

# **Energy Trust Board of Directors Strategic Planning Workshop**

**May 17 – 18, 2018**

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# Agenda

## Annual Board Strategic Planning Workshop

May 17-18, 2018

Mercy Corps Global Headquarters, Aceh Lecture Room

45 SW Ankeny Street

Portland, Oregon 97204

### Thursday, May 17, Mercy Corps, Aceh Lecture Room

- 7:30 am**      **Arrival & Breakfast**
- 8:00am**      **Welcome & Introductions** (Roger Hamilton, Board Chair/ Mark Kendall, Strategic Planning Committee Chair)
- 8:15am**      **Workshop Welcome** (Holly Valkama)
- 8:30am**      **Opening Remarks: Workshop Agenda Recap and Strategic Planning Overview** (Michael Colgrove)
- 9:15am**      **Strategic Plan Progress Update Year 3** .....*packet*
- 2015-2019 Strategic Plan Implementation Dashboard (Hannah Cruz)
- 10:30am**      **Break**
- 10:45am**      **Presentations and Briefings on Final Board Learning Topics**.....*materials under separate cover*
- Expanded Goals Supporting Energy Efficiency and Renewable Generation (Debbie Menashe and John Volkman)
  - Relationship Mapping (Amber Cole)
  - Efficiency as a Long-Term Resource (Spencer Moersfelder)
- 11:45am**      **Board Learning Topics Poster Review Session**
- 12:00pm**      **Board Photo and Lunch**  
Lunch will be served in The Gallery
- 1:00pm**      **Contextual Information on Energy Efficiency and Renewable Energy for Planning** (Michael Colgrove)
- Energy Efficiency Resource Potential Implications on Organization
  - Renewable Energy Program and Policy Landscape
- 1:45pm**      **Public Comment**
- 2:00pm**      **Break**
- 2:15pm**      **OPUC Perspective on the 2020-2024 Timeframe and Strategic Plan Development Process** (Jason Eisdorfer).....*packet*
- 3:00pm**      **Energy Trust Strengths/Role of Value: Small Group Discussions** (Holly Valkama)
- 4:30pm**      **Closing Conversation** (Board Members and Holly Valkama)
- 4:45pm**      **Adjourn**

## Friday, May 18, Mercy Corps, Aceh Lecture Room

- 7:30pm**      **Arrival and Breakfast**
- 8:00am**      **Board Discussion: Beginning the Energy Trust 2020-2024 Strategic Planning Process** (Holly Valkama)
- 8:45am**      **Role of Scenarios in Energy Trust Strategic Planning** (Michael Colgrove)
- 9:15am**      **Board Discussion: Parameters for 2020-2024 Strategic Plan Development** (Holly Valkama)
- 10:15am**     **Public Comment**
- 10:30am**     **Break**
- 10:45am**     **Proposed Timeline and Process Plan for 2020-2024 Strategic Plan Development** (Debbie Menashe and John Volkman).....*packet*
- 11:15am**     **Summary of Big Takeaways and Next Steps** (Debbie Menashe and John Volkman)
- 11:30am**     **Closing Comments** (Roger Hamilton, Mark Kendall, Michael Colgrove)
- 12:00pm**     **Adjourn**

# VISITING THE MERCY CORPS HQ



## ***Mercy Corps Headquarters (Event Venue Address)***

45 SW Ankeny Street  
Portland, OR 97204  
United States

Located on the corner of Ankeny and Naito Parkway.

## ***Google map with area parking lots***

## ***Parking around the Mercy Corps Action Center***

Mercy Corps has a small parking lot located on the Northside of the building that is free after 5:00pm, if spots are available.

There are several uncovered parking lots (and a few covered parking garages) around the MC HQ. Most of these have a flat 'per-day' rate ranging from \$8-10 USD, although some offer hourly rates as well. These lots often fill up in the morning. Please call to get up to date rates.

### ***Uncovered Parking Lot:***

#### **SW Ankeny & 1st (NW of the Skidmore Fountain)**

- [Diamond Parking Lot EP61](#)
- 503 222-6929

#### **SW Ash & 1st (West of 1st, behind Kell's)**

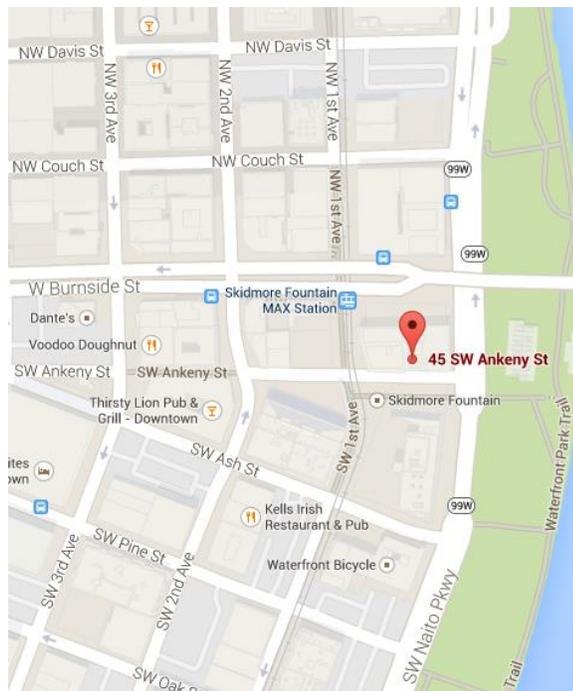
- [Central Parking Systems](#)

### ***Covered Parking Lots:***

- 877 717-0004

#### **NW Davis & Naito Pkwy (North of Burnside Bridge two blocks)**

- [Smart Park](#)
- 503 823-2898



Board Workshop Roadmap

# Energy Trust Board Workshop Roadmap

May 17-18, 2018

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## Objectives:

This workshop has two objectives:

- (1) To review and reflect on implementation of the current strategic plan, in preparation for a June discussion of priorities for the 2019 budget, the final year of the current plan.
- (2) To establish a starting point for development of the 2020-2024 strategic plan.

In this workshop, the board is not asked to decide on a strategic direction for Energy Trust or to specify details of the strategic planning process. Much of that work can be done later, by staff and the Strategic Planning Committee. Rather, at this workshop the board is asked to provide general parameters for the staff and committee to work with, key drivers to focus on, scenarios for analysis and consultation, and any areas in which the board would like more information, deeper discussion or consultation with other parties. The workshop is organized to explore these topics in the following order:

## Discussion

1. **Strategic Plan Progress Update Year 3:** After the introductory remarks, Hannah Cruz will review the strategic plan dashboard. The dashboard was developed after the 2015-2019 strategic plan was approved. It reports on progress in a condensed form to help the board see how things are going vis-à-vis strategic plan implementation. The dashboard discussion will provide perspective for a June discussion of 2019 budget priorities.
2. **A Starting Point for a 2020-2024 Strategic Plan:** 2020-2024 is shaping up to be a watershed in Oregon energy policy, including for the state's approach to demand-side management (DSM). Changing technology and regulatory policy, the 2025 expiration of the SB 1149 public-purpose charge, new varieties of the DSM resource and other factors will present opportunities, contingencies and challenges. The following items are intended to establish a framework for understanding Energy Trust's place in these developments:
  - a) **Changing DSM:** Demand response programs, distributed resources, energy storage, smart technologies, big data and other developments pose new DSM possibilities. Many of these possibilities are addressed in learning topic papers. Late in the morning of day one, we will brief you on the learning topics: goal setting, relationship mapping, and energy efficiency forecasting methodology for long-term resource planning. Just before lunch, you can take a poster tour of the full suite of learning topics.

b) **Context Information for Planning: Energy Efficiency and Renewable Energy Resource Projections, and Implications for Energy Trust as an Organization** (afternoon of day one)

- Forecasting energy efficiency: Michael Colgrove will start the afternoon by briefing you on the trends Energy Trust is likely to see during the next strategic planning period. We invite the board to probe the analysis, discuss where Energy Trust's share of the efficiency resource may be headed and how it is likely to change.
- Renewable energy forecasting: Michael Colgrove will also discuss Energy Trust's renewable energy program and policy landscape as the organization looks ahead to the 2020-2024 period.
- Oregon Public Utility Commission perspective: Jason Eisdorfer will provide the board with an OPUC perspective, including the role of energy efficiency and renewable energy in the coming years, challenges posed by fluctuations in resources, funding mechanisms, and new or evolving Energy Trust roles.

c) **Setting the Stage for Strategic Plan Development:**

- Energy Trust values and strengths: Late the afternoon of day one, Holly will facilitate small-group discussions of two subjects: (1) Energy Trust's unique role of value, i.e., the value or advantage Energy Trust provides to ratepayers and stakeholders that no one else does, and (2) the strengths that differentiate Energy Trust from others and enable it to provide this value. A staff member or members will participate in the small groups to support the discussions. **Note**: If you can reflect on these questions in advance of the workshop, you will have a running start in these discussions.
- Questions for the strategic plan: Holly will end day one by asking the board to think overnight about the following question: Given what you heard on day one about learning topics, efficiency and renewable forecasts, organizational implications, OPUC perspective, and Energy Trust values and strengths, what strategic questions should the 2020-2024 strategic plan address? Holly will provide you with examples of these kinds of strategic questions. Day 2 will begin with a discussion of these questions.
- Role of scenarios in strategic plan development: On Day 2, after discussing the strategic questions, we will discuss scenario development in two parts:

Mike Colgrove will start: In the board's earlier training session, Holly described a framework that can be helpful in periods of uncertainty, which identifies scenarios (possibilities) based on key drivers that affect Energy Trust's work. Mike will describe examples of some scenarios for strategic planning: a base case using three key drivers: efficiency potential as currently forecast, value that we can deliver through public-purpose programs, and programs beyond the public-purpose program (in addition to NW Natural Washington).

Holly will then facilitate a discussion of key drivers – the drivers that underlie the base case in Mike's presentation and/or others. With these key drivers in mind, what scenarios/possibilities/boundaries beyond the base case would the board like tested analytically and with stakeholders?

