Conservation Advisory Council Agenda

Wednesday, June 26, 2019
1:30 p.m. – 5:00 p.m.
421 SW Oak St., #300, Portland, OR 97204

Follow-ups from previous meeting:

- 2020 Organizational Goals: The final goals will be brought back to the council at a later meeting as an informational item. The goals will also be referenced by program staff developing their 2020 action plans, and the council will receive presentations in the fall on those action plans.

1:30 Welcome, Old Business and Short Takes *(Hannah Cruz; information)*

- Welcome Foundational DAC members (roster online)
- Introductions, agenda review and approve May 22 meeting minutes
- Review previous meeting follow-ups
- Check-in on memo regarding integrating energy efficiency and renewable energy at Energy Trust

1:45 Guest Speaker: City of Portland and the Portland Clean Energy Community Benefits Fund *(informational)*

Program Manager Sam Baraso, Energy Policy Coordinator Vinh Mason and PCEF Implementation Team Communications Lead Damon Motz-Storey will provide an update on the development of the Portland Clean Energy Community Benefits Fund program, including status of hiring staff, selecting the committee and upcoming milestones for the program.

2:15 Draft 2020-2024 Strategic Plan *(Mike Colgrove; discussion)*

Staff will present and seek feedback on the Draft 2020-2024 Strategic Plan. The discussion will center around the plan's five focus areas and their strategies and progress indicators. We are looking to understand whether CAC members, Foundational DAC members and others view the plan as a reflection of Energy Trust's role and if staff should consider modifying anything in the plan.

This is one way to provide feedback and comments on the plan. There is also a formal public comment period starting the week of June 24. The draft Strategic Plan and a guide to reference during the discussion are attached. Please read the plan before the meeting.

We have invited the Foundational DAC members to join us specifically for this discussion as the formal DAC is not anticipated to be operational during the strategic plan public comment period.

3:30 Break

3:40 Existing Multifamily Program Assessment *(Kate Wellington; discussion)*

Staff will host an interactive session to discuss the Existing Multifamily program assessment, which will inform program changes for 2020 and 2021. Staff is looking for feedback on early concepts coming out of the assessment and input on future engagement.

For this discussion, the packet includes a briefing paper intended to establish a common level of familiarity about this program among council members. Please read it before the meeting.

4:50 Public Comment

5:00 Adjourn

Meeting materials (agendas, presentations and notes) are available online.

Next meeting: Wednesday, July 31, 2019; agenda tentatively includes final 2020 organizational goals, 2020 budget schedule, OPUC cost-effectiveness exception requests and 2020 measures update

Conservation Advisory Council Meeting Notes

May 22, 2019

Attending from the council:

Holly Braun, NW Natural
Charlie Grist, Northwest Power and Conservation Council
Dave Moody, Bonneville Power Administration
Jeff Mitchell, NW Energy Efficiency Alliance, for Julia Harper
Warren Cook, Oregon Department of Energy
Wendy Gerlitz, NW Energy Coalition
Tim Hendricks, Building Owners and Managers Association
Kari Greer, Pacific Power
Anna Kim, Oregon Public Utility Commission
Danny Grady, City of Portland Bureau of Planning and Sustainability
Jason Klotz, Portland General Electric
Kerry Meade, Northwest Energy Efficiency Council

Attending from Energy Trust:

Hannah Cruz
Fred Gordon
Peter West
Ryan Crews
Debbie Menashe
John Volkman
Jackie Goss
Cameron Starr
Kenji Spielman
Alex Novie
Lizzie Rubado
Spencer Moersfelder
Steve Lacey
Mark Wyman
Kati Harper
Kate Wellington
Ashley Bartels
Jeni Hall
Peter Schaffer
Amber Cole
Jessica Iplicki
Michael Colgrove
Amanda Zuniga
Kirsten Svaren
Kate Hanson
Jack Cullen
Rob Strange
Jessica Kramer
Jay Olson

Others attending:

Alan Meyer, Energy Trust board
Lindsey Hardy, Energy Trust board (on phone)
Elee Jen, Energy Trust board
Shelley Beaulieu, TRC
John Molnar, Rogers Machinery
Whitney Rideout, Evergreen
Jenny Sorich, CLEAResult
Aaron Leatherwood, Evergreen
Nick Dreves, ICF
Joe Marcotte, Lockheed Martin
Greg Harr, Evergreen
Jon Eicher, ICF
Karla Hendrickson, ICF
Laura Hall, ICF

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1. Welcome, Old Business and Short Takes

Hannah Cruz convened the meeting at 1:32 p.m. The agenda, notes and presentation materials are available on Energy Trust's website at www.energytrust.org/about/public-meetings/conservation-advisory-council-meetings/. The meeting was recorded on Go To Meeting. If you'd like to refer to the meeting recording for further detail on any of these topics, email info@energytrust.org.

2. Guest Speaker: NW Energy Coalition

Topic summary

Northwest Energy Coalition Policy Director Wendy Gerlitz provided an overview of recent clean energy advancements in Washington State, including three of the major bills her organization worked directly on. Northwest Energy Coalition's website contains a legislative digest with more information.

Discussion

The first bill, SB 5116, aims to transition the electric sector to 100 percent clean energy by 2045, with a key provision that coal-fired energy cannot be charged to customers after 2025. The bill also states that all electric utility retail sales must be greenhouse gas neutral by 2030 and electric utilities are required to pursue all cost-effective efficiency and demand response. The bill would begin factoring the social cost of carbon at a 2.5% discount rate. It also contains a low-income assistance section requiring all programs to make funding available by 2021. The requirements extend to all electric utilities.

The second bill, HB 1257, will implement energy performance standards for large commercial buildings. It includes a tiered implementation time period to meet the standard, which must include energy use intensity targets by building type. Another part of the bill introduces energy efficiency standards for natural gas utilities and requires that by 2022 all natural gas utilities must identify and acquire cost-effective conservation incorporating a 2.5% social cost of carbon instead of the current cost of carbon compliance.

Holly Braun: Using the social cost of carbon should create a higher bar and make more measures cost effective.
Hannah Cruz: Since we serve customers in Southwest Washington, would this affect our processes?
Holly Braun: Yes and no. We already get all cost-effective energy efficiency. We have to change one of the components of the cost-effectiveness calculation to include the societal cost of carbon. We don't think there's a huge difference but it's worth exploring.

Wendy went on to describe the third bill, SB 2044, which creates new energy and water use standards for 16 appliance products, and also allows the Department of Commerce to update the standards.

Next Steps

No next steps.

3. Review of Draft 2020 Organizational Goals

Topic summary

Staff described the process to developing the 2020 organizational goals. The goals are still in draft form and will be revised with further staff input and with feedback from members of the Conservation Advisory Council and Renewable Energy Advisory Council. When final, the goals will guide the organization in developing the 2020 budget and action plan this fall.

Mike Colgrove reviewed Energy Trust's draft 2020-2024 Strategic Plan goals in their current form and explained. He noted that this year's process to developing organizational goals is different from past years because the annual organizational goals are being developed ahead of the final strategic plan goals. In subsequent years, the strategic plan will be final and a reference point before developing annual organizational goals.

Discussion

The council broke out into small groups and were given questions to prompt a discussion about the draft goals. Each group reported out their feedback to the group. High-level takeaways are as follows:

Group 1:

- Overall, the first goal felt a lot like business as usual, whereas the second through fifth goals related to how Energy Trust is collaborating internally or externally.
- One concern is how Energy Trust will integrate with other organizations. Will it be cumbersome? From the utility side, the concern is how Energy Trust influence will be perceived in conversations with other organizations. For example, with the goal relating to local and statewide policies, Energy Trust has a lot of influence. How do you avoid showing advocacy while still supporting with technical experience for others to leverage?
- From a trade ally perspective, the goals are a little high level.

Group 2:

- We are supportive of the fourth and fifth goals. We need more clarity on the third goal and are curious to know the effects it may have on entities that currently conduct some of this work.
- It would be helpful to get more clarification on what non-market transformation innovations you're pursuing.
- This doesn't go into specifics so it's hard to give direct feedback. Are these goals in addition to current activity or supportive of it?
- Defining your role is a tangible thing you could call out in here.

Group 3:

- What underlies these goals? They lack specificity and a way to measure progress. Various goals stated seemed to be at different levels; some are broad and others very specific. Either simplify or build out each goal.
- These goals advance and expand Energy Trust's goals. But the current core work about delivery wasn't mentioned anywhere explicitly.
- Regional stakeholders and communities want to be part of the innovation conversation. How would they be impacted?
- We appreciate the exercise, and its valuable to do it early on. It would be nice to add an additional touchpoint to understand why and how the goals were developed.

Group 4:

- Thank you for doing this process. It feels more whole and complete. More time to complete the exercise fully would be great.
- The goals seem more specific to the current time compared with last year. These feel timely for 2020.
- Advancing flexibility is something you always should do.
- The goals should all be high level. It feels appropriate for us to engage with the top-level goal and then be informed on the second, activity-based level.
- Under the innovation goal, you should also identify barriers to innovation.
- In the fifth goal, the Portland Clean Energy Fund and state carbon policy appear to be linked but might deserve partitioning. You can still provide impartial information but figuring out what your role is as it pertains to implementing the Portland Clean Energy Fund isn't called out here. It would go beyond providing information and analysis, and you could expand that.

Group 5:

- Some of the goals seemed too technical.

- We liked the mentions of creating future savings opportunities. That's specific to today. The notion of sustaining efficiency in a changing world was good.
- The goals don't need to represent the totality of what the organization is doing.
- The goal relating to operational improvements was confusing and you may want to re-word it.
- We liked the "create" clause in goal one suggesting advancing and expanding because it reflects a pursuit of innovation.
- On the fifth goal regarding impartial objective analysis, it needs to reflect collaboration. Implementation of policy happens after, but information sharing could occur prior to that.
- Early engagement on developing these goals is appreciated. We would like to be involved in the tactics and understanding implementation strategies.

