2013 Annual Report to the Oregon Public Utility Commission & Energy Trust Board of Directors

ENERGY TRUST OF OREGON
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Energy Trust of Oregon

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FROM THE EXECUTIVE DIRECTOR: 2013 IN REVIEW

I am pleased to submit this comprehensive Energy Trust of Oregon 2013 annual report to the Oregon Public Utility Commission and Energy Trust Board of Directors. This report details Energy Trust achievement of cost-effective energy efficiency and clean, renewable energy generation for the benefit of Oregon utility customers.

In 2013, our portfolio of established programs, new initiatives, exploratory pilot activities and strong utility collaboration enabled Energy Trust to reach and serve all types of customers, delivering a broad array of energy solutions. The maturity and diversity of our portfolio of programs and customer services enabled us to keep costs low while exceeding 2013 goals. This was true even during a year of significant program transitions and cost-effectiveness challenges related to low natural gas prices.

By year-end, Energy Trust annual results exceeded the stretch goal for overall electric savings, nearly achieved stretch goal for overall gas efficiency savings, surpassed Integrated Resource Plan efficiency targets for three out of four utilities and met 72 percent of the renewable energy conservative goal.

We achieved savings at outstanding value for utility customers, delivering the lowest-cost energy resources utilities can buy at 2.4 cents per kilowatt hour and 33 cents per therm (levelized). A full range of renewable technologies received support through project incentives and development assistance in 2013, delivering generation at 2.7 cents per kWh (levelized). We accomplished these results while maintaining high overall customer satisfaction at 93 percent and satisfaction with program representatives at 97 percent. In addition, low administrative costs were maintained at 4 percent of annual revenue.

Notably, the lowest-cost savings were acquired from new commercial construction of data centers, a very large industrial project, highly efficient technologies such as LEDs and energy-efficient TVs, and behavioral savings in homes and industrial facilities. Other areas of energy-saving activity included expanded services to renters in apartment buildings and low-income housing, customer responsiveness to simple, packaged incentives and services for small new commercial construction, and strong engagement of home builders as the building industry began to rebound.

Concurrently, we undertook significant program and operational adjustments in 2013. We refined incentives, services and strategies to sustain market momentum given cost-effectiveness challenges, and we developed systems to target customers with offers most relevant to their needs. In particular, we worked closely with our four affiliated utilities to implement new data sharing agreements, and established internal processes and security to apply such data to program design and marketing services for customers in future years.

A number of program milestones were accomplished in 2013, as well. The 5,000th home with solar installed and the state's first commercial food waste biogas generation plant, JC Biomethane, received Energy Trust incentives. Energy Trust led the way among many state and national organizations interested in home energy scoring by releasing EPS™, an energy performance score for existing homes. With EPS for new homes already established in the market, a broader promotion of EPS for all consumers was initiated by year-end.

With our strong 2013 results added to prior year accomplishments, we are now solidly within range of accomplishing the aggressive energy-efficiency goals established in our 2010-2014 Strategic Plan, having delivered 91 percent of the electric savings goal of 479 aMW and 95 percent of the gas savings goal of 34.7 million annual therms. For renewable energy, we have made significant progress, reaching 91 percent of our goal of 124 aMW, even within the challenging economy and absent state tax credits.

More important than reaching our goals are the far-reaching benefits all Oregonians experience when we reduce energy waste and our reliance on fossil fuels. Families, businesses and communities are stronger from the jobs created and additional wages paid when we save energy and money. Air quality is improved when we avoid carbon emissions, with long-term benefits for our health, environment and quality of life.

Every year I am pleased to thank our many customers and enjoy the collaborative relationships we have built together with PGE, Pacific Power, NW Natural, Cascade Natural Gas, Northwest Energy Efficiency Alliance, the Oregon Department of Energy, our nearly 2,700 trade ally contractors and allied professionals throughout the state, the Energy Trust Board of Directors and staff, and the many thousands of customers who participated in our programs. I look forward to ongoing work to deliver more affordable, clean energy and, in so doing, improving the lives of Oregonians.

Sincerely,

Margie Harris
Executive Director

I BACKGROUND, MISSION AND GOALS

A. Background

Since March 2002, Energy Trust has invested public purpose funds from utility customers so all can benefit from energy-efficiency improvements and renewable energy generation. Our mission is to help utilities meet the energy needs of their customers with the cheapest and cleanest energy available. We serve customers in coordination with utilities, community and industry organizations, government agencies and the other electric public purpose fund administrators—Oregon Housing and Community Services and the Oregon Department of Energy. This critical work benefits our state by building a more sustainable and brighter energy future, and contributing to our local and state economy in positive ways.

Energy Trust is an independent 501(c)(3) nonprofit organization funded by and serving Oregon customers of Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas, and NW Natural customers in Washington. We serve every type of customer, including those who own, rent or lease their home and building, product manufacturers, farmers and ranchers. New offers and effective collaboration enable us to provide clean energy solutions for a growing number of consumers, businesses, communities and schools. Our programs provide the necessary information, technical expertise and financial assistance to motivate people to modify their energy usage habits, choose high-efficiency products, invest in energy-efficient renovations and construction and install renewable energy projects. Through these actions, participating customers derive a range of benefits—lower energy bills, greater comfort, better indoor air quality, improved productivity and lower carbon emissions.

Energy Trust's program management, design and delivery strategies support innovation while providing ongoing value for ratepayers. As market conditions change and new technology emerges, Energy Trust has the flexibility to adapt its services and incentives to capture cost-effective energy efficiency and support viable renewable energy generation.

As a steward of ratepayer dollars, we consistently maintain low administrative and program support costs, and ensure funds are directed to customers through incentives, services and trainings. Our residential and commercial energy-efficiency programs are competitively bid and managed by contractors. The Production Efficiency program for industrial and agricultural customers and all renewable energy programs are internally managed by our staff. For most programs, Energy Trust leverages specialized local businesses already serving customers in the marketplace. We support and leverage a network trade ally contractors, allied professionals and participating retailers throughout the state who are familiar with Energy Trust incentives and can help customers access them. This approach keeps Energy Trust costs low, supports our region's energy services sector and sustains job opportunities in the areas we serve.

Our work is shaped with advice from two advisory councils comprised of stakeholders and is led by an independent, diverse board of directors whose members volunteer their time and expertise. We pride ourselves on being inclusive and transparent by holding open meetings and publishing online meeting agendas, notes, independent third-party evaluations of programs, draft and final budgets and action plans, reports and audited financial statements.

We comply with legal requirements and minimum performance measures set forth in our contract with the Oregon Public Utility Commission. In addition, annual goals for electric and natural gas energy savings and renewable energy generation are developed in consultation with PGE, Pacific Power, NW Natural and Cascade Natural Gas. An even stronger connection with Energy Trust activities and utilities serving their customers was made through changes in 2013. Starting in 2014, Energy Trust annual efficiency goals are built from each utility's Integrated Resource Plan. This collaboration helps Energy Trust focus on and be accountable for delivering the lowest-cost energy available to meet the needs of every utility customer.

B. Purpose Statement

Energy Trust provides comprehensive, sustainable energy efficiency, conservation and renewable energy solutions to those we serve.

C. Vision Statement

Energy Trust envisions a high quality of life, a vibrant economy and a healthy environment and climate for generations to come, built with renewable energy, efficient energy use and conservation.

D. 2010-2014 Strategic Plan Goals

1. Save 479 average megawatts of electricity
2. Save 34.7 million annual therms of natural gas
3. Produce 124 average megawatts of electricity from new renewable generation

E. Five-year Activities 2010-2014

1. Accelerate energy-efficiency investments
2. Support a variety of renewable energy technologies
3. Encourage innovative technologies
4. Support industry and business infrastructure to deliver energy efficiency and renewable energy
5. Provide excellent customer service
6. Consider overall balance and equity among programs and initiatives
7. Communicate the value of energy savings and renewable resource generation
8. Maintain an efficient, effective and transparent organization

II GENERAL HIGHLIGHTS

Annual results[1] [2]

- **Energy savings for 2013 were achieved at lower-than-budgeted cost**. Expenditures for 2013 were below budget—by 20 percent for electric spending and 23 percent for gas spending. This reflects the relatively high proportion of savings derived from lower-cost strategies, including very cost-effective savings from a large industrial project and construction of large data centers. Increasingly, behavior-based savings from efforts such as industrial Strategic Energy Management and residential Personal Energy Reports through Opower are contributing to low-cost savings acquisition.
- **Energy Trust's diverse portfolio of programs and savings strategies is a strength** that helps the organization adjust to variable market conditions and meet goals, even when some programs encounter challenges. Achievements in 2013 were largely led by New Homes and Products, New Buildings and data center construction, lighting, existing multifamily buildings and a large industrial project. These successes balanced other programs impacted by low natural gas costs, making it more difficult to attract and complete energy-efficiency projects, and unfavorable market fundamentals for the renewable energy sector.
- **Energy Trust met every OPUC performance measure in 2013.** Electric and gas efficiency savings exceeded OPUC performance measures, along with annual levelized life-cycle costs.
- **2013 results exceeded Energy Trust's annual stretch goal** for electric efficiency savings, nearly reached stretch goal for gas savings and fell short of the renewable energy generation conservative goal.
- **Savings results exceeded contracted utility-specific Integrated Resource Plan targets** for Portland General Electric, Pacific Power and NW Natural territories.
- **In Cascade Natural Gas territory, Energy Trust achieved 86 percent of IRP target** and fell short of annual conservative goal. A relatively small annual budget and associated savings can be significantly impacted when a few large projects are canceled or delayed to subsequent years. This was the case for Cascade Natural Gas territory where a few commercial and industrial projects did not complete in 2013. To manage this dynamic, Energy Trust and Cascade Natural Gas adjusted how savings are forecasted and budgeted, and planned to utilize reserves for large projects in 2014.
- **Electric efficiency projects completed in 2013** saved 57.8 aMW of electricity at a levelized cost of 2.4 cents per kWh. This savings is 4 percent over the 2013 stretch goal. Energy Trust delivered roughly the same electric savings in 2013 as in 2012, at roughly the same levelized cost.
- **Gas efficiency projects completed in 2013** saved more than 5.3 million annual therms of natural gas[3] at a levelized cost of 33 cents per therm. Gas savings were 3 percent below the 2013 stretch goal and 15 percent over the conservative goal. Gas results for 2013 are 5 percent

[1]This document reports net savings, which are adjusted gross savings based upon results of current and past evaluations.

[2]This report includes the best available energy savings data as of the date of submission. Energy savings reported here for periods prior to January 1, 2013, may be different than previously reported as a result of applying updated evaluation factors to Energy Trust funded program savings in Oregon through our annual true up process. The full True Up 2013 Report is available online at www.energytrust.org/reports.

[3]The gas savings do not include results for NW Natural in Washington. These results are reported in Appendix 9, p. 53.

less than 2012 gas savings, and were delivered at a lower levelized cost (6 cents per therm lower).

- **Renewable energy projects achieved 2.9 aMW in new generation** in 2013 at a levelized cost of 2.7 cents per kWh, largely from the state's first commercial food waste biogas generation plant, JC-Biomethane. This volume is 28 percent below the annual conservative goal and 41 percent less than renewable generation installed in 2012 due to ongoing challenging market conditions and project delays. Solar electric projects generated 0.7 aMW.
- **Energy Trust maintained low administrative and program support costs** at 4 percent of total revenue, well below the OPUC performance measure of 9 percent. An unmodified (previously "unqualified") financial audit opinion was obtained and strong customer satisfaction ratings recorded in 2013, meeting additional OPUC performance requirements.
- **Energy Trust helped all types of customers save energy and money** through innovative strategies and technologies. Accomplishments detailed in this report include:
  - **Economic growth and rebounds in new construction bolstered New Buildings savings** and led to high project enrollments in 2013, and the program acquired a large volume of highly cost-effective savings through construction of large data centers.
  - **A market solutions offering for New Buildings customers exceeded expectations**, with 70 projects enrolled in 2013.
  - **Strategic Energy Management continued to grow as a cost-effective** source of industrial savings, and industrial savings were further complemented by a very large project in PGE territory.
  - **Existing Buildings and New Buildings programs served 186 schools**—more than twice the number served in 2012—and 2013 audits led to projects identified for 2014.
  - **More small business customers around the state** engaged with Energy Trust through industrial and commercial programs.
  - **The multifamily initiative delivered energy savings directly to renters** and residential tenants of affordable housing, assisted living and campus living facilities through installation of energy-saving products.
  - **Energy Trust engaged commercial trade allies** through a new Allies for Efficiency training series and developed new market connections, such as working with roofing contractors who can identify and promote opportunities for ceiling and attic insulation.
  - **Market transformation efforts through the Northwest Energy Efficiency Alliance** and the New Buildings program provided exceptional savings for residential and commercial sectors. NEEA achieved 199 percent of anticipated savings for the residential sector due largely to a West Coast TV initiative, specialty lighting and uptake of the new residential code.
  - **Year-end bonuses boosted savings and expedited completion of projects** for Existing Homes and Existing Buildings customers.
  - **Increased construction of energy-efficient new homes and new lighting products** led to savings in New Homes and Products, which exceeded stretch goals for three utilities.
  - **Energy Trust installed the 5,000th residential solar system in 2013**, bringing the total number of supported solar installations of 6,066 systems for a total 58 MW capacity. The renewable energy sector developed robust pipelines for all technologies in 2014.
- **Energy Trust developed systems to protect and use utility customer data** for program planning, marketing and evaluation purposes. In collaboration with PGE, the first application of

utility data was a targeted communication to potential commercial solar customers. Functionality was developed to target and track marketing based on utility data and will be utilized in 2014.

- **Energy Trust completed competitive selection processes** for the New Buildings Program Management Contractor and four Production Efficiency Program Delivery Contractors. Strong competition helps to ensure delivery of effective services and value for customers.
- **Early in the year, Energy Trust completed transitions to two new PMCs** for Existing Buildings and Existing Homes programs. These new PMCs were selected through competitive processes in 2012.
- **The Production Efficiency and New Buildings programs received national recognition** as exemplary programs by the American Council for an Energy-Efficient Economy. The multifamily initiative was also cited in a separate ACEEE report as a successful national example of achieving energy and cost savings in multifamily buildings.
- **To enhance customer service, Energy Trust improved web pages and online tools**, including adding options to identify trade allies by location and redesigning program pages. In addition, a mobile-optimized version of www.energytrust.org launched to provide an easy user experience for web visitors using mobile devices. Over the past five years, Energy Trust experienced increased website visits from customers in areas outside of the Portland metro area, with web traffic doubling or tripling in Coos Bay, Medford, Redmond and Salem.
- **Energy Trust, the OPUC and utility representatives established a new energy efficiency goal framework** for implementation in 2014, resulting in a single energy-savings goal for each utility that approximates individual utility annual IRP targets. Additionally, Energy Trust Board of Directors reviewed and amended its reserves policy to clarify reserves usage and access.
- **Energy Trust regularly engaged stakeholders and the OPUC on its cost-effectiveness docket,** gathering data for a report on measure and program cost-effectiveness due to the OPUC on July 1, 2014. An evaluation of savings and a report on the comparative costs of three tracks within the Existing Homes program was undertaken to inform this report. OPUC action is expected in October 2014. In the interim, Energy Trust continued to operate gas weatherization programs under current policy approved by OPUC in 2012 allowing for cost-effectiveness exceptions.
- **Energy Trust invested in foundational improvements to IT systems** to accommodate future program needs and reduce future costs of integrating functionality, including expanding capacity of database servers, improving ability to integrate IT systems with PMC systems, adding functionality to Energy Trust's Customer Relationship Management system, and completing the first stage of a project to determine upgrades and improvements to FastTrack, Energy Trust's current measure and project tracking system.

