Energy Trust Board of Directors
Annual Strategic Planning Workshop

June 5 and June 6, 2015

421 SW Oak Street, Suite 300 Portland, OR 97204 1.866.368.7878 503.546.6862 fax energytrust.org

Agenda
Annual Board Strategic Planning Workshop

Reed College, Vollum Lounge & Gray Campus Center
Portland, Oregon
June 5 & 6, 2015

Friday, June 5, Vollum Lounge

7:30am **Arrival & Breakfast**

8:00am **Welcome & Introductions** (Debbie Kitchin)

8:15am **Context setting** (Mark Kendall)

Meeting rules (Kevin Hiebert)

8:30am **Opening remarks** (Margie Harris)

9:00am **Break**

9:15am **Energy Market Outlook** ..... ***packet***
9:15: Staff presentation (Fred Gordon, Ted Light)
9:30: Board Q&A

10:15am **Overview and Summary of 2015-2019 Strategic Plan** (Debbie Menashe) ..... ***packet***

10:30am **Implementing Key Strategies and Reporting** ..... ***packet***
10:30: Expanding participation: baseline research (Margie Harris, Fred Gordon)
10:45: New technology and methods (Fred Gordon)
11:00: New collaborations (Debbie Menashe)
11:15: Continuous improvement (Margie Harris, Steve Lacey, Courtney Wilton)

11:30am **Reflections on Scope of Reporting Presentations/Answering the Questions**

11:45am **Board Photo**

12:00pm **Lunch**

Friday, June 5, Gray Campus Center

1:15pm **Executive Director Succession** (Ken Canon)

1:30pm **Energy Trust Past & Present: Perspectives to Consider for the Transition** (Margie Harris)

2:00pm **World Café conversation** (Kevin Hiebert) ..... ***primer in packet***

3:30pm **Break**

3:45pm **World Café report out** (Kevin Hiebert)

4:15pm **Recap of day one**

4:45pm **End-of-day board comments and feedback** (Kevin Hiebert)

5:00pm **Break & Travel**

6:00pm **Board Dinner**

Saturday, June 6, Vollum Lounge

9:00am **Arrival & Breakfast**

9:30am **Welcome, day-one recap, board reflections** (Kevin Hiebert)

9:45am **Establishing initial strategic issues to provide to Executive Director Transition Committee** (Kevin Hiebert)

10:15am **Guest Speaker: Ann Kohler**..... ***resume in packet***
Reflections on Executive Director Transition

11:15am **Break**

11:30am **Refining and categorizing strategic issues to provide to Executive Director Transition Committee** (Kevin Hiebert)

11:45am **Final board reflections** (Kevin Hiebert)

12:00pm **Next steps in transition process** (Ken Canon)

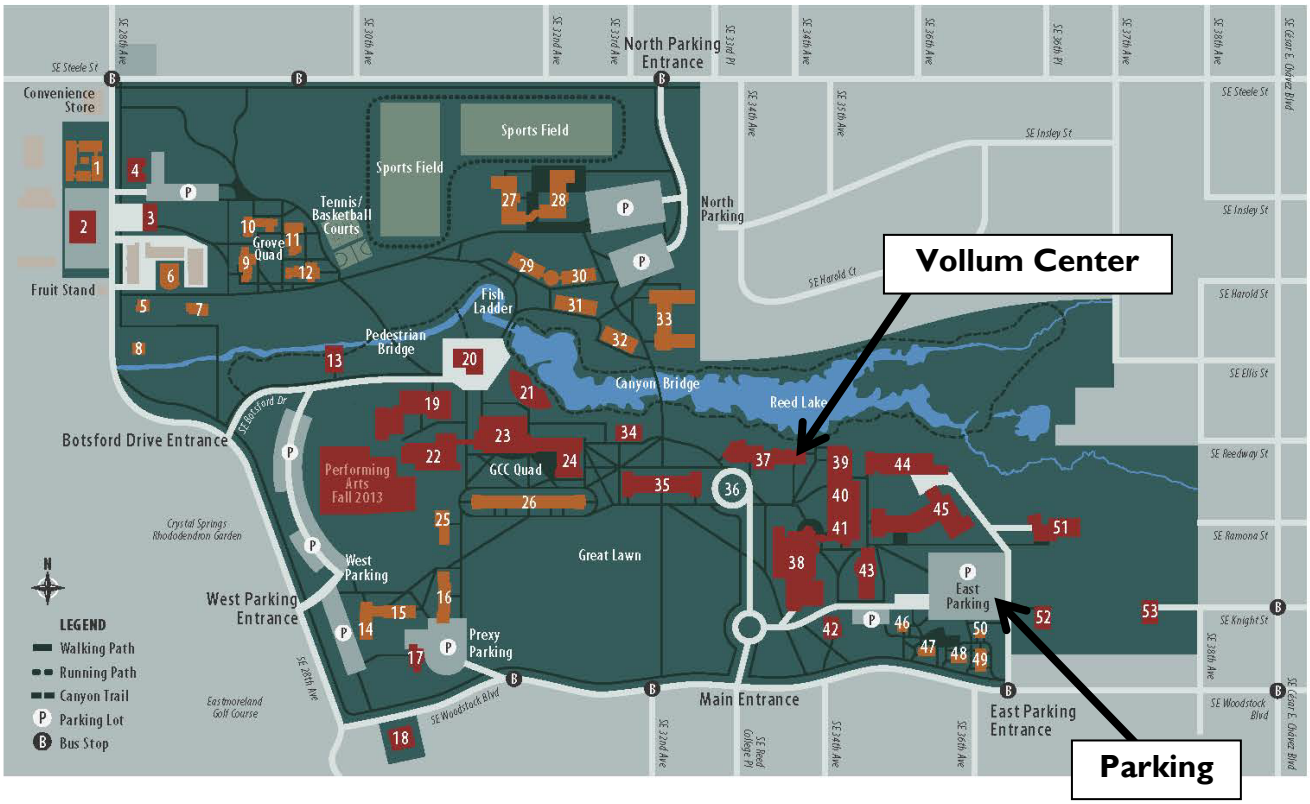
12:15pm **Next steps and closing remarks** (Margie Harris)

12:30pm **Adjourn & Lunch**

Energy Trust Board of Directors Strategic Planning Workshop

Reed College 3203 SE Woodstock Blvd, Portland OR

Friday, June 7, 2013 at 8:00am



REED COLLEGE

3203 SE Woodstock Blvd. Portland, Oregon 97202-8199

1. **Birchwood Apartments**
2. **Theatre annex, Reed warehouse**
3. **28 West**: community safety, residence life
4. **Health & Counseling Center**
5. **Garden House** (residence hall)
6. **Reed College Apartments**
7. **Canyon House** (residence hall)
8. **Farm House** (residence hall)
9. **Sequoia House** (residence hall)
10. **Sitka House** (residence hall)
11. **Bidwell House** (residence hall)
12. **Aspen House** (residence hall): Caffè Paradiso
13. **Theatre**
14. **Scholz** (residence hall)
15. **Foster** (residence hall)
16. **MacNaughton** (residence hall)
17. **Prexy** (music building)
18. **Parker House**
19. **Sports Center**
20. **Physical Plant**
21. **Cerf Amphitheatre**
22. **Kaul Auditorium**: Gray lounge
23. **Gray Campus Center**: bookstore, commons (dining hall), mail services, international student services, SEEDS
24. **Student Union**: Paradox Café
25. **Anna Mann** (residence hall)
26. **Old Dorm Block** (residence hall)
27. **Naito Hall** (residence hall)
28. **Sullivan Hall** (residence hall)
29. **Griffin** (residence hall)
30. **McKinley** (residence hall)
31. **Woodbridge** (residence hall)
32. **Chittick** (residence hall)
33. **Bragdon Hall** (residence hall)
34. **Student Center**: student activities, multicultural resource center
35. **Eliot Hall**: admission, chapel
36. **Eliot Circle**
37. **Vollum College Center**: lecture hall, lounge
38. **Library**: Cooley Art Gallery
39. **Physics**
40. **Biology**: auditorium
41. **Paradox Lost Café**
42. **Greywood**: alumni & parent relations, campus information, career services
43. **Educational Technology Center** (ETC)
44. **Chemistry**
45. **Psychology**: auditorium
46. **Russian House** (residence hall)
47. **German House** (residence hall)
48. **French House** (residence hall)
49. **Spanish House** (residence hall)
50. **Chinese House** (residence hall)
51. **Studio Art**: Feldenheimer Gallery
52. **Dorothy Johansen House**: academic and disability support services
53. **Center for Advanced Computation**

Market Outlook

Briefing Paper
Energy Market Outlook

May 26, 2015

Introduction and Summary

Although not much time has passed since October, when the board adopted the 2015-2019 strategic plan, we thought it would be helpful to take a fresh look at some market and policy influences that may impact our strategy, delivery and results.

This paper begins with a quick review of past results and then describes trends in loads, energy prices, conservation supply and other factors influenced by energy markets and policies.

In brief, this analysis shows:

- Energy demand is about as expected; the varying load forecasts for our funding utilities are detailed in section 3.
- Electricity and natural gas prices are expected to remain stable and real prices are expected to be fairly flat, see section 4.
- Section 5 reports that our forecast of energy efficiency potential resembles the Northwest Power and Conservation Council's, with two fairly minor differences:
  - We foresee a higher percentage of potential coming from the industrial sector, which may only reflect Oregon's higher industrial concentration.
  - In addition, the Council projects more relative energy savings across all sectors, which may reflect Energy Trust's strong past performance. We plan to explore this further by comparing measure assumptions in greater detail going forward.
- Section 6 discusses how individual sector plans, completed since adoption of our strategic plan, are tailoring programs to address our organizational plan's strategies: greater participation by small and medium-sized industries and commercial businesses, outreach to geographically diverse participants, and strategies to manage program delivery costs.
- Section 7 summarizes factors that could influence our strategy over the next five years or, more likely, over the next decade. These include: changes in valuing efficiency; emerging limits on funding measures for large customers of Portland General Electric (PGE); the possible impact of climate change on the Northwest power system, and other air quality issues; interactions between energy and water conservation, changing perspectives on our renewable energy portfolio, and other matters.

While none of these things represents a significant departure from what was anticipated in the strategic plan, they all bear watching.

Analysis

1. Strategic Planning

During the 2014 Board Strategic Planning Workshop, much of the discussion was focused on the development of the 2015-2019 Strategic Plan. For reference, the packet from that meeting is available at:
http://assets.energytrust.org/api/assets/meetings-boards/140613_Board_Meeting_Packet.pdf.

2. Results

The graphs below show Energy Trust's accomplishments relative to the 2010-2014 Strategic Plan. The five-year goals were met for both electricity and natural gas. Energy Trust acquired almost 268 average megawatts (aMW) and just over 27 million annual therms of natural gas savings, exceeding the five-year goals of 256 aMW and 26.4 million annual therms.

Figure 1 – Electric Energy Savings Compared to Strategic Plan Goals

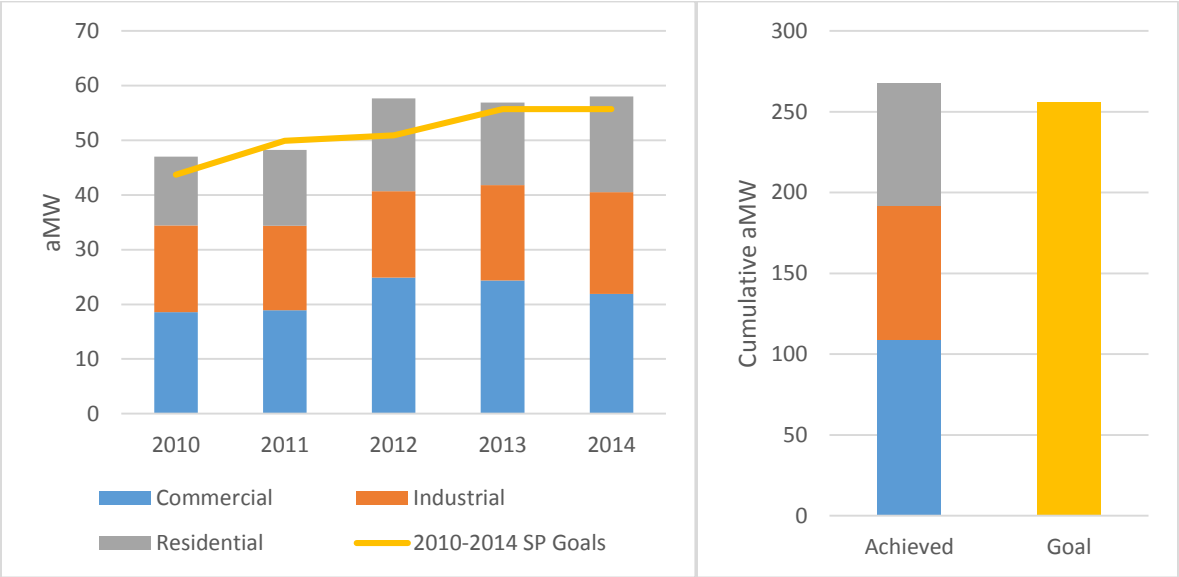
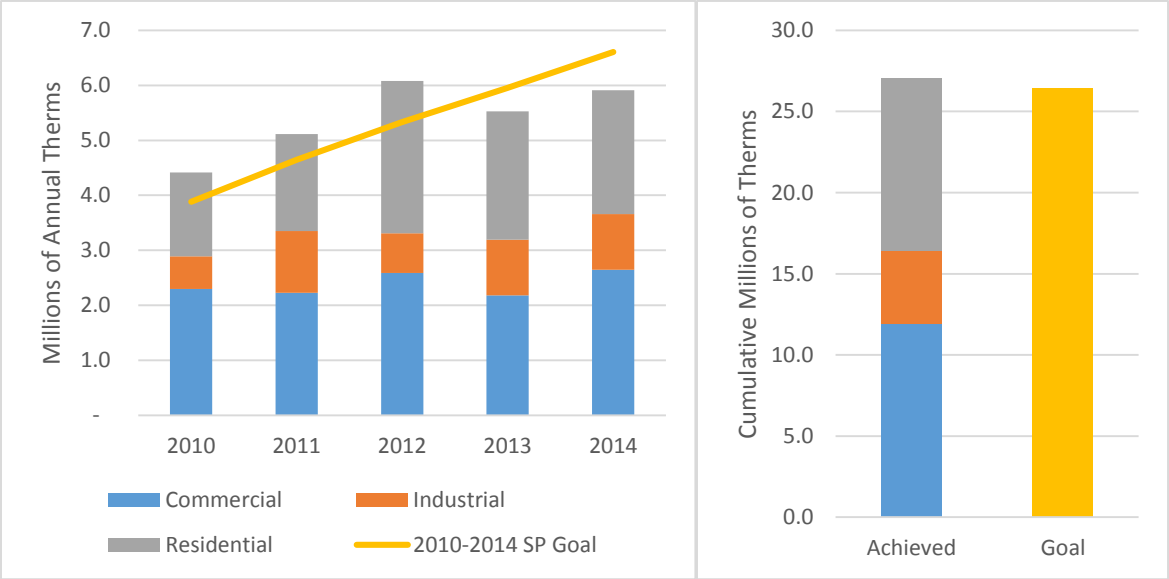
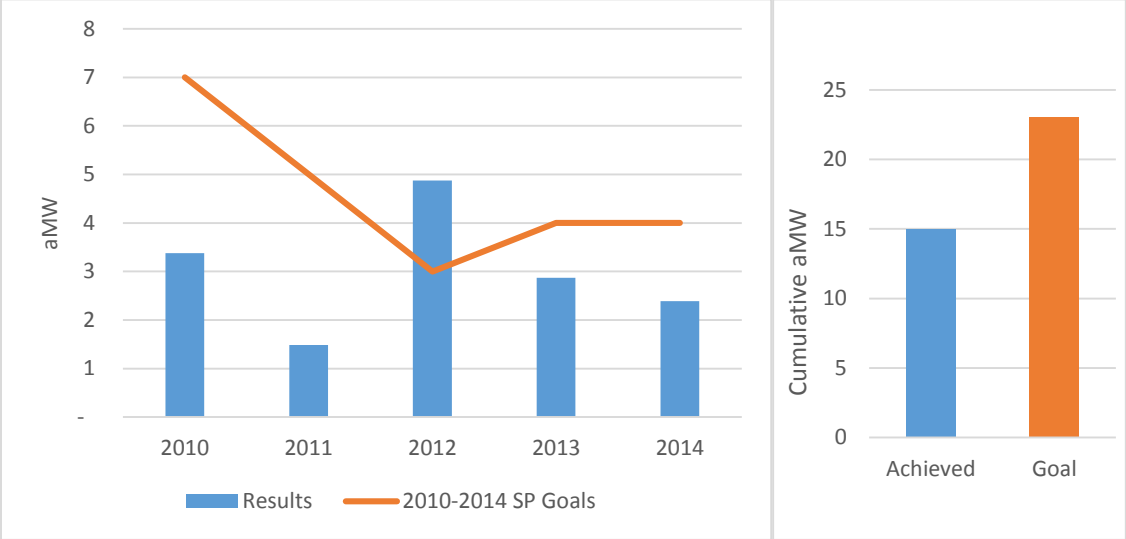