Hannah Cruz: Do you have interest in being involved in the next steps of the process as the goals are used to inform action plans?
Warren Cook: Yes. It helps link tactical decisions back to the "why."

Next Steps
With this feedback, staff will continue revising the draft 2020 organizational goals. The final goals will be brought back to the council at a later meeting as an informational item. The goals will also be referenced by program staff developing their 2020 action plans, and the council will receive presentations in the fall on this plan.

4. Commercial and Industrial Lighting Strategy
Topic summary
Staff is developing a longer-term lighting strategy for the Existing Buildings, Existing Multifamily and Production Efficiency programs. The council received an early look at the savings forecasts and how programs are proactively planning for anticipated savings declines.

Discussion
Jessica Kramer reviewed five-year lighting projections for commercial and industrial lighting. Staff convened a lighting strategy team to better understand future program savings and proactively plan for an expected reduction in savings from commercial lighting measures, which currently account for almost half of the total savings for the Existing Buildings, Existing Multifamily and Production Efficiency programs.

The lighting strategy team examined market effects for each technology to understand its savings potential, then looked at the delivery model which predicts cost effectiveness and whether each measure could continue. The team explored two scenarios: one in which there were no changes to the programs and another that factored in new program and delivery models.

Alan Meyer: Why is lighting not going to be cost effective?
Jessica Kramer: It's the changing baselines. There are fewer savings because highly efficient LED technology will become the standard.

Jessica described that the second scenario could include increased midstream delivery of commodity LEDs and a better designed program that could potentially provide design assistance to customers for major remodels. The second scenario predicts a much less steep drop-off in savings, which would decrease shock to the market.

Alan Meyer: Is the incentive spending the same in both scenarios?
Jessica Kramer: We haven't got to that level of detail evaluating the midstream and design incentives. We'd still have to stay within the maximum allowed incentive for each measure. We

want to support the midstream offering at a higher incentive rate to get the best adoption rate with distributors.
Jay Olson: We think we'll save a lot on operation costs. Program cost-effectiveness would go up.

Hannah Cruz: Are you largely maintaining TLEDs?
Jessica Kramer: Yes, that is the category that helps maintain savings throughout the years in the second scenario. It is the largest category for commodity LEDs.

Danny Grady: When you mentioned that in 2022 there were commodity LEDs that wouldn't be cost effective, is that using the existing baseline?
Jessica Kramer: In 2019, the baseline will still be the existing baseline but we're preparing for a dual baseline in 2020. We're in that transition period.
Jay Olson: Exploring the two scenarios helps determine the timing. At first, we wanted to move to midstream on January 1, 2020, but the study shows we would have lost savings by moving that quickly. We need more analysis to figure out when we should move forward.
Jeff Mitchell: What is the dual baseline?
Kenji Spielman: In Regional Technical Forum terminology, this is an early retirement baseline. It is trying to account for current practice after the technology that is replaced is expected to fail.

Dave Moody: Regional coordination will be important.
Jessica Kramer: The NEEA lighting meeting is happening in June. It would be good to come back after that with a regional perspective.

Kerry Meade: When you look at lighting savings from controls, how are you able to measure cost effectiveness since they impact HVAC and things other than the lighting portion? Is that something you're exploring in discussions? Should we be exploring it in our council meetings? Technology is moving toward connections within a building. It's a little easier in Washington to look at whole building impact. They just rolled out a commercial building performance standard to get past the cost-effectiveness barrier. There's still more out there that needs to happen. How are you thinking about that and how do we talk about it?
Jay Olson: Better lighting design approach comes into play to look at a system-based approach. Also, we're trying to launch a networked lighting controls pilot. It would incorporate the whole building approach with high-efficiency lighting, smart controls, lighting design, layout and exterior lighting. That's also part of what we want to come back in a few months. We're not looking at just these two things, but they are the two biggest we identified to not lose savings.

Anna Kim: I'd like to request more information on the lighting landscape.

Jason Klotz: Are there integration costs with the building management system if you're doing whole buildings with lighting?
Jessica Kramer: We haven't gotten to that level. The better design option is the least fleshed out. We'll bring that in.

Dave Moody: The post-2022 midstream approach looks like its protected. Do you anticipate that much of baseline savings to make that up? Are midstream savings really viable?
Jessica Kramer: According to the two factors we considered, we could prolong that into 2024. After 2024, we don't have that projection, but we think it will dramatically drop off. These are going to be consistently revisited. We'll have to test any scenario.

Anna Kim: Could you share more about what goes into your scenario?
Jessica Kramer: We'd love to do that in a follow-up. Would you like a short report?
Anna Kim: Yes, that would be good.

Alan Meyer: Thank you for bringing it to the CAC before it's a fully formed decision.

Kenji Spielman: Caveat is that we don't know as much about the market share as we'd like.
Dave Moody: Are you working with our market research team? I believe they have some good data.
Kenji Spielman: Yes. But working with NEEA and distributor-level data and piecing that together is challenging.
Jeff Mitchell: The market research indicates that there should be 200 million lamps, but we can only account for half of that.

Next Steps
Staff will continue developing the long-term business lighting strategy, and will follow-up wit the council at a later meeting in fall 2019 or early 2020.

5. Pilots Update
Topic summary
Staff provided an overview of recently completed and in-progress pilots. Kenji Spielman presented on Energy Trust's pilot process as a whole and some current ongoing pilots. Pilots are used to test technologies, behavioral change techniques and delivery methods and may or may not lead to a new measure being created.

Discussion
Holly Braun: What is the cadet plus heater?
Kenji Spielman: Cadet came out with a more efficient version of the traditional cadet wall heater, and we thought there may be savings in upgrading to that more advanced version. However, due to the sale of the company and distribution issues, we didn't get enough data.

Elee Jen: What about the data you are using for each of the pilots? For example, with the variable refrigerant flow pilot, how do you collect data?
Kenji Spielman: The pilot didn't come back with strong actionable results. We found barriers around permitting and how units were going in. Some of the modeling work and market research was used to create a different prescriptive measure that the New Buildings team is currently using. In terms of data collection around cadets, we need enough units going into buildings, but we just didn't get that.

Charlie Grist: I heard a talk yesterday on ductless heat pumps in manufactured housing that argued the Regional Technical Forum measure isn't really a good one. You should also have controls on the existing system or remove it. Have you looked at the effect of the existing embedded system working in conjunction with the new system?
Jackie Goss: It's an issue we need to look at, but won't address in the pilot.
Kenji Spielman: It's an issue with how we deal with the interaction between the ductless heat pump and backup heating.

Charlie Grist: In the multifamily homes, you were looking at regular and ductless heat pumps. Were ductless heat pumps installed through the wall or embedded in the ducts?
Jackie Goss: Through the wall.
Charlie Grist: Were there noise concerns?
Scott Leonard: It's two different ductless heat pumps, one on the lower and one on the upper floor with a ducted distribution system on the upper floor that connects to the bedrooms. The noise is coming from an inline fan within the distribution system that moves air through the ducts. Contractors have since discontinued using this system design and moved to manufacturer created duct systems that connect directly to the upstairs unit indoor head.

Next Steps
No next steps.

6. Establishing Baselines for Diverse Population Groups

Topic summary
This presentation examined what staff might be able to do from a data perspective to support more targeted program services and outreach to underserved customers. Kenji Spielman and Alex Novie presented highlights from a recent panel they participated in at NEEA's Efficiency Exchange Conference that looked at how a focus on equity could better quantify potential savings for certain customers. For example, secondary market purchases could potentially become cost effective if a different baseline were used. Energy Trust current baselines are calculated using a broad set of averages that don't necessarily reflect specific groups of participants.

Discussion
Hannah Cruz: How would you describe our current framework?
Kenji Spielman: We use measure-level cost effectiveness. We include fairly discrete ways to incorporate non-energy benefits. We assume certain customers, like very low-income populations, are specifically being served by other organizations. It is important to bring up that other jurisdictions use a 20 percent adder on savings reaching certain customer groups.

Alex Novie reviewed an example about residential clothes washers, explaining that the baseline for low-income customers could potentially be much lower because many purchases in this demographic are from a secondary market.

Alan Meyer: I understand what you're saying. You could offer higher incentives if you were getting more savings, but how do you know?
Kenji Spielman: Yes. It might not even be justifying higher incentives. We're normally only supporting front-loading washers. However, if it turns out there's a case that movement to an ENERGY STAR® top loader is cost effective, and we can get those into specific channels, maybe we have a different set of products to support.

Holly Braun: What happens to all these used appliances? Would re-use be better even if it's less efficient? What would be done to the used ones since if you're trying to look society wide.
Kenji Spielman: All those appliances have high value as scrap metal so they would likely end up in the recycling stream. We haven't looked into a full lifecycle assessment of the energy used in creating a new unit.
Holly Braun: I feel like this is a consideration even though we're about carbon emission. It feels congruent with better affordability.
Kenji Spielman: If existing units are wasting a lot of energy and water, the quality of the new appliances sometimes is much higher than what's on the secondary market.
Alex Novie: It's an important observation that we've also heard from customers.
Charlie Grist: The key from my point of view is getting data on a baseline for different populations: how much of that market is new and what level of efficiency are they buying? The market for efficient products is not ubiquitous. The Regional Technical Forum looks at four states and all income levels. If other markets are different, those need to be tapped but you have to find out what they're buying. It's hard, but I support that work.
Kenji Spielman: Also, what data do we have already? What else can we start to gather and leverage so it's not piecemeal and hyper-regional. Can there be regional collaboration to answer some of these questions? Are there enough savings to justify the effort to quantify it and gather enough data to support it?