Cumulative and total annual results

- **Since 2002, annual savings total 436 aMW of electricity and 33.1 million annual therms** of natural gas, equal to 91 percent of 2014 electric goal and 95 percent of the 2014 gas goal. (Totals include 22 aMW of savings from self-direct customers.)
- **Since 2002, annual generation equals 112 aMW of renewable energy**, approximately 91 percent of the 2014 goal of 124 aMW.
- **Total electric savings and generation since 2002** represent energy savings equivalent to building an energy-efficiency power plant or enough clean energy to power more than 425,000

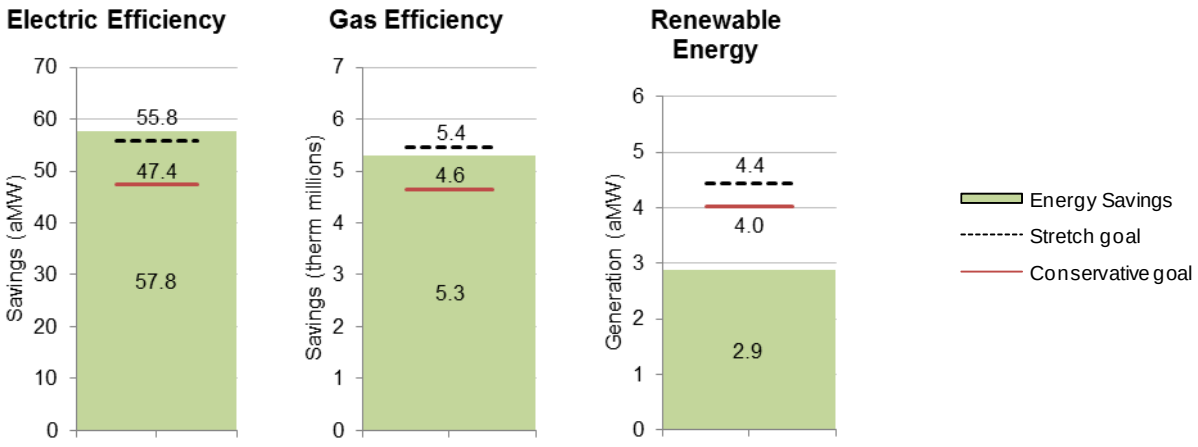
Oregon homes. Total gas savings represent enough fuel to heat more than 65,000 Oregon homes with natural gas for a year.

- **In 2012, the net economic benefits of Energy Trust 2002-2012 expenditures**, energy savings and renewable energy generation added $2.7 billion to the local economy, including $793 million in wages, $155 million in small business income and employment equivalent to 2,200 full-time jobs lasting a decade. With the inclusion of 2013 results, these benefits are expected to increase.[4]
- **Since 2003, Energy Trust has invested nearly $6.5 million in energy-efficiency projects** at more than 1,600 public and private K-12 schools in Oregon. The organization also provided more than $1.7 million in funding for solar electric and wind energy systems at nearly 50 schools.
- **Air quality improvements stemming from Energy Trust investments** have kept more than 10 million tons of carbon dioxide out of the atmosphere, the equivalent of removing nearly 1.8 million cars from Oregon roads for one year.

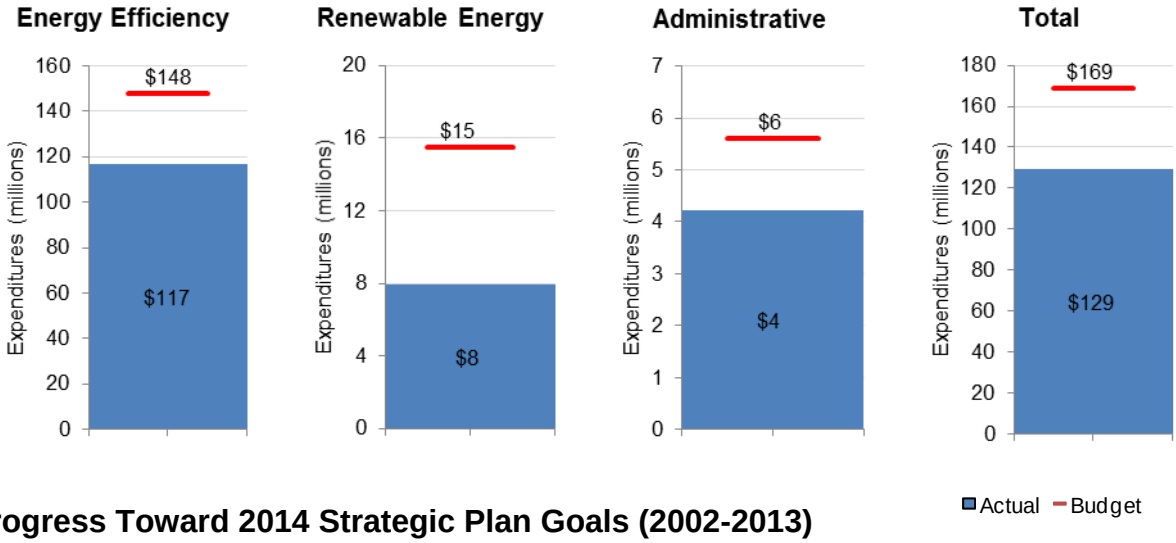
[4]These benefits will likely increase as a result of the completion of the third-party 2013 economic impacts study in spring 2014. Shown here are the net economic benefits from Energy Trust 2002-2012 expenditures, savings and generation as based on a 2013 independent analysis of an ECONorthwest economic impact study completed in 2012.

III 2013 ACTIVITY AT A GLANCE

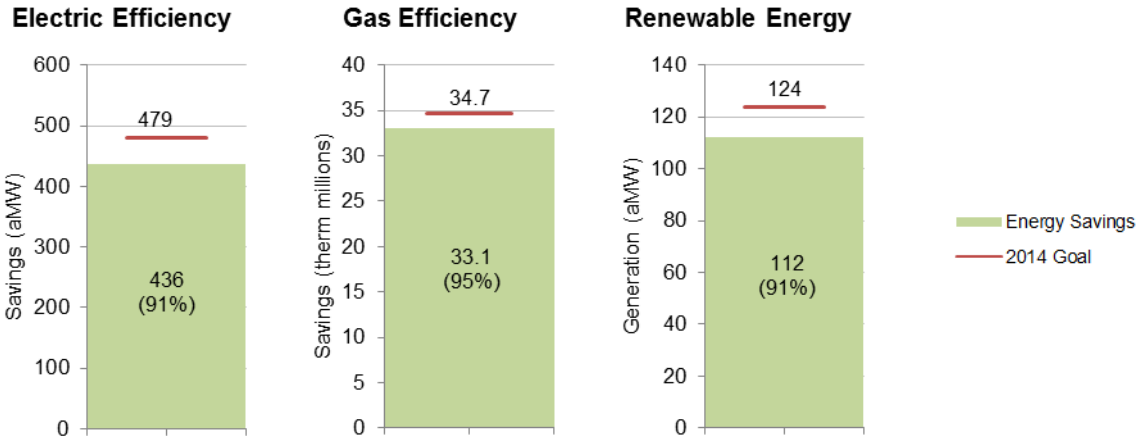
Savings and Generation



Expenditures



Progress Toward 2014 Strategic Plan Goals (2002-2013)



Residential Activity in 2013

New homes and major remodels	**2,446**
New manufactured homes	107
Weatherization retrofits	**8,586**
Single-family site-built	6,850
Mobile	1,736
Home Energy Reviews*	**1,877**
Total Sites	**12,909**
Heating systems	**4,979**
Water heaters	**844**
Solar	55
High-efficiency products	**19,542**
Washing machines	15,322
Refrigerators & freezers	4,220
High-efficiency lighting**	**2,083,699**
Refrigerators, freezers recycled	**16,176**
Energy Saver Kits sent	**13,886**
Total Other Activity	**55,427**

*Includes in-home reviews only; Home Energy Reviews are also available online and by phone
**Lighting excluded from totals

Commercial Activity in 2013

New Buildings sites served[1]	**387**
Whole building approaches	90
Packaged solutions for market segments	34
Standard/system-based approaches	243
Existing Buildings sites served[1]	**2,769**
Operations and maintenance	181
Custom[2]	265
Lighting	1,399
Prescriptive/standard[3]	926
Existing multifamily sites served	**1,661**
Solar water heating sites served	**15**
Sites with technical assistance	**681**

[1]New Buildings and Existing Buildings total sites served may include sites that participated in more than one program track
[2]The most common custom improvements are building controls and HVAC
[3]The most common prescriptive/standard improvements are foodservice and grocery equipment

Industrial/Agricultural Activity In 2013

Projects	**1021**
Custom[1]	157
Strategic Energy Management[2]	35
Lighting	299
Small industrial and agricultural[3]	530
SEM participating companies	**31**
Studies	**117**

[1]The most common custom improvements are compressed air system and process upgrades
[2]Savings from no-cost or low-cost operational steps (i.e., turning off equipment when not in use) identified through trainings in SEM approaches
[3]The streamlined initiative, formerly the small industrial initiative, delivers savings from irrigation improvements, small compressed air, variable frequency drives and other prescriptive and calculated improvements

Renewable Energy Activity in 2013

Biopower projects	**2**
Solar electric installations	**881**
Residential	839
Commercial	42
Other renewable projects	**5**
Wind projects	3
Hydropower projects	2
Geothermal projects	0
Total	**888**

Trade Ally Activity in 2013

Regional trade ally roundtable meetings	**17**
Attendance	635
Trainings provided	**159**
Trade allies added to network	**264**
Trade allies accessing business development funds	**429**

Customer Outreach Activity in 2013

Calls	**27,413**
Website visits	**735,891**
info@energytrust.org inquiries	**1,612**
Customer complaints	**18**
News stories in print, broadcast	**345**

IV HIGHLIGHTS OF 2013 ACTIVITIES

A. Commercial Sector Highlights

- **The commercial sector, comprising the Existing Buildings program, New Buildings program and multifamily initiative**, exceeded stretch goals in Pacific Power and NW Natural territories, approached stretch goal in PGE territory and fell short of conservative goal in Cascade Natural Gas territory, as described in section II. Sector savings benefited from strong activity in commercial construction, expansion of the multifamily initiative and increased installation of energy-saving products for existing multifamily buildings, and growth of lighting projects as a source of Existing Buildings' savings.
- **Commercial sector savings represented 43 percent of Energy Trust total electric savings** and 41 percent of total gas savings in 2013. Approximately 4,700 sites were served during 2013, representing a wide variety of business types and widely dispersed locations throughout Energy Trust territory.
- **Commercial activity included services for 11 school districts through Cool Schools** in coordination with the Oregon Department of Energy, and supported energy-efficiency improvements at 185 schools. A strong 2014 pipeline was developed by providing audits and project assistance.
- **A total of 24 commercial deep retrofit[5] projects** were completed out of 117 identified as renovations in 2013, resulting in upgrades to at least two major building systems.
- **Staff developed and distributed a draft request for proposals for a Pay for Performance** pilot, soliciting stakeholder input in preparation for a public hearing in Q1 2014. The Pay for Performance pilot will determine if paying incentives for capital and operations and maintenance improvements over a multiyear period will help contractors close projects and achieve additional energy savings from more comprehensive projects.

Existing Buildings

- **Existing Buildings exceeded stretch goal in NW Natural territory**, met conservative goals in PGE and Pacific Power territories and fell short of conservative goal in Cascade Natural Gas territory, as described below.
- **Lighting projects contributed a majority of Existing Buildings electric savings in 2013**, with LEDs comprising a greater portion of lighting savings than in previous years. Staff anticipates that LED projects will continue to increase as a portion of overall savings.
    - Working with PGE, the program saved 6 million kWh through LED upgrades to more than 12,500 streetlights, doubling expectations.
    - A market test to encourage small commercial customers to purchase reduced-price LEDs at distributor-hosted events resulted in approximately 600,000 kWh of savings.

[5]Based on a working definition of commercial deep retrofits developed for the purpose of OPUC reporting, deep retrofit projects typically achieve approximate savings of 40 percent beyond market average by following a number of pathways. A project must be a major renovation of an existing commercial building and receive incentives for one of the following: market solutions package, Leadership in Energy and Environmental Design achieving a 25 percent reduction for Energy and Atmosphere credit 1 points, Path to Net Zero or upgrades to at least two major building systems (such as HVAC, lighting or shell measures). The building can be large or small and the project can be simple or complex, applying multiple system-level upgrades or more holistic, customized energy-efficiency strategies.

- **In its second year, commercial Strategic Energy Management brought substantial savings** and demonstrated continued growth. A second SEM cohort launched with five participants. While SEM provided fewer electric savings than budgeted, gas savings exceeded expectations. Recruiting customers was initially difficult due to high time commitments for customers, and staff planned changes to increase early engagement and executive sponsorship through outreach and recruitment in 2014.
- **Challenges impacting gas savings included cancellation of a large project and delays** of several large custom projects in Cascade Natural Gas territory. Fewer savings were achieved from custom projects, Building Operator Certification and rooftop HVAC unit tune-ups, which were discontinued in Q3.
- **Existing Buildings increased gas savings from prescriptive projects** through a direct mailing promotional opportunity for kitchen equipment. Additional outreach efforts helped in-progress projects to complete in 2014.
- **More than 100 custom projects were expedited and completed from a Q4 bonus** of $0.05 per kWh and $0.50 per therm.
- **The program helped 15 projects complete the City of Portland's *Bucks for Buildings*** rebate program, ranging from retail to office buildings. Funded by a federal American Recovery and Reinvestment Act grant, *Bucks for Buildings* paid additional rebates to small commercial facilities for energy-efficiency upgrades qualifying for Energy Trust incentives.
- **Existing Buildings educated outreach staff and trade allies, including non-lighting trade** allies, to help them identify both lighting and non-lighting opportunities. The program's efforts to engage more non-lighting trade allies resulted in new market connections, such as working with roofing contractors who can identify and promote opportunities for ceiling and attic insulation. The program engaged 24 new non-lighting trade allies, including 16 HVAC contractors and eight roofing and insulation contractors, for a total of 265 non-lighting trade allies in 2013.
- **Staff added a first commercial-only lending ally for Existing Buildings and multifamily** customers, TIP Capital, which specializes in commercial lighting, HVAC and data center equipment leasing. TIP Capital collaborated with Energy Trust to promote its new lender ally status in a press release that received coverage in Oregon business media, and delivered live webinars for trade allies in 2013.
- **Existing Buildings outreach representatives in Southern and Northeastern Oregon** provided customer service, identified project opportunities and also served schools in coordination with the Oregon Department of Energy. In 2014, the program will add additional outreach representative to serve Central Oregon and other regions.
- **Multifamily reached stretch goals in gas utility territories**, achieved conservative goal in Pacific Power territory and fell short of conservative goal in PGE territory due to delay of some custom projects.
- **The multifamily initiative served more than 19,600 dwelling units in 1,660 properties,** including apartments, campus living facilities, assisted living facilities and affordable housing, a more than 50 percent increase over 2012.
- **Direct installation of energy-saving products** comprised approximately 82 percent of multifamily gas savings and 68 percent of multifamily electric savings in 2013. These products—light bulbs, showerheads and faucet aerators—provide energy and bill savings directly to renters at a very low cost.