- d) **Timeline and process:** Staff will review a draft timeline for the strategic planning process and invite reactions to it. Does it make sense? Is it missing anything important? Does it allow for the kinds of discussions and consultations you would like?

Strategic Planning Progress Update Year 3

## 2015-2019 Strategic Plan Dashboard—Year 3

May 17-18, 2018

This dashboard provides highlights and progress indicators on achievement to the 2015-2019 Strategic Plan goals and strategies. This is not a complete report of all activities. Refer to quarterly reports and annual reports for more information.

### AT A GLANCE

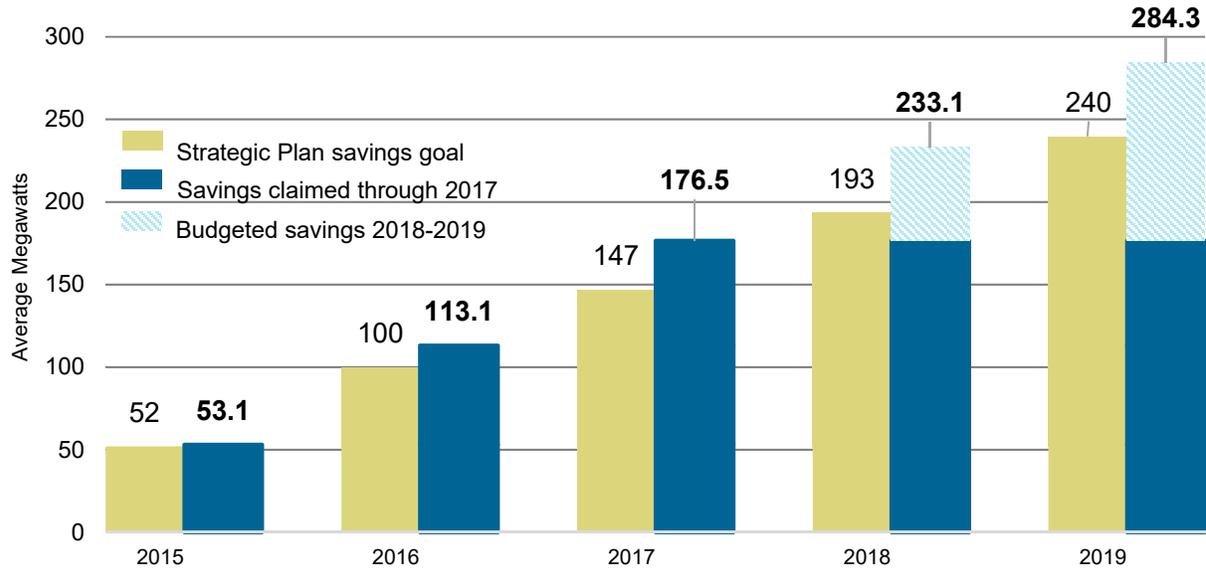
Status indicates by year if the goal or strategy is on track (green), off track (red) or out of Energy Trust's control (gray)

	['15, '16, '17, '18, '19]			
<b>I. ENERGY GOALS p. 2</b>	<b>Status</b>			
Electric efficiency savings of 240 aMW	■	■	■	■
Natural gas efficiency savings of 22 million annual therms	■	■	■	■
Renewable energy generation of 10 aMW	■	■	■	■
<b>II. EMERGING EFFICIENCY RESOURCES p. 4</b>	<b>Status</b>			
NEEA identification of electric market transformation savings of 35 aMW	■	■	■	■
Energy Trust identification of electric market transformation savings beyond NEEA	■	■	■	■
NEEA gas market transformation progress indicators	■	■	■	■
<b>III. EXPAND CUSTOMER PARTICIPATION p. 5</b>	<b>Status</b>			
Market research progress indicators	■	■	■	■
Program design and execution progress indicators	■	■	■	■
<b>IV. KEY PROCESSES p. 7</b>	<b>Status</b>			
Internal procurement and payment	■	■	■	■
Incentive processing	■	■	■	■
Customer services and customer information	■	■	■	■
Energy project tracking	■	■	■	■
Organizational review	■	■	■	■
Lean startup customer development	■	■	■	■
Budget process re-assessment	■	■	■	■
Data and tracking systems enhancements	■	■	■	■
<b>V. NEW OPPORTUNITIES p. 11</b>	<b>Status</b>			
Complementary initiatives with government, utilities, others	■	■	■	■
Response to policy initiatives	■	■	■	■
Load and demand management with utilities (includes demand response)	■	■	■	■
<b>VI. STAFF ENGAGEMENT p. 16</b>	<b>Status</b>			
Culture of highly engaged staff	■	■	■	■

## I. ENERGY GOALS (through 2017)<sup>1</sup>

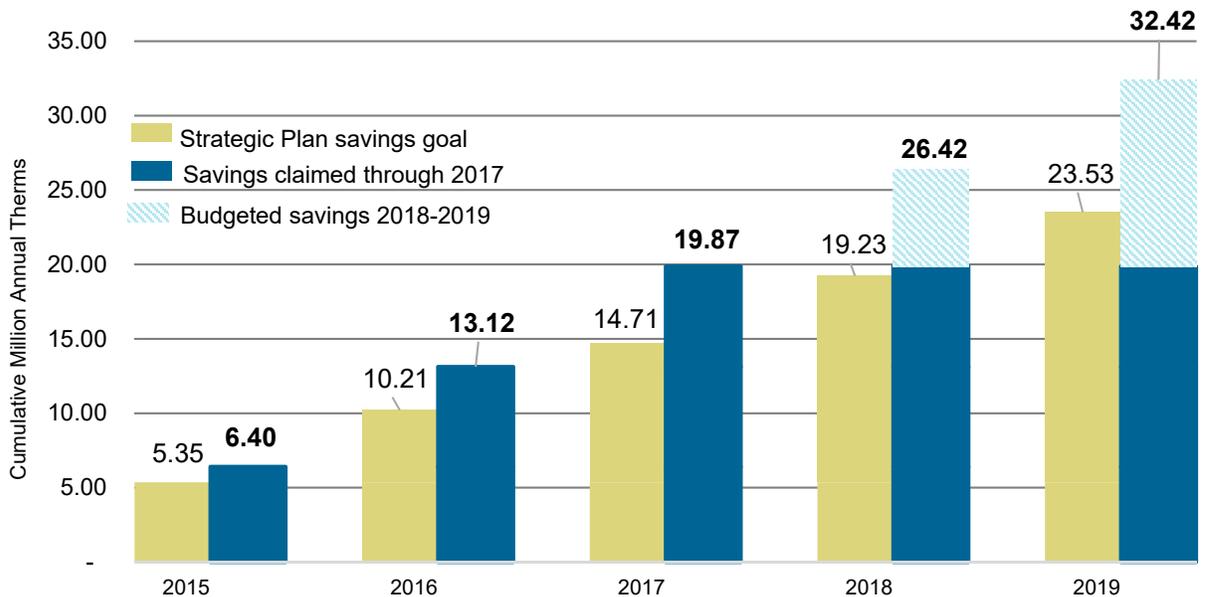
-  Achieved 74% of the electric efficiency five-year goal of 240 aMW
-  Achieved 83% of the gas efficiency five-year goal of 24 million annual therms (MMTh)
-  Achieved 110% of the renewable energy generation five-year goal of 10 aMW

**Chart A: Electric Efficiency Strategic Plan Goal to Actual Cumulative and Projected Savings**



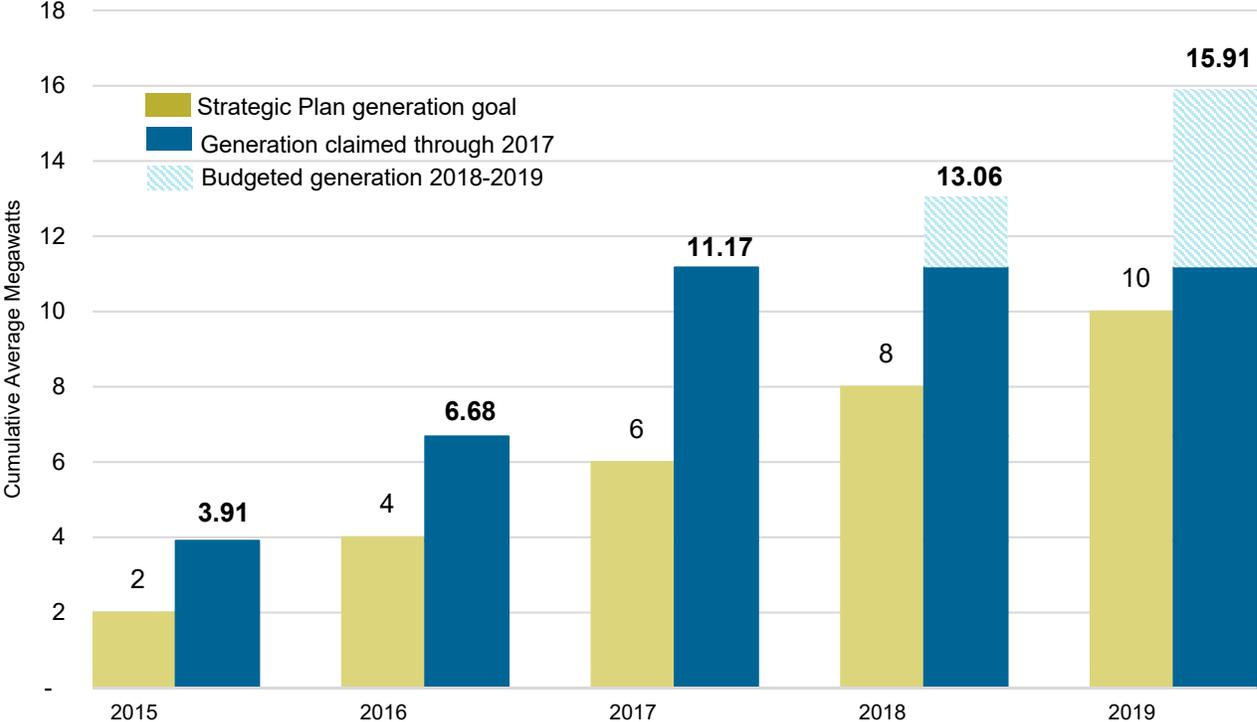
**Chart B: Gas Efficiency Strategic Plan Goal to Actual Cumulative and Projected Savings**

Note: Avista savings are reflected in achieved savings for 2016 and going forward; the OPUC direction to serve Avista customers was not determined until spring 2016 and therefore not incorporated in the five-year goals.