Figure 2 – Natural Gas Savings Compared to Strategic Plan Goals



The 2010-2014 Strategic Plan called for acquiring 23 aMW of renewable energy. Oregon tax credits for renewable energy projects were significantly reduced in 2011, significantly reducing the leverage of Energy Trust incentives. Energy Trust acquired 15 aMW of new renewable energy between 2010 and 2014.

Figure 3 – Renewable Energy Generation Compared to Strategic Plan Goals



In comparison, Energy Trust's 2015-2019 Strategic Plan calls for acquiring 240 aMW and 24 million annual therms of new savings and 10 aMW of renewable energy.

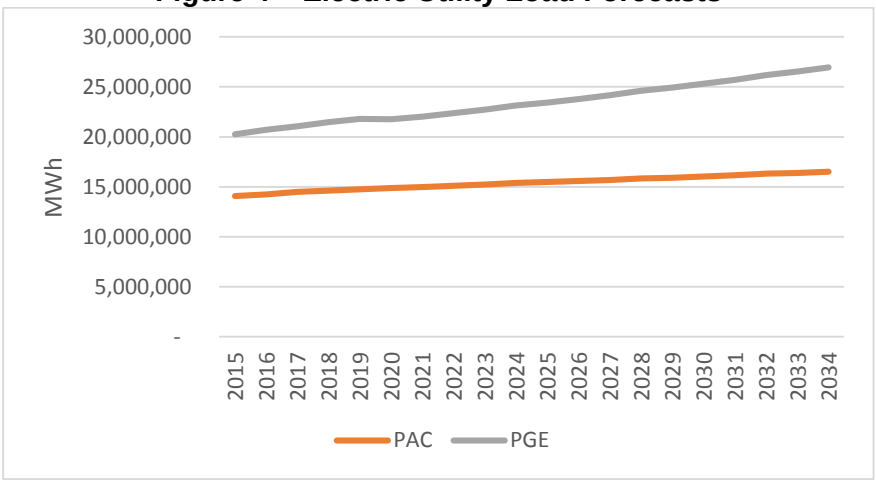
3. Load Forecasts

At a recent Integrated Resource Plan (IRP) meeting, PGE's load forecasters stated the primary drivers of growth in their forecast were from the high-tech sector and continued in-migration to the Portland metro area. PGE's 2013 IRP described their first summer peak in 2002, with four additional subsequent summer peak years. In PGE's current IRP, the average annual growth rate of summer peak is projected to be 1.4%, while the winter peak growth is expected to be 1.2%. PGE also noted the increasing cooling load.

Pacific Power's system is also experiencing summer peaking. Its load forecast suggests a "new normal" of reduced commercial and industrial activity and associated lower load growth.

Both PGE and Pacific Power have also acknowledged the average use per residential customer is declining and electric appliances are reaching or at saturation.

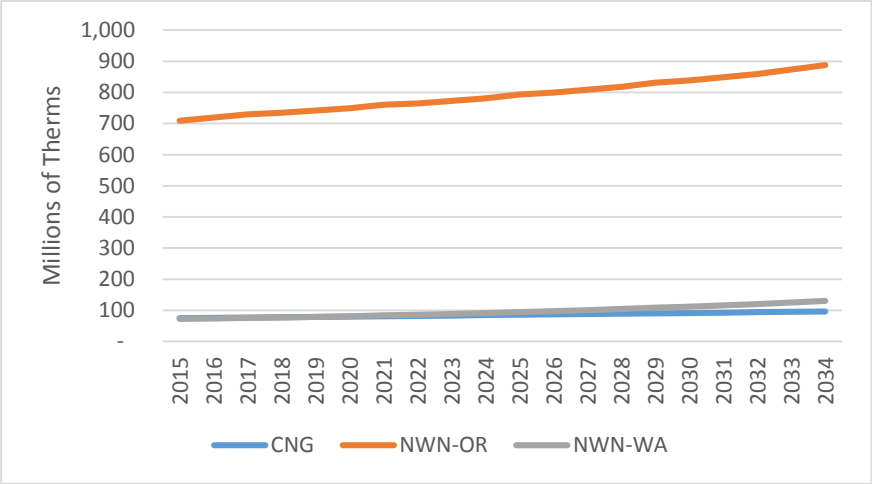
Figure 4 – Electric Utility Load Forecasts



The load forecasts in Cascade Natural Gas' 2015 IRP are generally lower and flatter than in their previous IRPs, as often occurs in load forecasting.

NW Natural expects growth as the economy continues to improve, particularly in Clark County, Washington. The growth rates in NW Natural's most recent IRP forecast are higher than those from previous years.

Figure 5 – Gas Utility Load Forecasts



4. Avoided Cost of Efficiency

Forecasts of utility power cost provide a useful and simple trend to gauge how the value of energy efficiency may be changing in utility least-cost planning. The graphs below show the most recent utility price projections. There has been very little change in these projections, indicating that real prices are expected to remain fairly flat in the coming years. For cost-effectiveness purposes, Energy Trust energy efficiency investments are compared to prices utilities pay for power generation and natural gas, and adjusted to reflect such things as deferred transmission and distribution facilities, risk value of efficiency, etc. No significant changes are expected in individual measure cost effectiveness in the near future.

Figure 6 – Electric Utility Market Forecasts

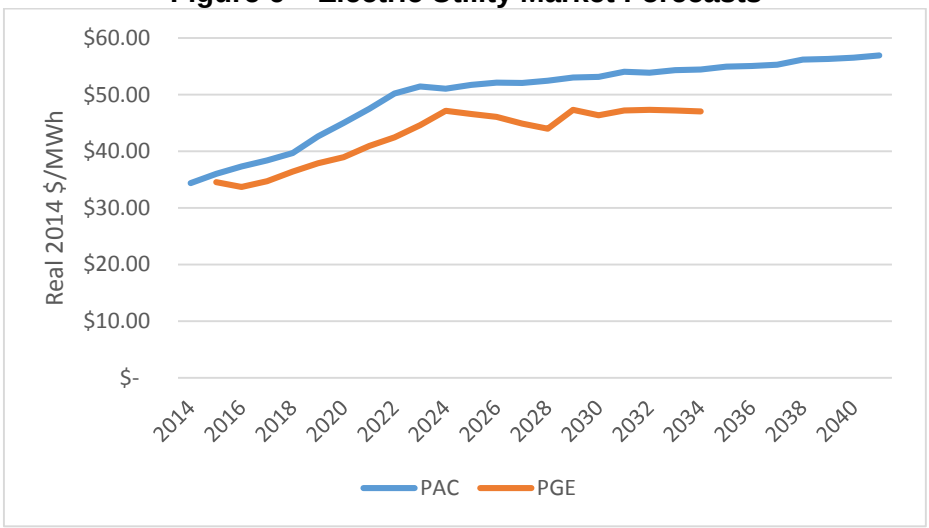
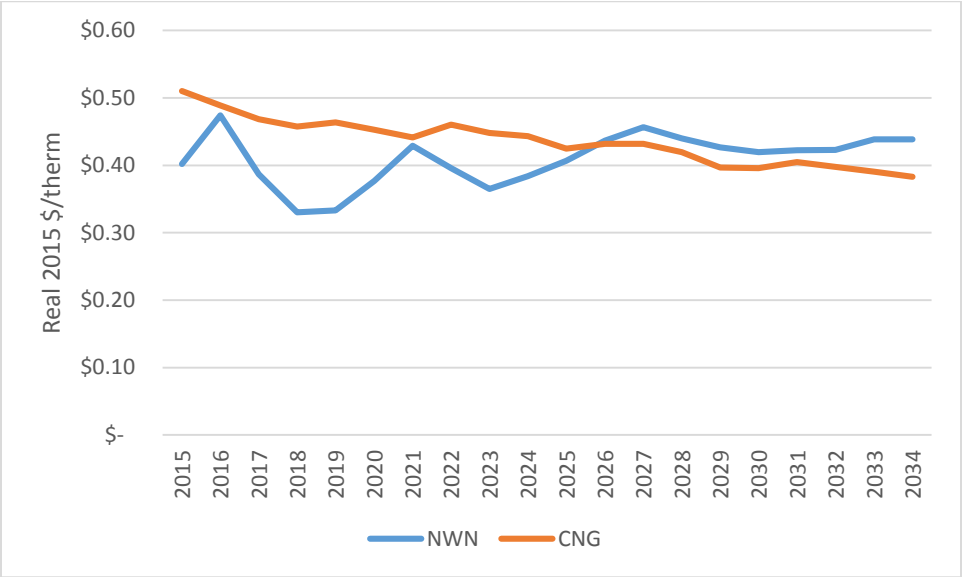


Figure 7 – Gas Utility Price Forecasts



Energy Trust recently completed an extensive process to review the cost-effectiveness of gas efficiency measures in conjunction with the Oregon Public Utility Commission (OPUC) and other stakeholders (UM 1622). As an outcome of this docket, some specific gas efficiency measures were granted exceptions and others, will soon be discontinued. Residential wall and floor insulation, are allowed only under limited conditions. In addition, program modifications were made in response to lower avoided costs brought about by low natural gas prices. The price projections in the above chart show that higher avoided costs are not expected soon. Hence the program changes made to help assure cost-effectiveness will likely need to remain in place for the foreseeable future.

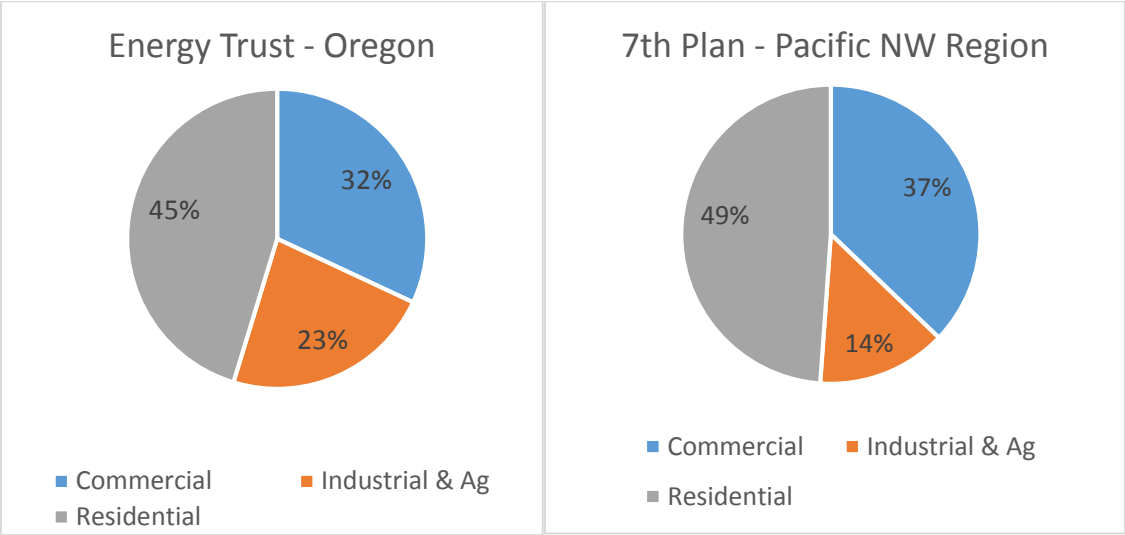
The OPUC and other stakeholders are discussing adding a risk reduction value to the natural gas avoided cost used in efficiency benefit-cost analysis. This may increase the value of gas savings, but not significantly. A deeper analysis of the premium value of gas efficiency may lead to more substantive changes in 2016.

