and industrial new construction projects, major renovations and additions to existing buildings. Program participants can leverage incentives from four distinct program tracks including: Custom Track, Standard Track, LEED-NC Track and ENERGY STAR Track. The program was launched in October 2003 and is implemented by Science Applications International Corporation.

**Production Efficiency.** This program provides technical assistance and incentives to improve the electrical process efficiency of manufacturing, water and wastewater treatment and agricultural systems. Measures include energy efficient pumps, fans, refrigeration, controls, compressed air systems and material transport. The program launched in May 2003 and transitioned at the end of 2007 from management by Lockheed Martin to in-house management.

**Northwest Energy Efficiency Alliance.** Energy Trust supports the market transformation work of the Northwest Energy Efficiency Alliance. An Energy Trust representative serves on the Alliance board of directors, with Margie Harris taking over for Fred Gordon in November of 2007. The Alliance influences regional energy efficient design and purchasing practices by providing training and coordinating regional marketing activity. The Alliance is funded by BPA, Energy Trust and regional utilities.

# **Renewable Energy Program Descriptions**

**Utility Scale.** The Utility Scale renewables program facilitates partnerships between utilities and developers of wind and other large-scale renewable energy projects and provides incentives to cover the above-market costs for generation. Projects are acquired through a competitive solicitation processes in partnership with Portland General Electric and Pacific Power.

**Solar Electric**. This program provides cash incentives, quality assurance, industry support and referrals to qualified solar contractors to help homeowners and businesses generate on-site, pollution-free power from the sun.

**Open Solicitation.** The Open Solicitation program provides incentives and support for renewable energy projects using commercial technologies that are not eligible for incentives through Energy Trust's other renewables programs. It also helps provide experience in renewable energy sectors that may in the future merit their own programs.

**Biopower.** The Biopower program provides financial incentives, cost-shared grants for feasibility studies, and other support for projects that generate electric power from organic wastes. Eligible fuels include digester gas from sewage treatment facilities or dairies, wood waste from mills or forest operations, and landfill gas, among others.

Wind. The wind program's four ongoing elements include: I) funding support for on-site use as well as local projects in clusters up to 20 megawatts that deliver power to the grid; 2) resource assessment through anemometer loans, managed by Oregon State University's Energy Resource Research Laboratory, to help landowners determine whether sites have sufficient wind generation potential; 3) co-funding for specific feasibility studies and project technical analyses; and 4) guidebooks for wind project development. A fifth element, support for utility scale wind projects, will end with completion in 2008 of the Goodnoe Hills wind farm.

# 2007 Energy Trust of Oregon Board of Directors

**PRESIDENT – Tom Foley** has over 26 years of experience in the field of energy analysis and management, including 10 years as manager of conservation and generating resources analyses for the Northwest Power Planning Council and 10 years at Battelle Northwest. He presently runs Tom Foley Consultants, which provides resource planning and consultation with utilities throughout the country. *Tom retired from the board in 2008.* 

**VICE PRESIDENT – John Reynolds** is professor of architecture emeritus at the University of Oregon. He has been involved in energy issues in Oregon since 1972, when he was elected to the Eugene Water and Electric Board. Since then he has served as the chair of the American Solar Energy Society and president of the Solar Energy Association of Oregon. He has served on the Oregon Alternate Energy Commission and the Energy Committee of the Building Codes Structures Board. *John was re-elected to a new three year term in 2007 and was elected President in 2008*.

**SECRETARY – Debbie Kitchin** is the co-owner of InterWorks, L.L.C., a construction company providing commercial tenant improvement and renovation and residential remodeling services. InterWorks is an award-winning company specializing in sustainable building practices. Prior to joining the family business in 1996, Debbie served as senior economist for the Northwest Power Planning Council for 15 years and was a regional economist for the Bonneville Power Administration for 3 years. Debbie also serves on the boards of the Portland Business Alliance, Portland Building Owners and Managers Association and the Oregon Remodelers Association. She is past president of the Portland Commercial Real Estate Women (CREW) Board of Directors. *Debbie was re-elected to a new three year term in 2007*.