<sup>1</sup> This report includes the best available energy data; energy savings reported for periods prior to January 1, 2017, may be different than previously reported due to true up and more up-to-date forecasts.

**Chart C: Renewable Energy Strategic Plan Goal to Actual Cumulative and Projected Generation**



Note: 2016 and 2017 generation sources are nearly all Solar with less than 1 percent from hydropower.

**Discussion Points**

- Current pace of savings acquisition is trending higher than forecasted; however, current factors influencing this trend are not expected to continue at the current pace over the next two years.
- Generation figures are also trending higher than the strategic plan forecast. Energy Trust exceeded the five-year Strategic Plan goal for renewable generation in 2017.

**Energy Goals Background**

- The electric savings goal reflects the savings projections from the 2014-2015 budget planning process, individual utility Integrated Resource Plan (IRP) savings targets for 2016-2019, and adjustments to annual savings totals based on the projected contributions from emerging efficiency resources, new sources of savings and >1 aMW customers.
- The natural gas savings goal reflects the savings projections from the 2014-2015 budget planning process, individual utility IRP savings targets for 2016-2019, and adjustments to the annual savings totals from emerging efficiency resources and new sources of savings.
- The renewable energy generation goal reflects the generation projections and pipeline from the 2015-2016 budget planning process extrapolated forward through 2019, including adjustments for incentive demand due to changes in federal level support, state level support and market forces.

## II. EMERGING EFFICIENCY RESOURCES



Replenishing electric and natural gas efficiency resources occurs with the development of emerging technologies that are part of market transformation activities at NEEA and separately at Energy Trust. Technologies that successfully move through the development pipeline are new energy savings resource opportunities for programs.

**See the 2015-2019 Emerging Efficiency Resources Dashboard for an overview of Energy Trust and NEEA electric and natural gas market transformation activities,** including the status of technology development by pipeline stages.

Energy Trust's emerging efficiency resources progress includes two technologies ready for program design in 2017: advanced power strips (tier 1) and Nest thermostats. These are in addition to Path to Net Zero added in 2016. No pilots moved into program design for 2018.

### III. EXPAND CUSTOMER PARTICIPATION

A 2015-2019 Strategic Plan strategy is to “expand customer participation.” Strategies to expand participation include activities related to market research and evaluation, and program design and execution. These activities are reported here.

Expanding customer participation includes efforts within Energy Trust’s Diversity, Equity and Inclusion Initiative in 2017. Energy Trust needs to effectively engage Oregon’s diverse residents and businesses to fulfill the purpose of delivering cost-effective energy efficiency and small-scale renewable energy. As mentioned below, staff developed a Diversity, Equity and Inclusion Operations Plan to understand if gaps exist in serving all customers, and to achieve energy efficiency and renewable energy program participation outcomes across a broad range of customer characteristics, including communities of color, rural communities, and people with low and moderate incomes in all areas of programs and operations. The Diversity, Equity and Inclusion Operations Plan will help the organization learn, innovate, implement new approaches that expand participation, and evaluate programs to ensure effective delivery of benefits to utility customers through energy efficiency and renewable energy.

#### A. Market Research and Evaluation Progress Indicators

<b>Market Research and Evaluation Progress Indicators</b>	
	<p>Study and determine if there are gaps and opportunities to expand participation</p> <ul style="list-style-type: none"> <li>• Residential customer insights survey               <ul style="list-style-type: none"> <li>○ In 2017, Energy Trust conducted a phone survey of residential participants and non-participants to learn about demographics, motivations and barriers. Compared to non-participants, participants were more likely to be homeowners, older, employed and more educated, and less likely to be lower-income (under \$50,000), have a very high income (over \$200,000) and be non-white.</li> </ul> </li> <li>• Focus groups with customers               <ul style="list-style-type: none"> <li>○ In 2017, Energy Trust conducted focus groups with Hispanic and Asian small business owners and decisions makers, older adults, moderate-income homeowners and renters with high school diplomas. Focus groups revealed priorities of these market segments that will guide future program planning and marketing efforts.</li> </ul> </li> <li>• Residential participation data analysis using external data overlay               <ul style="list-style-type: none"> <li>○ Data analysis indicated that participation rates increase as income increases. Results indicated a participation gap for customers making less than \$75,000. Results also indicated participants are more likely to have a bachelor’s degree.</li> </ul> </li> <li>• Business participation analysis               <ul style="list-style-type: none"> <li>○ In 2017, staff analyzed business participation rates by county and found that there is significant opportunity outside of the Portland Metro region, particularly in Linn and Benton counties.</li> </ul> </li> </ul>
	<p>If gaps or opportunities are identified, develop an action plan that includes engagement and goals</p> <ul style="list-style-type: none"> <li>• In 2017, staff developed a Diversity, Equity and Inclusion Operations Plan and presented it to the board of directors in December 2017. The plan includes 10 goals to achieve energy efficiency and renewable energy participation outcomes across a broad range of customer characteristics, including communities of color, rural communities, and people with low and moderate incomes in all areas of</li> </ul>

	<p>programs and operations. In 2018, staff will begin to set baselines to measure and report out on progress toward goals.</p> <ul style="list-style-type: none"> <li>• Staff developed a diversity, equity and inclusion lens, which is a set of questions to think through and ensure diversity, equity and inclusion are considered at all stages of decision-making. Employees will be trained to use the lens in 2018.</li> <li>• As part of its 2018 Annual Budget and 2018-2019 Action Plan, Energy Trust included a diversity, equity and inclusion action plan, documenting planned activities across all programs and operations groups, and highlighting expenditures associated with those activities.</li> </ul>
	<p>Report on research results, action plan and engagement results</p> <ul style="list-style-type: none"> <li>• In early 2018, reports were provided to staff on 2017 focus groups and on the customer insights phone survey described above.</li> </ul>
	<p>Advance engagement with two target ethnic markets</p> <ul style="list-style-type: none"> <li>• Targeted portions of marketing to Hispanic and Asian business owners and decision-makers through methods identified in focus group findings. <ul style="list-style-type: none"> <li>○ A Spanish translation service provider was selected, and a Spanish-translated customer service by phone is being evaluated. Energy Trust has a dedicated staff member to support inbound and outbound Spanish-speaking callers and will explore staffing models to build in additional overflow support.</li> <li>○ Continued exploring a community ambassador approach in 2017 and 2018, and conducted further market research.</li> </ul> </li> <li>• Deliver translated materials to Hispanic and Asian customers <ul style="list-style-type: none"> <li>○ Created web pages for Savings Within Reach residential offers.</li> </ul> </li> </ul>
	<p>Report annually on action plan and engagement results</p> <ul style="list-style-type: none"> <li>• Progress and key activities were described in Energy Trust's 2015, 2016 and 2017 annual reports to the OPUC and Energy Trust Board of Directors.</li> </ul>

**B. Program Design and Execution Progress Indicators**

Achievement to the first three progress indicators was determined by collecting program and operations activities and strategies completed in 2017 and planned for 2018. See Appendix 1.

<b>New Customers and Markets</b>	
	Itemize new initiatives to reach new and underserved <sup>2</sup> markets
	Itemize expanded initiatives to reach new and underserved markets
	Itemize continued initiatives that are meeting savings and generation goals
	Evaluate initiatives and report back to the committee

<sup>2</sup> Originally termed “difficult-to-reach” and changed after regional industry conversations identified the preferred term as “underserved”

## IV. KEY PROCESSES

The 2015-2019 Strategic Plan strategies to “continuously improve program delivery efficiencies,” “continuously improve internal operations” and “strengthen operational effectiveness” were informed by the 2014 Management Review recommendation to continue internal process improvements and set three to four administratively focused productivity metrics. These recommendations build on Energy Trust’s culture of continuous improvement.<sup>3</sup>

In 2015, four key processes were identified to be tracked by the Board Strategic Planning Committee. Three of the processes were benchmarked using baseline measurement techniques learned from Coraggio Group. While the fourth did not go through benchmarking due to staffing constraints, incremental improvements were made. Through this work, staff and the board determined at the 2016 strategic workshop that measuring against identified baselines would continue only when significant value<sup>4</sup> was anticipated, and staff was directed to continue to identify process improvement opportunities in other areas, reporting out on significant process improvements in the Strategic Plan Dashboard.

In 2016, staff continued process improvement activities related to the four key processes originally identified. In addition, ongoing improvements were embedded in program planning, design and evaluation. Finally, in his three-month assessment of the organization, Executive Director Michael Colgrove identified four improvement areas to be explored by staff in 2017.

### **Internal Procurement and Payment (Key Process Initiated in 2015)**

- Progress
  - In 2017, worked with one vendor to determine functional requirements and develop a paper prototype of the major functionality.
  - Placed project on hold due to staff constraints.
- Next Steps
  - Revitalize the project mid-2018, with first phase of implementation scheduled for Q2 2019.

### **Incentive Processing (Key Process Initiated in 2015)**

- Progress
  - Determine detailed requirements for improving the process for reversing incentive payments made in error (reversals). Moved the associated tracking and reporting of reversals into core data systems.
- Next Steps
  - Implement and deploy the improved reversals process in 2018.
  - Implement small improvements to the existing W-9 management process in 2018. Staff will also determine requirements and scoping in 2018 for a larger W-9 management improvement project to be implemented in 2019.