Hannah Cruz: Beyond secondary markets, did the panel have other examples?
Kenji Spielman: Yes, for example small hardware stores and the baseline of what's being sold in urban versus rural areas. Also, the age of water heaters in rentals versus owned homes or units. And delving into different census tracks and what the housing conditions are.

Mike Colgrove: If there's a differential in installation cost in rural communities due to product and installer availability, could that be an example?

Alan Meyer: We pay on average now. If we pay above average in targeted areas, maybe we could pay less than average in other areas. That gets even more complicated.

Hannah Cruz: Were there any business examples?
Alex Novie: There are retail lighting examples for areas where there might not be a Lowes or a Home Depot. Installer availability is also a factor. The market baseline for lighting is a very broad average for commercial buildings. Are there ways we could segment the market more? We aren't necessarily collecting data to inform program design. We are also looking at operating hours between business types and digging deeper on business sizes.
Mike Colgrove: From the NEEA conference, I thought an interesting observation is the impact this could have on the rest of the population. If measures are averaged over whole populations and we pull out the higher savings component, is that even built in the assumption? What does that then do to the remainder?

Next Steps
No next steps.

7. Public Comment
There was no public comment.

8. Meeting Adjournment
The meeting adjourned at 4:30 p.m. The next meeting is Wednesday, June 26, 2019.

Working Across: Energy Trust Energy Efficiency and Renewable Energy Program Delivery and Customer Services

June 2019

Background

A question was raised at the Energy Trust 2019 budget workshop in October 2018 regarding whether and how energy efficiency and renewable energy are integrated into program design and customer offers, and how battery storage information and options are presented to customers.

What follows are key examples of how Energy Trust programs combine energy efficiency and renewable energy opportunities for customers as well as information on future work in integrating these two energy resources.

I. Solar in New Construction

Staff from the Solar, New Buildings and Residential programs work closely to design effective program strategies, offerings and technical support to ensure cohesive support for customers and their project teams.

Solar-Ready Buildings

In addition to providing financial incentives for the installation of solar systems on homes or buildings, the Energy Trust Solar program sets design and installation requirements and provides incentives to encourage residential (homes) and commercial (buildings) new construction, or commercial major reconstruction, to be designed and built "solar ready."

Solar-ready homes and buildings are constructed to allow for later, easier installation of a solar electric system through clear roof space for solar panels, minimal shading, optimum alignment for better solar access, conduit installed between the roof and the electric panel or mechanical room, and space left for future solar electric system components. Planning to incorporate solar in the design of new homes and buildings can, at a minimum, decrease the cost of a solar installation and avoid the more extreme situations in which solar is precluded due to the shape or location of the building or equipment installed on the roof.

The Solar program works directly with the New Buildings program management contractor and Residential EPS™ New Construction program delivery contractor to define strategic goals for the solar-ready offer, identify and address market barriers, and increase solar adoption in new construction. Energy Trust solar-ready requirements are designed in alignment with international energy code standards and ensure that an eventual solar system will meet Energy Trust solar installation requirements and be eligible to receive a cash incentive.

Solar and New Buildings programs/offerings

The New Buildings program influences commercial design and construction practices to deliver buildings with low energy use. To do so, the program integrates solar and energy efficiency into program delivery for customers.

- *Outreach Managers:* New Buildings outreach managers are located across the state to provide accessible, local resources for solar and efficiency. The outreach managers cultivate working relationships with industry professionals and help them bring forward solutions to owners that provide a range of offerings, many of which aim for early planning, and assist projects through various stages of design and installation.

- *Solar Interest on New Buildings Enrollment Form*: Project owners can indicate when they enroll with the New Buildings program if they are planning on installing solar or are interested in learning more. This prompts an email from Energy Trust in response with additional resources as well as follow-up conversations with the customer around solar and next steps.

- *Early Design Assistance:* The New Buildings program provides an incentive for an early goal-setting meeting with the customer's project team. The meeting focuses on estimating energy use and identifying strategies to target energy reductions. The New Buildings program offers an additional incentive for Solar trade allies to attend this meeting. Bringing solar trade allies into the conversation earlier integrates critical design and solar project timeline pieces that are typically not discussed until later, often causing costly reworking of the design.

- *Solar Development Assistance* – This early solar planning support focuses on maximizing solar generation by enabling building owners to develop solar into their building, plan the mechanical, structural and electrical systems, and secure solar incentives through an Energy Trust solar trade ally for projects planning to install solar at the time of construction.

- *Path to Net Zero*: This offering drives big reductions in annual energy use by taking advantage of on-site solar and many passive and design-based strategies that offset usage. In-depth technical analysis of these strategies enables customers to consider energy resilience or passive survivability benefits of incorporating building-level net zero strategies. Engineers within the New Buildings program work directly with project teams to review annual onsite energy production values and provide support during the final model and site verification steps.

- *Solar-Ready Construction*: As described above.
  projects that are unable to install solar at the time of construction are able to take advantage of the Solar Ready Construction, an offering designed to support projects during new construction or major renovations to get ready for solar. Encouraging projects to preserve solar resource access and integrate electrical and structural components into their building before it finishes helps to avoid costly additions later once the project is ready to install a PV system and often times make solar possible where it otherwise would not be.

- *Market Solutions:* The New Buildings program offers a simplified incentive package that provides building-specific Good/Better/Best options to engage fast-paced project development through decision-making, spend less on energy modeling and invest more into efficiency and solar strategies.

Solar and Residential programs

The Residential program's EPS New Home Construction track influences residential home design and construction through above code requirements and a network of trade ally home builders and third-party verifiers who provide technical support, project modeling and guidance on best practices for the home builder. The EPS New Construction track provides trade ally builders with incentives that are tied to the home's percentage improvement over a code-built house.

- *Early Design Assistance*: The Residential program provides an incentive to trade ally builders in Oregon who meet early design assistance requirements. Beginning in 2019 an additional incentive is available for homebuilders that include a solar trade ally contractor in the Early Design Meeting. This incentive encourages builders to assemble a team to evaluate projects in their early stages, focusing on how energy efficiency and solar will be integrated from the beginning. Early design assistance creates an opportunity for all participants to provide input and voice their concerns. It enables builders to address potential problem areas early on. With careful early design planning, builders can save money by reducing callbacks, field modifications and schedule changes, while subcontractors benefit by limiting change orders.

- *Solar-Ready Construction*: As described above.

II. Energy Resilience

Customers in new residential and commercial construction, as well as existing homes and buildings, are increasingly asking for information and support on how to make their homes and buildings more resilient in the case of an earthquake, wildfire or other issue that causes an extended outage. Customers in the public sector and those serving vulnerable communities are especially interested in opportunities to consider resilience as part of building design or as a retrofit.

One approach to address customer consideration and demand for resiliency is through a solar plus storage microgrid, which can power the pre-selected loads it was designed to support indefinitely. A solar plus storage system is a solar photovoltaic system paired with advanced battery storage. These systems can be configured so they can "island" or separate from the distribution grid and continue to run independently. When this occurs, they can be considered a solar plus storage microgrid[1].

Energy Trust's Early Design Assistance meetings for residential and commercial builders and developers allows program staff to engage with customers to understand their drivers and their goals around resilience. This market research will be invaluable as Energy Trust transitions from gathering information to better understand customer needs to outlining best practices and creating offerings focused on providing energy resilience in new and existing construction. Here are a few examples of work currently underway on energy resilience:

[1] As defined by the U.S. Department of Energy, a microgrid is "a group of interconnected loads and distributed energy resources with clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid [and can] connect and disconnect from the grid to enable it to operate in both grid-connected or island mode."

- *Research on the benefits of solar plus storage for different building types*: Energy Trust is collaborating with the National Renewable Energy Lab and Clean Energy Group to perform analysis of the resilience capabilities and financial benefits of solar plus storage systems for pre-selected sites representing different building types and serving low-income communities around the state. Because the hourly load profile of a home or building is unique to the equipment installed, and the way the home or building is operated, the costs and benefits of solar plus storage systems are also unique to each site.

- *Solar plus Storage Feasibility Assessment Incentives*: Energy Trust supports the cost of design for advanced solar plus storage systems through the Solar Development Assistance incentive. This incentive helps offset the cost of a customized system design and financial analysis so that customers can gain an understanding of the costs and benefits of solar plus storage for their individual sites. As an example of this incentive, Energy Trust is currently coordinating with the City of Portland Bureau of Planning and Sustainability, Portland Fire and Rescue and Portland General Electric on a solar plus storage system at Fire Station #1 in downtown Portland.

- *Passive Resilience Research:* As part of the most recently awarded Net Zero Fellowship, Joel Good, senior consultant with RWDI's Building Performance and Sustainability team, explored the value of passive design strategies for resiliency. Joel focused on the resilience of two building designs using Kellogg Middle School as a case-study prototype. The school was designed to serve as a community center during a catastrophic event. The passive building systems were analyzed with a long-term view and provide valuable perspective on the role of energy efficiency and building design in resilience during an outage.

III. The Future of Integrating Energy Efficiency and Renewable Energy

Currently, Energy Trust programs are primarily integrating energy efficiency and solar in new construction. Looking forward, there will be a need for more coordination and collaboration for existing buildings as well. This need is in part being driven by Oregon Governor Brown's direction to state agencies to advance the state's new construction by going to higher levels of efficiency and making buildings net-zero ready. To achieve net-zero ready buildings, both energy efficiency and solar will be needed. In addition, these net-zero or net-zero ready buildings can be a flexible asset to utilities managing their systems, especially as it is anticipated they will need to manage to a more resource-constrained grid of the future.