5. Comparison of Energy Trust Conservation Supply to 7th Power Plan Conservation Supply

The Northwest Power and Conservation Council recently completed a conservation potential assessment as part of developing the 7th Power Plan. This analysis is analogous to Energy Trust's resource assessment, and although Oregon may differ in some ways from the rest of the region, a brief comparison may be instructive.

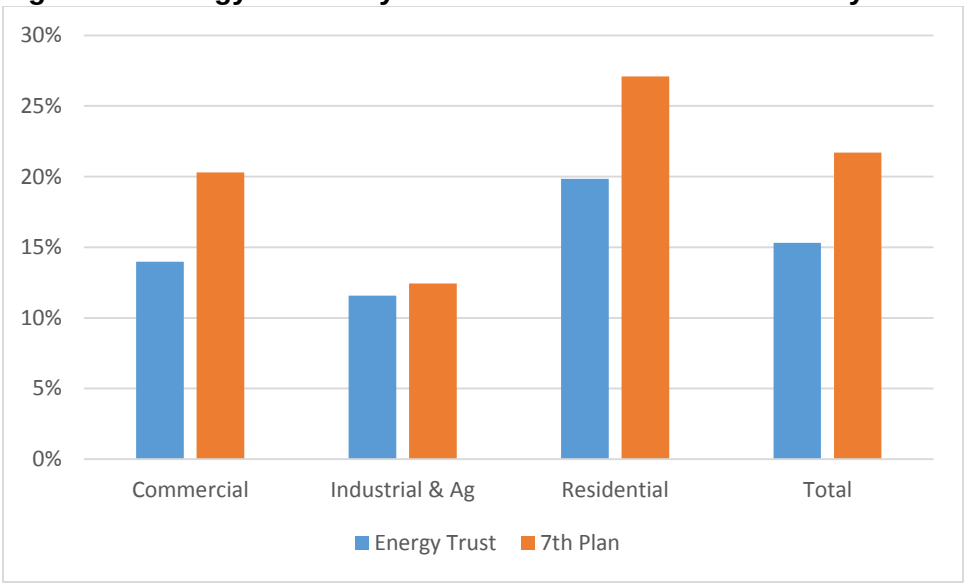
The two pie charts below show the percentage of total energy efficiency potential identified by sector. The results are similar, although Energy Trust's study predicted a higher percentage of its potential coming from the industrial sector. Oregon is the nation's second-most industrial state in the nation by percentage of gross domestic product (GDP), and this may account for the difference.

Figure 8 – Share of Total Efficiency Resource Potential by Sector



It's also instructive to compare the amount of efficiency potential to forecasted utility loads, as shown in the chart below. It is clear that the Council's study projects a slightly higher level of efficiency savings relative to loads across all sectors. Energy Trust's strong history of accomplishments may account for some of the differences here. We plan to compare measure assumptions in greater detail going forward.

Figure 9 – Energy Efficiency Potential as a Percent of Load by Sector



6. Opportunities Emerging From Sector Plans

Energy Trust program staff recently completed sector-specific strategic plans. These plans highlight the major opportunities, strategies and sources of savings expected to help realize the organizational five-year strategic plan goals. Highlights from the sector plans include:

- Increased participation in commercial and industrial Strategic Energy Management offerings, including smaller industrial sites and commercial buildings
- Additional services and outreach provided to small and medium-sized industries and commercial businesses
- Management of program delivery costs in a maturing commercial retrofit market

- Balanced outreach to smaller industrial sites while maintaining cost-effective delivery
- Balance efforts to diversify geographic and residential customer outreach while maintaining cost effective program delivery
- Adjust residential program in light of changing analysis of cost-effectiveness
- Reduce the non-equipment "soft" costs of solar

7. Things That May Change Things

A. Changes in the Value of Efficiency

While there is some variation in projections of long-term supply of natural gas, there are no signs that current utility forecasts of avoided cost are likely to change dramatically in the next few years. Some smaller changes are possible.

- **Summer peaking**–The Northwest Power and Conservation Council is developing a new analysis that shows the differential in value of efficiency measures by time of day, week and by season. Energy Trust uses the Council's analysis to show these differences. The new forecast will place a higher value on summer peak times, as the Northwest moves more toward being a summer peaking electric system. There are few enough summer peak hours that this has limited impact on the overall value of efficiency, but it provides some additional support for measures that save energy on summer afternoons.
- **Discount rates**–Discount rates used in efficiency benefit-cost analysis increased slightly when Energy Trust in 2014 incorporated decreases in utility cost of capital. This modestly improves the benefit-cost ratio of measures. If market interest rates increase in the next few years, this change may be reversed.
- **Wholesale power costs**–Updated forecasts of the wholesale cost of power and gas will be developed by utilities and finalized through Integrated Resource Plans occurring over the next 18 months. This may lead to modest changes in the estimated value of electric and gas efficiency measures, based on the lifetime savings. Values could go up or down.
- **Risk value of gas efficiency**–NW Natural proposes to add approximately 5% to the value of gas efficiency to account for the fact that once efficiency is bought its price is fixed, eliminating fuel price volatility.
- **Study of gas efficiency premium**–NW Natural plans a deeper study of premium value from efficiency for its 2016 Integrated Resource Plan, which could lead to a more significant change, perhaps somewhere between 5 and 20%. Any estimate of the value at this point is purely speculative.

B. Funding for Projects with Customers >1 aMW

Energy Trust funding for electric efficiency for customers with loads >1 aMW is limited:

- Such large commercial, institutional and industrial customers either contribute revenue under SB 1149, Energy Trust's initial electric funding source, or self-direct investments in Oregon Department of Energy approved efficiency.
- SB 838 allows supplemental electric efficiency funding additional electric efficiency funding. However, SB 838 specifies that customers with loads greater than 1 aMW may neither contribute supplemental efficiency funds nor directly benefit from supplemental funds.

As previously discussed with the board, a funding threshold was established for these larger customers based on historic funding patterns prior to the passage of SB 838. For PGE, Energy Trust programs approached, not surpassed, that threshold in 2012 and 2013. New analysis of 2014 spending shows the same. In accordance with the stakeholder agreement establishing the threshold, Energy Trust will not limit electric efficiency funding for large customers at this time.

This is likely to change in 2015. There is a very good chance the threshold for PGE customers will be crossed this year. We will know in April 2016; at which point, in accordance with the stakeholder agreement, actions will be taken to bring cumulative spending on large customers back in line. This will likely require selective reductions in funding through a process that has been extensively discussed with the board.

It appears likely that Pacific Power funding for large customers will not approach this threshold for several years, if at all.

Meanwhile, an existing OPUC docket is addressing the meaning of SB 838, the threshold, the stakeholder agreement, and possible policy changes. There is a range of opinion among the parties. A bill proposing changes to SB 838 and/or SB 1149 to require more efficiency funds from large customers is being considered in this legislative session. No action on the bill is expected this year.

Without a regulatory or legislative adjustment, it is likely Energy Trust will have to limit, not eliminate, funding for large customer projects on a forward looking basis, starting in 2016 in PGE service territory.

C. Impact of Climate Change

For the 7th Power Plan, the Northwest Power and Conservation Council has developed a scenario to reflect the possible impact of climate change on the Northwest power system. The scenario shows lower heating loads due to milder winters, which would reduce the value of winter-focused efficiency measures such as furnaces and insulation. The scenario also shows increases in summer loads accompanied by decreased capacity of the hydro system in the summer due to hotter temperatures and lower snow pack. These factors, if borne out, may further increase the need for and value of summer energy efficiency.

Another element of the climate change scenario is the possibility of accelerated in-migration of people moving to the Northwest from climates experiencing limited water and drought conditions along with an increase in days over 100-degrees. In-migration of several hundred thousand people above forecasts could incrementally add to the region's electric and gas use, creating both demand for more efficiency and more efficiency opportunities, as economic development and new construction accelerates to keep up with population growth.

Other climate change effects could come from diminished summer hydropower resources in California and/or in British Columbia. Either could change the dynamics in the power market, impacting Northwest prices. Since weather is volatile and hydro resources vary year to year, these effects could come very soon or not for decades.

Such climate-driven effects depend upon the scale and speed of change, which are unknown. For Energy Trust purposes, utilities are responsible for incorporating such considerations into their Integrated Resource Plans. It will be interesting to see whether and how this type of scenario analysis is built into plans for the four utilities whose customers fund Energy Trust.

The last climate change contingency is the potential effects of the U. S. Environmental Protection Agency (EPA) proposal to limit carbon emissions from existing electric power plants under section 111(d) of the Clean Air Act. EPA's proposed rules would require each state to develop a plan to achieve carbon emission reduction goals for existing power plants. Many planning considerations will require decisions by the State of Oregon, especially state plan "pathways" and enforceability. Other issues are intimately linked to energy efficiency and renewable energy program design, monitoring, evaluation and reporting. The state plan is likely to have implications for the shape of Energy Trust programs and to specify in what manner the plan's pathways will be enforced.

Final action on the proposed EPA rules is expected in June 2015. Oregon would have at least a year to submit a draft plan, so it will be June 2016 at the earliest before we know how the rules and state plan may affect us. *Caveat*: The schedule does not account for the potential effects of litigation and politics, either of which could complicate the final outcome.

D. Local Air Quality Issues

Energy Trust has been a support player in state-driven efforts to reduce particulate emissions in the Klamath and Lakeview areas by replacing wood stoves with less polluting devices, including efficient electric and gas heating equipment. While our purpose is to assure that new electric and gas systems use as little energy as possible, these systems also help ease the transition from wood use in areas struggling to comply with EPA air quality regulations. A similar issue has arisen in Washington County and may impact other areas.

E. Water Supply Issues

Concerns about water supply may boost support for energy efficiency measures that save water. In concert with water districts and municipalities, this may lead to an even greater focus on water-saving devices for homes and businesses in the short-term, including efficient showerheads and flow control devices. Over the longer term, the biggest opportunities may be in the agricultural sector, e.g., lining irrigation ditches involved in hydropower generation, energy efficiency in food processing and other water-intensive industries, and other places where Energy Trust has expertise.

F. Renewables Project Mix

Two trends may lead to changes in Energy Trust's renewable energy strategy. Reduced state and potentially federal tax credits and other forms of government support make it harder to identify and complete renewable energy projects, other than solar. At the same time, interest in solar electric projects is growing while the cost of solar electric is decreasing. It is probably too early to reevaluate Energy Trust's current strategy to distribute support and investment across all five renewable energy technologies. It is unclear how long solar electric projects will need Energy Trust incentives to succeed, particularly if federal support declines and solar system costs continue to decrease.

G. Energy Storage

There is a global jump in investment to create more affordable and marketable energy storage, both for utility use and for homes and businesses. Major solar system vendors are offering battery storage packaged with solar electric systems. While battery prices are still too high to make this an appealing option for most energy users and for most utility applications, future significant price drops could have myriad effects on the utility industry. Batteries could help address intermittence of wind, shape renewable resources to better match the shape of power system needs, and provide a complimentary use for energy-saving building and home control systems.

H. My Equipment Is Talking To Me!

An increasing share of new energy equipment for building and homes, such as lighting fixtures, theromstats, heating and cooling systems, and monitoring equipment and control systems include built-in sensors. This equipment delivers the capability to gather data and have two-way communication about energy use to facility managers and utility program providers. If standardized approaches were developed to use this data to validate savings, efficiency programs might focus less on equipment specification and more on savings validation. This type of shift may be increasingly important as equipment becomes more complex and diverse, and dependent on controls and on behavior change to achieve savings. Fewer efficiency measures would lend themselves to simple "bucks per box" rebates.

I. People like our stuff! And not always for our reasons.

LED lighting is proving to have far greater market acceptance far faster than the last generation of efficient lighting savings derived from efficient fluorescents. Smart home thermostats are selling to a "tech-happy" segment of the population, often without utility rebates. Home automation systems are forecast to sell based on appearance, prestige, security, and convenience. At the same time, there are still quality issues with LED lighting and some of the other management devices may have trouble reaching all possible markets with effective energy-saving features. Engaging with rapidly shifting markets and multi-purpose control systems may require different program approaches such as more engagement at regional and national levels with manufacturers and national retailers, and more nimbleness to stay ahead of market trends. Energy Trust collaborates with the Northwest Energy Efficiency Alliance (NEEA) and others on these activities.

J. Can We Measure What We Achieve?

Because of trends discussed in the last two paragraphs above, it is increasingly difficult to quantify our influence on markets. We may discover that we can measure savings in the new world, but without as much confidence that Energy Trust's efforts were crucial to the outcomes. This could leave us with difficult choices:

- If market actors interviewed in evaluations cannot definitively tell us that we influenced change, do we rely more on circumstantial evidence?
- Or do we decrease our scope to focus only on those activities where our impact is easy to prove?

K. New Additions to Conservation Supply

When Energy Trust updated its conservation supply curves in 2014, we identified slightly less firm resource than previously identified. By "firm" we mean commercially available, proven performance, with an existing delivery system. This was more than offset by emerging technologies. We have updated these curves again, to incorporate "newly mature" technologies. This results in another 14% increase in available efficiency. We also corrected a bug in the forecast model we used to produce strategic plan targets. The new analysis produced a few more average megawatts in the forecast of achievable savings. These new findings do not call into question the strategic plan's conservation goals, but are consistent with the Board's decision to set ambitious goals and assume we would find new and unanticipated opportunities.

L. Industry Consolidation

As described at the May 2015 board meeting, there has been significant consolidation among firms providing Program Management Contractor services. Our current view is that there is still significant competition for Energy Trust work in this area. However, if it continues, further consolidation may change this view.

M. Pipeline Construction Deferral

Energy Trust has been working with NW Natural to study whether efficiency, along with demand management and interruptible gas contracts, could delay construction of a new gas pipeline into the Salem area as anticipated in NW Natural's IRP. Recent analysis from NW Natural indicates that the pipeline may not be needed. We have committed to working with NW Natural to examine other planned distribution pipeline projects in Washington to see if any would be good places to accelerate efficiency efforts to delay construction. If so, this may demonstrate an additional value for gas efficiency in selected locales.