- **The portion of multifamily savings from common-area lighting projects increased** from 12 to 18 percent over 2012, contributing significantly to the initiative's overall electric savings.
- **Custom and prescriptive projects such as energy-efficient windows and insulation** provided additional gas savings.
- **Multifamily provided incentives directly to distributors** for promotion of highly efficient equipment, resulting in 1,345 units purchased, including refrigerators and clothes washers.
- **Multifamily staff cultivated relationships through outreach to a diverse set of building owners** and residential tenants, and collaborated with other agencies to incorporate water-efficiency benefits into outreach materials and efforts. In Cascade Natural Gas territory, multifamily staff developed relationships with key stakeholders and building owners, resulting in installations of energy-saving products and a strong pipeline of projects for 2014 and beyond.
- **In gas territories, multifamily completed numerous custom studies** to build a pipeline of future projects. Many custom projects in gas territories were delayed to 2014.
- **Multifamily began serving individual condominium unit owners** with more than 70 walkthroughs, stemming from concerted outreach to homeowners association presidents and managers, and promotion through newsletters and door hangers.
- **With local, regional and national organizations, staff developed Mpower Oregon, a pilot** using a utility on-bill repayment mechanism to serve renters in affordable housing developments. By year-end, two project agreements were signed, and several additional leads identified through Mpower went on to participate in standard multifamily offerings.

New Buildings

- **Fueled by new construction and economic recovery, New Buildings exceeded stretch** goals for three utilities, and achieved 99 percent of stretch goal in NW Natural territory. New construction activity was observed statewide, with nearly one-half of all completed projects located outside of the Portland metro area.
- **The program enrolled a record 422 projects in 2013**. Small commercial buildings comprised a majority of total projects.
- **Significant savings came from one large data center in Pacific Power territory**. Since launching a data center offering in 2011, New Buildings has served eight projects ranging from small server rooms using 10 kW or less annually to large enterprise facilities using up to 250 MW annually. Savings from data centers has increased over past years, reaching 61 percent of electric savings in 2013. Staff anticipate some savings from data centers to continue, with two to five data centers enrolling annually for the next few years, based on findings from a market assessment. However, the size of data centers and volume of savings is expected to be less than achieved in 2013.
- **Exceeding expectations in its first year, the market solutions offering enrolled 70 projects** and closed 14 projects. Market solutions helps customers achieve deeper energy savings in construction of small buildings under 70,000 square feet through standard tiered incentive packages for restaurant, grocery, multifamily, office, school and retail sectors. The program saw high participation with multifamily buildings, offices and schools, and launched a marketing campaign in Q3 to increase activity from the other sectors.
- **New Buildings supported increased construction of small, community-based healthcare** facilities to serve an evolving healthcare market.

- **A large addition to the Bay Area Hospital in Coos Bay contributed significant gas savings** while expanding medical services to Southern Oregon communities.
- **The program observed continued strong activity in low-rise multifamily buildings**, parking garages and retirement and assisted living facilities. Top participating market sectors were retail, office, restaurant, multifamily and schools.
- **New Buildings enrolled 13 projects in a new solar-ready offering.** Launched in coordination with the Solar program, solar ready offers technical and financial support to architects, engineers and builders who incorporate solar into their new commercial building designs. Building solar ready enables larger and less costly future solar installations.
- **The market transitioned to the 2010 commercial building code**, completing a full code cycle with more stringent code requirements.
- **More than 350 allies attended the first three Allies for Efficiency trainings**, a new series designed to advance the knowledge, skills and technical capabilities of allies and establish New Buildings as a resource to advance market awareness. Topics included financing construction of a high-performance building, emerging technologies and design strategies and post-occupancy results of the Path to Net Zero pilot. In total, New Buildings allies participating with the program reached 70 companies in 2013.
- **Staff increased contractor awareness and participation through sponsorship** of the Daily Journal of Commerce's annual Disadvantaged, Minority, Women and Emerging Small Business awards banquet and outreach to the Oregon Association of Minority Entrepreneurs.

B. Industry and Agriculture Sector Highlights

- **The industry and agriculture sector exceeded stretch goal** in PGE territory, approached stretch goal in NW Natural territory and fell short of conservative goals in Pacific Power and Cascade Natural Gas territories, as explained below.
- **Industrial sector savings represented 29 percent and 20 percent of Energy Trust's** electric and gas savings in 2013, respectively. Participating sites represented a broad range of industry and agriculture businesses and were distributed across the state, with strong participation in rural and urban areas.

Production Efficiency

- **The program completed a record 1,021 projects in 2013**, a 5 percent increase over 2012. Trade ally-driven projects at small and large industrial sites, including calculated and prescriptive offerings, emerged as a growing source of savings. The program completed the 2,000th small industrial project through the streamlined initiative, which launched in 2009.
- **In 2013, Production Efficiency achieved nearly 10 percent more electric savings** than in 2012, with significant growth in PGE territory. Extremely cost-effective savings from a very large industrial project and higher-than-expected savings from Strategic Energy Management participants were major contributors to electric savings.
- **Total 2013 gas savings were 46 percent higher than in 2012** due to a few large custom projects and strong performance from trade ally-driven projects at small and large industrial sites. Thermal curtains and other gas efficiency improvements for greenhouses contributed the majority of gas savings. In Cascade Natural Gas territory, a large project shifted to 2014, significantly impacting 2013 savings.

- **Activity in Eastern Oregon plateaued**, impacting savings in Pacific Power and Cascade Natural Gas territories. Outreach efforts in Eastern Oregon resulted in significant 2014 project pipeline development in Pacific Power territory. In Cascade Natural Gas territory, a large project brought in less than one-half of expected savings. Relatively few projects comprised Production Efficiency savings in Cascade Natural Gas territory—six projects were completed in 2013. To minimize uncertainty, Energy Trust and Cascade Natural Gas adjusted how savings are forecasted and budgeted, and planned to utilize reserves for large projects in 2014.
- **Industrial SEM savings continued to grow, contributing 10 percent of gas savings** and 32 percent of electric savings in 2013. In 2013, more than 50 sites were engaged in SEM offerings and 35 participants completed SEM projects, and 31 participants enrolled in SEM offerings that will complete in 2014. In the past five years, Energy Trust trained staff from more than 100 companies to manage and reduce their energy use through SEM practices. The program is poised to bring SEM to scale in Energy Trust territory in the next few years.
- **Ten customers completed the first cohort of the Core Improvement Pilot**, a track of SEM services designed for small- to medium-sized industrial customers. The first cohort achieved on average 6 percent electric savings and 3 percent gas savings. Twelve participants began the second cohort in August, indicating high market demand from small manufacturing companies.
- **Seven Refrigeration Operator Coaching participants saved 2.9 million kWh**, an average of 5 percent of each sites' energy use. This SEM approach trains on best practices in operations and maintenance of industrial refrigeration systems.
- **High-tech sector participation increased in 2013**, with three new customers completing custom projects. Ten sites, including two in rural areas, enrolled in a new industrial systems retro-commissioning offering that helps participants identify and implement operations and maintenance improvements with technical guidance from Allied Technical Assistance Contractors. The offering uses approaches successful with other types of businesses to help large, high-tech companies achieve savings quickly.
- **Production Efficiency increased custom lighting incentives** to help drive additional and more comprehensive lighting projects in 2014. Savings from lighting projects fell short of expectations in 2013 and decreased nearly 40 percent from 2012. Though savings declined, the volume of lighting projects was relatively constant from 2012 to 2013, representative of the continuing trend toward smaller project sizes.
- **Staff revised custom track Program Delivery Contractors services and territories** to better support customers, expanding services from medium and large companies to include small companies, many of which are in rural areas. Custom track PDCs provide comprehensive approaches to one-of-a-kind process-efficiency projects, including replacement, retrofit and operations and maintenance projects.
- **Staff cultivated and maintained long-term customer relationships** by hosting two Breakfast of Champions meetings for industrial SEM customers, sending The Champion newsletter quarterly to stakeholders and customers, launching in-person delivery of incentive checks for custom projects and reaching out to customers in Eastern Oregon through events and trainings. Attention to customer relationships is evident in the program's very high customer satisfaction ratings, with 98 percent satisfaction reported overall and 98 percent satisfaction reported with program representatives.

C. Residential Sector Highlights

- **The residential sector, comprised of Existing Homes and New Homes and Products** programs, exceeded conservative goals for three utility territories, and achieved 99 percent of conservative goal in PGE territory. In the Existing Homes program, the strategy to reduce savings from CFLs, showerheads and faucet aerators and increase savings from weatherization and equipment proved overly optimistic. While the volume of weatherization and equipment grew in 2013, these measures were impacted by more stringent requirements to address cost-effectiveness issues and the pace of growth was not strong enough to make up for planned reductions in kits.
- **Residential sector savings represented 28 percent and 39 percent of Energy Trust's** electric and gas savings in 2013, respectively. More than 60,000 new and existing homes received Energy Trust services in 2013.
- **More than 7,000 new and existing homes received EPS, an energy performance score**, which launched for existing homes in 2013. The volume of new homes receiving EPS exceeded expectations for the year by 40 percent, and a marketing campaign increased market awareness of EPS for both new and existing homes.
- **The sector achieved substantial market transformation savings** through NEEA, with 199 percent of anticipated savings achieved largely through energy-efficient TV sales. NEEA's promotion of ductless heat pumps and infrastructure also contributed strong savings.

Existing Homes

- **Existing Homes met conservative goal in NW Natural territory, and fell short** of conservative goals in the other utility territories. The majority of Existing Homes savings were achieved through behavioral savings studies and Energy Saver Kits. The program received fewer savings than expected from weatherization (as described below), Home Energy Reviews, mobile homes and the Savings Within Reach moderate-income offering.
- **A study determined that persistence of behavioral energy savings** resulting from Personal Energy Reports mailed to PGE and NW Natural customers saved 8.91 million kWh and 315,000 annual therms. In August, 15,000 high energy use Pacific Power customers began receiving similar reports and achieved 1.87 million kWh of savings. The Pacific Power effort will continue in 2014.
- **While equipment and weatherization project installations increased in 2013**, the pace of growth was not strong enough to make up for the planned reduction in savings from kits, impacting gas and electric savings. In 2014, the program plans to make a more gradual transition away from kits as a major source of savings.
- **In 2013, the program achieved fewer-than-expected savings through weatherization** projects, particularly through the Home Performance with ENERGY STAR® and Clean Energy Works tracks. Though approximately 20 percent fewer Home Performance and Clean Energy Works projects were completed in 2013 than 2012, the projects contributed 18 percent of the program's gas savings. Weatherization projects were impacted by measure reductions and restrictions due to a complex mix of low natural gas costs and lower measure savings realization informed by recent evaluations.
- **The program saw increased volume of windows, ductless heat pumps and gas hearths**, a trend that is expected to continue in 2014. Gas hearth installations increased 22 percent over

2012, highlighting the positive impact of targeted retailer outreach and measure specific promotions.

- **Bonuses for insulation and hearths** resulted in installation of 852 upgrades during fall heating season, and the gas hearth bonuse was extended into 2014.
- **Existing Homes designed a web-enabled thermostat pilot and installed 177 Nest** thermostats in participating homes. Analysis of energy usage data for the 2013-2014 heating season will provide information about consumer behavior in modifying thermostat temperature settings.
- **In 2013, Existing Homes completed three pilots:** a prescriptive duct sealing and repair pilot to address cost-effectiveness challenges, a cold water detergent pilot to explore new water heating savings strategies, and a customer engagement experiment in collaboration with Massachusetts Institute of Technology with results expected in 2014.
- **In 2013, staff enhanced support for trade allies through expanded tools and resources**, improved and new forms, and increased use of online forms. In addition, staff collaborated with the Home Performance Guild of Oregon to provide trade ally contractors with mentoring, training, business development and connections with lending allies.
- **In 2013, Energy Trust completed 1,476 residential deep retrofits**.[6] Many additional customers achieve whole-home savings through installation of a series of single measures over a period of months or years.
- **Implemented by Home Performance contractors, EPS launched for existing homes** and was supported by Clean Energy Works.
- **Energy Trust supported installation of 48 high-performance gas tank water heaters** by providing bonus incentives directly to George Morlan Plumbing Supply, which are passed onto customers at point of sale. Based on success, the program plans to expand the offering to additional high volume contractors in 2014.

New Homes and Products

- **The New Homes and Products program exceeded stretch goals in three utility territories** and reached stretch goal in PGE territory. In 2013, activity increased across all measure categories, resulting in 1,540 homes rated with EPS and purchase of more than 2 million compact fluorescent light bulbs and LEDs, more than 4,000 new refrigerators and freezers and more than 15,000 clothes washers. Activity increased for air sealing projects and new manufactured homes.
- **Economic recovery bolstered new housing construction and supported gas savings**. Single-family permits were strong in 2013, driving a 40 percent increase in new homes built and a 10 percent increase in the average natural gas efficiency levels of these homes compared to 2012.
- **The program completed the 4,000th EPS-rated home and reached 21 percent market share** for EPS in Energy Trust territory. Nearly one-half of all homes in 2013 Oregon green and solar home tours were rated with EPS, and the first verifier in Eastern Oregon began rating homes. The Central Oregon Builders Association tour of homes featured two Live Net Zero homes—homes that earned a superior EPS—some of the first presented in the state. Staff also coordinated with

[6]Consistent with the definition developed in Q1 2013 for the purpose of OPUC reporting, deep retrofits are defined as energy-efficiency actions in existing homes that include two or more shell or heating measures installed at the same time, and achieve a 20 percent or greater reduction in estimated heating load.

NEEA to develop and implement a digital platform for online submission of EPS for new homes to streamline processes and improve trade ally experience.

- **New lighting measures resulted in significant electric savings**, including general purpose and specialty CFLs and LEDs. The program expanded discounted lighting products available in stores through new retailers and prominent product placement and promotions. LEDs continued to grow and comprised about 10 percent of lighting savings in 2013.
- **Appliances delivered fewer savings than expected in 2013**, impacted by expiration of Oregon appliance tax credits, more stringent specifications for eligibility and changes in stocking practices at stores.
- **Customers recycled 16,000 older refrigerators and freezers, and donated more than $30,000** in refrigerator recycling incentives to Oregon Food Bank in 2013, providing approximately 95,000 meals for Oregonians in need. Due to success in 2013, the option to donate was extended through 2014.
- **The program completed 22 new solar-ready homes** in 2013, a significant increase over five solar-ready homes completed in 2012. The program expects completion of solar-ready homes to continue to grow in 2014.
- **Energy Trust collaborated with low-income agencies to distribute more than 7,000** Carry Home the Savings kits.

D. Renewable Energy Highlights

- **The renewable energy sector, comprised of Solar Electric, Biopower and Other Renewables** programs, reached 72 percent of its conservative generation goal due to ongoing challenging market conditions and project delays. Two biogas projects comprised a majority of renewable energy generation in 2013.
- **Ongoing market challenges, including the loss of Oregon Business Energy Tax Credits** and challenging market fundamentals, made it difficult for commercial solar and renewable energy custom projects to complete. In addition, commercial operation of several large custom projects—both solar and non-solar—shifted from 2013 to 2014. Delays are typical for both utility scale and distributed generation projects, often stemming from financing and other unanticipated schedule changes, making completion dates difficult to predict.
- **Nine custom projects were approved for funding in 2013, resulting in a robust pipeline** of new projects in 2014 and beyond.
- **The sector expanded project development assistance**, which includes financial and technical assistance to help project developers overcome market barriers. By providing project development assistance, the sector is able to develop a project pipeline and attract investment in new projects, while also complying with new OPUC performance measures.
- **The sector's achievement of 5,000 residential solar system installations** represents a key milestone for Energy Trust, demonstrating the viability of solar throughout Oregon and contributing to a maturing market to support solar in the state.
- **The board approved combining the Other Renewables and Biopower programs into one Other Renewables program** in 2014, providing flexibility to shift funding between the technologies and target strategic opportunities.