- *Defining the Future of Net Zero*: Governor Brown's Executive Order 17-20 outlines a vision for how energy efficiency and renewable energy in Oregon's built environment can reduce greenhouse gas emissions and address climate change. As part of that vision, the governor directs the state Building Codes Division (BCD) to require all newly constructed buildings be built solar ready starting October 1, 2020, for residential structures and October 1, 2022, for commercial structures. Governor Brown also directed that BCD shall require newly constructed residential buildings to be built "zero-energy ready" by October 1, 2023. Energy Trust programs are designed to push the envelope on clean energy practices through incentives that stimulate above-code construction. Programs also support builders, developers, contractors and design professionals in preparing for code changes, so they are ready to deliver to the new

standards and provide subject matter expertise in code change proceedings. Solar-ready and net-zero building are examples of where Energy Trust already plays this role in the market.

- *Beyond Net Zero*: A net-zero home or building that has enough onsite solar installed to offset the onsite load on an annual basis can create demand peaks on a daily basis that coincide with a utility's evening system peak. Energy Trust energy efficiency and renewable energy programs offer existing measures that also provide additional benefits to the customer and the utility grid and can create a home or building that is a flexible dispatchable resource. For example, in addition to providing energy resilience during an outage, solar plus storage systems can also provide demand response and frequency regulation to the grid. Currently there are dockets underway with the Oregon Public Utility Commission to explore what benefits behind the meter solar plus storage systems can provide the utility grid and how those benefits will be valued and ultimately monetized to pass that value along to the customer.

- *Targeted Distributed Energy Resources Deployment***:** On a more community-wide level, Pacific Power and Portland General Electric are both exploring the additional benefits that distributed energy resources can provide beyond the energy efficiency and renewable energy benefits currently being captured. Energy Trust is working with Pacific Power on a Targeted Load Management effort to address specific distribution grid constraints and potentially defer the cost of substation upgrades. Portland General Electric has received OPUC approval for its Smart Grid Testbed pilot. The pilot will engage customers by concentrating demand response deployment in three targeted geographic areas. The goals of the pilot are to 1) test the ability of demand response (through both direct load control and dynamic rate structures like time-of-use), energy efficiency and solar to mitigate peak events, and 2) address capacity shortfall anticipated in PGE's Integrated Resource Plan. Both of these efforts are designed to allow the utility to learn the additional benefits that distributed energy resources can provide to address specific utility concerns. As part of these efforts, Energy Trust is working in coordination with each utility to deploy resources that can affect the specific load shape on a substation or mitigate a period of peak demand.

DRAFT

Strategic Plan

2020-2024

Energy Trust of Oregon

About Us

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.

WHO WE ARE

We are an Oregon nonprofit organization dedicated to benefiting the customers of Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas and Avista. We are primarily funded from public purpose charges paid by utility customers. We are accountable to an independent board of directors and the Oregon Public Utility Commission.

WHAT WE DELIVER

Our information, financial incentives and connections to contractors help people, businesses and communities save energy and generate renewable power. We are committed to helping all customers manage their energy use, especially people with lower incomes, communities of color, smaller businesses and rural areas.

OUR WORK

- Helps lower utility bills for participants
- Reduces overall energy costs for all ratepayers
- Contributes to a stronger economy
- Builds resilient and sustainable communities
- Avoids carbon emissions in our region

Our impact
Working with us, customers have so far saved and generated enough energy to fuel a clean energy power plant

Context

Energy Trust is a nationally recognized expert in energy efficiency and renewable energy program development and administration.

We have served thousands of businesses, many of them large commercial, industrial and multifamily properties. Over 600,000 households have installed efficient light bulbs, water-saving solutions and other very cost-effective energy-saving projects. We have achieved success in transforming markets that have historically been low-cost and high-volume sources of savings, such as the residential lighting market. We have also helped customers install thousands of small-scale solar, hydropower, biopower, wind and geothermal systems.

DYNAMICS SHAPING OUR PLAN

In the next five years, known challenges and emerging dynamics will require us to innovatively build upon this foundational customer and market success so we can accomplish our energy goals and deliver benefits to all customers.

First, traditional clean energy program approaches need to evolve. Until advances in technology open up large areas of opportunity, we anticipate projects will save less energy on average than in the past. Consequently, we will need to help customers complete more projects to achieve our annual savings goals. This will likely increase levelized costs for energy efficiency during this timeframe. Additionally, we expect market conditions and the policy environment will make it harder to develop renewable energy projects. New partnerships and project funding models will be needed to continue diversifying Oregon's power mix with small-scale renewable energy.

Levelized cost
Our total cost to save or generate each unit of energy over the lifetime of the measure

Second, customer demographics are shifting. Our state population is expected to grow during the next five years, and with this growth, the demographics of Oregonians are changing. Nearly a quarter of Oregonians belong to communities of color and that percentage is expected to increase. To deliver on our energy savings and generation goals, we will need to engage an even more diverse population in the future. Adapting our programs and services to be relevant for diverse customers is critical to achieving our core purpose.

Third, government policies are targeting emissions reductions. As Oregon focuses on addressing climate change and reducing greenhouse gas emissions in both our energy supply and how we use that energy, our programs will be key to the state's success. Low-cost energy efficiency and clean, renewable energy are important ways to lower carbon emissions. While state carbon emissions reduction policies will likely have modest impact on our programs in the 2020-2024 timeframe, we anticipate more significant impact in the longer term.

Fourth, utility system changes and emerging technologies are presenting new opportunities. Utilities in the Northwest are adapting to address constraints on their systems and reduce greenhouse gas emissions. In addition, technology advancement is enabling new ways for utilities to begin interacting with customers to address these constraints. Our experience working with customers and contractors to install energy-efficient and solar technology can inform utility-led demand response programs and defer utility infrastructure upgrades in targeted areas.

Our Role in 2020-2024

We will continue our role as a third-party program administrator. We will **provide impactful energy efficiency and renewable energy programs** to benefit utility customers. This is our core purpose. We are entrusted to deliver cost-effective energy efficiency, transform markets to higher-efficiency products and lower the costs of small-scale renewable energy systems. We will maintain a multiple-utility, dual-fuel perspective and use independent analyses to inform this work.

We will **connect the benefits of clean energy to additional public purposes**. Utilities, communities, policymakers and implementers can make progress toward their goals by integrating energy efficiency and renewable energy into decarbonization, environmental projects, local economic development, community planning, social justice, healthcare, affordable housing and other efforts. Through coordination and alignment, we will meet our goals and make our investments go further.

Clean energy
For the purposes of this strategic plan, we define clean energy as conservation, energy efficiency and small-scale renewables

We will **accelerate customer adoption of technologies and approaches** that save energy, generate renewable power and provide additional value to the utility system. We will look ahead to identify and support new approaches, technologies and markets. We will cultivate a network of trade ally contractors, installers, architects, retailers and other third-party businesses to serve customers. We will evolve our clean energy programs by incorporating the expertise of contractors, community-based organizations, utilities, tribal governments and public agencies.

We will **serve and benefit all eligible utility customers and be inclusive in our program offerings**. We will help current participants complete their next energy projects. We will strengthen our approaches and tailor our programs to ensure people with low and moderate incomes, communities of color and rural communities can participate with us. We will carry out our diversity, equity and inclusion commitment—expanding participation in our programs and enhancing diversity, equity and inclusion in our own operations.

We will **collaborate with communities working to extend the benefits of clean energy** to those they serve. We will be a resource to community-based organizations, cities, counties, customer associations and other networks who can help engage new customers. We will seek to understand community interests and identify the mutual benefits of working together. We will partner to develop economical approaches for serving customers with efficient and renewable energy options.

Where We Will Focus

Our past successes with transforming markets and codes combined with emerging technologies, changing energy policies and regulations, and shifting state demographics are converging to open up new needs and opportunities.

To maximize our energy efficiency and renewable energy investments for the benefit of customers in this dynamic time, we will focus on:

1. Providing relevant programs, information and services for all customers, with particular attention to underserved customers
2. Delivering energy efficiency and renewable energy initiatives that benefit customers and help utilities manage constrained systems
3. Supporting development and implementation of energy-related policies by sharing our expertise
4. Maximizing public purpose charge investments by leveraging additional funding to accomplish clean energy projects with multiple public benefits
5. Enhancing our ability to quickly and effectively respond to changes, needs and new opportunities

All five areas of focus are mutually supportive and necessary. **Our priority is the first focus area, and that is where the vast majority of our investments will be made.** And yet to succeed there, we must invest in the other four. Focus areas 2, 3 and 4 will expand opportunities for our core energy efficiency and renewable energy programs and provide additional benefits to customers as the energy landscape changes. Focus area 5 is critical to our success in every other area as the pace of change accelerates and new opportunities emerge more quickly than ever before.

FOCUS AREA 1

Provide relevant energy efficiency and renewable energy programs, information and services for all our customers, including information and services designed specifically for underserved customers.

STRATEGIES

Continue to provide services and incentives to spur customer investment in their next energy project.

- Significant clean energy opportunities remain for residential, commercial, industrial and agricultural customers, even those we have already served. We will continue to provide trusted, independent information to educate customers about remaining opportunities. Our services and incentives will be available to spur investment in their next project.

Deliver cost-effective programs designed specifically to engage underserved customers.

- We will design programs and outreach plans to serve customers in geographic areas and communities where participation has been lower. In alignment with our Diversity, Equity and Inclusion operations goals, we will work to reach people with low and moderate incomes, communities of color and rural communities. We will evolve our services, information and incentives to address their energy needs and ensure they can participate in, and benefit from, cost-effective energy efficiency and clean, renewable generation.

Serve customers through distributors, suppliers, retailers and other mid- and up-stream market actors.

- We will focus on lowering program costs by expanding mid- and up-stream approaches, which seek to influence distributor and retailer stocking and sales of efficient products. We will apply lessons from our residential mid-and up-stream delivery to the commercial, industrial and renewable energy sectors, and continue to coordinate closely with the Northwest Energy Efficiency Alliance to identify additional mid- and up-stream opportunities.