N. Legalized Marijuana

Recreational marijuana use will be legal in Oregon this summer, and many people expect it will produce a significant uptick in energy use for growing operations. At this point, these effects are speculative though we are gaining an understanding of the energy intensity of this new industry. In coordination with Washington state and NEEA, we are monitoring developments closely to understand if and how they may affect demand forecasts and create program opportunities.

SP Implementation

Briefing Paper
Strategic Plan Implementation

June 5, 2015

I. Introduction

This paper outlines how we are implementing Energy Trust's new strategic plan, which is on the agenda for the morning of the first day of the board retreat.

II. Implementing Key Strategies and Reporting Progress

Adopted October 1, 2014, the *2015-2019 Strategic Plan* calls for Energy Trust to "establish metrics for strategies and evaluate progress toward goals" (*Strategic Plan*, p. 10). We already track and report to the board, the OPUC and others on many subjects, including progress toward quantitative energy savings and renewable energy generation goals, achievements compared to OPUC performance measures, etc. This section addresses ***new*** areas where the strategic plan establishes goals or strategies for which we should develop new metrics and reports. At the retreat, staff will make short presentations to the board on current implementation activities on the following key strategies:

- Expanding Participation,
- New Technology and Methods,
- New Collaborations, and
- Continuous Improvement in Programs and Service.

The board will not be asked to make formal decisions on these matters during the retreat. Rather, we seek your feedback on the following questions:

1. Are we focusing on the right things?
2. Do these approaches, which are necessarily general at this early stage, appear sound?
3. Are there aspects about which you would like additional information, and/or a "deep dive" at a future meeting?

Staff will use the feedback from this discussion to develop more specific metrics and procedures and review them with the strategic planning committee at future meetings.

We will take a different approach to one of the Plan's key operations strategies: succession planning. Beginning in the afternoon of the first day of the retreat, these strategies will be front and center for the board as it begins its discussions about the upcoming executive director transition and organizational change. Staff will not make presentations on this key strategy during the Friday morning portion of the retreat.

A. Expanding Participation

The strategic plan calls for Energy Trust to expand participation in Energy Trust programs among groups of customers who have participated in fewer numbers in the past (*Strategic Plan,* pp. 8-9). To do so, the plan directs staff to:

- Invest in research to understand opportunities to expand participation.
- Focus first on groups with potential for significant additional savings and uptake.
- Explore new delivery approaches to meet needs cost effectively, leveraging trade, program and lending allies to work in local communities.
- Increase awareness and engagement, working with communities, representative organizations and utilities to help identify and reach new markets.
- Actively collaborate with utilities to reach harder-to-reach customers.
- Pursue human resources strategies to ensure diverse talent for open positions.

At the retreat, staff will brief the board on the first step in this process: research to understand where participation gaps and opportunities exist. As this research is undertaken, staff will work with the strategic planning committee to develop more specific metrics and procedures in this area.

B. New Technology and Methods

The strategic plan calls for Energy Trust to "Replenish the energy-efficiency resource in the mid-to-long-term through a portfolio of new technologies and product development strategies" (*Strategic Plan*, page 9). Staff expects to establish metrics with which to track emerging technologies based on related Northwest Energy Efficiency Alliance's (NEEA) goals. Essentially, we plan to link our metrics to NEEA goals and decide how Energy Trust can achieve them sector-by-sector. We expect to include behavioral measures in this process.

At the retreat, staff will brief you on this approach. Staff will also brief the Strategic Planning Committee as we develop more specific metrics and procedures in this area.

C. New Collaborations

The strategic plan calls for Energy Trust to consider: (a) complementary initiatives that could promote clean energy development; (b) strategic relationships with community leaders and organizations in support of energy efficiency and renewable energy goals; and (c) projects that align energy conservation with other types of resource conservation *(Strategic Plan*, "Cross-Cutting Strategies," p. 10).

Examples, taken from discussions over the past year:

- Electric vehicles: the prospect of an Oregon electric vehicle rebate program.
- Wood heat conversions: a county is exploring a program to help homes convert from wood heat to electric ductless heat pumps or efficient gas hearths to improve air quality.
- Federal loan repayment: a federal manufactured home replacement program is considering using on-bill repayment to service energy efficiency and conservation loans.
- Carbon reduction: NW Natural is developing projects to reduce carbon emissions under a state program authorized by SB 844, some of which may include energy efficiency projects.
- Irrigation System Optimization projects: supporting Farmers Conservation Alliance to identify the broad range of support opportunities for irrigation system optimization.
- City of Portland tenant water sub-metering initiative: working with the City of Portland water bureau to provide incentive support for tenant water sub-meters to encourage water savings and corresponding energy savings.

The following criteria are used to evaluate such new collaborations and potentially bring additional funding to Energy Trust beyond public purpose funds, create new accountabilities, and/or broaden Energy Trust's mission:

- Scale and timing: What scale of benefit does the opportunity offer to Energy Trust?
- Is it complementary? Are the objectives complementary to Energy Trust's goals? Does the collaboration bring value that Energy Trust could not get otherwise?
- Resources: Would the collaborator bring resources to the collaboration?
- Organization: Does the collaborator have a track record that shows collaborative promise?

At the retreat, staff will brief you on two collaborative efforts currently underway, support for irrigation system optimizations and a tenant sub-metering water conservation initiative in collaboration with the City of Portland.

D. Continuous Improvement In Programs and Operations

The strategic plan calls for Energy Trust to continuously improve program designs, program delivery, customer service and internal operations.

With regard to energy efficiency and renewable energy, the plan commits Energy Trust to:

- Invest in research to understand current and evolving needs of specific market segments.
- Leverage low-cost metering and data analysis to allow customers to manage energy use.
- Help build and support a strong delivery market infrastructure to provide customers with energy-efficient options.
- Foster relationships with repeat customers, achieving deep, cost-effective savings.
- Efficiently manage energy efficiency services for large energy users.
- Effectively communicate the value of energy efficiency to customers.
- Support all eligible renewable energy technologies, including hydropower, geothermal, biopower, wind and solar.
- Emphasize market and project development support for renewable energy projects. (*Strategic Plan*, p. 8-9)

With regard to program delivery generally, the plan commits Energy Trust to:

- Effectively support and leverage Program Management Contractors, Program Delivery Contractors and trade and program allies to efficiently achieve strategic energy goals.
- Capture opportunities for program delivery efficiency gains through automation and ongoing Information Technology systems development and support.
- Align outreach activities to support program strategies and strategic opportunities. (*Strategic Plan*, p. 10).

With regard to operations, the plan commits Energy Trust to:

- Employ and improve efficient business practices and systems to support and free up resources to prioritize and achieve strategic energy efficiency and renewable energy goals.
- Address key recommendations of the most recent Management Review regarding process improvements.
- Establish and implement a succession plan for executive and senior management. (*Strategic Plan,* pp. 10-11).

With regard to continuous improvement, at the retreat, staff will brief the board on the approach we expect to take with respect to operations, having provided briefings on program delivery strategies in the previous presentations. In brief, we plan to:

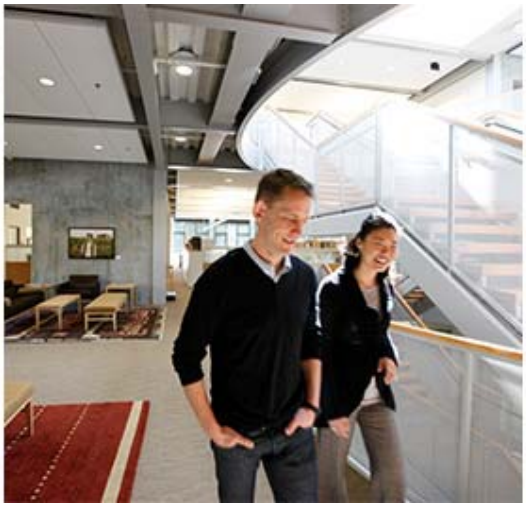
- Identify three or four organization-wide administrative processes as candidates for ongoing improvement.
- Identify improvement opportunities, including any planned projects or efforts underway, for each core process.
- Describe possible metrics for capturing improvements, to be explored further.

III. Conclusion

To reiterate, we seek the board's feedback whether:

1. We are focusing on the right things;
2. These general approaches appear sound;
3. There are areas about which you would like more information, and/or a "deep dive" at a future meeting.

Strategic Plan


Energy Trust of Oregon

2015-2019 Strategic Plan

October 1, 2014

Energy Trust of Oregon

Introduction

Who We Are

Energy Trust of Oregon is an independent nonprofit organization dedicated to helping 1.5 million customers of four investor-owned utilities save energy and generate renewable power. Created in response to 1999 Oregon legislation, Energy Trust is overseen by a volunteer board of directors with input from two advisory councils, and reports to the Oregon Public Utility Commission (OPUC). Energy Trust began operation in March 2002, charged by the OPUC with investing in cost-effective energy efficiency[1], helping to pay the above-market costs of renewable energy resources and transforming markets to higher efficiency products and services.

Energy Trust programs are funded by Portland General Electric and Pacific Power customers under a 1999 Oregon law (SB 1149) and a 2007 Oregon law (SB 838). Programs are also funded by Oregon natural gas customers pursuant to agreements with NW Natural (2003) and Cascade Natural Gas (2006), as well as Washington customers of NW Natural (2009). Energy Trust administers these utility customer funds and delivers services and programs to help all types of customers invest in electric efficiency, natural gas efficiency and renewable energy systems. Program offerings undergo detailed planning and analysis that weigh economic and environmental costs and benefits to ensure broad benefit for all customers.

Each year, Energy Trust brings energy savings and renewable generation to more households, commercial businesses, industries and public buildings. These services are delivered to customers by leveraging and supporting nearly 2,700 independent Oregon and southwest Washington businesses and through collaboration with Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas. Since 2002, Energy Trust has provided cash incentives, services and information to help businesses and residents save energy and generate renewable power at more than half a million locations.

Energy Trust's work provides the cheapest, cleanest energy for utilities and customers, and far-reaching benefits for the economy. Investment in Oregon's clean energy economy over the past 12 years totals $968 million. That investment will produce energy bill savings of $4 billion over time for participating customers. It also provides the most affordable energy available for all customers by helping utilities avoid investment in new and more expensive energy resources. Independent economic analysis shows an additional $3 billion in benefit to Oregon's economy to date from activity related to Energy Trust investments.

Role of the Strategic Plan and Planning Process

Energy Trust programs are guided by a series of five-year strategic plans, required by a grant agreement with the OPUC. These plans establish broad goals and strategies, which are then implemented through two-year action plans and annual budgets.

The strategic planning process is an open and transparent process. Energy Trust presents and invites public engagement and comment on the draft strategic plan at board and advisory council meetings, at public outreach events in communities across the state and through

[1] In this document, the phrase energy efficiency is used throughout and is inclusive of energy-efficient equipment, energy conservation activities and energy management strategies.

Energy Trust's website, www.energytrust.org. Public comments are considered by the board and help shape the final strategic plan. This process gives Energy Trust stakeholders and interested citizens an opportunity to guide the organization's broad direction.

In this plan, Energy Trust describes its long-term vision, goals and strategies, building on the results and success of the last 12 years.

Context

This draft strategic plan for the 2015-2019 timeframe emerges from a specific context.

The pace at which Energy Trust energy-efficiency programs delivered savings changed significantly after 2008. In 2013, Energy Trust programs saved twice as much electric energy (58 average megawatts) as they did in 2009 (27 aMW). This doubling in annual savings was made possible by the passage of SB 838, which allowed the electric utilities to supplement funding for electric efficiency, beyond the 3 percent charge established in Energy Trust's enabling legislation, to acquire all cost-effective energy efficiency identified in their long-term planning processes.

Natural gas savings also increased from 2.7 million annual therms in 2009 to 5.3 MMTh in 2013 as Energy Trust programs matured and expanded to address the needs of more customers and closely align with utility long-term planning. Also, in 2009 Energy Trust and NW Natural entered into agreements to provide program offerings for a portion of NW Natural industrial demand-side management customers and for NW Natural customers in southwest Washington.

With the passage of SB 838 and the expanded gas efficiency agreements, Energy Trust's goals were set to acquire cost-effective energy efficiency as determined within utility long-term planning. Prior to that, goals were limited by funding and not by opportunity. Achieving this higher level of performance required a focused effort to diversify and refine Energy Trust programs, generate faster feedback from participants on program effectiveness, process more incentives and serve more customers with strategies tailored to meet their needs. It also required a larger annual budget and expenditures, bringing Energy Trust's expenditures for energy efficiency to $117 million in 2013, as compared to $63 million in 2008.

The context for renewable energy is different. SB 838 redirected renewable energy funds to projects of 20 megawatts (MW) and less in size, and shifted responsibility for larger renewable project investment into the realm of the utilities, requiring them to meet a mandatory renewable energy standard. The law also adopted a goal for the state to meet at least 8 percent of retail electrical load from small-scale renewable energy projects. Though the focus was modified, Energy Trust funding for renewable energy was unchanged. It continued to be an increment of the 3 percent charge required by SB 1149, equal to a budget of approximately $13 million per year.

From 2009 through the end of 2013, Energy Trust supported small and mid-scale renewable energy project installations generating 15.27 aMW. While significant, this falls short of meeting Energy Trust's 2010-2014 strategic goal of 23 aMW for renewable energy and reflects significant market challenges facing renewable project development in recent years. In 2011, the State of Oregon significantly trimmed its longstanding renewable energy tax credits. Since most renewable generation projects leveraged both Energy Trust incentives and state tax credits, the absence of the tax credits significantly reduced Energy Trust's market leverage. After the reduction in state energy tax credits, Energy Trust re-geared its renewable energy

programs to provide more early-stage support for smaller projects. Helping these projects to launch continues to hinge on a combination of Energy Trust programs, government programs and subsidies, and larger economic and market forces.

Participants in Energy Trust energy efficiency and renewable energy programs have magnified the economic impact of Energy Trust investments. For example, in 2013 $117 million in Energy Trust efficiency investment leveraged an additional $125 million in investment by home and business owners. Every dollar of Energy Trust investment in renewable projects leveraged an additional $5 investment by home and business owners. These investments have helped expand private-sector businesses—a network of delivery contractors and trade ally contractors that delivers efficiency and renewable energy projects directly to customers.