Solar

- **In 2013, 881 projects received solar incentives and contributed 0.72 aMW of new generation**, 98 percent of conservative goal and 109 percent of the OPUC performance benchmark.
- **The program installed the 5,000th residential solar system in 2013**. Since 2003, Solar supported installation of 6,066 systems for a total 58 MW capacity—more than 75 percent of all solar electric systems and capacity in Oregon. In 10 years, Energy Trust supported 5,256 residential systems totaling 20 MW capacity; 795 commercial, nonprofit and public systems totaling 22 MW; and 15 utility-scale projects totaling 16 MW.
- **The residential solar electric market performed as expected and comprised 75 percent** of new generation installed in 2013.
- **Third-party owned residential systems continued to grow**, representing 64 percent of new residential generation and almost one-half of the overall program generation in 2013. This ownership model allows customers to install solar with little or no upfront costs. Third-party residential providers are predominantly located in the Portland area, and have lower market share in Pacific Power territory (approximately 30 percent).
- **Residential solar installations were relatively strong in Central Oregon, Southern Oregon** and the Southern Willamette Valley. Growth in Pacific Power territory was driven by lower installation costs compared to the Portland area and projects leveraging additional funding through the Pacific Power Blue Sky^{SM} Community Projects program and U.S. Department of Agriculture Rural Energy for America grants.
- **New solar electric reservations increased in 2013**, with funds reserved for 11 percent more capacity than in 2012. The program will start 2014 with 80 percent more reserved capacity in the pipeline than at the start of 2013. Residential projects made up 70 percent of the new reserved capacity.
- **Commercial solar performed below expectations with 42 installations**, attributed to the loss of state Business Energy Tax Credits and low incentive levels. By increasing incentives in 2013, the program doubled the pipeline of project reservations for 2014.
- **The program issued the first competitive request for proposals for custom projects** in PGE territory, and selected one 400-kW project to complete in 2014.
- **Solar reserved $700,000 to support two projects selected through a Pacific Power RFP** to meet Solar Capacity Standard requirements.
- **As solar equipment costs decline, "soft" costs—including labor, marketing and permitting** work—make up a larger portion of the overall price of solar. The program developed strategies to reduce soft costs through standardization, simplification and scale, helping reduce project costs and augment a limited incentive budget.
- **The program sponsored and presented at Solar Now! University in Coos Bay**. The conference, led by nonprofit Solar Oregon, provided opportunities for local decision-makers from Southern Oregon to learn how to support solar growth in their communities.
- **Staff enrolled the first six solar design allies in a new solar-ready offering** with New Buildings, preparing them to work with commercial developers to integrate solar into new building designs.

Biopower

- **Biopower approached its conservative goal of 2.3 aMW**, generating 2.1 aMW through completion of two innovative projects in 2013.
- **JC-Biomethane began generating energy from anaerobic digestion of post-consumer** commercial food waste, representing one-half of the renewable sector's annual generation. The plant, near Junction City, also produces fiber for compost and liquid nutrients for agriculture.
- **The 0.69 aMW Farm Power Misty Meadows Dairy digester biogas project in Tillamook** began delivering power to Pacific Power. Processing manure from 2,500 cows, the plant is the third largest biogas project using dairy manure supported by Energy Trust.
- **The program committed $3.3 million in project funding** to two biopower projects that will use metro area waste restaurant grease to generate electricity beginning in 2014 and 2015.

Other Renewables

- **Other Renewables fell short of conservative goal of 0.96 aMW**. The shortfall is attributed to completion of the Oregon Institute of Technology (Oregon Tech) geothermal project shifting to 2014. It is expected to produce 0.87 aMW. The program provided incentives to five projects in 2013, including two hydropower projects in Corbett and Hood River and three wind projects in Independence, Newberg and Scotts Mills.
- **The program committed funding for four hydropower projects** to complete in 2014 and beyond.
- **Other Renewables supported 22 projects with $492,000** in project development assistance for design and permitting studies, feasibility studies, resource characterization and wind speed monitoring. Twelve of those projects completed their development assistance activities in 2013 and are not slated to receive additional dollars in 2014. Six engaged in development assistance activities and received funds in 2013 and will continue that work and receive additional dollars in 2014. Four projects committed to development activities in 2013 and will receive funding in 2014.
- **Staff completed three competitive processes for project installation incentives** and project development assistance in 2013, resulting in five projects funded.
- **Market challenges such as low avoided costs and few federal and state tax credits** impacted renewable generation. In 2014, the program will cultivate projects that can be successful in these market conditions, such as projects that can maximize a resource (high capacity factor), offset retail rates by using power onsite, achieve additional non-energy benefits such as waste disposal and water savings, and leverage other funding sources, such as federal and state grants.
- **Energy Trust co-funded a Farmers Conservation Alliance case study**, finding that districts with hydropower generation have made substantial environmental improvements based on project revenues, reducing the amount irrigation water needed for agriculture and leaving more water in-stream. These findings demonstrate the beneficial intersection between renewable energy projects and other environmental goals.

V REVENUES AND EXPENDITURES

- Received $161.2 million in Oregon public purpose and incremental revenues during 2013.
- Invested $129.1 million (including carryover funds from prior years), 16 percent less than in 2012.
- Paid $67.2 million, 52 percent of expenditures, in incentives for energy-efficiency and renewable energy projects.

A. Revenues

Energy Trust revenues for 2013 were $2.7 million below the budgeted amount, or 2 percent.

Source	Annual Actual Revenues	Annual Budgeted Revenues
Portland General Electric	$ 34,273,605	$ 34,019,088
PGE Incremental	$ 48,918,175	$ 50,850,000
Pacific Power	$ 25,809,694	$ 25,472,491
Pacific Power Incremental	$ 25,557,205	$ 25,881,600
Cascade Natural Gas	$ 2,413,481	$ 3,293,912
NW Natural	$ 22,473,918	$ 21,996,075
NW Natural Industrial DSM	$ 1,727,838	$ 2,391,083
Total	**$ 161,173,914**	**$ 163,904,249**

Note: Incremental revenues are those authorized under SB 838 to support capturing additional cost-effective energy efficiency savings.

B. Expenditures

Electric efficiency spending was $25.6 million below budget for 2013, or 20 percent. Gas expenditures for 2013 were $6.2 million, or 23 percent, below budget. Savings results for 2013 were achieved at lower cost than budgeted. New data center construction, a very large industrial project, increased savings from residential and industrial behavioral strategies and high NEEA activity provided very cost-effective savings. Renewable energy program spending was $7.8 million, or 49 percent, below budget for the year, due to project completions shifting into later years.

Type	Actual Annual Expenditures	Annual Budgeted Expenditures
Energy Efficiency Programs	$ 116,979,428	$ 147,690,341
Renewable Energy Programs	$ 7,918,893	$ 15,475,634
Administration	$ 4,231,092	$ 5,607,323
Total	**$ 129,129,414**	**$ 168,773,298**

Source	Actual Annual Expenditures	Annual Budgeted Expenditures
Portland General Electric	$ 67,632,144	$ 87,912,223
Pacific Power	$ 40,745,535	$ 53,859,391
Cascade Natural Gas	$ 1,362,939	$ 2,508,049
NW Natural	$ 16,917,395	$ 21,800,649
NW Natural Industrial DSM	$ 2,471,400	$ 2,692,986
Total	**$ 129,129,414**	**$ 168,773,298**

C. Incentives Paid

	Energy Efficiency				Renewable Energy		Total
Quarter	PGE	Pacific Power	NW Natural	Cascade Natural Gas	PGE	Pacific Power	
Q1	$ 4,101,652	$ 1,433,889	$ 964,458	$ 57,157	$ 476,302	$ 252,458	$ 7,285,916
Q2	$ 5,538,043	$ 3,568,819	$ 2,412,322	$ 120,252	$ 592,955	$ 673,506	$ 12,905,897
Q3	$ 5,986,467	$ 3,748,265	$ 1,890,320	$ 133,226	$ 729,026	$ 675,469	$ 13,162,775
Q4	$ 17,503,491	$ 8,740,818	$ 4,646,527	$ 359,627	$ 1,725,530	$ 912,873	$ 33,888,866
Total	**$ 33,129,654**	**$ 17,491,792**	**$ 9,913,627**	**$ 670,262**	**$ 3,523,813**	**$ 2,514,306**	**$ 67,243,453**

VI SAVINGS AND GENERATION

A. Electric Efficiency Savings

In 2013, electric efficiency programs saved 57.8 aMW, 4 percent over Energy Trust's 2013 stretch goal of 55.8 aMW. From 2002 through 2013, these programs have achieved total annual savings of 436 aMW, including 22 aMW of savings from self-direct customers—representing 91 percent of Energy Trust's strategic 2014 goal.[7] This is equivalent to powering 338,000 Oregon homes for a year. The 57.8 aMW were acquired at a levelized cost of 2.4 cents per kWh.

2013 Electric Efficiency Savings	PGE aMW	Pacific Power aMW	Total Savings aMW	Expenses	Levelized Cost/kWh
Commercial	13.41	11.38	24.79	$ 44,105,048	2.2 ¢
Industrial	12.50	4.55	17.05	$ 25,090,341	2.1 ¢
Residential	9.70	6.26	15.96	$ 30,995,134	3.0 ¢
Total Electric Efficiency Programs	**35.62**	**22.19**	**57.80**	**$100,190,523**	**2.4 ¢**

B. Gas Efficiency Savings

In 2013, gas efficiency programs saved 5.3 million annual therms of natural gas, 3 percent below Energy Trust's 2013 stretch goal of 5.4 million annual therms. Since gas programs began in 2003, total annual savings of 33.1 million therms have been realized, accounting for 95 percent of the 2014 goal of 34.7 million therms. This is equivalent to providing gas heat to 65,000 Oregon homes for a year. The 5.3 million annual therms were acquired at a levelized cost of 33 cents per therm.

2013 Gas Efficiency Savings	NW Natural Therms	Cascade Natural Gas Therms	Total Savings Therms	Expenses	Levelized Cost/Therm
Commercial	2,014,862	165,724	2,180,585	$ 6,069,970	26 ¢
Industrial	992,325	57,119	1,049,445	$ 2,484,023	23 ¢
Residential	1,955,271	124,248	2,079,520	$ 12,197,742	45 ¢
Total Gas Efficiency Programs	**4,962,459**	**347,091**	**5,309,550**	**$ 20,751,735**	**33 ¢**

C. Renewable Energy Generation

Renewable energy generation totaled 2.9 aMW for the year, 28 percent below Energy Trust's 2013 conservative goal of 4.0 aMW. Results for 2013 are 41 percent less than new generation from 2012. To date, annual renewable energy generation from 2002 through 2013 totals 112 aMW, or 91 percent of the 2014 generation goal of 124 aMW.[8] This is equivalent to powering 87,000 Oregon homes for a year.

[7]Savings from self-directed efficiency projects count toward the goal of achieving 479 aMW of electric savings by 2014. To date, 22 aMW of savings have been achieved by large commercial and industrial customers via self-directed funding. Electric savings also include transmission and distribution savings.
[8]Renewable energy generation numbers include transmission and distribution savings, where appropriate.

2013 Renewable Energy Generation	PGE aMW	Pacific Power aMW	Total Generation aMW	Expenses	Levelized Cost/kWh
Biopower	1.44	0.69	2.13	$ 1,545,733	0.7 ¢
Solar Electric Program	0.42	0.30	0.72	$ 5,563,351	7.2 ¢
Other Renewable Programs	0.01	0.01	0.02	$ 1,078,072	52.7 ¢
Total Renewable Programs	**1.87**	**1.00**	**2.87**	**$ 8,187,156**	**2.7 ¢**

D. Progress Toward Annual Goals by Fuel Type

	Expenditures	Savings/ Generation	Levelized Cost	Energy Trust Annual Goal		
					Goal	% Achieved
Electric savings	$100,190,523	57.8 aMW	2.4 ¢ per KWh	Conservative	47.39 aMW	122%
				Stretch	55.75 aMW	104%
Natural gas savings	$20,751,735	5,309,550 therms	33.4 ¢ per therm	Conservative	4,631,127 therms	115%
				Stretch	5,448,385 therms	97%
Renewable electric generation	$8,187,156	2.9 aMW	2.7 ¢ per KWh	Conservative	4.0 aMW	72%
				Stretch	4.4 aMW	65%

E. Progress Toward Annual Efficiency Goals by Utility

	Expenditures	Savings	Levelized Cost	Energy Trust 2013 Annual Goal			Annual IRP Goal	
					Goal	% Achieved	Goal	% Achieved
Portland General Electric	$63,088,023	35.62 aMW	2.4 ¢ Per kWh	Conservative	30.67 aMW	116%	29.22 aMW	122%
				Stretch	36.08 aMW	99%		
Pacific Power	$37,102,500	22.19 aMW	2.3 ¢ Per kWh	Conservative	16.72 aMW	133%	16.70 aMW	133%
				Stretch	19.68 aMW	113%		
NW Natural	$19,388,796	4,962,459 therms	33.6 ¢ Per therm	Conservative	4,228,797 therms	117%	3,593,679 therms	138%
				Stretch	4,975,055 therms	100%*		
Cascade Natural Gas	$1,362,939	347,091 therms	31.1 ¢ Per therm	Conservative	402,331 therms	86%	405,844 therms	86%
				Stretch	473,330 therms	73%		

*Achieved 99.7 percent of stretch goal, rounded to 100 percent per Energy Trust reporting convention.

F. Electric Efficiency Results for SB 1149 and SB 838 Funds

Energy Trust will complete an analysis of the allocation of 2013 savings and related costs to SB 1149 versus SB 838 funding sources, along with the summary of SB 838 expenditures by utility, in summer 2014. We will then issue an addendum to the 2013 Annual Report with three SB 1149 and SB 838 tables:

1. 2013 SB 1149 savings and costs (total and by sector)
2. 2013 SB 838 savings and costs (total and by sector)
3. 2013 SB 838 utility expenditures (total and by utility)

As in past years, Energy Trust has engaged a third party to review energy consumption data provided by utilities and determine whether a project should be funded by SB 1149 (all sites using electricity from PGE or Pacific Power are eligible) or SB 838 (limited to sites using less than one average megawatt annually). In future years, with the benefit of access to utility data permitted under the new 2013 data-sharing rules and subsequent Energy Trust-utility agreements, we may be able to perform this analysis internally.

PGE and Pacific Power will each complete annual reports detailing activities supported by SB 838-authorized funding, with Energy Trust input and coordination. As such, utility activity reports are no longer included as appendices to Energy Trust annual reports. In spring 2014, the OPUC will receive the 2013 reports and PGE, Pacific Power and Energy Trust will jointly present highlights of the reports at a public commission meeting. The presentation will include areas of focus and collaboration, and progress toward goals of building awareness and engaging customers in Energy Trust programs.

See Appendix 10, p.63, for the 2013 electric efficiency results for SB 1149 and SB 838 funds; information appended to the report December 17, 2014.

VII 2013 PERFORMANCE MEASURES

The Oregon Public Utility Commission establishes minimum performance measures for Energy Trust in a variety of categories. Minimum savings and generation figures for energy-efficiency programs and renewable energy programs are set at an aggregated level rather than at an individual program or sector level. This allows Energy Trust to pursue different program strategies in the residential, commercial and industrial sectors as market forces and technological advances change.

The following OPUC minimum performance measures apply to Energy Trust 2013 results.

Electric Efficiency Performance Targets

- Electricity efficiency savings of at least 47 aMW in 2013

  Exceeded, with 57.8 aMW saved in 2013

- Levelized life-cycle cost should not exceed 3.9 cents per kWh

  Well within requirement, with 2013 average levelized life-cycle cost at 2.4 cents per kWh

Natural Gas Efficiency Performance Targets

- Natural gas efficiency savings of at least 4.6 million annual therms in 2013

  Exceeded, with 5.3 million annual therms saved in 2013

- Average levelized life-cycle cost should not exceed 57 cents per therm

  Well within requirement, with 2013 average levelized life-cycle cost at 33 cents per therm

Renewable Resource Development Targets

- For project and market development assistance, report annual results, including number of projects supported, milestones met and documentation of results from market and technology perspective

  Full compliance, paid and committed $492,000 in project development assistance to 22 projects, including 12 hydropower, seven wind and three geothermal. Details on the results of the 2013 project development assistance are in Appendix 3.