### **Customer Services and Customer Information (Key Process Initiated in 2015)**

- Progress
  - Brought the Energy Trust website into compliance with top tier Web Content Accessibility Guidelines, optimizing the browsing experience for

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<sup>3</sup> Energy Trust’s culture of continuous improvement is exemplified by the embedded functions of Planning and Evaluation to support program design; process improvement activities that occur regularly at both Energy Trust, and with PMCs and PDCs; and ongoing customer Fast Feedback surveys, process and impact evaluations, and quarterly and annual reports to the OPUC and board

<sup>4</sup> For example, significantly shortened processing times, efficiencies or improved quality



- In early 2018, the team presented preliminary recommendations to Management Team and gathered additional feedback from staff.
- Next Steps
  - In Q2 2018, the team will present revised recommendations to Management Team and the Board of Directors for consideration. A schedule for phase two of the project, focused on implementation, will then be determined.

 **Lean Startup Customer Development (2016 Exec. Dir. Improvement Area)**

- Progress
  - This multi-year project kicked off in spring 2017 and started by training two teams of staff over four months on Lean Startup methodology.<sup>5</sup> The objective is to learn new techniques to understand their applicability to Energy Trust program offer design, delivery and evaluation.
  - In Q2 and Q3 2017, staff piloted this new program development model to explore potential future offerings for moderate-income customers and for energy education in K-12 schools. Staff conducted research and customer interviews, developed and tested potential offerings, and presented findings to staff and the board.
- Next Steps
  - Results of the K-12 energy education Lean Startup pilot project led to a small field test of a new energy curriculum and kit for teachers and students. This will be evaluated in 2018 to inform potential educational offerings in 2019.
  - In early 2018, staff kicked off two additional Lean Startup pilot projects to explore new offerings for multifamily renters and small- to medium-sized commercial businesses.

 **Budget Process Re-assessment (2016 Exec. Dir. Improvement Area)**

- Progress
  - In early 2017, Management Team assigned a cross-organizational project team to identify an alternative budget process that is more efficient, effective and flexible than the current process. The team interviewed internal and external stakeholders to identify challenges and opportunities for improvements.
  - In late 2017, the team identified a set of recommendations and began to engage internal and external stakeholders in early 2018, including OPUC staff, to invite feedback. These recommendations will evolve as stakeholders provide input.
- Next Steps
  - In 2018, the team will respond to feedback and questions from the OPUC, and will incorporate changes into the proposed budget recommendations.
  - In Q2 2018, the project team will present recommendations to the board of directors, utilities and advisory councils for review and feedback.
  - Short-term improvements will be incorporated in the 2019-2020 budget cycle, and the full set of final recommendations could be implemented as early as 2019 for the 2020-2021 budget cycle.

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<sup>5</sup> This Lean Startup model promotes an iterative process for continuously improving program design while working to eliminate waste (e.g., time, a product that doesn't meet customer needs).

 **Data and Tracking Systems Enhancements (2016 Exec. Dir. Improvement Area)**

- Progress
  - This ongoing effort uses short-term projects to support improving the security and utility of Energy Trust data and tracking systems by streamlining processes; improving data storage, analysis and reporting; and enhancing existing systems with new functionality and flexibility.
  - Completed development of stakeholder relationship tracking capabilities in the CRM system. Launched beta solution and trained early adopters in Q1 2018.
  - Completed internal data outreach project to engage staff and PMCs in identifying data system, analysis and reporting improvements.
  - Redesigned measure tracking in PT to accommodate distinct measure versions, which will simplify processes for reporting and making annual measure changes.
- Next Steps
  - By Q2 2018, deploy stakeholder relationship tracking capabilities to all Energy Trust staff regularly engaged in stakeholder relationships.
  - By Q2 2018, determine requirements for project forecasting changes in PT.
  - By Q4 2018, move to electronic tracking of measure approval documents. This is currently a time-intensive paper-based process.
  - By the end of 2019, implement recommended improvements from the internal data outreach project.

## V. NEW OPPORTUNITIES

### A. Complementary Initiatives with Government, Utilities and Others

Staff engage with organizations that have complementary initiatives and goals. Activities can range from significant and game-changing to smaller scale. Staff continue to explore opportunities beyond this list.

#### Irrigation modernization

- Irrigation system assessments continued at 16 districts through the irrigation modernization initiative with Farmers Conservation Alliance. The program is now serving approximately 50 percent of all irrigated agriculture in Oregon. Assessments identify comprehensive system improvements to generate hydropower, reduce energy and water use, and improve drought resilience.
- In 2017, Energy Trust dedicated incentives for two small hydropower projects resulting from irrigation modernization assessments. Four districts began participating in 2017 and an additional two to six districts are expected to join in 2018.

#### Water savings through water metering

- Worked with the Portland Water Bureau to pilot support to property owners for installing tenant water sub-meters to encourage water savings and corresponding energy savings. The pilot launched in 2017, and will be discontinued in Q2 2018 due to low market demand and limited contractors to deliver products and submetering billing services. Staff continued to collaborate with Portland Water Bureau to explore water- and energy-savings opportunities in multifamily and commercial buildings.

#### Wood heat conversions

- In Lake and Klamath counties, Energy Trust worked with local governments, community organizations and utilities to market program offerings and drive installations of electric ductless heat pumps and efficient gas hearths and furnaces.
- Continued coordination with Washington County to help residents replace wood stoves and leverage Energy Trust incentives to support installations of electric ductless heat pumps or efficient gas heating equipment (hearths or furnaces) to improve air quality. To date, the county has completed more than 200 projects, many of which are full-cost replacements supported by Washington County Community Action Agency and therefore have not been eligible for Energy Trust incentives.

#### Federal loan repayment and manufactured housing

- In 2017, staff designed and launched a pilot to quantify and monitor the impact of retiring aging manufactured homes and replacing them with code-exceeding energy-efficient new manufactured homes. Through the pilot, staff aim to build partnerships and establish a replicable model that integrates energy efficiency, poverty alleviation and affordable housing investments. Over a two-year period from 2017 to 2019, Energy Trust intends to retire and replace 20 to 40 manufactured homes.

**Low- and moderate-income solar**

- Continued efforts to expand the benefits of solar generation to low- and moderate-income customers, in collaboration with Clean Energy States Alliance and the U.S. Department of Energy's SunShot program. In collaboration with ODOE, staff created a stakeholder work group that met nine times in 2017, comprised of nonprofits, agency staff and utilities. Community workshops were held in early 2017 with 140 participants. Staff developed a set of draft strategies that will be finalized in Q2 2018 with implementation set for Q3 2018.

**Local government building efficiency policies**

- Provided technical assistance to local governments and customers participating in building efficiency policies, including the City of Portland's commercial building energy disclosure policy (2015) and Home Energy Score Ordinance (2016, 2017), Oregon Department of Energy's HB 2801 home energy performance scoring rulemaking, the Multnomah County Property Fit initiative (2015, formerly the Commercial Property Assessed Clean Energy program), and the City of Hillsboro's sustainability goals for new home development.
- Supported community energy planning and initiatives in four rural communities through a collaboration with Sustainable Northwest, making Energy Trust program information available and supporting community-based Resource Assistance for Rural Environments (RARE) interns. Hood River County adopted an Energy Plan in early 2018, which will guide the county's future approach to energy efficiency and renewable energy, and Talent, Oregon passed one in 2017.

**Carbon reduction**

- In 2016, initial discussions with Energy Trust and NW Natural indicated potential for collaborating on SB 844-compliant energy efficiency projects.
- In 2017, Energy Trust discussed offering consulting services to NW Natural.
- In 2018, Energy Trust is working with NW Natural to develop a large boiler replacement offering that would leverage SB 844 funding to move a market that is resistant to move solely on energy efficiency replacement incentives.

**Solar plus storage**

- Customer adoption of solar plus storage grew substantially in 2017, with 85 solar applications including batteries. This was up from 14 applications with batteries in 2016 and four in 2015.
- Staff joined a team exploring the use of solar plus storage for community resiliency at Rocky Mountain Institute's Electricity Innovation Lab Accelerator, an invitation-only event that brings together energy innovators from around North America. The team was led by the City of Portland and included staff from Multnomah County, PGE and Pacific Power. Both utilities incorporated findings from the working group in energy storage procurement proposals submitted to the OPUC in late 2017 (dockets UM 1751, UM 1856 and UM 1857).

**High-strength organic waste evaluation in the Mid-Columbia region**

- Supported a study of the potential to generate biogas from high-strength organic waste for the Mid-Columbia region, in collaboration with the City of The Dalles, the City of Hood River and the Bonneville Environmental Foundation. The study quantified organic materials that could be used in anaerobic digesters at existing wastewater treatment plants, and found that there is sufficient waste for one

biopower project in the region. In 2018, one of the cities may move forward with a biopower project.

## B. Response to Policy Initiatives

### Renewable energy dockets at the OPUC

- Contributed expertise and data to four OPUC proceedings: rulemaking and implementation workshops for the Community Solar program that is targeting launch by the end of 2018 (AR 603 and UM 1930); workshops for the docket to develop guidelines for the solicitation and procurement of energy storage systems by the utilities which is expected to conclude by 2020 (UM 1751, UM 1856 and UM 1857); meetings for the docket that concluded in November 2017 examining the use of both ratepayer funds and voluntary renewable energy funds in renewable project funding (UM 1020); and the Resource Value of Solar dockets investigating the value that a solar resource provides to a utility system (UM 1716, UM 1910, UM 1911 and UM 1912).

### Transportation electrification programs

- Drafted a board learning topic paper and made a presentation to the board titled “Electric and Advanced Mobility” to educate the board on the current state of electric vehicles and other emerging transportation technologies. Transportation is the second largest source of energy use and greenhouse gas emissions in Oregon, and the industry is undergoing dramatic transformations that could deliver significant energy savings and carbon reduction.
- At the direction of the OPUC, Energy Trust did not pursue a research project identified in 2016 to determine whether there may be opportunities for Energy Trust to provide incentives for more efficient electric vehicles and more efficient electric vehicle chargers.