Evaluate new energy technologies in development and incorporate into program offers when they are cost-effective and ready for the market.

- When new technologies and approaches are ready, we will adapt programs to support customer awareness, education and adoption.

PROGRESS INDICATORS

We will know we are making progress in this focus area when:

- We achieve our annual savings and generation goals, making steady progress toward ambitious longer-term goals we will establish through a three-year planning process starting in 2021. We incorporate emerging sources of savings and generation in the three-year goals *(see callout box)*.
- We meet or exceed the goals we establish to increase the diversity of program participants.

WHY WE FOCUS HERE

Our core purpose is to deliver cost-effective energy efficiency and clean, renewable energy programs and services to our affiliated utility customers. It is the reason we were created, and it remains our top priority.

Working in coordination with utility integrated resource planning, we aim to achieve all available cost-effective energy efficiency over a 20-year planning horizon. We use multiyear planning and annual budgeting to determine how much of the 20-year resource we can capture in the near term.

Multiyear planning
We work with utilities to produce two-year integrated resource plan updates identifying short-term energy efficiency opportunities based on market intelligence. For 2020 and 2021, we will use our annual budgeting process to inform goal setting. For 2022 and beyond, we plan to adopt a new three-year action planning cycle that will inform annual budgets and goal setting.

Looking ahead, we must find new ways to support the higher-cost technologies that are still cost-effective and continue to develop markets for solar, hydropower and biopower technologies. Substantial efficiency and renewable energy opportunities remain for our customers and we need innovative approaches to our program design and delivery to support them.

Our focus on all customers highlights our commitment to achieve all available cost-effective energy efficiency and deliver renewable energy generation. It ensures all customers who pay the public purpose charge can be engaged by our programs and benefit from our services. Through our Diversity, Equity and Inclusion operations goals, we are committed to intentionally designing services to reach underserved customers with relevant offers. This is essential to accomplishing our annual savings and generation goals.

FOCUS AREA 2

Strengthen the value we deliver to customers by linking energy efficiency and renewable energy to the approaches utilities are using to meet changing customer energy needs.

STRATEGIES

Improve our ability to quantify and value the benefits of distributed energy efficiency and renewable energy to electric and natural gas utility systems.

- We will conduct further research to understand and account for all the benefits energy efficiency and renewable energy can provide to utility systems, including to what extent these benefits can lower customer costs, reduce utility peak consumption and defer utility investment in transmission, supply or distribution upgrades.

Educate, encourage and enable customers to install and realize benefits from clean energy projects that also help utilities efficiently lower the cost of operating their systems.

- By working with the OPUC, our partner utilities and other stakeholders, we will implement energy efficiency and renewable energy initiatives in ways that benefit customers and help utilities manage their local distribution systems. We will explore incentives and outreach strategies to help customers in specific locations adopt beneficial technologies and practices where utilities are integrating distributed energy resources and seeking additional load management and flexibility.

PROGRESS INDICATORS

We will know we are making progress in this focus area when:

- We develop a framework to value, deliver, report and evaluate energy efficiency and renewable energy resource opportunities in targeted locations in collaboration with utilities.
- We implement and evaluate initiatives designed to drive customer adoption of energy efficiency and renewable energy projects in targeted areas.

WHY WE FOCUS HERE

We help keep utility costs lower for all customers by using our program and delivery expertise to support customer adoption of clean energy technologies and practices. These efforts deliver customer benefits and they can also help utilities address specific challenges in meeting customer demand.

For instance, efficient heating and cooling systems that are grid-enabled with built-in Wi-Fi will deliver cost savings and can also be used in utility demand-response programs that encourage customers to use less energy at specific times. Contractors can be encouraged to construct efficient homes and buildings that are also electric vehicle-ready. Customer solar projects installed with battery storage can help utilities smooth the impacts of intermittent renewable energy on the grid, while also providing resilience benefits.

Distributed energy resources
Energy efficiency and renewable energy, together with battery storage, demand response and electric vehicles that are connected to the grid, are known as distributed energy resources

Distributed energy resources like energy efficiency and small-scale renewable energy have the potential to help electric and natural gas utilities moderate the effects of sudden swings in energy demand or defer investments in new transmission and distribution infrastructure. There is increasing interest at the OPUC and in the utility industry in using distributed energy resources in a more integrated way, and there is recognition that we have the skills and expertise to assist with this integration.

FOCUS AREA 3

Provide objective information and analyses to support development and implementation of energy policies.

STRATEGIES

Work with the OPUC to provide technical support and advice on energy policies and dockets.

- The OPUC is engaged in many policy processes that will impact the regulatory environment and set the direction for the utility industry in Oregon. These processes will include considering how energy efficiency and small-scale renewables can interact with a changing utility environment. We will maintain effective working relationships with commission staff and support their processes using a public benefits perspective.

Support energy-related policy initiatives, objectives and complementary programs led by local, state and federal governments.

- We will work with the OPUC to identify areas where Energy Trust's experience in energy efficiency and renewable energy program delivery and customer outreach may support government policy objectives or initiatives. This includes being an expert resource and providing data or analyses on customer participation in and results of our clean energy programs. We will provide this to the Oregon Legislature, Office of the Governor, Oregon Department of Energy, Oregon Housing and Community Services and others.
- We will identify areas where we can further support policy activities, and we will respond to policymakers' needs for information and advice in areas where our experience could help.
- We will continue our approach to coordinating with complementary programs at state and local agencies, including Oregon Department of Energy's schools program and low-income programs and pilots led by Oregon Housing and Community Services.

PROGRESS INDICATORS

We will know we are making progress in this focus area when:

- We establish a system for monitoring regulatory and policy initiatives. We participate in policy development and implementation when there is potential customer benefit related to energy efficiency and renewable energy in the resulting policy, and we contribute data analyses and technical expertise during development of the policy.

WHY WE FOCUS HERE

City, county and state policymakers in Oregon are increasingly interested in how energy efficiency, renewable energy and other distributed energy resources can help achieve public policy goals.

We are a resource with impartial, objective information that can educate and inform policymakers and implementers. We have historically participated in policy development and implementation by providing public agencies with information, data and analyses on energy efficiency and renewable energy opportunities, and program participation results and trends. Our technical knowledge and experience working directly with customers, contractors, the state's largest investor-owned utilities and other market actors can continue to be valuable inputs into policymaking discussions.

Through this work, we can enhance the effectiveness of policies and support our core purpose of delivering least-cost energy and developing renewable energy markets. Doing so can ultimately help achieve greater program participation, energy savings and renewable generation.

FOCUS AREA 4

Maximize the effectiveness and reach of public purpose funding by leveraging additional funding to advance clean energy investments that deliver multiple benefits.

STRATEGIES

Leverage outside funding to help customers complete projects with both energy and non-energy benefits.

- Clean energy projects can deliver significant non-energy benefits. Other organizations and agencies may have funding available for those benefits. By collaborating with external organizations to coordinate funding, and helping customers identify and secure these additional funding sources, more clean energy projects can be completed and our public purpose charge investments can go further.

Coordinate with communities to help integrate energy efficiency and renewable energy into climate action and resiliency plans or to accomplish other community energy goals.

- As more communities actively engage in energy, climate and resiliency planning, we can support those plans that complement our goals by pooling resources and providing technical and educational expertise.

Collaborate with utilities on carbon reduction strategies.

- As Oregon's greenhouse gas reduction strategy takes shape, we will help by bringing our energy efficiency and renewable energy expertise and resources. For example, we can lend our experience in developing biogas projects that produce renewable electricity to help natural gas utilities develop renewable natural gas projects that can reduce greenhouse gas emissions.

PROGRESS INDICATORS

We will know we are making progress in this focus area when:

- We acquire more energy savings and renewable generation than would otherwise be achieved with only public purpose charge funding.
- We coordinate with more organizations and communities where their additional resources help accomplish mutually supportive objectives.
- We establish a concept agreement with the OPUC and at least one natural gas utility to assess a joint carbon reduction effort.

WHY WE FOCUS HERE

We can achieve additional energy efficiency and renewable energy by identifying, coordinating and helping customers leverage non-energy benefits and the funding that comes with them. Clean energy projects frequently realize public benefits beyond energy savings and renewable generation. Organizations or customers who might value those additional non-energy benefits do not always recognize the contribution that efficiency and renewable projects can make, or they are not able to realize or maximize those benefits on their own.

Our incentives for irrigation modernization projects, for example, help irrigation districts convert open canals to pipes, which eliminates pumping, and install low-impact, in-conduit hydropower systems. These projects also deliver non-energy benefits, like water conservation, improved water quality and restored river flows. Our funding and collaboration in these projects attract other organizations who can support the non-energy benefits, like watershed enhancements in this example.

Building on experience with initiatives like irrigation modernization, we will explore partnerships with organizations focused on greenhouse gas reduction, public health, affordable housing, workforce development, environmental justice and other objectives benefiting customers and communities. The objective is to achieve both energy and non-energy benefits for the public good and broaden the impact of our investments.

FOCUS AREA 5

Enhance our ability to quickly and effectively respond to changes, needs and new opportunities.

STRATEGIES

Foster and retain talented staff skilled in innovation techniques and adapting to change.

- To continue to lead in the design and administration of programs for the benefit of utility customers and the State of Oregon, we will retain highly skilled and engaged staff and recruit passionate, diverse employees. We will provide support for staff who identify a promising idea or new opportunity and are actively pursuing innovation. We will implement organizational development initiatives, improve our ability to quickly scale and direct staff resources where needed, promote alignment to shared goals, and improve processes and systems for efficiency and effectiveness.

Intentionally cultivate diversity in our board of directors, advisory councils, executive leadership, staff, contractors, partners and vendors.

- Building a diverse and inclusive organization in all dimensions will bring a vibrant wealth of backgrounds, experiences, perspectives and creative approaches to our work in service to our diverse utility customers. We will improve our service to customers when we better reflect all communities.