- Obtain at least 0.66 aMW in installed generation of standard, net-metered projects, including solar and small wind

  Exceeded, with 0.72 aMW of installed generation from standard solar projects. Additional detail is in Appendix 3.

- For non-solar custom projects, the three-year rolling average incentive is not to exceed $40 per allocated MWh

  Well within requirement, with a three-year rolling average incentive per allocated MWh for 2011-2013 of $15.71

- For innovative and custom solar projects, report sources of funding for projects and the selection criteria

  Full compliance, dedicated funding for two solar projects for Pacific Power to meet the state's Solar Capacity Standard. Funding became available for these unbudgeted projects after an RFP for non-solar projects had $700,000 in unallocated funds.

Financial Integrity

- Receive an unqualified financial opinion from an independent auditor on annual financial statements

  Full compliance, with an unmodified (unqualified) financial audit opinion for 2013

Administrative/Program Support Costs

- Keep administrative and program support costs[9] below 9 percent of annual revenues

  Well within requirement, with 2013 administrative and program support costs at 4 percent of annual revenues

Customer Satisfaction

- Demonstrate greater than 85 percent satisfaction rates for:
  - Interaction with program representatives
  - Overall satisfaction

  Energy Trust calculated customer satisfaction from telephone surveys of participants soon after project completion. Results for major programs are averaged to determine satisfaction rates. This analysis determined a 97 percent satisfaction rate for interaction with program representatives and a 93 percent overall satisfaction rate. See Appendix 2.

[9]Program support costs are defined as all program costs except the following direct program costs: program management, program delivery, program incentives, program payroll and related expenses, outsourced services, planning and evaluation services, customer service management and Trade Ally Network management.

Benefit/Cost Ratios

- Report benefit/cost ratios for larger conservation acquisition programs for 2013

Program	Combined Utility System Benefit/Cost Ratio	Total Resource Benefit/Cost Ratio
New Homes and Products	1.9	2.4
Existing Homes	1.4	1.2
Existing Buildings	2.1	1.3
New Buildings	4.0	2.7
Production Efficiency	2.9	2.0
NEEA	3.2	0.8[10]

[10]In 2013, the combined total resource benefit/cost ratio for NEEA is below 1.0 due in part to difficulty in quantifying single-year societal costs given NEEA's portfolio includes multi-year market transformation initiatives at various stages of development. NEEA is redesigning its program portfolio to enhance and assure cost-effectiveness. Energy Trust cannot be certain that the total resource benefit/cost ratio is less than one, due to the limited ability to collect consumer cost data for NEEA's many and complex initiatives and limited information on non-energy benefits.

APPENDIX 1: Geographic Distribution of Sites Served

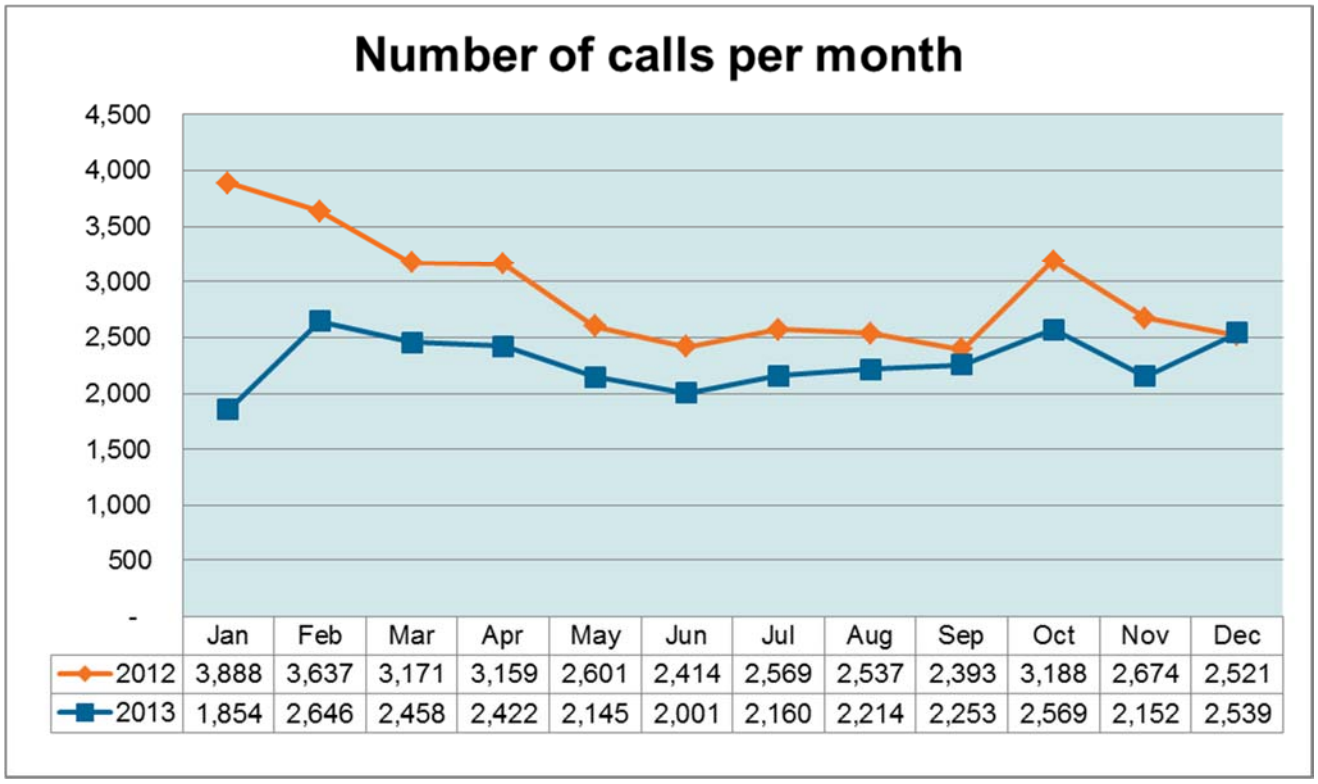
Energy Trust Sites Served by Region in 2013

	Commercial	Industrial	Residential	Total
Central Oregon	229	57	2,897	3,183
Eastern Oregon	68	47	528	643
North Coast	116	7	951	1,074
Portland Metro & Hood River	3,257	361	36,217	39,835
Southern Oregon	359	107	7,501	7,967
Willamette Valley	773	261	11,291	12,325
Total	**4,802**	**840**	**59,385**	**65,027**

APPENDIX 2: 2013 Customer Service and Satisfaction Results

Call and email volumes

Energy Trust's call center received 27,413 calls in 2013, a 21 percent decrease from 34,752 calls in 2012. Call volumes have been trending down since 2009 as Energy Trust has released more online forms and enhanced web-based customer services, and customers increasingly contact programs directly rather than through the main call center. During 2013, call center staff responded to 1,612 inquiries via info@energytrust.org, most from residential customers, a decrease of 5 percent since 2012.



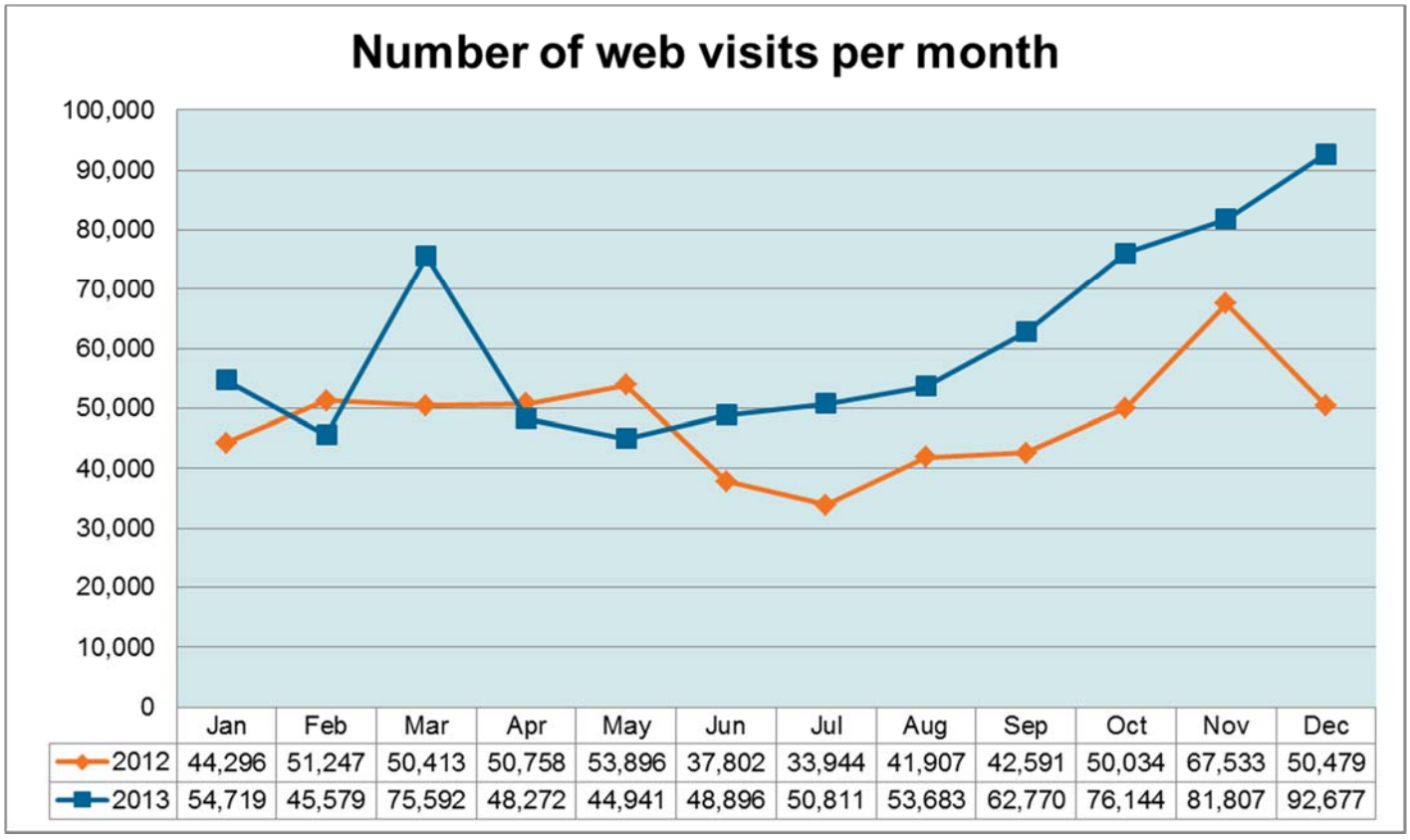
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	3,888	3,637	3,171	3,159	2,601	2,414	2,569	2,537	2,393	3,188	2,674	2,521
2013	1,854	2,646	2,458	2,422	2,145	2,001	2,160	2,214	2,253	2,569	2,152	2,539

Complaint report

Energy Trust recorded 18 escalated customer complaints in 2013, twice as many as in 2012. These complaints represent a very small proportion of the tens of thousands of customers served. Of the 18 complaints, most fell into the categories of ineligibility and incentive check processing time. The large increase in escalated complaints in 2013 can also be attributed to improved training and standardized procedures for tracking and escalating complaints in accordance with a new Customer Relationship Management system implemented in late 2012.

Website visits

Energy Trust's website, www.energytrust.org, received 735,891 visits in 2013, a 28 percent increase over the 574,900 website visits in 2012. Web traffic has increased nearly 50 percent in the past five years, reflecting Energy Trust's increasing use of online applications and forms, mobile-optimized content, online advertising and social media. Also in the past five years, Energy Trust observed increased online use in areas outside of the Portland metro area, with web traffic doubling or tripling in Coos Bay, Medford, Redmond and Salem.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	44,296	51,247	50,413	50,758	53,896	37,802	33,944	41,907	42,591	50,034	67,533	50,479
2013	54,719	45,579	75,592	48,272	44,941	48,896	50,811	53,683	62,770	76,144	81,807	92,677

Customer satisfaction

Energy Trust calculated customer satisfaction from short telephone surveys conducted with randomly selected participants soon after they completed projects. The survey asked participants about overall satisfaction with Energy Trust. Participants in the Existing Buildings, Production Efficiency and Commercial Solar programs were also asked about satisfaction with program representatives.

In 2013, the average rate of overall satisfaction with Energy Trust was 93 percent, and the rate of satisfaction with Energy Trust program representatives was 97 percent.

New Buildings projects often involve numerous market actors (architects, engineers, developers and owners) at different project stages, so it is difficult to reach a project representative who is able to respond to questions about satisfaction. Satisfaction with the New Buildings program is obtained from interviews with program participants as part of annual program process evaluations. In the 2013 process evaluation, conducted in early 2014, 35 New Buildings project owners or representatives were surveyed about their

overall program satisfaction and satisfaction with communications with program representatives. Of participants surveyed, 89 percent were satisfied with their overall program experience. Respondents were asked about five different aspects of their communications with program representatives, and these responses were averaged to determine that 96 percent were satisfied with program representatives.

Table 1. 2013 Overall Satisfaction

	2013 Overall Satisfaction
Existing Buildings, including multifamily	91%
New Homes and Products[11]	94%
Existing Homes	88%
New Buildings	89%
Production Efficiency	98%
Solar[12]	98%
Unweighted average	**93%**

Table 2. 2013 Satisfaction with Program Representatives

	2013 Satisfaction with Program Representatives
Existing Buildings, including multifamily	93%
New Buildings	96%
Production Efficiency	98%
Commercial Solar	3 of 3[13]
Unweighted average	**97%**

Note: Energy Trust's customer feedback survey does not ask residential participants about satisfaction with program representatives. Residential participants interact with Energy Trust representatives to a varying degree—some have in-home energy reviews, some call the contact center and others may not interact with a program representative. In general, commercial and industrial participants have more interaction with Energy Trust representatives.

[11]Only Products customers were surveyed. Energy Trust does not track purchasers of new homes.
[12]Customers that installed solar using a third party are not surveyed.
[13]Only commercial solar customers are surveyed about satisfaction with program representatives. Three commercial solar customers were surveyed due to low project volume in 2013.

APPENDIX 3: Renewable Resource Development Targets

Project Development Assistance Activity in 2013

Introduction

The primary goal of renewable energy project development assistance is to expand distributed renewable energy generation in Oregon by minimizing early stage development barriers. Funds for project development assistance help underwrite the cost of resource characterization, studies to support permit applications, technology evaluations and utility interconnection.

By providing project development assistance, the renewable energy sector is able to help build a pipeline of projects, enable project success, expand understanding of the market for various renewable energy technologies, and meet a need in the renewable industry for early stage project support that will help secure longer-term financing.

2013 project development assistance results

In 2013, Energy Trust supported 22 projects with project development assistance. The organization committed a total of $492,000 for a wide range of development assistance, including non-solar technologies. (See table below.)

Projects completing project development assistance activities in 2013

Of the 22 projects in progress in 2013, 12 completed in 2013 and received a total of $130,000. These projects included five hydropower projects, one geothermal project and six wind projects. Five of the wind projects received funding for wind monitoring prior to the program's internet-based wind monitoring tool was released. Eight of the projects receiving support were in PGE territory and four were in Pacific Power territory.