**TREASURER – John Klosterman** is vice president of operations at Rejuvenation Inc., having served the company for 14 years. As part of a state pilot project, he led his company's implementation of an International Organization for Standardization 14001-based energy management program based on the sustainability principles of The Natural Step. For the past 7 years he has worked directly with Asian suppliers to reduce their environmental impacts, while implementing socially responsible policies and programs in Rejuvenation's Portland operations.

**Julie Hammond** is the president of Sage Insurance Center in Bend. She has over 20 years experience in the insurance industry. Julie currently serves Deschutes United Way as campaign chair. She brings a customer service orientation, small business perspective and regional representation to Energy Trust program delivery.

**Al Jubitz** is a native Oregonian, recently retired from the family business, the Jubitz Corporation. He is president and founder of the Jubitz Family Foundation and serves as director of two private start-up companies. He is also past president and an active member of the Rotary Club of Portland, a board member of the Portland Schools Foundation, director emeritus of Morrison Child and Family Services, and a trustee of Outward Bound West Wilderness School. Al has an extensive business background and brings a strong business sense to the board. He has a bachelor of science degree from Yale University and an MBA from the University of Oregon School of Business.

**Preston Michie** has more than 25 years experience working in the electric power industry, most of which was spent working as an attorney in the Office of General Counsel at the Bonneville Power Administration (BPA). Currently he works as a consultant with BPA to help develop Grid West, an electric energy transmission organization, support BPA's demand response programs, and assess the potential for hydrogen in Northwest power applications. He is on the boards of the Northwest Hydrogen Alliance, Inc., the Wetlands Conservancy, and Ridgeline Energy, LLC (a start-up wind developer). Before his time at the BPA, Preston was a research chemist. He is a graduate of Lewis and Clark Law School and the University of Oregon School of Business.

**Rick Applegate** is the Portland Harbor Superfund Administrator at the City of Portland Bureau of Environmental Services. He served as staff director in the U.S. Senate and House of Representatives. Since then, he has worked for nearly 25 years on energy and environmental issues, principally as an advocate for salmon and their watersheds. Rick was the fish and wildlife director for the Northwest Power Planning Council, west coast conservation director for Trout Unlimited and administrator of the Habitat Conservation Division at National Marine Fisheries Service (NOAA). He was the chair of the U.S. Southern Stakeholders Pacific Salmon Treaty Negotiations and a member of the Pacific Northwest Comprehensive Energy Review. He has also served on the executive committee of For the Sake of Salmon, and on the boards of the Pacific Salmon Watershed Fund and the Sustainable Fisheries Foundation.

**Jason Eisdorfer** is legal counsel and energy program director for the Citizen's Utility Board. He served as the public interest representative in work sessions of the Oregon Legislature's House Committee on Power Deregulation in 1997, and in 1999 helped author Oregon's electricity industry restructuring legislation. He is on the executive boards of the Fair and Clean Energy Coalition, the Northwest Energy Coalition and the Renewable Northwest Project.

**Vickie Liskey** is a native of Klamath Falls and vice president of Liskey Farms, a 1,500-acre ranch that uses geothermally heated water to heat ranch houses, greenhouses, tropical fish ponds, cattle watering ponds and irrigated pastures. She has 17 years experience managing commercial greenhouses and a degree in horticulture from North Dakota State University. Vicki brings a small business perspective and regional representation to the Energy Trust Board. *Vickie was re-elected to a new three year term in 2007*.

Caddy McKeown is the southern region supervisor for the ASPIRE Program, Oregon Student Assistance Commission. She is active in her community serving as a commissioner and vice chair for the Oregon International Port of Coos Bay. She served on the Coos Bay School District Board of Directors for 11 years and on the budget committee for 15 years. She serves on the board of directors of the nonprofit organization that manages Mingus Park Municipal Pool, serves the Oregon Community Foundation as a volunteer grant evaluator, and recently stepped down after 17 years on the board of Bob Belloni Ranch, Inc., a residential treatment facility for adolescent offenders. Caddy brings private, nonprofit and economic development experience, years of community service and a South Coast perspective to her service to Energy Trust.

Alan Meyer is the director of energy management for Weyerhaeuser Company, a diversified pulp, paper and forest products manufacturing company. He is responsible for coordinating energy management activities at hundreds of manufacturing facilities throughout North America. Prior to joining Weyerhaeuser, he was director of energy for Willamette Industries, holding similar responsibilities. He also worked for PacifiCorp as the Oregon Large Industrial Accounts Manager. He brings this extensive experience in the energy industry plus sales and marketing experience to the Energy Trust board. Alan was re-elected to a new three year term in 2007.