### Department of Environmental Quality market-based carbon reduction mechanisms

- In 2016, the Oregon Legislature directed Oregon Department of Environmental Quality to study market-based cap-and-trade options to reduce greenhouse gas emissions. Energy Trust participated in DEQ workgroup meetings.
- In 2018, the Legislature considered cap-and-invest bills but did not adopt legislation. Instead, legislative leaders appointed a Joint Committee on Carbon to analyze cap-and-invest proposals for consideration in 2019. Energy Trust will monitor those proceedings.

### Oregon legislation

- Monitored proposed 2018 legislation with the potential to affect Energy Trust programs and ability to continue acquiring efficiency and renewable resources for utility customers.
- Responded to data requests from legislators and advocates relating to energy legislation.
- Moving forward, Energy Trust will monitor and participate (if invited) in work convened by the new Joint Committee on Carbon Reduction as well as the state’s new Carbon Policy office. Both were created near the end of the 2018 legislative session.

 **Environmental Protection Agency Clean Power Plan**

- In October 2017, the EPA proposed a process to withdraw the Clean Power Plan and replace it with a different proposal. Comments on the proposal were due in April 2018. The process proposed in October 2017 was expected to take at least two years to complete, not including any litigation.

 **Oregon Residential Energy Tax Credits**

- The Residential Energy Tax Credit expired at the end of 2017. During the 2017 state legislative session, bills were proposed to extend RETC past the 2017 sunset, and Energy Trust provided information to the legislature to quantify the impacts of the sunset of the RETC.

 **Senate Bill 978**

- SB 978 was passed by the Oregon Legislature in 2017. The bill requires the OPUC to establish a public process to investigate how developing industry trends, technologies and policy drivers may impact the existing electricity regulatory system. The commission is also required to investigate the obligations of and benefits to electric companies and customers under the existing regulatory system. The commission is required to submit a report on the findings of the public process to the Legislature no later than September 15, 2018. Energy Trust will monitor and participate (if invited).

### **C. Load and Demand Management with Utilities (includes demand response)<sup>6</sup>**

 **Reporting to OPUC**

- Submitted a summary of demand management activity to the OPUC as an appendix to Energy Trust's 2017 Annual Report, including information about the value of current program impacts, data and tools needed to link utility grid objectives to specific Energy Trust actions, and possible complementary pilots to be developed in coordination with utilities.
- Through this demand management appendix to the 2017 Annual Report, Energy Trust reported the estimated 2017 contributions from electric and gas savings and solar generation to demand reductions on utility systems.
- Energy Trust estimated peak demand reduction from electric and gas energy-efficiency projects by calculating the fraction of the annual energy saved during peak times identified by the utilities. Energy Trust uses load profiles taken from the Northwest Power and Conservation Council's Seventh Power Plan to estimate this value for each end use, which is then applied to a measure as determined by engineering review.
- Energy Trust estimated average generation from installed solar projects during peak hours by using monthly generation profiles for representative project types based on variation caused by tilt, orientation and geographic location.

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<sup>6</sup> Load management is the process of structuring and/or scheduling the use of energy among a group of customers to best match demand to available supplies. It includes a variety of strategies that either reduce the demand for energy at peak times or shift the energy use to periods of lower demand. Demand response is a load management strategy that reduces electricity consumption by end-use customers from their normal pattern of consumption during times of peak energy use, when wholesale electricity prices are high and/or when system reliability is jeopardized. Customers are often compensated for participating in demand response programs.

 **Ongoing activities**

- In 2017, collaborated with Pacific Power and NW Natural to design and implement locational load management (formerly referred to as targeted demand-side management) pilots to test how Energy Trust’s energy-efficiency and renewable energy offerings could be deployed in constrained locations to reduce energy use during peak hours and possibly defer traditional system investments.
- Began working with Kevala Analytics in 2017 to study potential areas where local load reduction efforts could contribute to reducing local electric utility load constraints. Work was supported by a U.S. Department of Energy grant.
- In 2017, supported enrollment of customers with Nest thermostats in PGE’s Rush Hour Rewards program through a \$25 bonus incentive.
- Planned to collaborate with PGE in 2018 on a pilot to explore the effectiveness of Whisker Labs set point automation of Ecobee and Honeywell smart thermostats.
- Completed evaluation for phase one of Nest Seasonal Savings pilot, and began planning for phase 2.

**VI. STAFF ENGAGEMENT**

One outcome of the annual Staff Engagement Survey is an assessment of employee engagement. Staff responses to survey statements were categorized as “engaged” when staff indicated “agreement” or “strong agreement” with a statement.

Energy Trust’s ranking in the Oregon Business magazine 100 Best survey is another indicator of employee engagement, as the rankings are determined by employee responses to a survey about workplace culture, sustainability, benefits and other key indicators of engagement.

Source	2015	2016	2017	2018	2019
Staff Engagement Survey	3/4 of statements with 75% or more agreeing	3/4 of statements with 75% or more agreeing	3/4 of statements with 70% or more agreeing		
Oregon Business Survey	7th of 100	5th of 100	6th of 100		
<b>Indicator</b>	<b>Engaged</b>	<b>Engaged</b>	<b>Engaged</b>		

Background:

- The Strategic Plan calls for Energy Trust to “sustain a culture of highly engaged staff.” When the strategic plan was developed, a definition of “highly engaged” was not formulated. Without such a definition, staff determines “engaged” when results from the staff engagement survey and Oregon Business rankings indicate positive reviews across the majority of survey questions. For these reasons, it is believed Energy Trust is achieving these objectives despite a small decline in the number of staff that agreed with three-quarters of statements.
- While a 2017 Gallup “State of the American Workplace” report found 33 percent of U.S. employees are engaged at work, industry and national data are best referenced for their broad contextual findings and not as a benchmark against which to compare Energy Trust staff engagement. Still, when compared to national averages, Energy Trust staff are highly engaged.

## **APPENDIX 1: Expand Customer Participation Program Activities Inventory**

This appendix provides information for the Expand Customer Participation: Program Design and Execution Progress Indicators. Energy Trust staff identified in annual budget actions plans to reach new customer segments or new markets in support of the Strategic Plan goal to expand customer participation.

Additional activities occur or are being explored by programs and support groups beyond the direct customer or market engagement activities listed here (e.g., contracting and procurement changes). The Diversity, Equity and Inclusion Initiative is organizing these longer-term strategies, and will help identify new initiatives for programs to pursue in the coming years.

### **Progress Indicator 1: New initiatives in 2018 to reach new and underserved markets**

- Refine program design and outreach strategies by incorporating lessons learned from market analysis and data-driven program outreach.
- Conduct research to identify opportunities to increase participation in specific market sectors.
- Contract with community-based organizations to ensure residential offers and promotions engage underserved communities. Contracted activities may include advising PMCs on best practices to engage customers and/or delivery of services.
- Add New Buildings Market Solutions offering for public sector facilities and low-income multifamily buildings, including features that help overcome barriers faced by nonprofit developers building affordable housing.
- Solicit input from stakeholders on proposed strategies for increasing solar adoption in low- and moderate-income communities. With support from a U.S. Department of Energy grant, collaborate with the Clean Energy States Alliance and six other states to identify and prioritize strategies to increase access to solar for low- and moderate-income communities.
- Design and test a solar incentive offer for moderate-income customers in owner-occupied, single-family homes.
- Evaluate tools for measuring baseline adoption of solar by customer demographic and identify opportunities for increased access.

### **Progress Indicator 2: Expanded initiatives from prior years to reach new and underserved markets**

- Establish partnerships and collaboration protocols with low-income stakeholders that leverage Energy Trust's market engagement to support greater efficiency with lower-income customers.
- Develop and deepen relationships with organizations that reach and serve diverse communities and customer groups.
- Analyze market and program participation data to identify key areas of opportunity, and refine marketing based on market segment and region.
- Develop outreach tactics for customer groups with lower participation rates, such as customers outside of the Portland Metro area.
- Increase trade-ally driven program activity through enhanced trade ally support, one-on-one engagement and educational resources, and encouraging business development funds.

- Dedicate outreach and contractor recruitment resources to promote participation of minority- and women-owned businesses in Energy Trust's Trade Ally Network.
- Provide rural outreach and services to farmers, irrigators and their vendors, including collaborating with other agencies and nonprofits.
- Expand the delivery of energy-efficiency workshops for multifamily customers, presenting relevant information based on market segment and region.
- Maintain Savings Within Reach incentives for moderate-income homeowners to reduce the up-front cost of energy upgrade projects. Incentives are paid to the trade ally and passed onto customers through lower up-front project costs.
- Coordinate with Oregon Housing and Community Services, Community Action Partnership of Oregon and agencies serving low-income populations to develop energy-saving strategies.
- Use Energy Saver Kits as a customer engagement tool. Customers can order Energy Saver Kits from Energy Trust's website at no cost, including energy-saving LEDs, showerheads and faucet aerators.
- Expand Existing Multifamily participation in market segments and regions where participation has historically been low, using market and program participation data analysis, customized marketing and outreach strategies, and education events for property managers.
- Explore community outreach activities, particularly in rural markets, to reach small multifamily property owners, a typically low-participating customer group.
- Promote common-area lighting solutions to gain additional Existing Multifamily electric savings, with emphasis on smaller multifamily properties.
- Continue direct installation of efficient lighting to serve small business customers throughout the state and support equitable access to program opportunities.
- Deliver industrial SEM Continuation cohorts in Southern Oregon, Central Oregon, Willamette Valley and Portland and launch two year-one cohorts.
- Improve service delivery to Existing Buildings customers that have not yet participated, including by targeting geographic regions, market sectors and participant diversity.
- Work with the cities of Hillsboro, Beaverton and others to advance opportunities for energy efficiency in new housing developments prior to the building permitting process. Deliver training and support to real estate industry actors
- Expand participation in the Irrigation Modernization initiative to meet increasing interest and market uptake.
- Join at least one U.S. Department of Energy proposal to increase solar deployment among low- to moderate-income groups.
- Continue New Buildings regional outreach and delivery model with personnel based in Eastern Oregon, Southern Oregon and the Portland Metro area. Emphasize diversity and inclusion of all customer types in program offers, outreach, training and education.
- Expand availability of residential water heater and gas hearth incentives at retail locations.