PROGRESS INDICATORS

We will know we are making progress in this focus area when:

- Annual surveys indicate that staff are significantly aware of how annual goal setting, business planning and prioritization enables flexible resourcing of existing and new initiatives.
- We achieve Diversity, Equity and Inclusion goals for employee hiring and recruitment, and for the board of directors.

WHY WE FOCUS HERE

To achieve focus areas 1 through 4, we will need to evolve how we approach our work and customers. We cannot continue to deliver significant benefits to utility customers in the 2020-2024 plan period by relying only on our prior successes.

To reach more customers and rethink how our expertise in energy efficiency and renewable energy add value to an increasingly integrated and distributed energy system, our organization must be more innovative and quicker to pivot to new opportunities. We will need to develop new ways of working with more diverse customers and adapt program designs to find cost-effective approaches to serve them. In addition, changes underway in the utility system and Oregon's energy policy may drive additional opportunities to serve and benefit utility customers and the public.

In periods of change, successful organizations focus on employees, helping them grow, learn and work productively through the uncertainty and divergence that comes with change. We will focus on ensuring alignment to organizational goals, providing a welcoming environment open to new ideas and perspectives, and cultivating employees' continued passion to deliver on the vision and purpose of the organization.

Strategic Plan Development and Management

We are guided by a series of five-year strategic plans, required by a grant agreement with the OPUC. The strategic plan is developed in an open and transparent process that gives stakeholders, customers and interested citizens an opportunity to guide the organization's broad direction.

DEVELOPING THE PLAN

Development of the 2020-2024 Strategic Plan began in May 2018 and will conclude in October 2019 when the plan is presented by staff to the board of directors for adoption. During this time, we present and invite public comment on the draft strategic plan at board and advisory council meetings, at public outreach events in communities across the state and through our website and communications. The board considers public comments and they help shape the final strategic plan.

After the adoption of the strategic plan, we will use annual and multiyear planning and budgeting processes to identify, prioritize and resource specific initiatives.

MONITORING PROGRESS

In past strategic plans, we set quantitative five-year energy savings and generation goals and used them to measure progress. In this 2020-2024 plan period, we will establish:

- Multiyear energy savings and generation targets through our three-year planning process starting with 2022, and
- Annual energy savings and generation goals through annual budgets, which will be based on current market conditions, policy changes and input from utilities, regulators, stakeholders and staff

This plan provides additional progress indicators to help the board monitor and evaluate each focus area and identify if staff are on track to meeting them by 2025.

PLAN MANAGEMENT AND SENATE BILL 1149 SUNSET

As we implement this strategic plan over its five-year timeframe, market, policy and other conditions will differ from what we assumed when we developed the plan. As with past strategic plans, we will manage and respond to unanticipated changes through other planning processes, like our contributions to the utilities' two-year integrated resource plan updates and our three-year business plans, annual budgets and action plans.

One policy condition that could require a change to the plan's focus areas or strategies is the sunset of the public purpose charge (established in SB 1149) at the end of 2025. This plan assumes public purpose charge funding will continue beyond 2025. Throughout this five-year plan, staff will monitor the status of that sunset, reconvening the board to reassess the plan if this funding is not extended.

HOW WE ARE FUNDED

We are funded by customers of Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas and Avista. We receive a small, dedicated percentage of customer utility bills to invest in energy efficiency and renewable energy programs in Oregon and Southwest Washington. The Oregon Public Utility Commission oversees our investments.

1. **SB 1149**: We receive a portion of a 3% public purpose charge to fund electric efficiency, market transformation and small-scale renewable energy development.
2. **SB 838**: We coordinate with the two electric utilities to identify additional electric efficiency funding beyond the original amount determined in SB 1149.
3. **Natural gas tariffs**: We coordinate with the three natural gas utilities to identify natural gas efficiency funding.

NEXT STEPS: PUBLIC OUTREACH AND PLAN REVISION

We're interested in your thoughts and feedback. Here are some questions we'll be asking in our discussions with stakeholders and the public during our summer outreach.

- How does our strategic plan relate to your priorities over the next five years?
- Will our focus areas meet your energy goals and needs?
- What relative level of investment do you suggest we make in each of the five focus areas?
- What are we missing that we should consider when finalizing the plan?

Written public comments are accepted through August 2 and will be considered for inclusion as we finalize the plan for board adoption on October 16, 2019.

Find more information, including how to submit your feedback, at **www.energytrust.org/strategicplan**.

Energy Trust of Oregon 421 SW Oak St., Suite 300, Portland, OR 97204 1.866.368.7878 **energytrust.org**

DRAFT 2020-2024 STRATEGIC PLAN GUIDE

FOCUS AREA 1

Provide relevant energy efficiency and renewable energy programs, information and services for all our customers, including information and services designed specifically for underserved customers.

STRATEGIES

- Continue to provide services and incentives to spur customer investment in their next energy project.
- Deliver cost-effective programs designed specifically to engage underserved customers.
- Serve customers through distributors, suppliers, retailers and other mid- and up-stream market actors.
- Evaluate new energy technologies in development and incorporate into program offers when they are cost-effective and ready for the market.

PROGRESS INDICATORS

- We achieve our annual savings and generation goals, making steady progress toward ambitious longer-term goals we will establish through a three-year planning process starting in 2021. We incorporate emerging sources of savings and generation in the three-year goals.
- We meet or exceed the goals we establish to increase the diversity of program participants.

FOCUS AREA 2

Strengthen the value we deliver to customers by linking energy efficiency and renewable energy to the approaches utilities are using to meet changing customer energy needs.

STRATEGIES

- Improve our ability to quantify and value the benefits of distributed energy efficiency and renewable energy to electric and natural gas utility systems.
- Educate, encourage and enable customers to install and realize benefits from clean energy projects that also help utilities efficiently lower the cost of operating their systems.

PROGRESS INDICATORS

- We develop a framework to value, deliver, report and evaluate energy efficiency and renewable energy resource opportunities in targeted locations in collaboration with utilities.
- We implement and evaluate initiatives designed to drive customer adoption of energy efficiency and renewable energy projects in targeted areas.

FOCUS AREA 3

Provide objective information and analyses to support development and implementation of energy policies.

STRATEGIES

- Work with the OPUC to provide technical support and advice on energy policies and dockets.
- Support energy-related policy initiatives, objectives and complementary programs led by local, state and federal governments.

PROGRESS INDICATOR

- We establish a system for monitoring regulatory and policy initiatives. We participate in policy development and implementation when there is potential customer benefit related to energy efficiency and renewable energy in the resulting policy, and we contribute data analyses and technical expertise during development of the policy.

DRAFT 2020-2024 STRATEGIC PLAN GUIDE

FOCUS AREA 4

Maximize the effectiveness and reach of public purpose funding by leveraging additional funding to advance clean energy investments that deliver multiple benefits.

STRATEGIES

- Leverage outside funding to help customers complete projects with both energy and non-energy benefits.
- Coordinate with communities to help integrate energy efficiency and renewable energy into climate action and resiliency plans or to accomplish other community energy goals.
- Collaborate with utilities on carbon reduction strategies.

PROGRESS INDICATORS

- We acquire more energy savings and renewable generation than would otherwise be achieved with only public purpose charge funding.
- We coordinate with more organizations and communities where their additional resources help accomplish mutually supportive objectives.
- We establish a concept agreement with the OPUC and at least one natural gas utility to assess a joint carbon reduction effort.

FOCUS AREA 5

Enhance our ability to quickly and effectively respond to changes, needs and new opportunities.

STRATEGIES

- Foster and retain talented staff skilled in innovation techniques and adapting to change.
- Intentionally cultivate diversity in our board of directors, advisory councils, executive leadership, staff, contractors, partners and vendors.

PROGRESS INDICATORS

- Annual surveys indicate that staff are significantly aware of how annual goal setting, business planning and prioritization enables flexible resourcing of existing and new initiatives.
- We achieve Diversity, Equity and Inclusion goals for employee hiring and recruitment, and for the board of directors.

Briefing Paper: Existing Multifamily Program Assessment Early Concepts and Considerations

Conservation Advisory Council – June 26, 2019

This briefing paper provides background and concepts to be discussed at the June 26 Conservation Advisory Council meeting. Staff will host a working session for council members to provide feedback on early concepts related to the Existing Multifamily Program Assessment.

Background

A cross-functional team of Energy Trust staff is conducting an in-depth analysis of the Existing Multifamily program to identify potential solutions to challenges that the program is facing, including reductions in savings, increasing costs of acquisition and increasing market saturation. Solutions could range from straight-forward program optimizations to more significant shifts such as revisions to program sorting rules and eligibility or program delivery and contracting structures.

The objectives of the program assessment are to:

- Maintain a resilient and robust program with a suite of cost-effective offerings that will meet the diverse needs of multifamily customers in Energy Trust service territory.
- Ensure that offerings are reaching and serving all multifamily customers and furthering Energy Trust's diversity, equity and inclusion (DEI) goals.
- Explore the non-energy benefits of energy efficiency and renewable energy for multifamily property owners and managers and develop options for incorporating those into program offerings.
- Identify opportunities to decrease market confusion and improve customer and contractor experience.

Multifamily market segments and participation

Energy Trust's Existing Multifamily program serves a wide range of customer types, with a diverse set of market actors, motivations and engagement channels. While the program's goal is to ensure that Energy Trust has offerings that meet the needs of each customer, this can be challenging due to the engagement and needs of the different customer segments.

