Conservation Advisory Council Agenda

Virtual meeting

Wednesday, November 18, 2020
1:30 p.m. – 5:00 p.m.

To join the Zoom meeting, register at this link:
https://zoom.us/meeting/register/tJIpdOurqDMiHNxP6vQdG9ZBz-R7YgbhRsDt

After registering, you will receive a confirmation email containing information about joining the meeting.

1:30 Welcome

- Zoom housekeeping info
- Introductions
- Approve September meeting notes
- Member updates

1:45 Residential Incentives for Low-Income Utility Customers *(input)*
The council and invited stakeholders will hear an update on the Residential Sector's energy efficiency services and incentives for low-income Oregonians. This update follows the September presentation of the Residential Sector's draft 2021 action plan, which highlighted all customer incentives and outreach activities. This presentation will review current and 2021 planned activities, including the expansion of a successful co-funding pilot with Community Action Organization of Washington County. Staff seek council and stakeholder feedback on how we might improve coordination efforts with community action agencies and community-based organizations.

Presenter: Marshall Johnson (50 min)

2:35 Break (5 min)

2:40 2021 Budget Update *(Q&A)*
Director of Energy Programs Peter West will provide an overview of changes to the Draft 2021 Budget and 2021-2022 Action Plan and summarize public and stakeholder feedback received. These changes will be reflected in the Final Proposed 2021 Budget and 2021-2022 Action Plan presented to the board in December.

Presenter: Peter West (25 min)

3:05 Organizational Response to Rebuilding Efforts Due to Labor Day Wildfires (Q&A)
Staff will provide an update on actions Energy Trust has taken to be a resource to the communities impacted by the Labor Day wildfires. Initial actions include raising awareness with community leaders and decision makers on how we can assist and where energy efficiency and solar incentives can be applied in rebuilding efforts.

Presenters: Karen Chase, Scott Leonard and Mark Wyman (20 min)

3:25 Break (5 min)

3:30 New Buildings Cost-effectiveness Working Group Recommendations *(Q&A)*
The working group consisting of Energy Trust, Oregon Department of Energy, NEEA, CLEAResult and the Oregon Public Utility Commission has assessed potential paths forward for this program, which will operate in 2021 under a cost-effectiveness exception due to the higher efficiency levels in the latest state code update. The group has arrived at its recommended approach and staff will review the recommendation with the council.

Presenter: Jay Olson (25 min)

3:55 2021 Industrial Sector Standard Track RFP and Technical Review RFQ *(Q&A)*
The Industry and Agriculture sector is releasing a Request for Proposals for the Standard Track and a Request for Qualifications for Technical Review in Q1 2021. Staff will review the draft objectives and diversity, equity and inclusion elements of the two solicitations.

Presenters: Amanda Potter and Adam Bartini (30 min)

4:25 Residential Non-energy Benefits Research *(inform)*
Exploring and connecting our investments to non-energy benefits is identified by the board in the 2020-2024 Strategic Plan as a focus area for the organization. Energy efficiency, distributed renewable energy and other distributed energy resources benefit customers and end users in a variety of ways, and the non-energy aspects of these benefits are an emerging area of interest. Energy Trust worked with TRC Companies to conduct a preliminary investigation into some of the non-energy benefits that may provide value to customers. Residential and renewable energy staff will share an overview of the results and will engage the advisory councils for direction on next steps.

Presenters: Mark Wyman and Jeni Hall (30 min)

4:55 Public comment

5:00 Adjourn

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

Next meeting: This is the last meeting of the year—thank you for your time and dedication to supporting the implementation of Energy Trust's energy efficiency programs. Our next meeting will be in February 2021.

Conservation Advisory Council Meeting Notes

September 16, 2020

Attending from the council:

Jeff Bissonnette, NW Energy Coalition
Anna Kim, Oregon Public Utility Commission
Jess Kincaid (for Dave Moody), Bonneville Power Administration
Jason Klotz, Portland General Electric
Keith Kueny, Community Action Partnership of Oregon
Kari Greer, Pacific Power
Lisa McGarity, Avista
Jeff Mitchell, Northwest Energy Efficiency Alliance
Rick Hodges, NW Natural
Tim Hendricks, BOMA
Warren Cook, Oregon Department of Energy
Tina Jayaweera, Northwest Power and Conservation Council
Tyler Pepple, Alliance for Western Energy Consumers

Attending from Energy Trust:

Amber Cole
Hannah Cruz
Sue Fletcher
Fred Gordon
Jeni Hall
Marshall Johnson
Steve Lacey
Alex Novie
Thad Roth
Julianne Thacher
Jay Ward
Kate Wellington
Peter West
Amanda Zuniga
Tom Beverly
Cheryle Easton
Kathleen Belkhayat
Elizabeth Fox
Andrew Shepard
Oliver Kesting
Greg Stokes
Shelly Carlton
Amanda Potter
Spencer Moersfelder
Mark Wyman
Tyrone Henry
Susan Jowaiszas
Scott Leonard
Karen Chase
Ryan Crews
Jessica Kramer
Quinn Cherf
Kati Harper
MacKenzie Kurtzner
Wendy Gibson
Michael Colgrove
Peter Schaffer
Kenji Spielman
Debbie Menashe
Jackie Goss
Cameron Starr
Ashley Bartels