**Progress Indicator 3: Continued initiatives from prior years that are meeting savings and generation goals**

- Pursue plans for small, rural wastewater treatment plants to reach net-zero energy use through solar and/or anaerobic digestion.
- Build participation among minority- and women-owned businesses and emerging small business owners by engaging with minority chambers and associations, such as Oregon Association of Minority Entrepreneurs, Women in Construction and Commercial Real Estate Women.

- Coordinate and provide technical assistance to the City of Portland for its ordinance regarding home energy scoring.
- Support the two-year Commercial Property Assessed Clean Energy financing pilot through Multnomah County and the City of Portland.
- Participate in commercial construction industry events focused on the minority business community.
- Grow participating small and independent retailers, increasing program presence in communities outside the Portland Metro area.
- Develop a pipeline of new Existing Homes savings opportunities. Potential opportunities include proper heat pump sizing and controls, web-enabled thermostats and ceiling insulation in hard-to-reach markets.
- Drive outreach efforts to recruit new home builders, focusing on regions with historically low participation and using home builders associations and regional staff as outreach channels.
- Email Existing Buildings customers when bilingual representatives are available to help.
- Support Spanish-speakers in filling out Existing Buildings forms.
- Have Existing Multifamily bilingual staff.
- Staff residential events where Spanish speakers are expected to attend with a Spanish-speaking staff member.
- Provide food banks and community action agencies with a Spanish client intake form for Carry Home Savings kits.
- Provide trainings in Spanish for residential builders and sub-contractors.
- Translate Existing Multifamily customer handouts in Spanish.
- Translate select residential web pages in Spanish, including Savings Within Reach and Appliances.
- Maintain an Existing Buildings call center real-time translation services contract.
- Hold trade ally workshops in smaller markets to engage small businesses.
- Continue conducting targeted outreach throughout the state.
- Continue having PMC outreach staff across the state supporting multiple residential programs, through engagement with consumers as well as contractors, builders and verifiers.
- Include geographic, gender, ethnicity and racial diversity, and various sizes of businesses, in outreach, marketing and website materials.
- Continue initiative to lower the soft costs of solar to make it more accessible to all groups.
- Work with housing authorities and community housing groups to reach rural and low-income multifamily properties.
- Work with Habitat for Humanity as a residential trade ally builder.
- Support student homebuilders in Hermiston, reaching an underserved part of the state.
- Collaborate with utilities to include an email distribution offering a limited-time online purchase of products (lighting and showerheads).
- Develop industrial Strategic Energy Management curriculum and materials for people of all backgrounds, utilizing icons and relatable vocabulary.
- Focus program design, delivery and outreach on statewide participation (urban and rural) and participation by all sizes of Production Efficiency businesses.
- Include in PMC contracts the requirement for PMCs to reach and serve diverse customers and contractors.

# 2015-2019 Emerging Efficiency Resources Dashboard—Year 3

As of Budget Year 2018; updated with information from the 2017 Pilots Report submitted to the OPUC

## OVERVIEW

Energy Trust and NEEA each manage a pipeline for establishing new, energy-saving resources. NEEA focuses on upstream activities stimulating the **Production & Development** of new energy-saving resources. Energy Trust focuses on **Testing & Implementing** technologies ready for deployment.

## PIPELINE STAGES

Each pipeline is designed to move technologies through a defined set of stages. Either the technology moves forward to the next stage or it drops out and will not become a savings resource for programs.

## END RESULT

If a technology successfully passes through a pipeline it becomes an additional savings resource. It is then available to the programs to design a program offering and capture the savings.

## Energy Trust Emerging Efficiency Resources Pipeline

### Scoping (2)

Res. Online Appliance Purchase ●  
T-Stat Demand, Energy Controls ●

### Planning (2)

*Existing Homes Automated Smart T-Stat Optimization (Ph. 2)* ●  
*Existing Buildings Luminaire Lighting Controls*

### In Implementation (6)

Pay for Performance ●  
Water Sub-metering ●  
New Buildings Variable Refrigerant Flow  
Cadet Heaters (Multifamily)  
*New Building Luminaire Lighting Controls*  
*Manufact. Home Replacement* ●

### Install Complete (1)

Building Perform. Tracking & Controls ●

### Evaluation (5)

Ductless Heat Pumps (Multifamily)  
Heat Pumps (Manufact. Homes)  
*Adv. Power Strips (Tier 2)*  
*Ductless Heat Pumps (Mobile Homes)*  
*Existing Homes Automated Smart T-Stat Optimization (Ph. 1)* ●

### New Program Savings Resources

**Goal by 2019**  
Achieve additional savings resources separate from NEEA

● = Gas Savings Potential; *Italics* = new or moved

REMOVED FROM PIPELINE

● *Mpower Oregon (Multifamily)* ●

Path to Net Zero program offer ●  
Adv. Power Strips (Tier 1)  
NEST T-Stats ●

## NEEA Electric Market Transformation Pipeline

### Scanning

Advanced Com. HVAC  
Dynamic Windows  
Optimized Motor Systems  
Pump Operator Cert.  
Combined Water/Space Heat  
Advanced Water Heaters  
Next Generation TVs  
Connected T-Stats  
Simp. Ductless Heat Pumps  
Packaged Terminal Heat Pumps  
*Occupancy Sensors*  
*Window Films and Blinds*  
*Dynamic Windows*  
*Compressed Air Systems*  
*Irrigation Pivot Commissioning*

### Concept Assessment

Compressed Air Saver Unit  
Optimized Motor Systems (Pumps)  
*Dedicated Outdoor Air Systems Commercial Buildings*

### Market, Product Assess.

Manufactured Homes  
Com. Window Attachments  
*Heat Pump Water Heater Split System*  
*Residential Window Attachments*

### Strategy & Testing

Retail Product Portfolio  
Super-Efficient Dryers  
Next Step Home Refrigeration Operator Cert.  
*Luminaire Lighting Controls*

### Market Development

*Heat Pump Water Heaters*  
*Ductless Heat Pumps*  
*Other Codes & Standards*  
*Reduced Wattage Lamp Replacement*  
*Exp. Builder Operator Cert.*  
*Integrated Design Labs*  
*Top Tier Trade Ally*  
*Ind. Technical Training*  
*Com. Real Estate*  
*Com. & Ind. SEM*  
*Com. Codes Enhancement*

### Long-Term Monitoring

Monitoring & tracking energy savings from 9 previously funded initiatives

### New Program Savings Resources

**Goal by 2019**  
35 aMW of additional savings resources for Energy Trust

Early Stage

5-yr goal: 1,400 aMW | Through 2017: 1,089 aMW

Mid Stage

5-yr goal: 1,000 aMW | Through 2017: 955 aMW

Market Deployment

5-yr goal: 175 aMW | Through 2019: 200 aMW forecast

# NEEA Gas Efficiency Resource Annual Progress Indicators

Metric	Status
2015: Complete scanning research and concept opportunity assessment for 2 technologies	Achieved, with 3 technologies receiving high-level assessments: Combi systems, low-capacity modulating furnaces and smart thermostats for control of multiple heat sources
2016: Complete concept opportunity assessment for 3 technologies	Achieved; reviewed hearths, gas absorption heat pump water heaters and residential gas dryers, and continued testing work with Combi systems and commercial condensing rooftop units
2017: Complete market and product assessment for 1 technology, 5 additional technologies in "Scanning"	Achieved, completed for plugless 0.67 gas water heaters Achieved, with 5 technologies in the Scanning phase: Part-load residential gas furnace, gas variable refrigerant flow system, commercial foodservice, carbon capture of combustion products and gas internal combustion engine heat pump
2018: Complete strategy testing and finalization for 1 technology	NA
2019: At least 2 technologies ready for scale-up	NA

## Current Initiatives

Absorption heat pump water heaters
Absorption continuation space and water heating systems
Efficient clothes dryers
Rooftop commercial condensing heaters
Efficient hearths

# 2015-2019 Emerging Efficiency Resources Dashboard—Year 2

As of Budget Year 2017; updated with information from the 2016 Pilots Report submitted to the OPUC