#### ex-officio

**John Savage** is one of three commissioners serving the Oregon Public Utility Commission. He joined the OPUC staff in 2003 as director of its utility program, after having served as director of the Oregon Department of Energy for the previous decade. He was administrator of the ODOE's policy and planning division from 1987 to 1993. John received a master's degree in natural resource economics from Oregon State University in 1979 and a bachelor of science degree from Oregon State University in 1975.

#### Oregon Department of Energy Special Board Advisor

William Nesmith was the assistant director for conservation at the Oregon Department of Energy until February 2008. Bill has a master of science degree and over 20 years experience in the field of

energy efficiency. He has worked as a land use planner for local government, been a program manager with state government, and served as a public utilities specialist with the Bonneville Power Administration. In his ODOE position he directed energy efficiency and renewable resource programs for Oregon homeowners, businesses, and public institutions that have a combined budget of over \$10 million. Bill resigned from ODOE and therefore no longer serves as ODOE's Special Board Advisor. Betty Merrill was named to replace Bill in April 2008.

## **Board Development Guidelines**

April 16, 2007

The Energy Trust / Oregon Public Utility Commission grant agreement calls for the Energy Trust board to include the skills, broad representation and diversity necessary to achieve its mission.

The initial board of directors included nine members and one non-voting ex-officio member from the OPUC. The nine members represented a variety of energy and business perspectives, including energy policy and planning, program implementation and evaluation, facility siting, consumer advocacy, renewable energy development and sustainable practices, and commercial and industrial sectors.

The board has experienced expected turnover, and as this has occurred the board has taken steps to broaden its membership further. In addition to soliciting input through advisory councils and at public board meetings, over a dozen individuals and partner organizations were polled to identify candidates with appropriate experience from throughout the state. At this same time, the board expanded its size to 12 voting members to allow further diversity.

Through these efforts and targeted recruitment, the current board includes voting members with background in business (agriculture, industry, transportation, construction, manufacturing/retail and insurance), government and nonprofit energy sectors and higher education. Members come from Coos Bay, Bend, Eugene, Klamath Falls and the Portland area. Of the voting membership, four are women and eight are men. The board's Oregon Public Utility Commission (OPUC) ex-officio member is Commissioner John Savage. The board created an additional non-voting position for an appointee of the Oregon Department of Energy (ODOE). Bill Nesmith, ODOE Assistant Director for Conservation Programs, was appointed to fill this "special advisor" position. Bill resigned from his position at ODOE in 2008.

All new members participate in an orientation session and are provided handbooks containing historical information, policies, plans, budgets and program descriptions. The majority of board members also participate on advisory councils and board committees. All regular board and advisory council meetings and background information are public. Advisory council and board meetings are well attended, and public comment is included in every meeting.

All regular board members complete and sign conflict of interest forms each year. The OPUC ex officio board member and the special advisor from ODOE do not receive confidential information. Once a year, board and staff members participate in a planning session to review progress and discuss the Energy Trust's strategic direction. Board development is a part of this public planning session, as needed.

# 2007 Advisory Council Members and Meetings

#### **Conservation Advisory Council**

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

Michael Early, Industrial Customers of Northwest Utilities

Thomas Eckhart, UCONS LLC

Tom Eckman, Northwest Power Planning Council

Andria Jacob, City of Portland, Office of Sustainable Development

Don Jones, PacifiCorp

Ken Keating, Bonneville Power Administration

Lori Koho, Oregon Public Utility Commission

Mat Northway, Eugene Water & Electric Board

Paul Olson, Oregon Remodelers Association

Stan Price, Northwest Energy Efficiency Council

Lauren Shapton, Portland General Electric

Susan Steward, BOMA

Steve Weiss, Northwest Energy Coalition

Energy Trust board members who regularly attend CAC:

Jason Eisdorfer

Debbie Kitchin

Alan Meyer

John Reynolds

2007 Meeting Dates	CAC Major Discussion Topics
January 17	Business Energy Solutions – Existing Buildings 2007 Incentive Changes Summary,
	Business Energy Solutions – Production Efficiency 2007 Proposed Incentive Changes
	Summary, Available Incentive Funding Web Posting, Home Energy Solutions – Existing
	Homes 2007 Proposed Incentive Changes Summary
February 21	Business Energy Solutions – Existing Buildings 2007 Incentive Changes Summary,
	Business Energy Solutions – Production Efficiency 2007 Proposed Incentive Changes
	Summary, Available Incentive Funding Web Posting, Home Energy Solutions – Existing
	Homes 2007 Proposed Incentive Changes Summary
March 14	Program Delivery Model Update, Budget Reallocation of 2006 Carryover Funds,
	Efficiency Program Savings Potential Forecast
April 18	Program Delivery Model Evaluation Preliminary Findings, New Gas Efficiency Measures
May 16	Program RFP Schedules, Program Delivery Model Enhancement Exploration, Exclusive
	Residential Trade Ally Network, I <sup>st</sup> Quarter Program Results Highlights
June 20	Residential Code Change Implications for New Homes Program, Residential Trade Ally
	Exclusive Network, Board Strategic Planning Workshop Results
September 19	2nd Quarter Program Results, Existing Buildings and Existing Homes Recompete Status,

	Renewable Energy Act Incremental Funding Program Impact, Energy Trust Trade Ally Network Oversight
October 17	2008 Draft Budget, 2008 New Buildings Incentive Changes Oversight, Electric Utility
	Incremental Funding Rate Filing Update
November 28	2008 Budget and Action Plan, 2008 PUC Performance Measures and Avoided Costs,
	Existing Buildings 2008 Incentive Changes, Biofuel Efficiency Projects

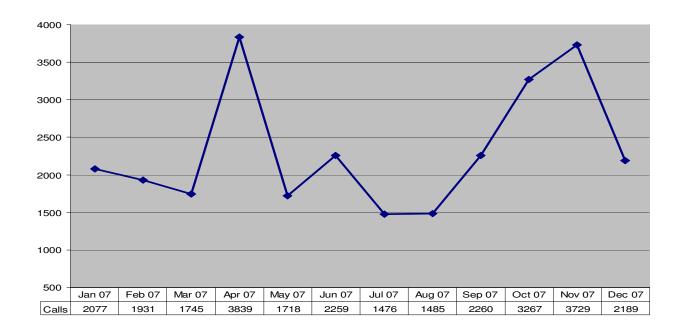
### **Renewable Energy Advisory Council**

Doug Boleyn, Cascade Solar Consulting
Debra Malin, Bonneville Power Association
Angus Duncan, Bonneville Environmental Foundation
Thor Hinkley, Portland General Electric
Jeff King, Northwest Power & Conservation Council
Justin Klure, Oregon Department of Energy
Troy Gagliano, Renewable Northwest Project
Kyle Davis, Pacific Power
Lori Koho, Oregon Public Utility Commission
Frank Vignola, Solar Monitoring, University of Oregon
Chris Taylor, Horizon Wind Energy

Energy Trust board members who regularly attend RAC:
Alan Meyer
John Reynolds

2007 Meeting Dates	RAC Major Discussion Topics
January 17	Portland Habilitation Center Large-scale Solar Project, Small-scale Wind Project,
January 17	Community Renewable Energy Association, Regulatory Update
March 14	Solar Impact Evaluation, PMC & Process Evaluation, Green Tag Policy, Program &
Planch 14	Budget Updates
April 18	Legislative Update, Wind Integration, Oregon Green Power Options, PMC Model
April 18	Evaluation, Not-for-profit Solar Incentive
May 16	Legislative Update, Strategic Issues
June 20	Legislative Update, Strategic Planning Follow-up, Portland Community Center,
June 20	Small Wind Program Draft Design, Hydropower Policy Recommendations
July 10	Swalley Irrigation District, Green tag exemption for PV on new homes,
July 18	Demonstration Project Policy, Renewable Energy Goals
September 19	Large Scale Solar Electric Project, Small Scale Hydro Project, SB838 Rulemakings,
September 19	Renewable Program Activities 2008-2009
October 17	Emerging technologies, Draft 2008 Renewable Energy Program Budgets
November 28	Marketing Solar to Residential Customers, 2008-2009 Renewable Energy Program
November 26	Budgets

# 2007 Call Volumes



# 2007 Web Visits