Multifamily Segments	Primary Customers	Motivators
Affordable	Community development corps, public agencies	Reduce energy costs in order to increase net operating income
Assisted Living	Property managers	Savvy business operators, must maintain comfort to attract customers
Campus Living	Campus housing department	Highlight efficiency to attract students with social and environmental values

Multifamily Segments	Primary Customers	Motivators
Condos & Townhomes	Individual unit owners Homeowners Associations (HOAs)	Select upgrades based on personal preferences and finances Determine common-area upgrades based on reserve funding and buy-in
Large Market Rate	Property managers	Activities to improve return on investment, bottom line Upgrades can attract tenants at higher rents, reduce turnover
Plexes	Property managers/owners	Often pay utility bills directly and live in one of the units Concerned about turnover and vacant units, keep tenants' content
Renters	Tenants in rental properties	Typically pay utility bills but do not have control over energy-efficiency upgrades Often savvy about behaviors to reduce energy use

A recent market saturation and program performance study identified that participation rates vary significantly between market segments, regions and property types. Participation rates are highest in large market rate properties, assisted living and affordable housing, most notably in the Portland Metro and Central Oregon regions. Customer groups with the lowest participation rates are smaller properties and individual unit owners, particularly in less urban areas.

As part of Energy Trust's DEI efforts, the program has established goals for increasing engagement and participation in small multifamily properties and customers in Southern, Eastern, Willamette Valley and North Coast regions, and re-engagement with past participants in low-income areas of the Portland Metro region.

Historical savings by program delivery track

The Existing Multifamily program currently offers five delivery tracks: prescriptive, common-area lighting, direct install, distributor buy-down and custom incentives. The direct install track has historically provided a large percentage of program savings, but savings from this track have been declining in recent years, while savings from common-area lighting and prescriptive measures have become increasingly important for the program.

Figure 1. Existing Multifamily Electric Savings by Program Track (GWh)

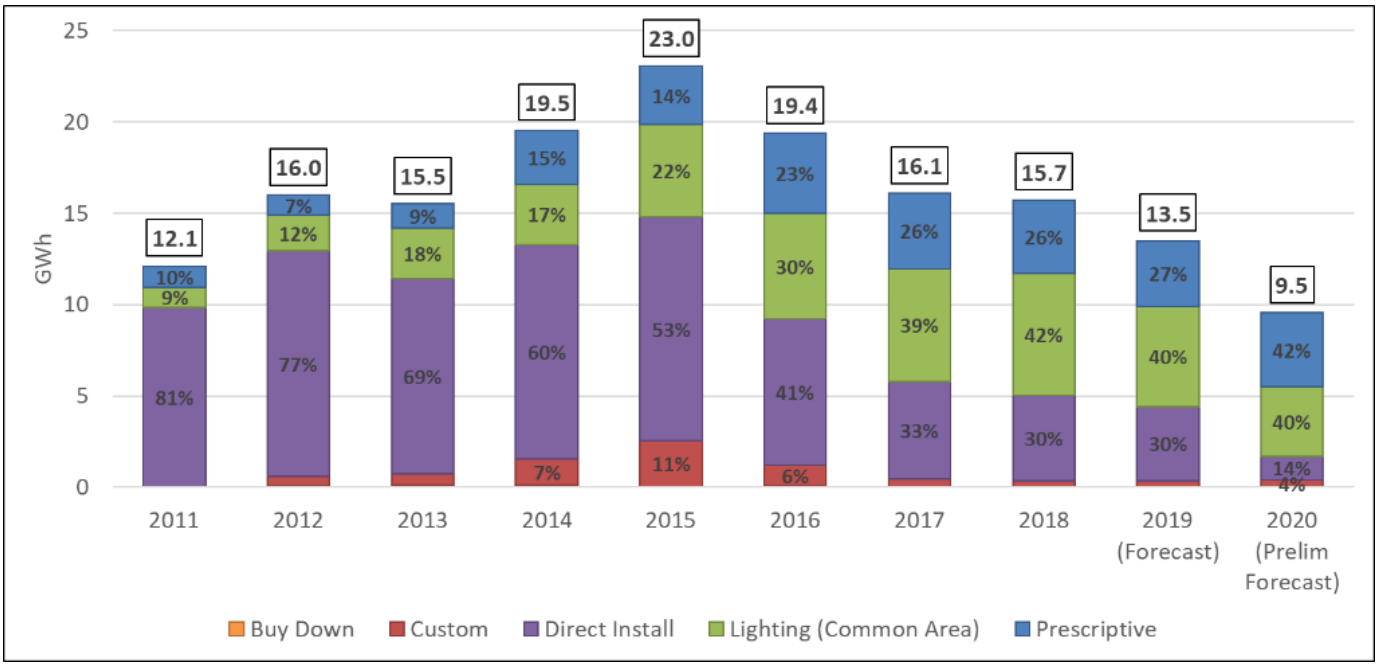
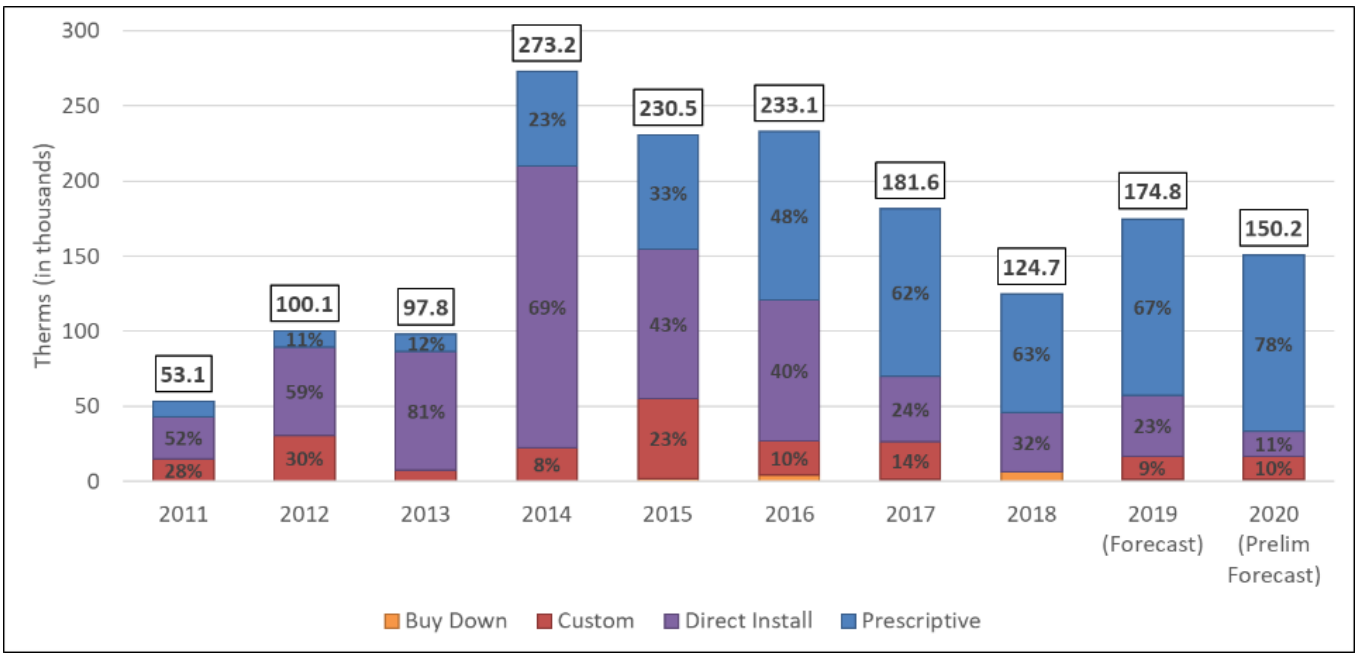


Figure 2. Existing Multifamily Gas Savings by Program Track (1000s of Therms)



Measure risks and future resource potential

Several measures currently in the program are facing challenges due to cost-effectiveness risks or market saturation, or are under exception with the Oregon Public Utility Commission (OPUC). To address risks to program-level cost-effectiveness, staff is exploring savings opportunities and approaches to quantify additional savings where appropriate. The table below describes at-risk

measures, high savings potential measures and examples of emerging technologies that may provide savings to the program in the future.

At-risk measures	High resource potential	Emerging technologies
Ductless heat pumps Lighting Direct-install water devices Insulation	Ductless heat pumps Water heating Windows Boilers Smart thermostats	Thin triple-pane windows Line-voltage thermostats Heat pump clothes dryers Efficient electric wall heaters

Concepts for Discussion

1. Customer Engagement

Expand alignment across programs.
The Existing Multifamily program intersects with several other programs, which can create confusion in the market. How can the program create alignment to reduce friction on the path to participation for both customers and trade ally contractors?

Benefits:	Challenges:
• Alleviates customer and contractor confusion. • Standardizes and simplifies program eligibility requirements, making it easier for customers and contractors to navigate. • Reduces disqualified applications, improving customer satisfaction and risk to contractors. • Improves program's ability to attract and engage with trade allies to increase program participation.	• Not all incentives can be the same across programs due to different energy savings and requirements associated with different building types. • Aligning incentives may cause a reduction in measure-level savings. • Trade allies may still prefer to work with a single program.

Streamline and expand midstream offerings.
Several programs work with distributors and retailers to offer midstream incentives, which allow customers to instantly receive incentives. How can we increase savings and customer reach with these approaches? Which measures or approaches should we consider?

Benefits:	Challenges:
• Removes need for customers to understand sorting rules or program differences or submit applications. • Can reduce program delivery costs and streamline the distribution of incentives, while driving and capturing more savings. • Centralizing distributor engagement would make participation easier for distributors and retailers.	• Distributors may work with multiple programs, which may have different incentives and requirements. • Differences between program savings assumptions. • Lack of certainty of where products are being installed. • Reduces Energy Trust's opportunity for direct customer engagement. • Midstream incentives may not be passed on to customers.