## OVERVIEW

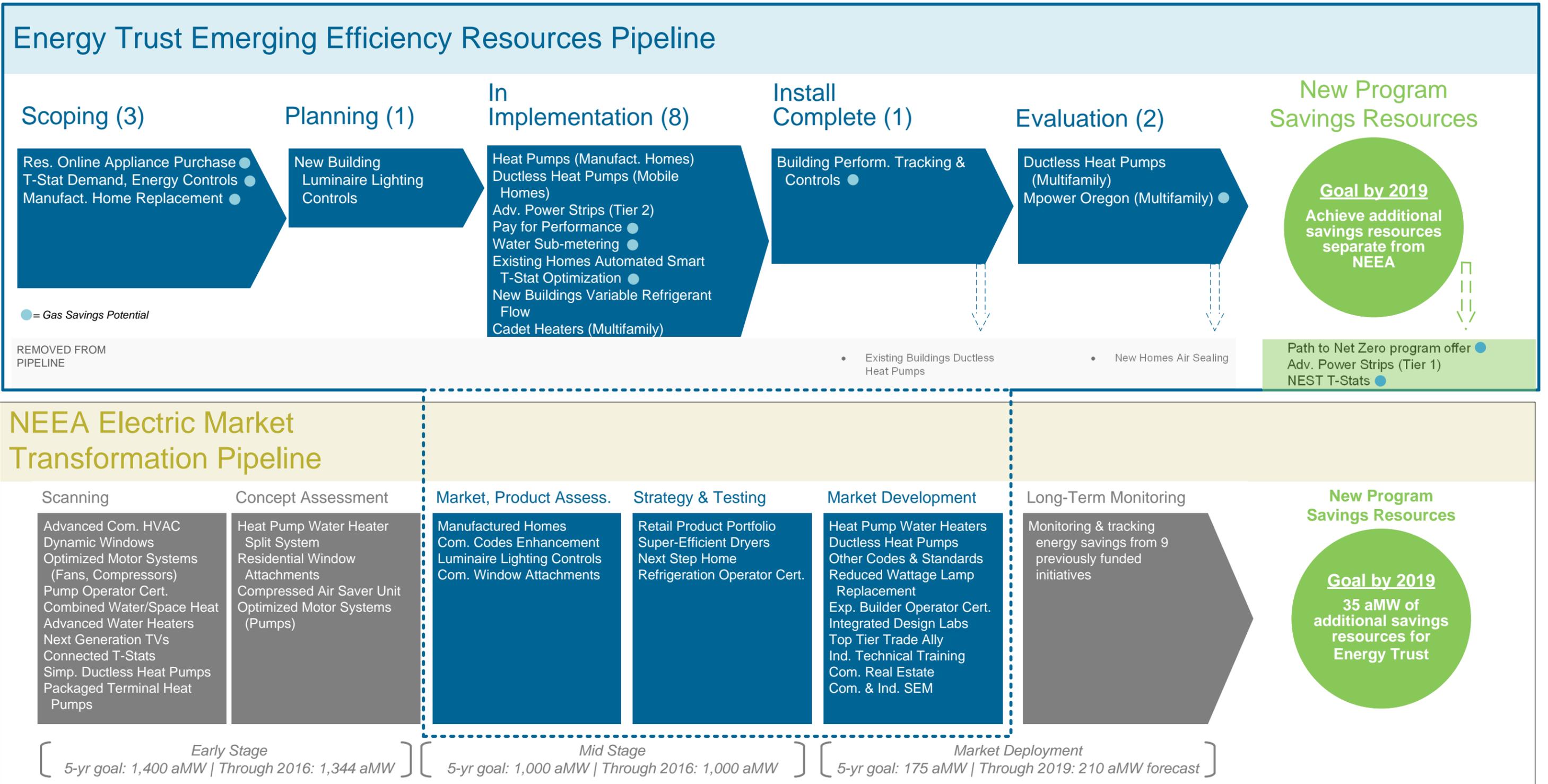
Energy Trust and NEEA each manage a pipeline for establishing new, energy-saving resources. NEEA focuses on upstream activities stimulating the **Production & Development** of new energy-saving resources. Energy Trust focuses on **Testing & Implementing** technologies ready for deployment.

## PIPELINE STAGES

Each pipeline is designed to move technologies through a defined set of stages. Either the technology moves forward to the next stage or it drops out and will not become a savings resource for programs.

## END RESULT

If a technology successfully passes through a pipeline it becomes an additional savings resource. It is then available to the programs to design a program offering and capture the savings.



# NEEA Gas Efficiency Resource Annual Progress Indicators

Metric	Status
2015: Complete scanning research and concept opportunity assessment for 2 technologies	Achieved, with 3 technologies receiving high-level assessments: Combi systems, low-capacity modulating furnaces and smart thermostats for control of multiple heat sources
2016: Complete concept opportunity assessment for 3 technologies	Achieved; reviewed hearths, gas absorption heat pump water heaters and residential gas dryers, and continued testing work with Combi systems and commercial condensing rooftop units
2017: Complete market and product assessment for 1 technology; 5 additional technologies in "Scanning"	NA
2018: Complete strategy testing and finalization for 1 technology	NA
2019: At least 2 technologies ready for scale-up	NA

Current Initiatives
Absorption heat pump water heaters
Absorption continuation space and water heating systems
Efficient clothes dryers
Rooftop commercial condensing heaters
Efficient hearths

# 2015-2019 Emerging Efficiency Resources Dashboard—Year 1

As of Budget Year 2016; updated with information from the 2015 Pilots Report submitted to the OPUC

## OVERVIEW

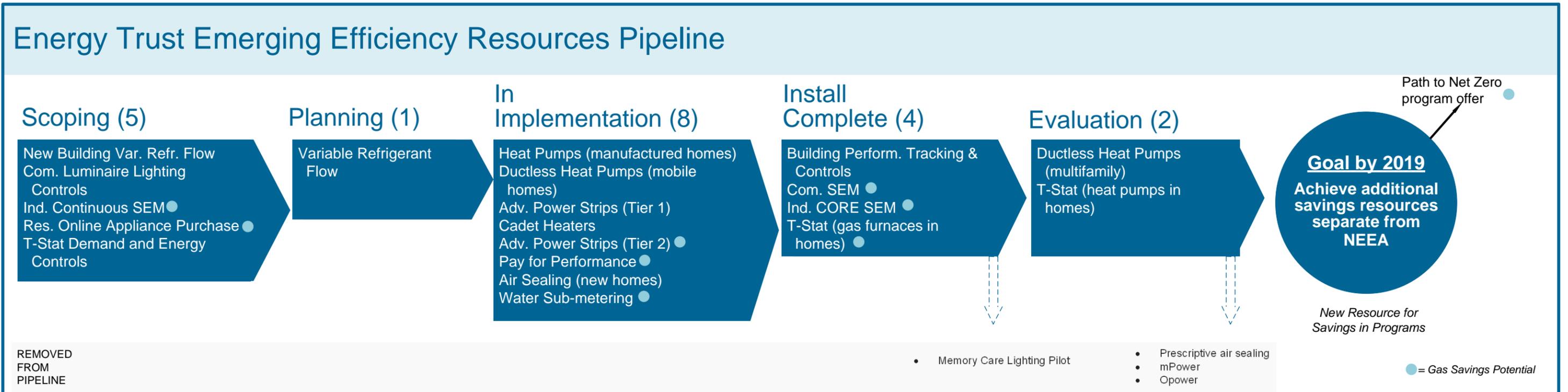
Energy Trust and NEEA each manage a pipeline for establishing new, energy-saving resources. NEEA focuses on upstream activities stimulating the **Development & Production** of new energy-saving resources. Energy Trust focuses on **Testing & Implementing** technologies ready for deployment.

## PIPELINE STAGES

Each pipeline is designed to move technologies through a defined set of stages. Either the technology moves forward to the next stage or it drops out and will not become a savings resource for programs.

## END RESULT

If a technology successfully passes through a pipeline it becomes an additional savings resource. It is then available to the programs to design a program offering and capture the savings.



# NEEA Gas Efficiency Resource Annual Progress Indicators

Metric	Status
2015: Complete scanning research and concept opportunity assessment for 2 technologies	Achieved, with 3 technologies receiving high-level assessment: Combi systems, low-capacity modulating furnaces and smart thermostats for control of multiple heat sources
2016: Complete concept opportunity assessment for 3 technologies	NA
2017: Complete market and product assessment for 1 technology; 5 additional technologies in "Scanning"	NA
2018: Complete strategy testing and finalization for 1 technology	NA
2019: At least 2 technologies ready for scale-up	NA

Current Initiatives
Absorption heat pump water heaters
Absorption continuation space and water heating systems
Efficient clothes dryers
Rooftop commercial condensing heaters
Efficient hearths

## Speaker Bio

## Jason Eisdorfer

Jason Eisdorfer will address the board at its 2018 Strategic Planning Workshop. As the board begins strategic planning for its next five-year strategic plan, Jason will discuss the ways in which the Oregon Public Utility Commission (OPUC) perspective on the upcoming strategic planning process and the future landscape and significance of energy efficiency and renewable energy resources.

Jason Eisdorfer has served as the Utility Program Director of the OPUC since 2012. He oversees a staff of analysts, economists and policy experts and provides direction to formulate policies, recommendations, and practices regarding the regulation of investor-owned electricity, natural gas, water and telecommunications utilities. He ensures that program staff considers the balances between consumer interests, shareholder interests, and state policy. He advises the Commissioners on policies and issues concerning utility regulation and evolving industry structures. He oversees the administrative affairs of the Utility Program and its biennial budget.

Previously Eisdorfer was the Interim Director of Strategy Integration at the Bonneville Power Administration, a federal Power Marketing Administration, and before that he served as BPA's Greenhouse Gas Policy Advisor. In this role he served as the senior advisor to the agency on policies and programs related to climate change.

Eisdorfer served as legal counsel and energy program director of the Citizens' Utility Board of Oregon for 13 years. He acted as legal representative for all organizational activities on behalf of residential utility customers of investor-owned electricity, natural gas and telecommunications utilities in Oregon before state and federal agencies and state courts.

He has co-authored state legislation related to climate change and to electric utility restructuring and operations, including the electricity restructuring law in 1999, and the Oregon Renewable Energy Act and the Climate Change Integration Act, both of 2007, and more recently he has advised on additional state legislation concerning storage technology pilots and natural gas utility carbon reduction programs. He has served on numerous boards and is the Governor's appointee to the Northwest Energy Efficiency Alliance Board of Directors.

Eisdorfer is an adjunct professor of law since 2008 at the University of Oregon School of Law and the Northwestern School of Law at Lewis and Clark College, teaching classes on energy law and climate change law and policy. He is a graduate of the University of Chicago and he received his law degree from the University of Oregon.

## Proposed SP Process Timeline

## Energy Trust Board Proposed High Level Strategic Planning Process Timeline

May 17-18, 2018

<b>Date</b>	<b>Lead</b>	<b>Action</b>
May 17-18	Board	Workshop
June 7	Strategic Planning (SP) Committee	Debrief workshop
August	Internal team	Draft work plan for SP development
September	SP Committee	Agree on work plan for SP development to include: <ol style="list-style-type: none"> <li>1. Form and timing of report outs</li> <li>2. Role and function of SP Committee</li> <li>3. Role and function of internal SP team</li> <li>4. General proposal for stakeholder engagement</li> <li>5. Clarifications of boundary conditions</li> <li>6. Commitment and identification of necessary resources</li> <li>7. Anything else?</li> </ol>
October	Board	Briefing on work plan for SP development
<b>2019</b>		
Winter/spring	Internal team, SP committee & Board	Develop draft 2020-2024 SP Includes stakeholder outreach and conversations
Winter/spring	Legislature	Legislation affecting Energy Trust?
May	Board	Approve draft 2020-2024 SP
Summer	Stakeholders, Internal team, SP committee & Board	Stakeholder outreach on draft/Receive and digest comments
Oct.	Board	Approve 2020-2024 SP
<b>2020-2024</b>		
	Legislature/Congress/Regulator	Legislation or rules affecting Energy Trust?