As markets have changed and new opportunities have emerged, Energy Trust and its trade allies have made significant adjustments—emphasizing customer focus, innovation, productivity gains, quality assurance and collaboration. Energy Trust has built and leveraged important relationships, working closely and strategically with its affiliated utilities to communicate to their customers, and has engaged in collaborative efforts with local, state, regional and national entities to achieve goals.

The result, now rooted in many years of practice, is an approach widely supported by government, utilities, business and interest groups that produces clean, reliable and affordable energy. Energy Trust has been repeatedly recognized by the U.S. Environmental Protection Agency, U.S. Department of Energy, American Council for an Energy-Efficient Economy, Clean Energy States Alliance, Oregon Business and others for program design innovation and organizational leadership. This proven approach and the organization's culture of continuous improvement are the basic assets leveraged in this strategic plan.

2015-2019 Strategic Plan

Vision

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.

Purpose

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

Goals

1. Energy Efficiency

Long-term energy-efficiency goal

- Acquire all achievable, cost-effective energy efficiency for utility customers.

Five-year energy-efficiency goals

- Between 2015 and 2019, save 240 average megawatts (aMW) of electricity.
- Between 2015 and 2019, save 24 million annual therms (MMTh) of natural gas.

To derive 2015-2019 energy-efficiency goals, Energy Trust first projected the amount of electricity and natural gas Energy Trust programs could be expected to save between 2015 and 2019 given current funding, known technologies and projected energy costs. The result of this initial calculation was five-year savings of 218 aMW and 22 MMTh. These are ambitious figures but these initial estimates assumed essentially no new energy-efficient technologies, no new large energy-efficiency projects and no regulatory adjustment under current cost-effectiveness criteria.

However, if several promising technologies become cost-effective in the next five years, one or more large electric efficiency opportunities[2] emerge, and the OPUC reinterprets or revises cost-effectiveness criteria, Energy Trust estimates that a total of 243 aMW and 26.5 MMTh could potentially be saved.

Further, none of these estimates account for opportunities that may emerge from external policy changes or market developments. For example, energy efficiency and renewable energy play an important role in proposals relating to achievement of state, regional and national energy, climate and carbon reduction goals. Recently proposed federal rules on carbon emissions from power plants, as an example, envision that energy efficiency will not only be achieved at high savings levels, but that these savings rates will be sustained over the long term. Energy Trust's vision, purpose and funding are not explicitly tied to these

[2] These opportunities are not reflected in current resource assessment modeling, which is not focused on identifying site-specific large energy-efficiency projects (i.e., projects that use over 1 aMW and/or require more than $500,000 in Energy Trust incentives).

policy goals. Nevertheless, such policies are likely to influence demand for energy efficiency and renewable energy, helping push innovation in clean energy and creating new opportunities for Energy Trust to reach and serve customers through collaborative efforts with others.

Given these considerations, Energy Trust proposes 2015-2019 energy-efficiency goals of 240 aMW and 24 MMTh. To reach these goals, Energy Trust assumes that additional energy savings will be found from some combination of new technology, unforeseen large energy-efficiency projects, regulatory cost-effectiveness adjustments and opportunities driven by external policy changes.

Energy Trust manages risk associated with these goals in several ways: Monitoring and evaluation help programs to adjust if performance falls short and/or unexpected opportunities emerge. A portfolio of programs offers diverse ways to make these adjustments. New market, legal or regulatory developments are factored into annual utility funding discussions and Energy Trust budgets.

Energy Trust believes these goals and risk mitigation tools balance opportunity and risk reasonably. Strategic goals should push Energy Trust and others to maximize savings for customers and utilities and help Oregon achieve state energy and resource goals, and the organization believes these goals will do so.

The following graphs show Energy Trust's accumulated annual historic savings and projections for annual savings for 2014 and over the 2015-2019 Strategic Plan period based on the goals the organization will aspire to reach. These goals are each 12 percent less than 2010-2014 accomplishments, which reflect the increased complexities in acquiring savings. Over the five-year period, these goals are expected to meet 80 percent of projected PGE and Pacific Power load growth. Combined, Energy Trust electric and gas savings are expected to deliver 25 percent of the reduction in carbon dioxide needed to meet Oregon's 2020 emissions reduction goal.

Figure 1. Cumulative Electric Savings

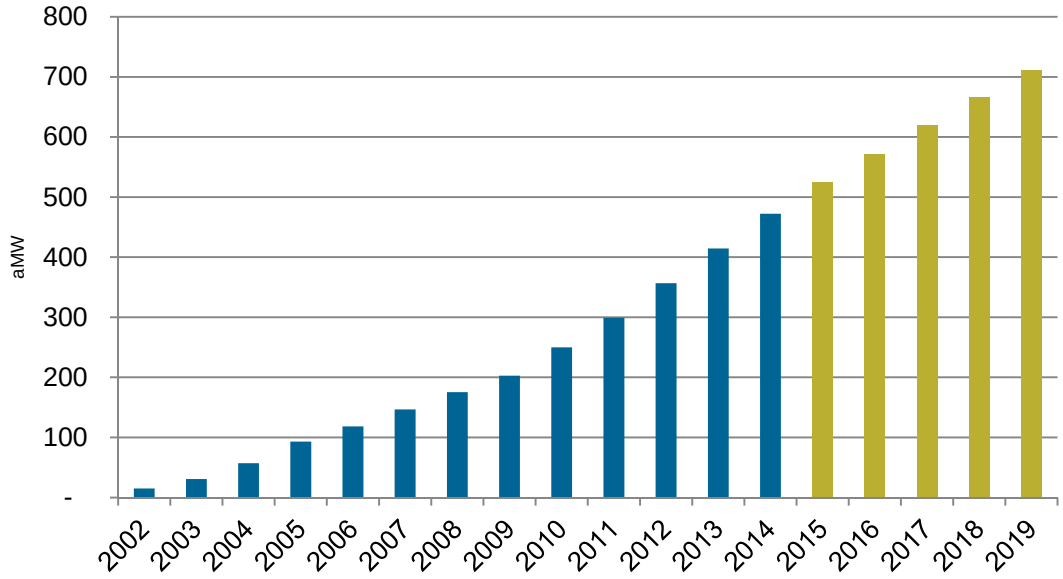
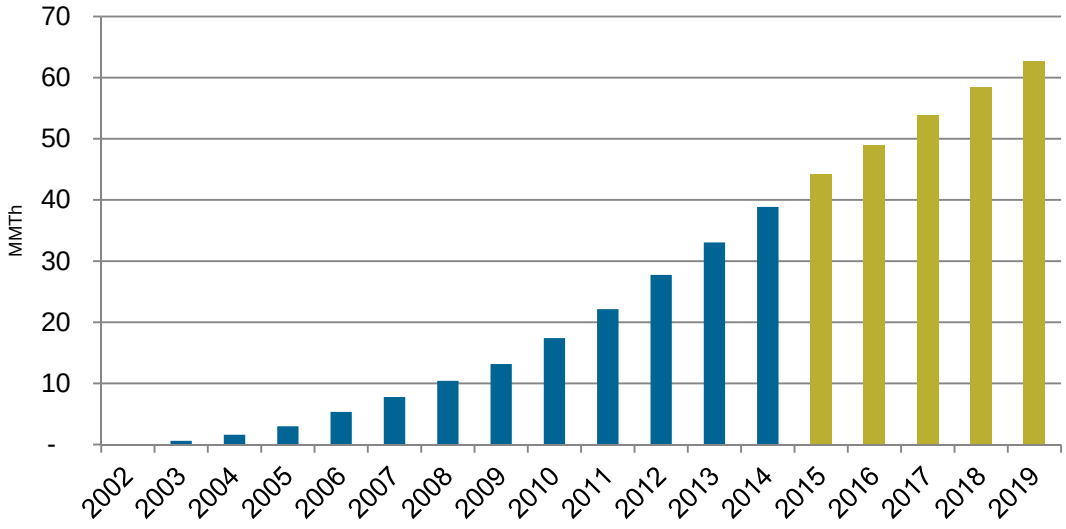


Figure 2. Cumulative Natural Gas Savings



2. Renewable Energy

Long-term renewable energy goal

- Accelerate the pace at which new, small and mid-scale renewable energy projects (20 MW or less in size) are completed to help Oregon achieve its 2025 goal of meeting at least 8 percent of retail electrical load from small-scale renewable energy projects.

Five-year renewable energy goals

- Sustain a vibrant small and mid-scale renewable generation market that produces continual growth in project installations across all five eligible technologies.
- Between 2015 and 2019, install 10 aMW of renewable energy.

To derive 2015-2019 renewable energy goals, Energy Trust referenced goals and strategies detailed in the 2010-2014 Strategic Plan and subsequent adjustments made in 2012 and 2013 based on changes in state and federal policy affecting renewable market dynamics. In addition, by the end of 2013 Energy Trust's accumulated renewable energy funding due to lower expenditures in earlier program years had been spent down to support projects, effectively reducing annual budgets. The 2015-2019 goals reflect the projected funding and rebalance the focus of renewable energy programs from primarily emphasizing project incentives at operation to a greater role in market support and development. This rebalance is reflected in a lower numeric goal for installed generation and greater emphasis on technical support to lower the cost of renewable energy development and leverage new sources of capital from other sources.

3. Operations

Five-year operations goals

- Align internal operations and management to efficiently support Energy Trust strategic goals and objectives, optimizing resources and systems and maintaining an effective, open, transparent and accountable business.
- Sustain a culture of highly engaged staff.

To derive the 2015-2019 operations goals, Energy Trust identified cross-cutting, high-level principles for Energy Trust operations and management. The goal emphasizes the efficient and effective investment of utility customer funds to achieve energy efficiency and renewable energy goals and uphold high standards for operational productivity and stewardship. It drives a responsible, transparent and accountable organization, one adaptable to new approaches and ways of conducting business in support of the overall strategic vision and purpose.

Strategies

During the early stages of the strategic planning process, Energy Trust explored how to build on accomplishments and strengths. These early discussions, along with ongoing input from Energy Trust staff, helped identify strategies to ensure strategic goals are met. The utility of these strategies will be tracked against metrics that will be established once the plan is approved.

1. Energy Efficiency

- Continuously improve program designs and services to meet customer needs and provide excellent customer service
    - Invest in market research necessary to better understand current and evolving needs of specific market segments
    - Leverage low-cost metering and data analysis to allow customers to better manage their energy use
    - Help build and support a strong delivery market infrastructure to best serve customer needs with energy-efficiency options
    - Foster relationships with repeat customers, achieving deep, cost-effective savings over time
    - Manage energy-efficiency services for large energy users to make best use of available funding
    - Effectively communicate the value of energy efficiency to customers
- Manage the total cost of delivering energy efficiency to maintain and improve the supply of cost-effective measures
    - Identify and optimize cost efficiencies in Energy Trust internal delivery costs and costs for trade allies in working with Energy Trust programs
    - Employ alternative supply chain incentives: motivate retailers, distributors and contractors to promote efficient products by providing incentives to them directly, taking advantage of better leverage of wholesale prices
    - Increase participants' awareness of the financial case for efficiency investments
- Expand customer participation
    - Invest in research necessary to understand where participation gaps exist
    - Focus first on groups with significant savings potential and strong opportunities to increase uptake

    - Explore new delivery approaches to meet needs cost effectively, leveraging trade, program and lending allies to work in local communities
    - Increase awareness and engagement, working with communities, representative organizations and utilities to help identify and reach new markets
- Replenish the energy-efficiency resource in the mid- to-long-term through a portfolio of new technologies and product development strategies:
    - Incorporate Northwest Energy Efficiency Alliance work on emerging technology and product development into Energy Trust program delivery strategies, and stay engaged to save energy as technologies evolve
    - Identify, test, cull and refine new technologies, innovative measures and approaches with longer-term energy-saving potential of five years and beyond, e.g., advanced water heaters, condensing commercial rooftop furnaces, more advanced windows
    - Accelerate and refine exploration of behavioral strategies, building on successful strategies
    - Lower the cost of promising approaches that are now too costly and work to achieve persistent savings

Balancing strategies

These energy-efficiency strategies have different implications for different sectors and the role of any given strategy is likely to vary with changes in markets, cost-effectiveness policies and other developments. For example, the strategies of continuously improving program designs and services to meet customer needs and provide excellent customer service may at times be difficult to sustain while also implementing the strategy of managing the total cost of delivering energy efficiency. Moreover, Energy Trust does not assume additional revenues for the coming five years, and some of these strategies can be expected to compete for funding.

To balance these potentially conflicting directions, we need to evaluate tradeoffs and find innovative ways to continue supporting customers while reducing delivered costs of programs. To account for these factors, Energy Trust will use ongoing planning, budgeting and management processes to balance and make adjustments among and between strategies. Sector managers will develop plans adapting the strategies for industrial, commercial and residential sectors. Planning staff will bring the strategies into utility Integrated Resource Planning, and annual budgets will allocate funding to specific programs and activities. At each point, current information, professional judgment and stakeholder input will help balance strategies.