Results for the completed development assistance

Hydropower

- Design and interconnection support for a hydropower project at an irrigation district:
    - Project subsequently received incentive funding from Energy Trust.
- Design and permitting assistance for an innovative, low-head hydropower project in an irrigation district:
    - Surveying, mapping and preliminary design work were completed to enable permitting applications to be filed.
    - Final design and cost estimating were completed to enable the project to go to bid.
    - The project is now under construction.
- Feasibility studies for three hydropower projects at municipal water systems:
    - A scoping level study was performed to determine the feasibility of hydropower at various sites at a municipal wastewater treatment plant. The study determined that while some hydropower potential exists, development would not be financially feasible.
    - A scoping level study was performed to determine the feasibility of hydropower at a municipal water reservoir. The study determined multiple potentially feasible

configurations and potential issues for follow up. The project owner is now exploring the feasibility of interconnecting the potential facility output.
    - Other Renewables program provided cost-share funding to assist with final Federal Energy Regulatory Commission permitting activities for a 10-kW municipal hydropower project. The permitting process was successful and the project reached commercial operation late in 2013.

Geothermal

- Resource characterization and feasibility work for a geothermal project:
    - The study determined that there is a high likelihood of a geothermal resource at the site. The next step will be geophysical studies to characterize the fault structure and identify drilling targets. The site owner is looking for a developer who might be interested in the property and can invest in the additional testing and study.

Small Wind

- Interconnection studies for a community scale wind project (approximately 10 MW):
    - The studies determined that interconnection is feasible, provided a cost and identified several issues that would need to be addressed such as the need to prevent sustained islanding.
- Small wind project monitoring:
    - Staff provided assistance to five turbines that had old monitoring systems requiring monthly replacements of data chips. Energy Trust helped the customers install internet-based monitoring.
    - The new internet-based wind-monitoring systems are not functioning as expected and staff are working to make them fully operational.

New development assistance commitments in 2013

Ten projects began development assistance activities in 2013 that will complete in 2014 or later. Technologies represented by these contracts included seven hydropower projects, one wind project and two geothermal projects. Total funds committed to these new projects are $362,000.

Development activities

Hydropower

- Scoping level feasibility study to investigate micro hydropower potential at a residential property:
    - When complete, the study will evaluate the site's technical potential, provide a preliminary design and identify the permitting processes necessary to develop the project.
- Design and permitting assistance for four innovative low-head hydropower projects in two irrigation districts:
    - Preliminary designs and cultural resource reviews have been completed, enabling permit applications to be filed.
    - Site surveys and geotechnical work completed, enabling more detailed civil and structural design and engineering works to proceed.
- Permitting and financing package assistance for an upgrade at an existing hydropower facility:

- Completion of wetland delineation and visual resource studies will enable the drafting of National Environmental Policy Act documents and permit applications.
- Contract work with specific watershed partners to secure the balance of funds necessary for project development.

Geothermal

- Initial resource characterization for two potential geothermal projects:
  - The owner of the first project is gathering temperature and flow data from existing wells and soil chemistry information in the area, and will also conduct seismic testing. The resulting data will help determine if any locations have a fault structure likely to contain a geothermal resource.
  - The second project includes completing a cultural resources study, site survey and well pad engineering, enabling the developer to apply for a well drilling permit.

Small Wind

- Studies related to permitting and interconnection for a community-scale wind project (approximately 10 MW):
  - An interconnection facility study and two studies (revised cultural/archaeological and acoustic studies) are part of the permitting process.
  - Completing this work will enable the project to finalize a power purchase agreement and interconnection agreement and attract financing.

Of these new projects, eight will receive standard assistance and two projects received commitments for an expanded funding offer of up to $150,000. Energy Trust launched this expanded funding offer in 2013, through direct outreach and a request for proposals in 2013. Although developers have shown considerable interest in this offering, staff expect increased uptake as project owners learn to incorporate the possibility of larger amounts of assistance into their planning processes and propose activities within eligibility rules.

It should be noted that although several biopower projects received installation incentives in 2013, none received project development assistance. One project applied to an RFP, but was not mature enough to receive assistance. Staff is expanding outreach efforts in the biopower sector in 2014. A second project did receive a commitment of assistance very early in 2014, which will be covered in next year's report.

Identification of project development barriers

Energy Trust's project development assistance efforts are designed to address today's main barriers to project development. Helping projects overcome these barriers builds a pipeline of projects that can apply for incentives and complete construction.

- **It is difficult to find capital to support early stage work.**
  The most risky time to invest money in a renewable energy project is at the beginning. Investors are reluctant to put funds into what can be seen as an unproven resource or a project with unclear potential. Without early stage funding, a project cannot advance to the point where the risk is reduced. By providing early stage funds, Energy Trust builds a pipeline and helps move projects forward, enabling them to attract additional financing. In addition, Energy Trust's support

demonstrates confidence that can help projects successfully secure other sources of funds. In some cases, projects at this early stage learn that they are not feasible. Energy Trust helps project owners reach that point with limited exposure.

- **Less sophisticated developers with limited energy experience encounter difficulties navigating stages of developing a project.**
  Energy Trust works with many project developers that are not professional developers. Moving through the steps of resource characterization, feasibility, permitting and interconnection can be lengthy and difficult. Program development assistance—both financial and technical—helps them navigate these steps in less time and for less cost.

- **Poor market conditions exist for distributed renewable generation in Oregon.**
  At all stages of the development process, project owners face poor market fundamentals, including low avoided cost rates and diminished state and federal incentives. Project development assistance is a tool to continue to attract investment in projects in Oregon, and to maintain development capacity in the state.

Table 1: 2013 Project Development Assistance Details

Technology	Utility	Dedicated Date	Completed Date	Incentive
Geothermal	Pacific Power	2012	2013	$39,351
Geothermal	Pacific Power	2013	2014	$5,311
Geothermal	Pacific Power	2013	2014	$75,000
Hydropower	PGE	2013	2013	$2,244
Hydropower	PGE	2013	2013	$5,033
Hydropower	PGE	2011	2013	$4,559
Hydropower	Pacific Power	2012	2013	$15,877
Hydropower	Pacific Power	2013	2013	$40,000
Hydropower	PGE	2013	2014	$1,000
Hydropower	Pacific Power	2012	2014	$20,000
Hydropower	Pacific Power	2013	2014	$40,000
Hydropower	Pacific Power	2013	2014	$40,000
Hydropower	Pacific Power	2013	2014	$40,000
Hydropower	Pacific Power	2011	2014	$36,461
Hydropower	Pacific Power	2013	2014	$68,373
Small Wind	PGE	2010	2013	$2,910
Small Wind	Pacific Power	2012	2013	$14,855
Small Wind	PGE	2011	2013	$1,480
Small Wind	PGE	2011	2013	$1,188
Small Wind	PGE	2011	2013	$1,455
Small Wind	PGE	2011	2013	$1,265
Small Wind	Pacific Power	2013	2014	$35,425
Total				**$491,787**

Table 2: Non-solar Project Cost and Generation

Project Name	QF v. NM	Date Operational	Energy Trust Incentive	Contract Term in Years	MWh per Year	REC % to Energy Trust	Energy Trust Allocated MWh	Total RECs	$/Energy Trust Allocated MWh
Revolution Energy Solutions Oak Lea dairy	QF	2012	$ 441,660	15	1,500	60	22,500	13,500	$ 32.72
Klamath Irrigation C-Drop Hydro	QF	2012	$ 490,000	20	3,494	84	69,881	58,700	$ 8.35
City of Portland Vernon Hydro	QF	2012	$ 65,000	20	115	50	2,300	1,150	$ 56.52
City of Medford wastewater treatment plant	NM	2012	$ 450,000	20	4,820	50	96,400	48,200	$ 9.34
City of Pendleton wastewater treatment plant	NM	2012	$ 450,000	25	1,383	24	34,583	8,300	$ 54.22
Wallowa Resources Integrated Biomass Energy Campus	NM	2012	$ 70,000	15	700	55	10,500	5,775	$ 12.12
Revolution Energy Solutions Forest Glen Oaks	QF	2012	$ 441,660	15	2,800	60	42,000	25,200	$ 17.53
Farmers Irrigation District Low Line Canal	QF	2012	$ 95,000	20	119	100	2,380	2,380	$ 39.92
Farm Power Misty Meadows dairy	QF	2013	$ 1,000,000	15	5,400	65	81,000	52,650	$ 18.99
JC-Biomethane	QF	2013	$ 2,000,000	20	12,000	56	240,000	134,400	$ 14.88
Totals			**$ 5,503,320**		**32,331**		**601,544**	**350,255**	**$ 15.71**

Note: QF stands for qualifying facility, NM stands for net metered and REC stands for renewable energy certificate.

APPENDIX 4: NW Natural Industrial Demand-side Management Activities

Since 2009, Energy Trust has provided service to NW Natural's Schedule 31 and 32 non-transport customers, funded through a special rate adjustment mechanism rather than through the public purpose charge. Program costs and therm savings for these customers in 2013 are included in the body of this annual report as a portion of NW Natural savings and reported separately below.

Program/Customer Type	2013 Annual Therms Saved	2013 Expenditures	2013 Levelized Cost
Production Efficiency	676,553	$1,676,730	24.0 ¢
Existing Buildings	355,002	$729,733	17.6 ¢
New Buildings	47,339	$64,937	9.9 ¢
Total	**1,078,894**	**$2,471,400**	**20.9 ¢**

APPENDIX 5: Energy Trust Program Descriptions

Existing Buildings. Energy Trust Existing Buildings offers technical assistance and cash incentives for installation of qualified energy-efficient equipment to help commercial businesses of all types and sizes reduce energy use and lower operating costs. Existing Buildings offers incentives for improvements including lighting, HVAC, foodservice or insulation, as well as customized solutions and operations and maintenance improvements. Existing Buildings' technical staff helps customers identify and evaluate energy-saving opportunities with technical energy studies, contractor referrals and other technical services. Portions of the program are offered to NW Natural customers in Washington. Existing Buildings began in 2003 and was implemented in 2013 by ICF International.

Multifamily property managers have a menu of offerings for financial and service incentives for both in-unit and common-area improvements. Technical services include direct-installs of compact fluorescent light bulbs and faucet aerators in the tenant spaces, energy surveys and custom incentive solutions, as well as cash incentives for common-area lighting, appliances, insulation, windows and HVAC systems. Multifamily moved to the commercial sector in 2010 and was implemented in 2013 by Lockheed Martin Services, Inc.

New Buildings. This program provides incentives for energy-efficient design and equipment to support construction of high-performance commercial new buildings and major renovations of all sizes and types of buildings. Participants can leverage a comprehensive set of services and incentives. These include early design and energy modeling assistance and a wide array of standard and customized equipment incentives, including modeled savings incentives for whole-building approaches and incentives for integrating solar designs. New in 2013, the market solutions offering helps small businesses under 70,000 square feet achieve deeper energy savings through standard tiered incentives packages for restaurants, groceries, multifamily buildings, office buildings, schools and retail buildings. Incentives are offered for projects that achieve Leadership in Energy and Environmental Design®, LEED, certification or save energy in excess of the 2010 Oregon Energy Efficiency Specialty Code requirements. Post construction, Energy Trust can help cover costs of earning ENERGY STAR® certification. New Buildings began in 2003 and was implemented in 2013 by Portland Energy Conservation, Inc.

Production Efficiency. Industrial and agricultural businesses of all types and sizes look to Production Efficiency for technical services and cash incentives to help them identify and implement electric and natural gas efficiency projects and practices. Energy Trust engages highly skilled industrial energy engineers to advise Oregon businesses on how to make the most of opportunities to reduce energy-related operating costs while improving productivity, product quality and environmental performance. The program works closely and consultatively with industries long-term, helping these businesses employ best practices and continuously improve their energy performance. Production Efficiency began in 2003 and is managed internally.

Existing Homes. Homeowners and renters can take advantage of energy-saving recommendations, referrals to qualified trade ally contractors and cash incentives for qualified improvements including weatherization, heating equipment, and electric, gas and solar water heaters. The program supports market-based Home Performance with ENERGY STAR, a diagnostic assessment conducted by Building

Performance Institute-certified contractors, and Savings Within Reach, designed to provide greater assistance for moderate-income homeowners. The program offers a web-based home energy profile for residential customers, in-home energy reviews and phone-based support for customers. Customized Energy Saver Kits may be ordered online. The program is testing behavior change strategies through a pilot sending quarterly Personal Energy Reports to a sample of customers. Existing Homes supports referrals to Clean Energy Works, an initiative offering financing and repayment options for comprehensive home retrofit projects. Portions of the program are offered to NW Natural customers in Washington. Existing Homes has been offered since 2003. The program was implemented in 2013 by CLEAResult Consulting, Inc.

New Homes and Products. New Homes seeks to expand the market share of energy-efficient homes in Oregon by creating homebuyer demand and training the contractors who build them. Qualified new homes Energy Trust supports receive an EPS rating. EPS is an energy performance score useful in guiding homebuyers, just as a miles-per-gallon rating helps consumers shop for cars. New Homes provides builders with performance-based incentives tied to increased efficiency levels and incentives for integrating solar. In addition to builders, the program works with subcontractors and real estate professionals, and encourages the sale of energy-efficient manufactured homes by local retailers. Products offers include cash incentives for purchase of ENERGY STAR qualified clothes washers, refrigerators, freezers, lighting and showerheads, and for the recycling of old refrigerators and freezers. The program also provides energy-saving kits to food pantries to deliver to their clients, and distributes showerheads through water bureaus and districts throughout the state. Portions of the program are offered to NW Natural customers in Washington. New Homes and Products began in 2004 and is implemented by Portland Energy Conservation, Inc.

Solar Electric. This program helps homeowners, businesses and public agencies supplement their electricity needs with on-site solar generation. The program provides cash incentives for net-metered solar electric installations, educates consumers about solar purchasing and financing options and ensures high-quality installations through design review and verification. When additional funds are available, the program also supports custom, large-scale solar projects. The program envisions solar as a significant part of Oregon's energy mix and makes strategic investments in projects, infrastructure and the local industry that will give rise to a healthy, stable market for solar in the long-term. The Solar program began in 2003 and is managed internally.

Biopower. The Biopower program provides financial incentives, cost-shared grants for feasibility studies, technical assistance and other support for projects that generate electric power from organic residues. Eligible fuels include biogas from sewage treatment facilities, food processing and agriculture, and the organic fraction of municipal solid waste; solid organic fuels from mill waste, forest and field residues, and urban wood waste; landfill gas; and dedicated energy crops available on a renewable basis. The goal of the program is to expand Energy Trust's portfolio of biopower projects and to improve market conditions for the development of these projects. Biopower began in 2005 and is managed internally.

Other Renewables. This program provides support for renewable energy projects that generate electricity using wind, hydropower and geothermal technologies. The program provides custom incentives for projects with generating capacities of 20 megawatts or less and a standard incentive program for small wind systems up to 50 kilowatts in capacity. Custom incentives are calculated after a thorough,

multi-disciplinary technical and financial review of project applications. To ensure projects are well executed, incentives are paid upon successful project completion and inspection. In addition to incentives, the program offers various kinds of project development assistance for the early stages of projects. This includes financial and technical assistance for feasibility studies, resource characterization, site assessments, anemometers, grant-writing, initial design, permitting and interconnection cost development. The goal of the program is to expand Energy Trust's renewable energy portfolio across a range of technologies and to improve market conditions. Other Renewables started in 2003 and is managed internally.

Northwest Energy Efficiency Alliance. NEEA is a nonprofit organization working to maximize energy efficiency to meet our future energy needs. In 2013, Margie Harris, Energy Trust executive director, served as ex officio to the Executive Committee and subsequently board secretary of the NEEA Board of Directors. NEEA is supported by and works in partnership with Bonneville Power Administration, Energy Trust and more than 100 Northwest utilities for the benefit of more than 12 million energy consumers. NEEA uses the market power of the region to accelerate innovation and adoption of energy-efficient products, services and practices. NEEA has delivered market transformation savings under contract to Energy Trust since 2002.