## Glossary

# Energy Trust of Oregon Glossary of Key Terms and Program Descriptions

Updated April 2017

## Key terms

**Allied technical assistance contractors:** Allied technical assistance contractors provide technical analysis and studies to help industrial customers identify energy-efficiency upgrades.

**Avoided cost:** The amount of money that an electric utility would spend for the next increment of electric generation it 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 gets paid for power sold to the utility.

**Benefit/cost ratio:** Energy Trust ensures investment in cost-effective energy efficiency based on the Total Resource Cost Test benefit/cost ratio and the Utility Cost Test benefit/cost ratio. Together, the tests assess the value of the energy-efficiency investment compared to a utility supplying the same amount of energy, and determine whether energy efficiency is the best energy buy for a utility and for all utility customers.

**Total Resource Cost Test:** This is the main test that determines whether Energy Trust can offer an incentive for a project. Benefits include the value of energy savings to the ratepayers of the utility system over the expected life of the energy-efficiency resource (otherwise known as the avoided cost of energy), and in some cases benefits also include quantifiable non-energy benefits, such as water savings and operations and maintenance benefits. Costs include the total cost of the energy-efficiency resource, including Energy Trust incentives and the project cost paid by the participating customer.

**Utility Cost Test:** This test is used to indicate the incentive amount for a project. It helps Energy Trust determine whether providing an incentive is cost effective for the utility system. Benefits include the value of energy savings to the ratepayers of the utility system over the expected life of the energy-efficiency resource (otherwise known as the avoided cost of energy). Costs include the cost of the Energy Trust incentive.

**Multnomah County Property Fit initiative** (formerly Commercial Property Assessed Clean Energy): Started in Q3 2015, the pilot provides 100 percent of funding to commercial property owners that complete comprehensive energy-efficiency and renewable energy projects, with standard incentives from Energy Trust and long-term loans from the Portland Development Commission repaid through energy savings or electricity production.

**Cost-effectiveness:** The OPUC has a definition that refers to 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.

**Demand response:** A load management strategy, it is the reduction in electricity consumption by end-use customers from their normal pattern of consumption during times of peak energy use, when wholesale electricity prices are high and/or when system reliability is jeopardized. Customers are often compensated for participating in demand response programs.

**Energy Saver Kit:** Customers of Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas can order free Energy Saver Kits from Energy Trust’s website, including energy-saving LEDs, showerheads and faucet aerators.

**EPS™:** Builders can receive cash incentives for new homes constructed to EPS energy performance requirements, indicating low energy consumption, utility costs and carbon footprint. The score helps homebuyers assess and compare the energy use and costs of similarly sized homes.

**Irrigation modernization:** A collaborative effort by Energy Trust and Farmers Conservation Alliance, irrigation modernization connects irrigation districts and farmers with tools to invest in modern irrigation infrastructure, saving water and energy, improving habitats for fish and generating clean energy through small-scale hydropower systems installed in pipes.

**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 a measure.

**LivingWise kits:** LivingWise kits and curriculum are delivered to sixth-grade students in Oregon schools. Energy Trust provides free LivingWise science curriculum to teachers, and offers energy-saving LEDs and showerheads for students to install in homes.

**Market solutions:** Tailored market solutions incentive packages help businesses make quick decisions and achieve deeper energy savings when constructing small restaurant, grocery, multifamily, office, school or retail buildings less than 70,000 square feet.

**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.

**Megaproject:** Large commercial or industrial projects receiving more than \$500,000 in Energy Trust incentives for energy-efficiency upgrades are considered megaprojects. These projects are reviewed and approved by Energy Trust’s Board of Directors.

**Midstream incentive:** Midstream incentives are provided to distributors and to retailers, with savings passed onto customers. Downstream incentives are provided directly to customers.

**Path to Net Zero:** The Path to Net Zero offering provides increased design, technical assistance, construction, and measurement and reporting incentives to new commercial construction projects that aim to exceed energy code by 40 percent through a combination of energy-efficiency and renewable energy features.

**Pay for Performance:** The Pay for Performance offering for commercial customers offers incentives for capital and operations and maintenance improvements over a multiyear period to help achieve additional energy savings for more comprehensive projects.

**Program Management Contractor (PMC):** Company contracted with to deliver and implement a program or major program track. PMCs keeps costs low for utility customers, draw from existing expertise and skills in the market, and allow Energy Trust to remain flexible and nimble as the market changes. PMC contracts are competitively selected, reviewed by a committee with internal staff and external representatives, and approved by the board. Contracts are rebid on a regular basis.

**Program Delivery Contractor (PDC):** Company contracted with to implement a specific program track. PDCs keeps costs low for utility customers, draw from existing expertise and skills in the market, and allow Energy Trust to remain flexible and nimble as the market changes. PDC contracts are competitively selected, reviewed by a committee with internal staff and external representatives, and approved by the board. Contracts are rebid on a regular basis.

**Project development assistance:** Incentives and support for early-stage development of Other Renewables projects helps build a pipeline of future renewable energy projects.

**Retrocommissioning:** A systematic process for identifying less-than-optimal performance in commercial equipment, lighting and control systems and improving the energy efficiency of these existing systems.

**Savings Within Reach:** Owners of single-family or manufactured homes who meet moderate-income qualifications can receive enhanced Savings Within Reach incentives for qualifying projects.

**Strategic Energy Management:** Energy Trust helps industrial and commercial customers reduce energy use and save money through behavioral and low-cost operations and maintenance improvements.

**Verifier:** Trade ally verifiers provide technical guidance and inspection to home builders, ensuring that homes rated with EPS save energy through energy-efficient windows, HVAC, appliances and weatherization.

## Program descriptions

**Existing Buildings.** The Existing Buildings program offers energy-efficient improvements for existing commercial buildings of all sizes. Incentives are available for custom projects, including capital upgrades and operations and maintenance improvements; standard upgrades; lighting upgrades; and energy management offerings with tools, training, technical assistance and Strategic Energy Management offerings to help customers reduce energy use through behavioral and operations improvements.

**Existing Multifamily.** The Existing Multifamily program serves existing multifamily buildings with two or more units, including market-rate housing, affordable housing, homeowners associations, individual unit owners, and assisted living and campus living facilities. The program offers standard incentives for water heaters, HVAC equipment, weatherization, appliances and foodservice equipment; free in-unit installation of LEDs, showerheads

and faucet aerators and distribution of advanced power strips; custom incentives for capital improvements; incentives for lighting upgrades in common areas; and incentives paid to distributors to reduce costs of efficient lighting and equipment for customers.

**New Buildings.** The New Buildings program supports design and construction of high-performance commercial buildings and major renovations of all sizes and building types. Staff engage with building owners, developers, business owners and design professionals to provide standard prescriptive incentives, market solutions incentive packages and custom incentives. Tailored market solutions incentive packages help businesses make quick decisions and achieve deeper energy savings when constructing small restaurant, grocery, multifamily, office, school or retail buildings less than 70,000 square feet.

**Production Efficiency.** The Production Efficiency program offers technical assistance and incentives to industrial and agricultural businesses, including incentives for custom projects, standard lighting and equipment upgrades delivered by trade allies, and an industrial Strategic Energy Management offering to help customers achieve persistent energy savings through behavioral and operations and maintenance improvements.

**Existing Homes.** The Existing Homes program serves single-family homeowners, renters and owners of existing manufactured homes with energy-saving recommendations, referrals to qualified trade ally contractors, cash incentives for heating and water heating equipment, smart thermostats, insulation and windows, and LEDs, showerheads and faucet aerators delivered through kits. Enhanced Savings Within Reach incentives are available for moderate-income residents.

**New Homes.** The New Homes program works with trade ally builders, subcontractors and verifiers to construct energy-efficient homes that exceed code through construction of EPS-rated homes and prescriptive incentives for individual equipment.

**Products.** The Products program offers cash incentives for residential ENERGY STAR qualified products, including lighting, clothes washers and showerheads. The program also provides energy-saving kits to food pantries to deliver to their clients, and distributes showerheads through water bureaus and districts. In addition, the program encourages the sale of energy-efficient new manufactured homes.

**Solar Electric.** The Solar program aims to create a vigorous and sustainable market for solar energy by offering cash incentives that lower above-market costs for small solar projects, educating consumers, creating and enforcing quality standards and ensuring a robust network of qualified trade ally contractors. Staff review incentive levels regularly and gradually reduce them to manage budget and respond to decreases in solar costs. The Solar program supports installation of standard solar systems on residential and commercial properties, and also large custom projects if funding is available.

**Other Renewables.** The Other Renewables program provides project development assistance and incentives that lower above-market costs for projects that generate renewable energy from hydropower, biopower, wind and geothermal resources. Project development assistance supports early-stage development and helps build a pipeline of future renewable energy installation projects. In 2016, staff focused on projects that provide a wide range of benefits, including biogas projects generating energy from anaerobic digestion of organic waste and hydropower projects at irrigation districts.

**Northwest Energy Efficiency Alliance.** NEEA is a nonprofit organization working to maximize energy efficiency to meet our future energy needs. Michael Colgrove, Energy Trust executive director, serves as a board member. NEEA is supported by and works in partnership with Bonneville Power Administration, Energy Trust and more than 100 Northwest utilities for the benefit of more than 12 million energy consumers. NEEA uses the market power of the region to accelerate innovation and adoption of energy-efficient products, services and practices. NEEA has delivered market transformation savings under contract to Energy Trust since 2002.