2. Renewable Energy

- Support all eligible renewable energy technologies, including hydropower, geothermal, biopower, wind and solar
    - Maintain flexibility to shift resources from or between technologies to capitalize on market opportunities
- Emphasize market and project development support for renewable energy projects
    - Focus on improving project performance, for example:
        - Reduce solar soft costs such as customer acquisition and permitting
        - Reduce operations and maintenance costs for biopower projects
        - Utilize experience gained and lessons learned from completed projects to help future projects

    - Collaborate with other organizations, potential investors or lenders to attract and facilitate supplemental funding, new financing models and assistance
    - Engage with key market actors, utilities and other organizations to find additional opportunities for providing market assistance and building the pipeline of projects
- Use competitive approaches to identify and fund new projects and market solutions for those projects receiving non-standard incentives

3. Cross-Cutting Strategies for All Energy Programs

- Continuously improve program delivery efficiencies
    - Continue focus on customer service and delivering customer benefits
    - Effectively support and leverage Program Management Contractors, Program Delivery Contractors and trade and program allies to efficiently achieve strategic energy goals
    - Capture opportunities for program delivery efficiency gains through automation and ongoing Information Technology systems development and support
    - Align outreach activities to support program strategies and strategic opportunities
- Continue to employ an open, transparent annual budget and two-year action planning process, engaging utilities, the OPUC, the board of directors, advisory councils and other stakeholders
- Maintain flexibility to pursue government, utility and other relationships and carry out complementary initiatives
    - Remain poised and ready to respond to new state and national policy initiatives that could promote and complement clean energy development
    - Track and report Energy Trust contribution to achieving state and federal greenhouse gas emission goals
    - Collaborate as appropriate with utility-led peak load management programs
- Formulate and establish effective strategic partnerships and relationships with community leaders and organizations in support of energy efficiency and renewable energy goals. Focus such collaborations on organizations with:
    - Common interests and mutual benefits
    - Resources with which to support collaborative investments
    - Demonstrated ability to jointly collaborate and deliver mutual benefits and results
- Explore projects with benefits that align with the priorities of governments and other organizations, e.g., projects with energy and water benefits, biopower projects that help manage waste streams, and projects that save energy and transportation fuel

4. Operations

- Continuously improve internal operations
    - Employ and improve efficient business practices and systems to free up resources to achieve strategic energy efficiency and renewable energy goals
    - Where possible, establish benchmarks and measurement tools to evaluate business and operations efficiency and productivity gains and reflect these in annual budgets and two-year action plans
    - Manage risks flexibly and sensibly by hedging significant operational and program design risks
      Optimize planning and evaluation processes, services and communications to support program strategies

- Address key recommendations of the most current Management Review and capitalize on other opportunities to strengthen operational effectiveness, particularly related to administrative costs, staffing, organization structure and enhancements to the budget process and reporting
    - Establish metrics for strategies and evaluate progress toward goals, to be reflected in annual reports
    - Establish and implement a succession plan for executive and senior management
- Maintain flexibility in operations to help programs leverage local, state and national policy initiatives spurring activity in energy efficiency and renewable energy

World Café

The World Cafe

Dialogue for large and small groups

The World Café is a method for creating a living network of collaborative dialogue around questions that matter in real life situations. It is a provocative metaphor...as we create our lives, our organizations, and our communities, we are, in effect, moving among 'table conversations' at the World Café. (From The World Café Resource Guide)

www.theworldcafe.com

What is World Café Good For?

A World Café is a great way of fostering interaction and dialogue with both large and small groups. It is particularly effective in surfacing the collective wisdom of large groups of diverse people. The café format is very flexible and adapts to many different purposes – information sharing, relationship building, deep reflection exploration and action planning.

When planning a café, make sure to leave ample time for both moving through the rounds of questions (likely to take longer than you think!) and some type of whole-group harvest.

Operating Principles of World Cafe:

- Create hospitable space
- Explore questions that matter
- Encourage each person's contribution
- Connect diverse people and ideas
- Listen together for patterns, insights and deeper questions
- Make collective knowledge visible

Assumptions of World Cafe:

- The knowledge and wisdom we need is present and accessible.
- Collective insight evolves from honoring unique contributions; connecting ideas; listening into the middle; noticing deeper themes and questions.
- The intelligence emerges as the system connects to itself in diverse and creative ways.

General Flow of a World Café:

- Seat 4-5 people at café-style tables or in conversation clusters.
- Set up progressive rounds of conversation, usually of 20-30 minutes each – have some good questions!
- Ask one person to stay at the table as a "host" and invite the other table members to move to other tables as ambassadors of ideas and insights
- Ask the table host to share key insights, questions, and ideas briefly to new table members, and then let folks move through the rounds of questions.
- After you've moved through the rounds, allow some time for a whole-group harvest of the conversations.

Cafe Etiquette

- Focus on what matters
- Listen to understand
- Contribute your thinking
- Speak your mind and heart
- Link and connect ideas
- Listen together for themes, insights, and deeper questions
- Play, Doodle, Draw - HAVE FUN!

Materials Needed:

- Small tables (36-42"), preferably round
- Chairs for participants and presenters
- Tablecloths
- Flip chart paper or paper placemats for covering the tables
- Markers
- Flip chart or large butcher paper for harvesting collective knowledge or insights
- Posters/Table Tents of Café Etiquette
- Materials for harvest

(The above info adapted from Café to Go at: www.theworldcafe.com)

Speaker Bio

Ann R. Kohler
14912 NE Newport St. Portland, OR. 97230
annkohler@comcast.net
(503) 349-1471 c

Diverse background in private and public sector organizations. People-oriented leader helping organizations achieve their goals. Management style adapts to produce strategic solutions and timely results. Effective community relations and customer-oriented outcomes supporting organizational planning and development.

Professional Experience

Interim Executive Transition Management-NAO & private practice 2006- 2015
Private practice 1992-1994

Provide full range of executive management services to non-profit organizations in transition to achieve demonstrable board and staff driven goals. Provide assessment of agency administrative systems and executive search services, as desired.

- Film Action Oregon-Hollywood Theater
- The Center Against Rape and Domestic Violence, (CARDV)
- YWCA of Greater Portland-a large multi service agency
- Southeast Uplift Neighborhood Coalition-a 20 neighborhood association body
- Oregon Coalition Against Domestic and Sexual Violence-a statewide coordinating body
- Council for the Homeless-a community advocacy and coordination agency
- Westwind Stewardship Group-a retreat center focused on conservation/outdoor education
- Neighborhood Economic Development Corporation, (NEDCO)
- Peninsula Children's Center-a large inner-city childcare center
- Oregon Child Development Coalition-statewide migrant Head Start programs
- River Network-Executive search services for this national organization based in Portland
- Domestic Violence Prevention Fund-executive committee determining final funding
- City of Portland-mentor for candidate in the leadership training institute

City of Portland Bureau of Development Services 1994 – 2006
Divisional Manager: Information Technology, Compliance Programs and Site Development 00-06

Manage 70 full time staff conducting plan review, inspections, public education and investigation work for Site Development and Compliance Services programs. Information Technology staff provided development, maintenance and help desk functions for city-wide development services software.
Responsible for developing and implementing work plans and budgets for personnel who have a high degree of public and interagency contact. Managed all aspects of human resources issues for three distinct work units.

Key achievements:

- Revamped Compliance Programs to provide enhanced customer service and achieve improved compliance through effective communication.
- Led the development, integration and ongoing improvements of business specific software systems for seven city agencies.
- Oversaw the creation of new billing system to serve large institutional customers.

- Charter member of first labor management committee which improved working relationships between management and three labor groups, reducing grievances by 67%

Communications Manager 94-99

Directed writing and production of public agency information materials, including a customer oriented newsletter, distributed bi-monthly to more than 2,500. Spokesperson and media relations manager for 300 employees. Managed public procurement process and subsequent development of permit tracking software system used by more than 650 city and county employees and private sector partners. Supervised Information Technology staff and facilitated the bureau's presence on the Internet.

Key Achievements:

- Created, implemented and updated bureauwide media communications strategies
- Facilitated policy alignment strategy development among six City agency heads
- Developed and implemented City "4000" urban services information and referral hotline

Private/Public Sector Consulting Practice 1989 - 1994, 2006 - 2012

Practice focuses on non-profit organizational management, executive coaching services, government/community development and strategic planning activities for clients. Designed and implemented multiple series of citizen trainings for area jurisdictions. Acted as campaign manager for city council and state senate races. Clients included Transition Projects, Office of Neighborhood Associations, YWCA, Oregon Coalition Against Domestic and Sexual Violence, Bureau of Housing and Community Development, State of Washington, Oregon Stealheaders Association, Shelter From the Storm, The Council for the Homeless, Westwind Stewardship Group, and various organizations and jurisdictions in Washington and Oregon.

YWCA of Greater Portland 1978 – 1988

Associate Executive Director 85-89
Women's Resource Center Director 78-84

Management oversight of $2.5 million community non-profit with four sites. Responsibilities included hiring, training, and supervision of 70 staff. Management representative for labor relations. Primary program promotion for this multi service agency. Facilities management, oversight of budget preparation and liaison to community, funders and other agencies.

Key achievements:

- Expanded services to include crisis shelter, counseling and walk in day center for senior women
- Founded women's residential transition services from criminal justice system
- Developed special events, information and referral and career services.
- Coordinated major capital improvements at multiple sites
- Developed senior management team for improved agency management
- Brokered multiple agency agreements for public and foundation grants
- Led key government relations activities for agency
- Maximized board/staff relations to meet organizational mission

Retail Management 1970-1978

Merchandising buyer for three national retail chains. Emphasized promotion, customer service, market trend analysis and retail staff incentive programs.

Glossary

Glossary of Energy Industry Terms

Glossary provided to the Energy Trust Board of Directors for general use. Definitions and acronyms are compiled from a variety of resources. Energy Trust policies on topics related to any definitions listed below should be referenced for the most up-to-date and comprehensive information. Last updated May 2014.

Above-Market Costs of New Renewable Energy Resources
The portion of the net present value cost of producing power (including fixed and operating costs, delivery, overhead and profit) from a new renewable energy resource that exceeds the market value of an equivalent quantity and distribution (across peak and off-peak periods and seasonally) of power from a nondifferentiated source, with the same term of contract. Energy Trust board policy specified the methodology for calculating above-market costs.

Aggregate
Combining retail electricity consumers into a buying group for the purchase of electricity and related services. “Aggregator” is an entity that aggregates.

Air Sealing (Infiltration Control)
Conservation measures, such as caulking, better windows and weatherstripping, which reduce the amount of cold air entering or warm air escaping from a building.

Ampere (Amp)
The unit of measure that tells how much electricity flows through a conductor. It is like using cubic feet per second to measure the flow of water. For example, a 1,200 watt, 120-volt hair dryer pulls 10 amperes of electric current (watts divided by volts).

Anaerobic Digestion
A biochemical process by which organic matter is decomposed by bacteria in the absence of oxygen, producing methane and other byproducts.

Average Megawatt (aMW)
One megawatt of capacity produced continuously over a period of one year. 1 aMW equals 1 megawatt multiplied by the 8,760 hours in a year. 1 aMW equals 8,760 MWh or 8,760,000 kWh.

Avoided Cost
(Regulatory) The amount of money that an electric utility would need to spend for the next increment of electric generation they would need to either produce or purchase if not for the reduction in demand due to energy-efficiency savings or the energy that a co-generator or small-power producer provides. Federal law establishes broad guidelines for determining how much a qualifying facility (QF) gets paid for power sold to the utility.

Base Load
The minimum amount of electric power delivered or required over a given period of time at a steady rate.

Benefit/Cost Ratios
By law, Oregon public purpose funds may be invested only in cost-effective energy-efficiency measures—that is, efficiency measures must cost less than acquiring the energy from conventional sources, unless exempted by the OPUC.

Energy Trust calculates Benefit/Cost ratios (BCR) on a prospective and retrospective basis. Looking forward, all prescriptive measures and custom projects must have a total resource cost test BCR > 1.0 unless the OPUC has approved an exception. As required in the OPUC grant agreement, Energy Trust reports annually how cost effective programs were by comparing total costs to benefits, which also need to exceed 1.0.

Biomass
Solid organic wastes from wood, forest or field residues which can be heated to produce energy to power an electric generator.

Biomass Gas
A medium Btu gas containing methane and carbon dioxide, resulting from the action of microorganisms on organic materials such as a landfill.

Blower Door
Home Performance test conducted by a contractor (or energy auditor) to evaluate a home's air tightness. During this test a powerful fan mounts into the frame of an exterior door and pulls air out of the house to lower the inside air pressure. While the fan operates, the contractor can determine the house's air infiltration rate and better identify specific leaks around the house.

British Thermal Unit
The standard measure of heat energy. The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit).

Cogeneration (Combined Heat & Power or CHP)
The sequential production of electricity and useful thermal energy, often by the recovery of reject heat from an electric generating plant for use in industrial processes, space or water heating applications. Conversely, may occur by using reject heat from industrial processes to power an electricity generator.

Compact Fluorescent Light Bulbs (CFL)
CFLs combine the efficiency of fluorescent lighting with the convenience of a standard incandescent bulb. There are many styles of compact fluorescent, including exit light fixtures and floodlights (lamps containing reflectors). Many screw into a standard light socket, and most produce a similar color of light as a standard incandescent bulb.

CFLs come with ballasts that are electronic (lightweight, instant, no-flicker starting, and 10–15 percent more efficient) or magnetic (much heavier and slower starting).Other types of CFLs include adaptive circulation and PL and SL lamps and ballasts. CFLs are designed for residential uses; they are also used in table lamps, wall sconces, and hall and ceiling fixtures of hotels, motels, hospitals and other types of commercial buildings with residential-type applications.

Conservation
While not specifically defined in the law or OPUC rules on direct access regulation, "conservation" is defined in the OPUC rule 860-027-0310(1)(a) as follows: Conservation means any reduction in electric power or natural gas consumption as the result of increases in efficiency of energy use, production or distribution. Conservation also includes cost-effective fuel switching.

Although fuel switching is part of the definition, this aspect of the rule has not been operationalized as of March 2013.

Cost Effective
Not specifically defined in SB 1149. The OPUC has a definition which refers to a definition from ORS 469.631 (4) stating that an energy resource, facility or conservation measure during its life cycle results in delivered power costs to the ultimate consumer no greater than the comparable incremental cost of the least-cost alternative new energy resource, facility or conservation measure. Cost comparison under this definition shall include but not be limited to: (a) cost escalations and future availability of fuels; (b) waste disposal and decommissioning cost; (c) transmission and distribution costs; (d) geographic, climatic and other differences in the state; and (e) environmental impact. ORS 757.612 (4) (SB 1149) exempts utilities from the requirements of ORS 469.631 to 469.645 when the public purpose charge is implemented.

By law, Oregon public purpose funds may be invested only in cost-effective energy-efficiency measures—that is, efficiency measures must cost less than acquiring the energy from conventional sources, unless exempted by the OPUC.

Cumulative Savings
Sum of the total annual energy savings over a certain time frame while accounting for measure savings "lives." (For example, if a measure is installed for each of two years, the cumulative savings would be the sum of the measure installed in the first year, plus the incremental savings from the savings installed in the second year plus the savings in the second year from the measure installed in the first year.)