APPENDIX 6: 2013 Energy Trust Board of Directors

PRESIDENT—John Reynolds, Eugene, is a professor of architecture emeritus at the University of Oregon and a fellow of the American Institute of Architects. 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 chair of the American Solar Energy Society, president of Solar Energy Association of Oregon and member of the board of the International Solar Energy Society. He has served on the Oregon Alternate Energy Commission and the Energy Committee of the Building Codes Structures Board. *John has served as president since 2008 and has served on the board since Energy Trust's inception.*

VICE PRESIDENT—Debbie Kitchin, Portland, is the co-owner of InterWorks LLC, a construction company engaged in commercial tenant improvement and renovation and residential remodeling services. InterWorks is an award-winning contractor specializing in sustainable building practices. Prior to joining the family business in 1996, she served as senior economist for the Northwest Power and Conservation Council for 15 years and was a regional economist for the Bonneville Power Administration for three years. Debbie is treasurer of the Portland Business Alliance, vice president of the Central Eastside Industrial Council and a board member of the Portland Building Owners and Managers Association. She is a past president of the Portland Commercial Real Estate Women. *This is Debbie's third term as vice president.*

SECRETARY—Alan Meyer, Salem, recently retired as director of energy management for Weyerhaeuser Company, a diversified forest products manufacturing company. In that role, he was responsible for coordinating energy management activities at numerous 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 previously served on the board of directors of Industrial Customers of Northwest Utilities, a nonprofit advocacy organization focused on energy policies. He has also served for more than 20 years on the City of Salem Morningside Neighborhood Association board. *Alan has served as secretary since February 2013.*

TREASURER— Dan Enloe, Portland, is supply chain manager at Intel Corporation in Hillsboro, where he has worked in varying capacities since 1984. Prior to 1984, he was on active duty in the U.S. Navy and served as a nuclear submarine officer. Since leaving active duty, he served with the Naval Reserve, completed six reserve command tours and retired as a captain in 2009. He is a member of the Naval Reserve Association, the American Legion and the Navy League. A graduate of the U.S. Naval Academy with a degree in electrical engineering, he holds two patents. *Dan has served as treasurer since November 2012.*

Rick Applegate, Portland, is the principal at Applegate Consulting, specializing in natural resource policy, environmental banking and restoration, strategic planning and facilitation. During the 10 years he served as Portland Harbor Superfund administrator for the City of Portland, he was responsible for coordinating the city's work on the lower Willamette River clean up. He served as administrative assistant and in senior legislative positions in the U.S. Senate and House of Representatives. Since then he has worked for more than 30 years on energy and environmental issues, principally as an advocate for salmon and their watersheds. He was the fish and wildlife director for the Northwest Power and Conservation Council,

West Coast conservation director for Trout Unlimited, assistant regional administrator of the Habitat Conservation Division and senior policy advisor at the National Oceanic and Atmospheric Administration's National Marine Fisheries Service. He was the chair of the U.S. Southern Stakeholders Pacific Salmon Treaty Negotiations and a member of the Pacific Northwest Comprehensive Energy Review.

Julie Brandis, Corvallis, is the director of corporate relations for the Oregon State University Foundation. She connects local, regional and national companies to the university through its first comprehensive fundraising effort, The Campaign for OSU, by matching their research and employment needs with internationally recognized researchers and high-achieving OSU students. Previously, she spent 17 years as the energy lobbyist for Associated Oregon Industries, Oregon's largest business advocacy organization, including during the period of time when SB 1149 was negotiated and enacted.

Ken Canon, Myrtle Creek, founded in 1981 the Industrial Customers of Northwest Utilities, a regional trade association focused on electric energy issues. Since retiring from that role in 2005, he chaired a committee that examined the performance of the Northwest Energy Efficiency Alliance and also managed the Northwest Energy Efficiency Task Force. Earlier in his career, while working for Associated Oregon Industries, he drafted and helped enact Oregon's Business Energy Tax Credit. Later, he helped implement a comprehensive energy-efficiency program at an International Paper mill. He has a long history of organizing, managing and advising nonprofit organizations. Applying his expertise to residence, Ken built the first ENERGY STAR home in Douglas County. Ken, a life-long Oregonian, was born and raised in Medford and graduated from Southern Oregon University and Willamette University College of Law.

Anne Warrington Donnelly, Coos Bay, is executive director of the Coos County Historical Society, a 120-year-old private, nonprofit institution. Under Donnelly's direction, the organization is building a new facility, the Coos Historical and Maritime Museum. The new museum incorporates energy-saving features supported by Energy Trust. Her wide-ranging professional background includes land use planning, watershed management and trial law. *Anne resigned from the board in September 2013.*

Roger Hamilton, Eugene, is a consultant with Western Grid Group, an organization that promotes transmission access for renewable energy projects across the West. He also consults with The Resource Innovation Group on climate change adaptation and mitigation. He owns and operates a cattle and hay ranch in south-central Oregon. He has spent many years in public service as a Klamath County commissioner, an advisor on energy and watersheds to Governor John Kitzhaber and an Oregon Public Utility Commissioner. He has also served on the Oregon State Parks Commission and the National Association of Public Utility Commissioners. He currently serves on the board of directors of the Regulatory Assistance Project.

Anne Haworth Root, Medford, is co-owner and general manager of EdenVale Winery and Eden Valley Orchards, a destination winery, historic pear orchard and events center in southeast Medford. A second tasting room called Enoteca is located in Ashland. An award-winning entrepreneur, she developed the concept and helped found the Oregon Wine and Farm Tour, an agritourism coalition of Southern Oregon wineries, historic farms and specialty food and cheese companies. She is a graduate of Southern Oregon University, where she was student body president and chair of the Oregon Student Lobby. She pursued postgraduate studies in the Master of Commerce program at Wollongong University in Australia.

Mark Kendall, Salem, has more than 33 years of experience in energy management and renewable resource development in Oregon. Prior to founding his own consultancy, Kendall Energy, in 2009, he spent 19 years with the Oregon Department of Energy working in commercial and industrial energy management policy, including serving as the governor's appointee to the Northwest Energy Efficiency Alliance board from 2001-2006. Before working for the state, he spent 11 years with the Eugene Water and Electric Board. He also served on the Oregon Low Carbon Fuel Standard Advisory Committee, and facilitated the 2009 Industrial Greenhouse Gas Reduction subcommittee of the Oregon Global Warming Commission. He received his bachelor's degree from Linfield College with an emphasis in communications and energy management, and his master's degree in organizational development from the Leadership Institute of Seattle City University.

Jeff King, Portland, has a long history in the energy industry, including more than 25 years with the Northwest Power and Conservation Council. At the council, he analyzed issues associated with the development and operation of electric power generation resources; prepared the council's forecasts of regional power prices, generation development and carbon dioxide production; and staffed the Northwest Wind Integration Forum. While at the council, he engaged with utilities, government agencies, power project developers and public interest groups, including service as the council's representative on the Energy Trust Renewable Energy Advisory Council. Prior to his position at the council, he worked as a staff engineer at the U.S. Department of Energy Pacific Northwest Laboratories. Following retirement, he continues part-time consulting on energy related issues.

Kenneth Mitchell-Phillips Sr., Multnomah County, is an attorney and president of Easy Legal Northwest, Inc., which specializes in providing high quality, personalized and low-cost legal services throughout Oregon and Washington. He recently served as general counsel, vice president of human resources and chief compliance officer and corporate secretary at Portland-based NxSystems, Inc. NxSystems is a provider of global electronic payment solutions with offices in Canada, Ireland and the U.K. Prior to joining NxSystems, he specialized in corporate law as an associate attorney at Davis Wright Tremaine LLP. He also established Mitchell-Phillips Law, P.C. where he provided legal services to businesses throughout the Pacific Northwest. In addition to practicing law, he teaches business law courses at Portland Community College and has served as a member of the Oregon State Bar Board of Governors. He received a J.D. from Lewis and Clark Law School in 2006, a Master of Science degree in Business from Troy State University in 1996 and a Bachelor of Arts degree in English from University of Maryland Eastern Shore in 1991. He is currently admitted to the Oregon State Bar and the United States District Court for the District of Oregon. His Washington State Bar license is pending. *When Anne Donnelly resigned from the board in September 2013, Kenneth was elected to the board in December 2013 to serve the remainder of the three-year term, which will expire in February 2016.*

Dave Slavensky, Bend, is the Operations Manager at EarthCruiser USA, building adventure vehicles to travel the globe. Prior to joining EarthCruiser, he was chief operating officer for Structus Building Technologies, a Bend manufacturing company specializing in construction products. He has worked as a manufacturing consultant with Oregon Manufacturing Extension Partnership, as vice president of operations at KVP in Sacramento and as a consultant with the California Manufacturing Technology Center. He also spent five years working for Aircon Energy, Inc., an energy management and HVAC service company founded by his father. In 2007 he co-founded the High Desert Enterprise Consortium, a group of companies in Central Oregon committed to employing Lean Manufacturing principles to improve

their businesses. He has conducted professional seminars in numerous process improvement techniques including Lean, Kaizen and Just-in-Time. He has been a member of the Bend Economic Development Advisory Board since 2009, and was the president of the Cascades Mountaineers in Bend from 2008 - 2010.

ex-officio

John Savage, Salem, is one of three Oregon Public Utility Commissioners. He joined the staff of the Commission in 2002 as Director of its Utility Program, after serving as Director of the Oregon Department of Energy from 1993 - 2002. He was Administrator of the Department of Energy's Policy and Planning division from 1987 - 1993. He 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

Lisa Schwartz, Salem, was appointed the Oregon Department of Energy director. Lisa has more than 25 years of experience in energy policy, regulation and education. She began state service in 1987 as assistant administrator of the Oregon State University Extension Energy Program. Joining the Oregon Department of Energy for the first time in 1995, she helped establish oversight mechanisms for the state's new third-party administrator for energy efficiency and renewable energy—Energy Trust. At the OPUC from 2002 through early 2009, she directed analysis of electric utility resource plans and competitive bidding processes, and helped develop the state's Renewable Portfolio Standard. Before re-joining the Oregon Department of Energy, she was senior associate at the Regulatory Assistance Project and recently served on the Western Electricity Coordinating Council's Transmission Expansion Policy Committee.

APPENDIX 7: Board Development Guidelines; 2013 Advisory Council Members and Meetings

Board Development Guidelines

Energy Trust's board of directors is a non-stakeholder, volunteer board. The board oversees Energy Trust management, provides strategic and policy direction and approves the organization's budget and major expenditures. The board carries out its oversight role collectively and through several committees. The board's bylaws ensure that Energy Trust board meetings and other processes are clear, open and accessible to the public.

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

The initial board of directors included nine members from a variety of energy and business backgrounds, and one non-voting *ex-officio* member from the OPUC. As board openings arise, the board consults advisory councils, individuals and collaborating organizations to identify candidates with appropriate experience from throughout the state. To allow further diversity, the board expanded its size to 13 voting members.

The 2013 board included voting members with background in business (agriculture, industry/ manufacturing, construction/remodeling, restaurant), private consulting, nonprofit and higher education. Members come from Bend, Coos Bay, Corvallis, Eugene, Medford, Myrtle Creek, Salem and the Portland area. Of the 13 voting members at the end of the year, three were women. The board's 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. Lisa Schwartz, Oregon Department of Energy director, occupied this "special advisor" position for 2013.

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 disclosure of economic interest forms each year. The OPUC *ex-officio* board member and the special advisor from the Oregon Department of Energy do not receive confidential information. Once each year, board and staff members participate in a planning session to review progress and discuss Energy Trust's strategic direction. Board development is a part of this public planning session, if warranted.

2013 Advisory Council Members and Meetings

Conservation Advisory Council

Jim Abrahamson, Cascade Natural Gas
Brent Barclay, Bonneville Power Administration
Jeff Bissonnette, Fair and Clean Energy Coalition
Warren Cook, Oregon Department of Energy
Bruce Dobbs, Building Owners and Managers Association
Joe Esmonde, International Brotherhood of Electrical Workers
Wendy Gerlitz, Northwest Energy Coalition
Charlie Grist, NW Power and Conservation Council
Garrett Harris, Portland General Electric
Karen Horkitz, Northwest Energy Efficiency Alliance
Scott Inman, Oregon Remodelers Association
Andria Jacob, City of Portland Bureau of Planning and Sustainability
Juliet Johnson, Oregon Public Utility Commission
Don Jones, Jr., PacifiCorp
Don MacOdrum, Home Performance Guild of Oregon
Holly Meyer, NW Natural
Stan Price, Northwest Energy Efficiency Council

2013 Meeting Dates	Major Discussion Topics
February 13	Gas weatherization cost-effectiveness update; deemed savings calculator; program measure changes and pilots
March 13	OPUC performance measures; commercial sector trends; Building Performance Tracking and Control Systems pilot results
May 1	Industry and agriculture sector trends and opportunities; market and customer research
June 19	Residential sector trends and opportunities
July 17	Annual goals, funding nomenclature and utility IRPs; draft 2014-15 budget and action plan and budget themes
September 11	Residential sector fall bonus; Strategic Energy Management customer panel; Commercial Pay for Performance pilot
October 23	Results through quarter three; 2014 measure and incentive changes
November 20	Final proposed 2014-15 budget and action plan; 2014 residential measure changes

Renewable Energy Advisory Council

Bruce Barney, Portland General Electric
Jason Busch, Oregon Wave Energy Trust
Robert Grott, Northwest Environmental Business Council
Juliet Johnson, Oregon Public Utility Commission
Suzanne Leta-Liou, Atkins
Jimmy Lindsey, Renewable Northwest Project
Frank Vignola, Solar Monitoring, University of Oregon
Dick Wanderscheid, Bonneville Environmental Foundation
Tashiana Wangler, Pacific Power
Matt Krumenauer, Oregon Department of Energy

2013 Meeting Dates	Major Discussion Topics
March 13	OPUC performance measures for renewable energy programs; 2012 year-end results; 2013 plans
May 1	Competitive process for custom and solar projects; Central Oregon Irrigation District Juniper Ridge funding proposal
June 19	Results through quarter one; proposal to merge Biopower and Other Renewables programs; commercial solar update
July 17	Legislative recap; PGE Smart Power Project; results through quarter two
September 11	2014-2015 budget themes; research on hydropower irrigation districts
October 23	Results through quarter three; proposed 2014-15 budget and action plan; solar projects proposed for funding; Astoria hydropower projects
November 20	Biopower and hydropower projects proposed for funding

APPENDIX 8: 2013 Utility Activities Supported by SB 838-authorized Funding

PGE and Pacific Power will each complete annual reports detailing activities supported by SB 838-authorized funding, with Energy Trust input and coordination. As such, utility activity reports are no longer included as appendices to Energy Trust annual reports. In spring 2014, the OPUC will receive the 2013 reports and PGE, Pacific Power and Energy Trust will jointly present highlights of the reports at a public commission meeting. The presentation will include areas of focus and collaboration, and progress toward goals of building awareness and engaging customers in Energy Trust programs.

APPENDIX 9: Energy Trust 2013 Annual Report on Activities for NW Natural in Washington

2013 Annual Report
NW Natural Washington

TABLE OF CONTENTS

I INTRODUCTION, BACKGROUND, OVERSIGHT AND GOALS

A. Introduction

This report covers 2013, the fourth full year that Energy Trust of Oregon provided services and incentives to residential and commercial customers of NW Natural in Washington.

It addresses progress toward annual goals, information on revenues and expenditures, number of completed measures and incentives paid during the year and highlights of program activity.

B. Background

At the request of NW Natural and following approval granted by the Washington Utilities and Transportation Commission, WUTC, Energy Trust began administering NW Natural's demand-side management programs in southwest Washington on October 1, 2009. The first year was viewed as a pilot. Satisfied with results from the pilot year, in 2011 the WUTC approved Energy Trust's continued administration of conservation programs for NW Natural in Washington.