Others attending:

Lindsey Hardy, Energy Trust board
Elee Jen, Energy Trust board
Alan Meyer, Energy Trust board
Rep. Pam Marsh
Dave Backen, Backen Consulting
Shelly Beaulieu, TRC
Jon Eicher, ICF
Joe Marcotte, TRC
Aaron Leatherwood, Evergreen Consulting
Alicia Dodd, CLEAResult
Bayo Ware, Casa of Oregon
Neil Grigsby, NEEA
Cassie Hibbert, Wenaha Group
Kyle Hemmi, CLEAResult
Brian Lynch, AESC
Arthur Chaput
Carrie Ng, Utility Advocates
Jenny Sorich, CLEAResult
Misti Nelmes, CLEAResult
John Molnar, Rogers Machinery

Eric Zechenelly, Willamette Homes
Dan Elliott
Karla Hendrickson, ICF
Kelly Fleck, Next Step
Erica Mills, NW Umpqua
Paul Hawkins, Bonneville Power Administration
Callie Lawson, Craft3
Randall Olsen, CAO Washington
Garrick Harmel, Casa of Oregon
Rob Prasch, Noah-Housing
Brady Peeks, Northwest Energy Works
Melanie Stutler, Eco Act
Pamela Ruddock, South Central Oregon Economic Development District
Monica Cowlishaw, Cascade Natural Gas
Theresa Deibele
Alejandro Saucedo-Avila, CLEAResult
Patrick Murphy, CLEAResult
Kyle Kent, CLEAResult
Michael Budds, CLEAResult

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1. Welcome and Introductions

Hannah Cruz convened the meeting at 1:30 p.m. The meeting was held as a video conference. Prior council meeting notes are posted online and the council accepted them with no changes. The meeting was recorded.

Hannah Cruz acknowledged attendees' time and competing priorities many are facing due to the wildfires. Because of the large number of attendees, introductions were limited to council members.

Hannah Cruz welcomed two new council members: Tina Jayaweera with the NW Power and Conservation Council and Keith Kueny with the Community Action Partnership of Oregon.

2. Manufactured Home Replacement Pilot Update and Discussion

Topic summary

Mark Wyman presented an update on the pilot, which was recently extended through 2021. He noted the remaining expenditures allowed for the pilot are being prioritized for and combined with Oregon Housing and Community Services' manufactured home replacement program that is in development. Mark Wyman pointed out that the impact of fires on manufactured home communities in Phoenix and Talent has been staggering and will impact how the pilot operates going forward. He introduced state Rep. Pam Marsh, who was a chief sponsor of HB 2896 to support manufactured home replacement and protection of manufactured home communities. Rep. Marsh provided a summary of the fire damage in Talent and Phoenix near Medford, areas with high senior citizen and Latino populations. She called on attendees to identify affordable housing solutions like this pilot to support residents in rebuilding.

Discussion

Rep. Pam Marsh: I have been involved in policy discussions around manufactured home parks for a number of years. My district is in the center of the fire impacted areas. The impact is significant in Talent and Phoenix. About 40% of Talent's land mass is impacted. So far we know we've lost about 2,400 housing units in communities of 4,000 and 6,000 people. We know that 12 or 13 parks are damaged and the homes that were spared may not be habitable. This doesn't include RV parks or apartments. These are low- to moderate-income people, along with seniors and Latinx families.

The good news is that city leaders understand the value of the parks. Planning is underway on a couple of levels, including loan packages for those with lower income. Craft3's package has been limited so far, but now we need to consider how we scale it up. To get people back into these parks will take a lot of work and focus. Replacement homes can be very efficient, but that will mean they are more expensive.

What's happening in my area and other parts of the state will be critical for large numbers of people. Manufactured homes are one of few naturally occurring low-income housing options. I appreciate your support and your expertise.

Mark Wyman: We are able to pursue projects like this under the cost-effectiveness exception framework. The OPUC extended the timeline for manufactured home replacement under this framework. We have completed projects in Portland and the Umatilla reservation. The pilot was designed to serve occupied properties. This requirement will have to shift.

Umpqua Ranch park is still standing, which was one of the cooperatives we worked with. We are thankful for that, but we are still coming to terms with the staggering losses.

Lisa McGarity: Given the scale of this, we could be talking about $150 million in replacement costs, which doesn't include taking care of the sites. If we pay $15,000 in incentives per home, you wouldn't be able to scale it up that much. It would be a burden for ratepayers.

Mark Wyman: There's a performance upgrade to be had even if they aren't going to a newly built high-efficiency home. At this point, we know of damage to 16 parks, 15 of which are in our territory.

Kari Greer: Pacific Power supports getting customers back into homes. How we fit in should shake out even further. We are supportive of on-bill financing. Tariff updates may be needed. We are still taking inventory of what was lost here. After we get the full scope is there the opportunity for something like a group buy? Can we work with manufacturers to do large orders and look for discounts that way?