Decoupling
A rate provision which reduces or eliminates the degree to which utility profits are driven by the volume of electricity or gas sold. Decoupling is thought by its proponents to reduce utility disincentives to support efficiency. There are many specific variants employed in different states and with different utilities.

Direct Access
The ability of a retail electricity consumer to purchase electricity and certain ancillary services from an entity other than the distribution utility.

Economizer Air
A ducting arrangement and automatic control system that allows a heating, ventilation and air conditioning (HVAC) system to supply up to 100 percent outside air to satisfy cooling demands, even if additional mechanical cooling is required.

Energy Management System (EMS)
A system designed to monitor and control building equipment. An EMS can often be used to monitor energy use in a facility, track the performance of various building systems and control the operations of equipment.

ENERGY STAR®
ENERGY STAR is a joint Environmental Protection Agency and Department of Energy program that encourages energy conservation by improving the energy efficiency of a wide range of consumer and commercial products, enhancing energy efficiency in buildings and promoting energy management planning for businesses and other organizations.

Energy Use Intensity (EUI)
A metric that describes a building's energy use relative to its size. It is the total annual energy consumption (kBtu) divided by the total floor space of the building. EUI varies significantly by building type and by the efficiency of the building.

Enthalpy
Enthalpy is the useful energy or total heat content of a fluid. Ideally, the total enthalpy of a substance is the amount of useful work that substance can do. Enthalpy is used in fluid dynamics and thermodynamics when calculating properties of fluids as they change temperature, pressure and phase (e.g. liquid to liquid-vapor mixture). In HVAC, refrigeration and power cycle processes, enthalpy is used extensively in calculating properties of the refrigerant or working fluid. Additionally, in HVAC applications, enthalpy is used in calculations relating to humidity. An enthalpy economizer is a piece of HVAC equipment that modulates the amount of outdoor air entering into a ventilation system based on outdoor temperature and humidity.

Environmental Protection Agency (EPA)
Founded in 1970, this independent agency was designed to "protect human health and safeguard the natural environment." It regulates a variety of different types of emissions, including the greenhouse gases emitted in energy use. It runs several national end-use programs, like ENERGY STAR, SmartWay, Smart Growth programs and green communities programs.

Evaluation
After-the-fact analysis of the effectiveness and results of programs. *Process and Market Evaluations* study the markets to be addressed and the effectiveness of the program strategy, design and implementation. They are used primarily to improve programs. *Impact evaluations* use post-installation data to improve estimates of energy savings and renewable energy generated.

Feed-in Tariff
A renewable energy policy that typically offers a guarantee of payments to project owners for the total amount of renewable electricity they produce; access to the grid; and stable, long-term contracts.

Footcandle
A unit of illuminance on a surface that is one foot from a uniform point source of light of one candle and is equal to one lumen per square foot

Free Rider
This evaluation term describes energy efficiency program participants who would have taken the recommended actions on their own, even if the program did not exist. Process evaluations include participant survey questions, which lead to the quantification of the level of free rider impacts on programs that is applied as a discounting factor to Energy Trust reported results.

Geothermal
Useful energy derived from the natural heat of the earth as manifested by hot rocks, hot water, hot brines or steam.

Green Tags (Renewable Energy Credits or RECs)
A Green Tag is a tradable commodity that represents the contractual rights to claim the environmental attributes of a certain quantity of renewable electricity. For wind farms, the environmental attributes include the reductions in emissions of pollutants and greenhouse gases that result from the delivery of the wind-generated electricity to the grid.

Here's how emission reductions occur: When wind farms generate electricity, the grid operators allow that electricity to flow into the grid because it is less expensive to operate, once it has been built, than generators that burn fossil fuels. But the electricity grid cannot have more electricity flowing into it than is flowing out to electricity users, so the grid operators have to turn down other generators to compensate. They generally turn down those that burn fossil fuels. By forcing the fossil fuel generators to generate less electricity, wind farms cause them to generate fewer emissions of pollutants and greenhouse gases. These reductions in emissions are the primary component of Green Tags.

Green Tags were developed as a separate commodity by the energy industry to boost construction of new wind, solar, landfill gas and other renewable energy power plants. Green Tags allow owners of these power plants to receive the full value of the environmental benefits their plants generate. They also allow consumers to create the same environmental benefits as buying green electricity, or to neutralize the pollution from their consumption of fossil fuels.

Green Tags are bought and sold every day in the electricity market. Tens of millions of dollars in Green Tags are under contract today. They are measured in units, like electricity. Each kilowatt hour of electricity that a wind farm produces also creates a one-kilowatt hour Green Tag. Wind farm owners may sell Green Tags to other purchasers, remote or local, to obtain the extra revenues they need for their wind farms to be economically viable.

Gross Savings
Savings that are unadjusted for evaluation factors of free riders, spillover, and savings realization rates. Energy Trust reports all savings in net terms, not gross terms, unless otherwise stated in the publication.

Heat Pump
An HVAC system that works as a two-way air conditioner, moving heat outside in the summer and scavenging heat from the cold outdoors with an electrical system in the winter. Most use forced warm-air delivery systems to move heated air throughout the house.

Heating, Ventilation and Air Conditioning (HVAC)
The mechanical systems that provide thermal comfort and air quality in an indoor space are often grouped together because they are generally interconnected. HVAC systems include: central air conditioners, heat pumps, furnaces, boilers, rooftop units, chillers and packaged systems.

Hydroelectric Power (Hydropower)
The generation of electricity using falling water to turn turbo-electric generators.

Incremental Annual Savings
Energy savings in one year corresponding to the energy-efficiency measures implemented in that same year.

Incremental Cost
The difference in cost relative to a base case, including equipment and labor cost.

Instant-savings Measure (ISM)
Inexpensive energy-efficiency products installed at no charge, such as CFLs, low-flow showerheads and high-performance faucet aerators. Predominately used by the Existing Homes program and multifamily track to provide homeowners and renters with easy-to-install, energy-saving products.

Integrated Resources Planning (Least-Cost Planning)
A power-planning strategy that takes into account all available and reliable resources to meet current and future loads. This strategy is employed by each of the utilities served by Energy Trust, and for the region's electric system by the Northwest Power and Conservation Council. The term "least-cost" refers to all costs, including capital, labor, fuel, maintenance, decommissioning, known environmental impacts and difficult to quantify ramifications of selecting one resource over another.

Interconnection
For all distributed generation—solar, wind, CHP, fuel cells, etc.—interconnection with the local electric grid provides back-up power and an opportunity to participate in net-metering and sell-back schemes when they are available. It's important to most distributed generation projects to be interconnected with the grid, but adding small generators at spots along an electric grid can produce a number of safety concerns and other operational issues for a utility. Utilities, then, generally work with their state-level regulatory bodies to develop interconnection standards that clearly delineate the manner in which distributed generation systems may be interconnected.

Joule
A unit of work or energy equal to the amount of work done when the point of application of force of 1 newton is displaced 1 meter in the direction of the force. It takes 1,055 joules to equal a British thermal unit. It takes about 1 million joules to make a pot of coffee.

Kilowatt
One thousand (1,000) watts. A unit of measure of the amount of electricity needed to operate given equipment.

Large Customers (with reference to SB 838)
Customers using more than 1 aMW of electricity a year are not required to pay electric conservation charges under SB 838. Additionally, Energy Trust may not provide them with services funded under SB 838 provisions.

Least Cost
The term "least-cost" refers to all costs, including capital, labor, fuel, maintenance, decommissioning, known environmental impacts and difficult to quantify ramifications of selecting one resource over another.

Levelized Cost
The level of payment necessary each year to recover the total investment and interest payments (at a specified interest rate) over the life of the measure.

Local Energy Conservation
Conservation measures, projects or programs that are installed or implemented within the service territory of an electric company.

Low-income Weatherization
Repairs, weatherization and installation of energy-efficient appliances and fixtures for low-income residences for the purpose of enhancing energy efficiency. In Oregon, SB 1149 directs a portion of public purpose funds to Oregon Housing and Community Services to serve low-income customers. Energy Trust coordinates with low-income agencies and refers eligible customers.

Lumen
A measure of the amount of light available from a light source equivalent to the light emitted by one candle.

Lumens/Watt
A measure of the efficacy of a light fixture; the number of lumens output per watt of power consumed.

Market Transformation
Lasting structural or behavioral change in the marketplace and/or changes to energy codes and equipment standards that increases the adoption of energy-efficient technologies and practices. Market transformation is defined in the Oregon Administrative Rules.

Megawatt
The electrical unit of power that equals one million watts (1,000 kW).

Megawatt Hour
One thousand kilowatt hours, or an amount of electrical energy that would power approximately one typical PGE or Pacific Power household for one month. (Based on an average of 11,300 kWh consumed per household per year.)

Methane
A light hydrocarbon that is the main component of natural gas and marsh gas. It is the product of the anaerobic decomposition of organic matter, enteric fermentation in animals and is one of the greenhouse gases.

Monitoring, Targeting and Reporting (MT&R)
A systematic approach to measure and track energy consumption data by establishing a baseline in order to establish reduction targets, identify opportunities for energy savings and report results.

Municipal Solid Waste
Refuse offering the potential for energy recovery. Technically, residential, institutional and commercial discards. Does not include combustible wood by-products included in the term “mill residue.”

Net Metering
An electricity policy for consumers who own (generally small) renewable energy facilities (such as wind, solar power or home fuel cells). "Net," in this context, is used in the sense of meaning "what remains after deductions." In this case, the deduction of any energy outflows from metered energy inflows. Under net metering, a system owner receives retail credit for at least a portion of the electricity they generate.

Net-to-Gross
Net-to-gross ratios are important in determining the actual energy savings attributable to a particular program, as distinct from energy efficiency occurring naturally (in the absence of a program). The net-to-gross ratio equals the net program load impact divided by the gross program load impact. This factor is applied to gross program savings to determine the program's net impact.

Net Savings
Savings that are adjusted for evaluation factors of free riders, spillover and savings realization rates. Energy Trust reports all savings in net terms, not gross terms, unless otherwise stated in the publication.

Nondifferentiated Source (Undifferentiated Source)
Power available from the wholesale market or delivered to retail customers.

Non-energy Benefit (NEB)
The additional benefits created by an energy-efficiency or renewable energy project beyond the energy savings or production of the project. Non-energy benefits often include things like water and sewer savings (e.g. clothes washers, dishwashers), improved comfort (e.g. air sealing, windows), sound deadening (e.g. insulation, windows), property value increase (e.g. windows, solar electric), improved health and productivity and enhanced brand.

Path to Net Zero Pilot (PTNZ)
The Path to Net Zero pilot was launched in 2009 by Energy Trust's New Buildings program to provide increased design, technical assistance, construction, and measurement and reporting incentives to commercial building projects that aimed to achieve exceptional energy performance. Approximately 13 buildings worked with New Buildings to develop strategies to save 60 percent more energy than Oregon's already stringent code through a combination of 50 percent energy efficiency and 10 percent renewable power. The pilot demonstrates that a wide range of buildings can achieve aggressive energy goals using currently available construction methods and technology, as well as by testing innovative design strategies.

Photovoltaic
Direct conversion of sunlight to electric energy through the effects of solar radiation on semi-conductor materials. Photovoltaic systems are one type of solar system eligible for Energy Trust incentives.

Public Utility Commissions
State agencies that regulate, among others, investor-owned utilities operating in the state with a protected monopoly to supply power in assigned service territories.

Public Utility Regulatory Act of 1978 (PURPA)
Federal legislation that requires utilities to purchase electricity from qualified independent power producers at a price that reflects what the utilities would have to pay for the construction of new generating resources. The Act was designed to encourage the development of small-scale cogeneration and renewable resources.

Qualifying Facility (QF)
A power production facility that generates its own power using cogeneration, biomass waste, geothermal energy, or renewable resources, such as solar and wind. Under PURPA, a utility is required to purchase power from a QF at a price equal to that which the utility would otherwise pay to another source, or equivalent to the cost if it were to build its own power plant.

Renewable Energy Resources
a) Electricity-generation facilities fueled by wind, waste, solar or geothermal power or by low-emission nontoxic biomass based on solid organic fuels from wood, forest and field residues
b) Dedicated energy crops available on a renewable basis
c) Landfill gas and digester gas
d) Hydroelectric facilities located outside protected areas as defined by federal law in effect on July 23, 1999

Renewable Portfolio Standard
A legislative requirement for utilities to meet specified percentages of their electric load with renewable resources by specified dates, or a similar requirement. May be referred to as Renewable Energy Standard.

Retrofit
A retrofit involves the installation of new, usually more efficient equipment into an existing building or process prior to the existing equipment's failure or end of its economic life. In buildings, retrofits may involve either structural enhancements to increase strength, or replacing major equipment central to the building's functions, such as HVAC or water heating systems. In industrial applications, retrofits involve the replacement of functioning equipment with new equipment.

Roof-top Units (RTU)
Packaged heating, ventilating and air conditioning unit that generally provides air conditioning and ventilating services for zones in low-rise buildings. Roof-top units often include a heating section, either resistance electric, heat pump or non-condensing gas (the latter are called “gas-paks”). Roof-top units are the most prevalent comfort conditioning systems for smaller commercial buildings. Generally small (<10 ton) commodity products, but very sophisticated high-efficiency versions are available, as are units larger than 50 tons.

R-Value
A unit of thermal resistance used for comparing insulating values of different material. It is basically a measure of the effectiveness of insulation in stopping heat flow. The higher the R-Value number, a material, the greater its insulating properties and the slower the heat flow through it. The specific value needed to insulate a home depends on climate, type of heating system and other factors.

SB 1149
The Oregon legislation enacted in 1999 allowing for the creation of a third party, nonprofit organization to receive approximately 74 percent of a 3 percent utility surcharge (public purpose charge) and deliver energy-efficiency and renewable energy programs to the funding Oregon ratepayers of Portland General Electric and Pacific Power. Energy Trust was approved by the OPUC to deliver the services. The rest of the surcharge is distributed to school districts and Oregon Housing and Community Services.

SB 838
SB 838, enacted in 2007, augmented Energy Trust's mission in many ways. Most prominently, it provided a vehicle for additional electric efficiency funding for customers under 1 aMW in load, and restructured the renewable energy role to focus on generation plants that produce less than 20 aMW. SB 838 is also the legislation creating the state's Renewable Portfolio Standard and extended Energy Trust's sunset year from 2012 to 2026.