C. Oversight

The Energy Efficiency Advisory Group, EEAG, was created, at the direction of the WUTC, to provide advice and oversight for NW Natural/Energy Trust energy-efficiency offerings in Washington. The advisory group is comprised of representatives from NW Natural, Energy Trust, WUTC, Washington Public Counsel, Northwest Industrial Gas Users and the Northwest Energy Coalition.

D. Goals

NW Natural, in collaboration with the EEAG, established performance metrics for the 2013 program year. This report presents Energy Trust's performance against those goals (see page 55).

II. ANNUAL REPORT HIGHLIGHTS

A. Summary

- **Gas efficiency measures installed in 2013** by NW Natural's Washington customers saved 221,172 annual therms of natural gas—including 132,308 annual therms in Existing Buildings, 40,238 annual therms in Existing Homes and 48,626 annual therms in New Homes. In total, this was 4 percent greater than 2012 savings.
- **Total 2013 savings met the minimum savings goal**, as detailed in NW Natural's 2013 Energy Efficiency Plan. Total program spending (including incentives, delivery and administration) was under budget, with variances primarily occurring between budgeted and actual expenditures for incentives. This is, in part, a result of capping custom path commercial incentives at 50 percent of project costs, which may result in a lower-than-budgeted cost of therm acquisition. Within the Existing Homes program, the budget variance is the result of some incentive offers not being adopted at the expected rate.
- **An energy-efficiency services group,** comprised of Clark County stakeholders, continued meeting in 2013 to identify collaboration opportunities, including joint incentive offerings and coordination on outreach events and marketing. The group includes representatives from Energy Trust, Clark Public Utilities, Planet Clark, Clark County Department of Environmental Services and Clark County Community Development's Weatherization Program.
- **Energy Trust completed transitions to new Program Management Contractors** for commercial and residential programs providing services to NW Natural customers in Washington, following a 2012 competitive bid process.

B. Washington Utilities and Transportation Commission Performance Metrics

The table below compares 2013 annual results to 2013 program goals, as established in NW Natural's Energy Efficiency Plan for Washington (updated December 2012).

2013 Results Compared to Goals

Metrics	Goal	2013 Total YTD	Q1 Results	Q2 Results	Q3 Results	Q4 Results
Therms Saved	220,421 – 259,319	221,172	20,626	40,948	28,087	131,512
Total Program Costs	$1,430,092 – $1,613,437	$1,170,602	$190,711	$291,420	$240,649	$447,821
Average Levelized Cost Per Measure	Less than $0.65	$0.42	$0.826	$0.573	$0.648	$0.268
Dollars Spent Per Therm Saved	Less than $6.50	$5.29	$9.25	$7.12	$8.57	$3.41
Total Resource Cost and Utility Costs at Portfolio Level	Greater than 1.0	1.26 and 1.19	Reported annually	Reported annually	Reported annually	Reported annually

2013 Utility Cost and Resource Benefit/Cost Ratio by Program

Program	Utility Benefit Cost/Ratio	Total Resource Benefit/Cost Ratio
Existing Buildings	1.7	1.0
Existing Homes	0.8	0.9
New Homes	1.0	1.6
Total	**1.26**	**1.19**

2013 Total Utility Cost and Resource Benefit/Cost Ratio

Program	Utility Benefit Cost/Ratio	Total Resource Benefit/Cost Ratio
NW Natural Washington Portfolio	1.3	1.2
NW Natural Washington Low Income	0.9	0.6
Total	**1.24**	**1.16**

C. Commercial Sector Highlights

Existing Buildings

- **Existing Buildings achieved savings of 132,308 annual therms** in 2013, 4 percent over the conservative goal of 127,500 annual therms.
- **Custom path projects comprised 41 percent of commercial sector savings**. Savings acquired through the custom path are initiated by technical studies. The cost of these studies is partially paid for with the program's incentives.
- **Existing Buildings observed a significant increase in foodservice upgrades,** with 34 in 2013 and five in 2012, resulting from increased outreach and marketing to restaurant and hospitality sectors.
- **The rooftop HVAC unit tune-up incentive was discontinued in 2013**, primarily due to less market potential than expected and evaluation efforts indicating rooftop tune-ups achieve fewer savings than expected. Advanced HVAC controls upgrades remain available through the custom path, where site specific studies can be produced to demonstrate cost-effective savings potential.
- **Commercial customers expressed satisfaction with their experience with Energy Trust**, with four of four respondents surveyed indicating satisfaction with their overall program experience.

D. Residential Sector Highlights

- **Residential programs achieved total savings of 88,864 annual therms** in 2013, of which Existing Homes accounted for savings of 40,238 annual therms, while New Homes saved 48,626 annual therms. Existing Homes results were 29 percent below the conservative goal of 56,409 annual therms, while the New Homes results were 13 percent over stretch goal of 42,956 annual therms. In total, the residential sector achieved savings that were 16 percent lower than 2012, which was a particularly strong year for savings.

Existing Homes

- **The Existing Homes program planned to reduce savings from Energy Saver Kits** and increase savings from equipment and weatherization. While equipment and weatherization measures did increase in 2013, the pace of the growth was not strong enough to make up for the significant reduction in savings from kits. The program distributed a total of 167 kits in 2013 as compared with 992 in 2012 and 1,757 in 2011.
- **The program installed 94 gas hearths in 2013, a 24 percent increase over 2012**. Dedicated outreach to trade associations and dealer networks and new marketing materials supported this trend.
- **Installation of 192 high-efficiency gas furnaces comprised one-third of program savings,** more than double the savings achieved in 2012. This is consistent with the above strategy to increase savings from equipment and weatherization.
- **The volume of completed water heaters, insulation measures and window installations** remained comparable to 2012.
- **In 2013, the program launched mobile media campaigns** to supplement online ads in KGW.com, The Oregonian and The Columbian. Mobile and online advertising with regional outlets enables exclusive targeting of customers in SW Washington.
- **Customer satisfaction surveys indicate 93 percent of Existing Homes participants** were satisfied with their experience with Energy Trust in 2013—up from 89 percent in 2012. Surveys were conducted with 145 program participants by phone shortly after completing energy-efficiency upgrades and receiving an incentive check. While it is unclear what impacted the increased customer satisifaction, the 2013 sample included fewer participants who received Home Energy Reviews (17 percent in 2013 as compared to 23 percent in 2012), and was the first year that participants who installed gas hearths were surveyed.

New Homes

- **The program saw a 22 percent increase in ENERGY STAR new homes** since 2012, with 231 homes completed in 2013.
- **In 2013, the program supported 846 high-efficiency gas clothes washers** through a joint incentive offer with Clark Public Utilities, an increase of 31 percent from 2012.

E. Trade Ally Network

- **Energy Trust's Trade Ally Network serving Washington** customers continued its steady growth in 2013.
- **By year-end, 201 trade allies served Washington,** including 80 based in Washington. Energy Trust enrolled 18 new trade allies serving Washington in 2013.
- **Breakfast meetings exclusively for Washington trade allies** were held in June and December for Existing Homes trade allies and in June for Existing Buildings trade allies. Located in Vancouver, these breakfasts continue to be important forums, particularly on the residential side, and trade ally attendance and engagement continues to increase.

III. ANNUAL RESULTS

A. Activity Highlights—Sites Served

	Q1	Q2	Q3	Q4	Total
Existing Commercial					
School/college retrofits	0	2	0	2	**4**
Other commercial retrofits	1	20	13	24	**58**
Studies	0	2	1	3	**6**
Existing Homes					
Weatherization (insulation, air and duct sealing and windows)	11	33	32	51	**127**
Gas hearths	9	26	8	43	**86**
Gas furnaces	21	35	28	100	**184**
Water heaters	4	6	6	23	**39**
Home Energy Reviews	11	14	21	25	**71**
New Homes					
Builder Option Packages	5	55	16	155	**231**
Clothes washers	159	124	140	423	**846**

B. Revenues

Source	Actual Revenue YTD	Budgeted Revenue YTD
NW Natural	$ 1,291,102	$ 1,291,102

C. Expenditures

		Actual Expenditures YTD	Budgeted expenditures YTD	Variance
Commercial Programs	Existing Buildings	$ 475,643	$ 630,877	$ 155,235
	Subtotal	$ 475,643	$ 630,877	$ 155,235
Residential Programs	Existing Homes	$ 340,831	$ 456,436	$ 115,605
	New Homes	$ 315,772	$ 331,005	$ 15,233
	Subtotal	$ 656,603	$ 787,441	$ 130,838
Administration		$ 38,356	$ 51,174	$ 12,818
Total		$ 1,170,602	$ 1,469,492	$ 298,890

A range of savings goals were established in the program annual update to the Energy Efficiency Plan, with conservative goal representing 15 percent less than stretch goal. Total program spending was under budget, with spending variances primarily occurred between budgeted and actual expenditures for incentives. In part, this is a result of capping custom path commercial incentives at 50 percent of the project cost, which may result in a lower than budgeted cost of therm acquisition. Within the Existing Homes program, the variance is the result of some incentive offers not being adopted at the expected rate.

D. Incentives Paid

		Actual Incentives YTD
Commercial Programs	Existing Buildings	$ 218,066
	Subtotal	$ 218,066
Residential Programs	Existing Homes	$ 103,337
	New Homes	$ 183,381
	Subtotal	$ 286,718
TOTAL		$ 504,784

Incentives paid account for just over 50 percent of year-to-date program expense, when total program expense is adjusted down by 15 percent to account for costs that a utility-delivered program would recover through rates.

E. Savings

		Therms Saved YTD	Annual Goal (Conservative)	% Achieved YTD	$/Therm	Levelized Cost/Therm
Commercial Programs	Existing Buildings	132,308	127,500	104%	$ 3.72	30.5 ¢
	Subtotal	132,308	127,500	104%	$ 3.72	30.5 ¢
Residential Programs	Existing Homes	40,238	56,409	71%	$ 8.76	64.2 ¢
	New Homes	48,626	36,513	133%	$ 6.71	52.7 ¢
	Subtotal	88,864	92,921	96%	$ 7.64	58.1 ¢
TOTAL		221,172	220,421	100%	$ 5.29	42.0 ¢

A portfolio-wide shift to acquire a greater proportion of measures with longer measure lives contributed to a reduction in levelized cost from $0.48 to $0.42. The levelized cost represents the annualized cost of the investment made in savings acquisition on a per unit basis. When the average measure life across a portfolio of programs increases, it reduces the annual per unit cost to acquire savings, when those costs are levelized across the useful life of the investment. The program is performing well below the per therm metric established by the WUTC.

NW NATURAL APPENDIX 1: 2013 Energy Efficiency Measure Counts and Savings

Table 1: Residential Sector Measures

Category	Measure	Measures Installed	Total Therms Saved
Air Sealing	Air Sealing	11	230
	Blower Door Test	8	0
	Air Sealing Total	***19***	***230***
Duct Sealing and Insulation	Duct Insulation	7	86
	Duct Sealing	3	102
	Duct Testing	3	0
	Duct Sealing and Insulation Total	***13***	***188***
Energy Saver Kit	***Energy Saver Kit Total***	***167***	***6,184***
Home Energy Reviews	***Home Energy Reviews Total***	***71***	***0***
Shell Insulation	Ceiling Insulation	30	2,571
	Floor Insulation	14	567
	Wall Insulation	9	286
	Shell Insulation Total	***53***	***3,424***
Space Heating	Boiler	2	88
	Furnace	192	13,556
	Gas Fireplaces	94	9,572
	Space Heating Total	***288***	***23,216***
Water Heating	Tank Water Heater	47	1,149
	Tankless Water Heater	0	0
	Water Heater Thermostat Set-back	0	0
	Showerheads Left Behind At Home Energy Review	63	907
	Showerwands Left Behind At Home Energy Review	29	386
	Faucet Aerators Left Behind At Home Energy Review	137	1,005
	Cold Water Detergent Left Behind At Home Energy Review	41	238
	Water-saving Device Installed By Plumber	0	0
	Water Heating Total	***317***	***3,685***
Windows	***Windows Total***	***86***	***3,310***
New Homes	ENERGY STAR New Home	231	23,260
	Tankless Water Heater	10	650
	Low Income Energy Saver Kit	45	324
	Showerheads Sold At Retail	2,563	21,068
	High Efficiency Clothes Washers	846	3,325
	New Homes Total	***3,695***	***48,627***
	Grand Total	***4,709***	***88,864***

Table 2: Commercial Sector Measures

Category	Measure	Measures Installed	Total Therms Saved
Foodservice Equipment	Gas Fryer	31	17639
	Convection Oven	3	906
	Foodservice Equipment Total	**34**	**18,545**
Shell Insulation	Ceiling Insulation	1	3,000
	Shell Insulation Total	**1**	**3,000**
Space Heating	Boiler	13	35,246
	Space Heating Total	**13**	**35,246**
Water Heating	Conventional Condensing Tank	4	642
	Water Heating Total	**4**	**642**
Rooftop HVAC Tune-up	RTU Tune Up DCV Control	60	20,287
	Rooftop HVAC Tune-up Total	**60**	**20,287**
Custom	Studies	6	0
	Custom Building Controls	20	43724
	Misc Custom Measures	5	10,864
	Custom Total	**31**	**54,588**
	Grand Total	**143**	**132,308**

NW NATURAL APPENDIX 2: Customer Satisfaction

In 2013, Energy Trust continued short phone surveys of NW Natural customers in Washington to determine satisfaction with their participation in Energy Trust programs. Results from 145 residential customers and four commercial customers indicate a generally high level of customer satisfaction.

Table 1: NW Natural Washington Residential Customer Satisfaction 2013

Residential (n=145)	Dissatisfied	Neutral	Satisfied
Overall	1%	6%	93%
Incentive application form	3%	9%	88%
Turnaround time to receive incentive	9%	15%	76%

Energy Trust was able to interview four commercial customers in 2013. All respondents were satisfied with their overall program experience, the incentive amount, ease of applying for the incentive and interaction with program representatives.

Table 2: NW Natural Washington Commercial Customer Satisfaction 2013

Commercial (n=4)	Dissatisfied	Neutral	Satisfied
Overall	-	-	4
Incentive amount	-	-	4
Ease of applying for incentive	-	-	4
Interaction with program representative	-	-	4
Performance of equipment or system installed	-	2	2
Turnaround time to receive incentive[14]	2	-	1

[14]Customer satisfaction ratings do not add to four because one customer responded “unknown.”

APPENDIX 10: 2013 Energy Efficiency Results for SB 1149 and SB 838 Funds

2013 SB 1149 Electric Efficiency Results	PGE aMW Saved	Pacific Power aMW Saved	Total aMW Saved	Expenses	mil $/aMW
Commercial	4.39	7.51	11.90	$16,255,700	$1.37
Industrial	10.06	3.21	13.27	$15,122,031	$1.14
Residential	2.98	2.55	5.53	$9,557,191	$1.73
Total Electric Efficiency Programs	17.43	13.28	30.71	$40,934,922	$1.33

2013 SB 838 Electric Efficiency Results	PGE aMW Saved	Pacific Power aMW Saved	Total aMW Saved	Expenses	mil $/aMW
Commercial	9.02	3.87	12.89	$27,849,350	$2.16
Industrial	2.45	1.33	3.78	$9,968,311	$2.64
Residential	6.72	3.71	10.43	$21,437,940	$2.06
Total Electric Efficiency Programs	18.18	8.91	27.10	$59,255,601	$2.19

2013 SB 838 Utility Expenditures	Q1	Q2	Q3	Q4	Total
Portland General Electric	$194,389	$224,589	$214,771	$138,459	$772,207
Pacific Power	$85,267	$314,428	$204,996	$285,103	$889,795
Total Electric Efficiency Programs	$279,656	$539,017	$419,767	$423,562	$1,662,001