2. Reaching Underserved Customers

Create new program to focus on underserved customers. Energy Trust currently embeds initiatives and activities within specific programs based on property types. Are there other ways or structures to increase participation and accomplish deeper engagement?	
Benefits: • Centralizing program services for underserved customers for residential and multifamily may create efficiencies. • Could allow for more intuitive and streamlined coordination with stakeholders and community-based organizations. • Provides flexibility in contracting structure to work with organizations that specialize in reaching specific market and customer segments.	Challenges: • Resource potential is unknown and likely to create cost-effectiveness challenges. • Defining and implementing new program boundaries would be challenging. • Could lead to increased staffing resources needed to manage; could cause a decrease in focus for market-rate properties to offset resources.

Engage more renters through education and new offers. Providing services for renters is a critical need for the program, but currently there are limited offerings for tenants. How can we improve how we serve renters? Are there other organizations excelling in this area that we could learn from?	
Benefits: • More resources for renters could help lower energy burdens for many low- and moderate-income customers. • Educating renters can help them make more efficient choices and adopt behaviors, which may lead to deeper savings within properties.	Challenges: • Renters typically can't make upgrades without landlord involvement. • Some services may require buy-in from property managers. • Quantifying behavioral savings is challenging.

3. Driving and Quantifying Savings

Explore differential baselines.
Currently, baselines for measures are broadly derived and applied. What measures/markets could make use of differential baseline conditions, based on varying customer demographics, to target customers with higher savings potential?

Benefits:	Challenges:
• Could be leveraged to target DEI communities and traditionally underserved markets. • With targeted approaches, the program could reach untapped energy savings potential and achieve higher per unit savings.	• Primary data would potentially be expensive and time consuming to support differential baselines. • Difficult to find secondary data to quantify and support differential baselines.

Further assess non-energy benefits.
Energy Trust engages with the OPUC on including non-energy benefit values in cost-effectiveness calculations that are quantifiable and easily monetized. Additional benefits may be present which are difficult to quantify. Should Energy Trust explore non-energy benefits beyond what we currently quantify? If so, what benefits should be considered?

Benefits:	Challenges:
• Could immediately address cost-effective issues for the TRC test, which is the more difficult test for the program to pass. • Impact on cost-effectiveness related to this action is relatively easy to determine and forecast. • Could allow us to include existing values that are difficult to monetize. • Could help address other state and local government and nonprofit policy goals, such as DEI goals.	• Would only help the cost-effectiveness for the TRC test. • Would require additional time and effort to develop consensus on how additional non-energy benefits should be quantified and included in cost-effectiveness calculations.

Consider opportunities for combined funding sources.
Energy Trust works with several affordable housing and industry organizations to promote program offerings, which also have funding available to serve low- and moderate-income customers. How can we effectively collaborate with these organizations? Are there new funding sources Energy Trust could leverage outside of public purpose charge funding?

Benefits:	Challenges:
• Would likely increase program activity and volume of measures. Once additional funding amount is known, impact on program and measure level cost-effectiveness may be simple to determine. • Would likely not require fundamental changes to program operations or delivery to customers.	• Would add more coordination needs and reporting requirements for staff. • Relationships with other agencies may be complex and require ongoing coordination to determine how to achieve a shared outcome with an agency that has different goals than Energy Trust.

4. Future Measure Offerings

Develop a multifamily pay-for-performance offering.
Pay-for-performance is a new investment strategy that measures actual reductions in energy use at a site and pays customers based upon performance. Would this be an effective model for multifamily customers? Are there lessons learned from similar models tried elsewhere?

Benefits:	Challenges:
• Could improve cost effectiveness if additional savings are captured from better installation practices. • May facilitate behavior-based offers, available to underserved markets. • Customers would be motivated to complete more comprehensive projects, including operations and maintenance.	• Uncertain if approach is effective at capturing additional savings • Persistence of savings is unknown. • Uncertainty around market adoption in multifamily. • If measure level cost-effectiveness is required under this model, this would decrease the value and efficiency. • Determining appropriate baseline will be difficult.

Leverage measure exceptions for select measures or offerings.
Several measure offerings are currently under cost-effectiveness exceptions granted by the OPUC. How should we prioritize which measures to request exceptions for? What are the long-term versus short-term benefits of this approach?

Benefits:	Challenges:
• Allows for a more robust program offering. • Provides incentive opportunities for customers that may not otherwise have an efficient option. • Can help to drive the cost down of measures. • Allows time for measures to become cost-effective without disrupting the market. • Allows measures to be offered that have significant but non-quantifiable non-energy benefits.	• Measures are not-cost effective under current cost-effectiveness requirements. • Brings the overall cost effectiveness of the program down. • Customer adoption of some measures under exception can be difficult to drive. • A large percentage of the remaining resource potential in multifamily properties are currently under exception.

Continue to pursue emerging technologies that may provide new cost-effective savings opportunities.
Several emerging technologies may present savings opportunities in the future, but this will require additional development and research. What is the best path forward for pursuing these measures? Are there additional measures or approaches we should consider?

Benefits:	Challenges:
• Fills the savings pipeline with more savings opportunities. • Diversifies program offerings. • Provides opportunities for the program to continue providing value to customers.	• Opportunities may not come to fruition. • Require more upfront funding to develop. • Investment risk.

Multifamily Program Assessment

Conservation Advisory Council

June 26, 2019

Energy Trust of Oregon

Introduction

- Status update
- Objectives
- Concepts
- Working session
- Debrief & discussion

Project Status

Phase 1: Exploration	Phase 2: Options/Impacts	Phase 3: Concepts & Recommendations
January 2019 through March 2019	**April 2019 through June 2019**	**June/July 2019 through January 2020**

• Working sessions
  • Customer segments
  • Resource potential
  • Cost-effectiveness
  • Program delivery models
  • Vision planning
	• Continued working sessions
	• Stakeholder engagement
	• Savings resource planning
	• Develop and prioritize early concepts
		• Present early concepts to CAC, board & other stakeholders
		• Determine changes for program optimization in 2020
		• Present recommendations for program updates and structure for 2020 rebid

Program Assessment Objectives

- Maintain a resilient and robust program with a suite of cost-effective offerings that will meet the diverse needs of multifamily customers in Energy Trust service territory.
- Ensure that offerings are reaching and serving all multifamily customers and furthering Energy Trust's diversity, equity and inclusion goals.
- Explore the non-energy benefits of energy efficiency and renewable energy for multifamily property owners and managers and develop options for incorporating those into program offerings.
- Identify opportunities to decrease market confusion and improve customer and contractor experience.

Concept Themes

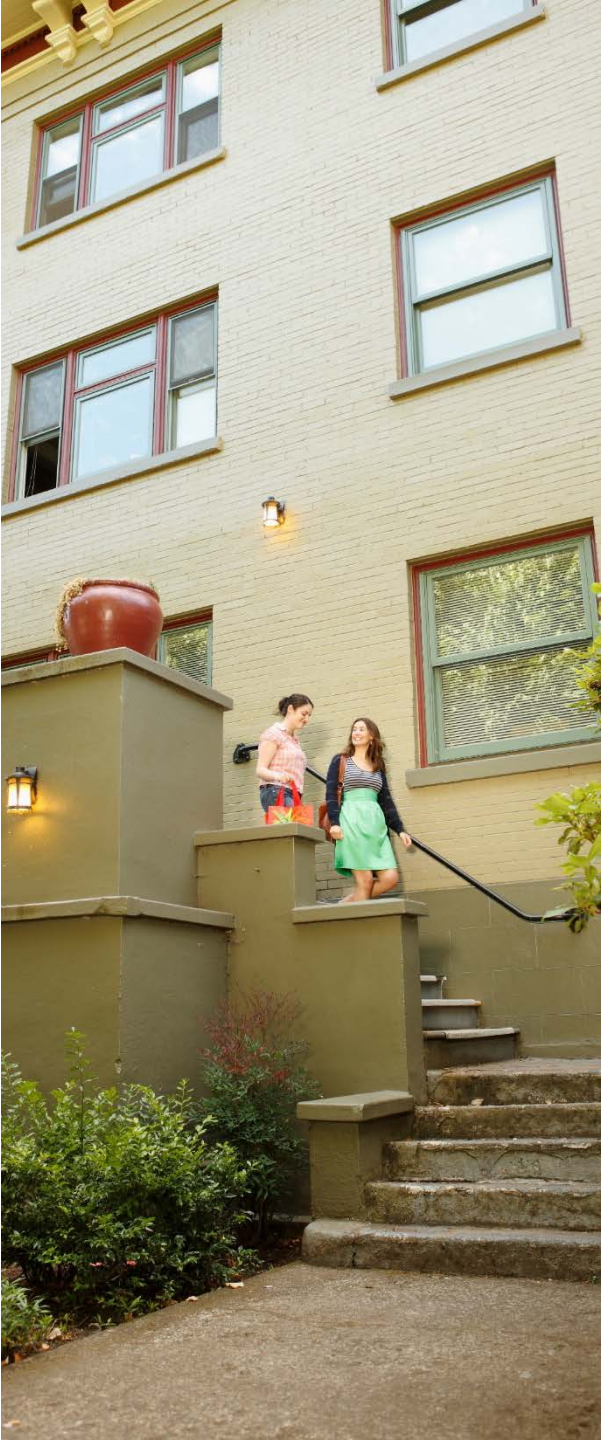
- Customer engagement
- Reaching underserved customers
- Driving and quantifying savings
- Future measure offerings

Working Session

- Advisory members: Rotate through four tables for 10 minutes each
- Audience: Each concept will be presented at a single table

At your table…

- Discuss concepts
  - Benefits
  - Challenges
  - Other thoughts
- What concepts are most effective?
- What are we missing?



Debrief

- Standout concepts, themes
- Next steps
- Interest in future engagement

- Use index cards to leave comments:
  - Did anything surprise you?
  - Questions related to the program assessment or Existing Multifamily program in general

Thank You!

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EnergyTrust of Oregon