SBW Consulting, Inc
A consulting firm based in Bellevue, WA, with expertise in facility energy assessments, utility conservation programs and program evaluations.

Sectors
For energy planning purposes, the economy is divided into four sectors: residential, commercial, industrial and irrigation.

Self-Directing Consumers
A retail electricity consumer that has used more than one average megawatt of electricity at any one site in the prior calendar year or an aluminum plant that averages more than 100 average megawatts of electricity use in the prior calendar year, that has received final certification from the Oregon Department of Energy for expenditures for new energy conservation or new renewable energy resources and that has notified the electric company that it will pay the public purpose charge, net of credits, directly to the electric company in accordance with the terms of the electric company's tariff regarding public purpose credits.

Societal Cost
Similar to the total resource cost as including the full cost to install a measure including equipment, labor and Energy Trust cost to administer and deliver the program, societal cost also includes any costs beyond those realized by the participant and Energy Trust associated with the energy-saving project. Typically additional societal benefits are seen with energy-efficiency projects that can be difficult to quantify and include in the Societal Cost Test for cost effectiveness.

Solar Power
Using energy from the sun to make electricity through the use of photovoltaic cells.

Solar Thermal
The process of concentrating sunlight on a relatively small area to create the high temperatures needed to vaporize water or other fluids to drive a turbine for generation of electric power.

Spillover
Additional measures that were implemented by the program participant for which the participant did not receive an incentive. They undertook the project on their own, influenced by prior program participation.

Therm
One hundred thousand (100,000) British thermal units (1 therm = 100,000 Btu).

Total Resource Cost
The OPUC has used the “total resource cost” (TRC) test as the primary basis for determining conservation cost-effectiveness as determined in Order No. 94-590 (docket UM 551). SB 1149 allows the “self-directing consumers” to use a simple payback of one to 10 years as the cost-effectiveness criterion.

Tidal Energy
Energy captured from tidal movements of water.

U-Value (U-Factor)
A measure of how well heat is transferred by the entire window—the frame, sash and glass—either into or out of the building. U-Value is the opposite of R-Value. The lower the U-Value number, the better the window will keep heat inside a home on a cold day.

Wave Energy
Energy captured by the cyclical movement of waves in the ocean or large bodies of water.

Watt
A unit of measure of electric power at a point in time, as capacity or demand. One watt of power maintained over time is equal to one joule per second.

Wind Power
Harnessing the energy stored in wind via turbines, which then convert the energy into electricity. Mechanical power of wind can also be used directly.

Weatherization
The activity of making a building (generally a residential structure) more energy efficient by reducing air infiltration, improving insulation and taking other actions to reduce the energy consumption required to heat or cool the building. In practice, “weatherization programs” may also include other measures to reduce energy used for water heating, lighting and other end uses.

Energy Industry Acronyms

AAMA	American Architectural Manufacturers Association	Trade group for window, door manufacturers
A/C	Air Conditioning	
ACEEE	American Council for an Energy-Efficient Economy	Environmental Advocacy, Researcher
AEE	Association of Energy Engineers	
AEO	Annual Energy Outlook	
AESP	Association of Energy Services Professionals	Energy services and energy efficiency trade org
A+E	Architecture + Energy	Outreach program for architects
AFUE	Annual Fuel Utilization Efficiency	The measure of seasonal or annual efficiency of a furnace or boiler
AgriMet	Agricultural Meteorology	Program for soil moisture data
AIA	American Institute of Architects	Trade organization
AIC	Association of Idaho Cities	Local government organization
aMW	Average Megawatt	A way to equally distribute annual energy over all the hours in one year; there are 8,760 hours in a year
AOI	Associated Oregon Industries	
APEM	Association of Professional Energy Managers	
ARI	Air-Conditioning and Refrigeration Institute	AC trade association
ASE	Alliance to Save Energy	Environmental advocacy organization
ASERTTI	Assocation of State Energy Research and Technology Transfer Institutions, Inc.	
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers	Technical (engineers) association
ASME	American Society of Mechanical Engineers	Professional organization
ASiMi	Advanced Silicon Materials LLC	Manufacturer of polysilicon with plants in Moses Lake and Butte Mountain
AWC	Association of Washington Cities	Local government trade organization
BACT	Best Achievable Control Technology	
BCR	Benefit/Cost ratio	See definition in text
BEF	Bonneville Environmental Foundation	Nonprofit that funds renewable energy projects
BETC	Business Energy Tax Credit	Oregon tax credit
BOC	Building Operator Certification	Alliance funded project that trains and certifies building operators
BOMA	Building Owners and Managers Association	
BPA	Bonneville Power Administration	Federal power authority
C&RD	Conservation & Renewable Discount	BPA program
CAC	Conservation Advisory Council	
CARES	Conservation and Renewable Energy System	Defunct consortium of Pacific Northwest PUDs
CCS	Communications and Customer Service	A group within Energy Trust
CCCT	Combined Cycle Combustion Turbine	

CEE	Consortium for Energy Efficiency	National energy efficiency group
CEWO	Clean Energy Works Oregon	
CFL	Compact Fluorescent Light bulb	
CHP	Combined Heat and Power	
CNG	Cascade Natural Gas	Investor-owned utility
ConAug	Conservation Augmentation Program	BPA program
CHT	Coefficient of Heat Transmission (U-Value)	A value that describes the ability of a material to conduct heat. The number of Btu that flow through 1 square foot of material, in one hour. It is the reciprocal of the R-Value (U-Value = 1/R-Value.
COU	Consumer-Owned Utility	
COP	Coefficient of Performance	The Coefficient of Performance is the ratio of heat output to electrical energy input for a heat pump
CT	Combustion Turbine	
CUB	Citizens' Utility Board of Oregon	Public interest group
Cx	Commissioning	
DG	Distributed Generation	
DSI	Direct Service Industries	Direct Access customers to BPA
DOE	Department of Energy	Federal agency
DSM	Demand Side Management	
EA	Environmental Assessment	
EASA	Electrical Apparatus Service Association	Trade association
ECM	Electrically Commutation Motor	An Electrically Commutation Motor, also known as a variable-speed blower motor, can vary the blower speed in accordance with the needs of the system
EE	Energy Efficiency	
EER	Energy Efficiency Ratio	The cooling capacity of the unit (in Btu/hour) divided by its electrical input (in watts) at standard peak rating conditions
EF	Energy Factor	An efficiency ratio of the energy supplied in heated water divided by the energy input to the water heater
EIA	Energy Information Administration	
EIC	Energy Ideas Clearinghouse	Washington State University program that provides energy-efficiency information, Alliance funded project
EMS	Energy Management System	See definition in text
EPA	Environmental Protection Agency	Federal agency
EPRI	Electric Power Resource Institute	Utility organization

EPS	Energy Performance Score	Brand name used by Energy Trust for the rating that assesses a newly built or existing home's energy use, carbon impact and estimated monthly utility costs
EQIP	Environmental Quality Incentive Program	
EREN	Energy Efficiency and Renewable Energy Network	DOE program
ESS	Energy Services Supplier	
EUI	Energy Use Intensity	See definition in text
EWEB	Eugene Water & Electric Board	Utility organization
FCEC	Fair and Clean Energy Coalition	Environmental advocacy organization
FEMP	Federal Energy Management Program	
FERC	Federal Energy Regulatory Commission	Federal regulator
GHG	Greenhouse gas	
HER	Home Energy Review	A free visit to a customer's home by an Energy Trust energy advisor to assess efficiency and provide personalized recommendations for improvement
HSPF	Heating Season Performance Factor	
HVAC	Heating, Ventilation and Air Conditioning	
ICNU	Industrial Consumers of Northwest Utilities	Trade interest group
ICF	ICF International	Existing Buildings Program Management Contractor
ICL	Institute for Conservation Leadership	
IDWR	Idaho Department of Water Resources	State agency
IEEE	Institute of Electrical and Electronic Engineers	Professional association
IESNA	Illuminating Engineering Society of America	
IOU	Investor-Owned Utility	
IRP	Integrated Resource Plan	
ISIP	Integrated Solutions Implementation Project	
ISM	Instant-Savings Measure	See definition in text
kW	Kilowatt	
kWh	Kilowatt Hours	8,760,000 kWh = 1 aMW
LBL	Lawrence Berkeley Laboratory	
LED	Lighting Emitting Diode	Solid state lighting technology
LEED	Leadership in Energy & Environmental Design	Building rating system from the U.S. Green Building Council
LIHEAP	Low Income Housing Energy Assistance Program	
LIWA	Low Income Weatherization Assistance	
LOC	League of Oregon Cities	Local government organization
MEEA	Midwest Energy Efficiency Alliance	Midwest Market Transformation organization, Alliance counterpart
MLCT	Montana League of Cities and Towns	Local government organization

MLGEO	Montana Local Government Energy Office	Local government organization
MT&R	Monitoring, Targeting and Reporting	See definition in text
MW	Megawatt	Unit of electric power equal to one thousand kilowatts
MWh	Megawatt Hour	Unit of electric energy, which is equivalent to one megawatt of power used for one hour
NAHB	National Association of Home Builders	Trade association
NCBC	National Conference on Building Commissioning	
NEB	Non-Energy Benefit	See definition in text
NEEA	Northwest Energy Efficiency Alliance	
NEEC	Northwest Energy Efficiency Council	Trade organization
NEEI	Northwest Energy Education Institute	Training organization
NEEP	Northeast Energy Efficiency Partnership	Northwest market transformation organization, Alliance counterpart
NEMA	National Electrical Manufacturer's Association	Trade organization
NERC	North American Electricity Reliability Council	
NFRC	National Fenestration Rating Council	
NRC	National Regulatory Council	Federal regulator
NRCS	Natural Resources Conservation Service	
NRDC	Natural Resources Defense Council	
NREL	National Renewable Energy Lab	
NRTA	Northwest Regional Transmission Authority	
NWEC	Northwest Energy Coalition	Environmental advocacy organization
NWBOA	Northwest Building Operators Association	Trade organization
NWFPA	Northwest Food Processors Association	Trade organization
NWN	NW Natural	Investor-owned utility
NWPPA	Northwest Public Power Association	Trade organization
NWPCC	Northwest Power and Conservation Council	Regional energy planning organization, "the council"
NYSERDA	New York State Energy Research & Development Authority	New York public purpose organization
OBA	Oregon Business Association	Business lobby group
OEFSC	Oregon Energy Facility Siting Council	Authority to site energy facilities in Oregon
ODOE	Oregon Department of Energy	Oregon state energy agency
OPUC	Oregon Public Utility Commission	
OPUDA	Oregon Public Utility District Association	Utility trade organization
OPEC	Organization of Petroleum Exporting Countries	
ORECA	Oregon Rural Electric Cooperative Association	Utility trade organization
OSD	Office of Sustainable Development	
OSEIA	Solar Energy Industries Association of Oregon	Volunteer nonprofit organization dedicated to education/promotion
OTED	Office of Trade & Economic Development	Washington State agency
P&E	Planning and Evaluation	A group within Energy Trust

PDC	Program Delivery Contractor	Company contracted with Energy Trust to identify and deliver industrial and agricultural services to Energy Trust customers
PEA	Pacific Energy Associates	
PECI	Portland Energy Conservation, Inc.	Energy Trust Program Management Contractor
PGE	Portland General Electric	Investor-owned utility
PG&E	Pacific Gas & Electric	California investor-owned utility
PMC	Program Management Contractor	Company contracted with Energy Trust to deliver a program
PNGC	Pacific Northwest Generating Cooperatives	
PNUCC	Pacific Northwest Utilities Conference Committee	
PPC	Public Power Council	National trade group
PPL	Pacific Power	
PSE	Puget Sound Energy	Investor-owned utility
PTC	Production Tax Credit	
PTCS	Performance Tested Comfort Systems	Alliance project that promotes the efficiency of air-systems in residential homes
PTNZ	Path to Net Zero pilot	See definition in text
PUC	Public Utility Commission	Oregon and Idaho PUCs
PUD	Public Utility District	
PURPA	Public Utility Regulatory Policies Act	See definition in text
QF	Qualifying Facility	
RAC	Renewable Energy Advisory Council	
RE	Renewable Energy	
REIT	Real Estate Investment Trust	
RETC	Residential Energy Tax Credit	Oregon tax credit
RFI	Request for Information	
RFP	Request for Proposal	
RFQ	Request for Qualification	
RNP	Renewable Northwest Project	Renewable energy advocacy group
RSES	Refrigeration Service Engineers Society	Trade association
RTF	Regional Technical Forum	BPA funded research group
RTU	Rooftop HVAC Unit Tune Up	Rooftop HVAC unit tune up, an Existing Buildings incentive offering
SCCT	Single Cycle Combustion Turbine	
SCL	Seattle City Light	Public utility
SEED	State Energy Efficient Design	Established in 1991, requires all state facilities to exceed the Oregon Energy Code by 20 percent or more
SEER	Seasonal Energy Efficiency Ratio	A measure of cooling efficiency for air conditioners; the higher the SEER, the more energy efficient the unit

SGC	Super Good Cents	Alliance project & legacy BPA & utility program that promotes the sales of SGC homes
SIS	Scientific Irrigation Scheduling	Agricultural information program
SNOPUD	Snohomish Public Utility District	Washington State PUD
SEIA	Solar Energy Industries Association	Volunteer nonprofit organization dedicated to education/promotion
SWEEP	Southwest Energy Efficiency Partnership	Southwest market transformation group, Alliance counterpart
T&D	Transmission & Distribution	
TNS	The Natural Step	
TRC	Total Resource Cost	See definition in text
TXV	Thermal Expansion Valve	
	University of Oregon Solar Monitoring Laboratory	Solar resource database
U-Value		The reciprocal of R-Value; the lower the number, the greater the heat transfer resistance (insulating) characteristics of the material
USGBC	U.S. Green Building Council	Sustainability advocacy organization responsible for LEED
VFD	Variable Frequency Drive	An electronic control to adjust motion
WAPUDA	Washington Public Utility District Association	Utility trade organization
WNP	Washington Nuclear Power Plant	
WPPSS	Washington Public Power Supply System	Also called "whoops"
WUTC	Washington Utilities and Transportation Commission	
Wx	Weatherization	
W	Watt	