Mark Wyman: There are a lot of experts on the call and we are trying to learn from one another now. The concept has come through in total park redevelopment like Oak Leaf. It helps. We also have to be aware that the Santa Rosa fire in California is having an impact on production and manufactured home inventory. Most facilities have also adjusted production for COVID-19. The surge in demand and the drop in capacity will pose some challenges. Our role isn't to be a buying agent, but we can provide assistance as we did with Umatilla Housing Authority.

Pamela Ruddock: Will there be a time when this comes to Southern Oregon, like Klamath and Lake Counties?

Mark Wyman: We've had projects scattered around the state, but not those exact areas. It's possible that we can move into that area.

Eric Zechenelly: My company helps with replacing homes in manufactured home parks. We are seeing production times ranging from four to 12 months to build new homes. Group discounts are less of an option right now due to demand and surcharges on construction materials. Build time will be the biggest concern right now.

Mark Wyman: Timing couldn't be worse in terms of COVID-19 and demand.

Jess Kincaid: Bonneville Power Administration customers are seeing momentum around replacement, too. The supply chain will be a problem for a while. When you add this crisis we need to take a step back and not exacerbate the supply chain problem. We'll need to work collaboratively. And we need to take a statewide approach to ensure we're not driving up prices.

Warren Cook: The decision makes sense in the context of having to stack several funding mechanisms to make it work. But for action on replacing fire-loss homes, let's brainstorm a quickly deployed program to make sure folks get an efficient home.

Jay Ward: You mentioned a four month build time. Does that pertain mostly to regional manufacturers? There are national nodes and companies out here. Is it possible to use up the capacity here and put some of the demand back on other areas of the country without driving up costs due to transportation?

Eric Zechenelly: Oregon and Idaho serve a lot of this area. Transportation costs would be high to bring homes from California. It would probably add $3,000 to $4,000 per section of the home. That's almost a 10% increase in price.

Lindsey Hardy: We recently got a question in Bend for hosting a green tour next week. This is a hard time to do it when so many people are struggling. This brings to mind, if someone is trying to rebuild a single-family home, what resources exist? There's a great opportunity to put this information out, too.

Mark Wyman: I agree. We are still trying to take stock and determine where we can engage. Our residential new construction program can help customers with that work. It's early in the game, but we'll take that as an endorsement.

Elee Jen: Our former board member, Debbie Kitchin, builds green homes. She will have tons of information you can use.

Hannah Cruz: There is a lot of staff interest. We will explore all of these helpful insights.

Comments provided via Zoom chat (edited for clarity):

Warren Cook: The decision to hold remaining incentive funds for the OHCS program makes sense in the context of having to stack several funding mechanisms to make it work. For rebuilding efforts, the state could arrange with FEMA on recovery homes that are built in Oregon and built with efficiently. They could be purchasable by people afterward instead of returning to FEMA.

Elee Jen: How about the idea of reusing material even without LEED material reusing credit? There is a way to quantify the reused material to reduce the material cost.

Eric Zechenelly: Willamette Homes will be reaching out to park owners directly to start the process to redevelop communities. If anyone wants more information email info@willamettehome.com.

Next steps
Updates on the pilot will be provided to the council over the next year.

3. Update on Goals Forecast and Measure Changes
Topic summary
Peter West and Alex Novie discussed Energy Trust's progress toward 2020 energy savings goals. Due to the economic slowdown related to COVID-19, staff initially forecast in spring that the organization would achieve the 60% range for the electric savings goal and about 70% for the gas savings goal. The latest year-end forecast from July indicate achieving 90% or more for both electric and gas goals. (See slides for more details.) The savings goal forecast doesn't

account for the wildfires as it was prepared before the fires. Staff will reforecast and update in a month for budget purposes

Discussion
Council members asked about windows and if they are the thin triple pane ones NEEA is working on, noting the cost is still fairly high but is supposed to come down (Tina Jayaweera). Staff said Energy Trust does work with thin triple pane windows; it is not limited to thin triple pane on Tier 3 windows, but any units that can achieve a U-value 0.24 or lower.

Next steps
Responses to questions on measure changes were emailed to council members after the meeting and are copied below in Appendix A: 2021 Measure Changes Questions.

4. Draft 2021 Action Plans Preview
Topic summary
Staff presented a preview of 2021 draft action plans for each sector, along with the business lighting initiative and overarching context. The presentation included new strategies for 2021 and changes from 2020, including a new program design for business lighting and Existing Buildings and merging Multifamily with Existing Buildings. Overarching themes included a decline in consumer spending for a large segment of the population, along with businesses. Areas of focus will include underserved populations and marketing as efficiently as possible to reach them. Details are provided in the presentation slides. The council will provide input in a workshop on October 14, and the final proposed budget will go to the board for approval in mid-December.

Discussion
Council members asked what pilots Energy Trust is running or planning to run and how are location-specific incentives being structured (Jason Klotz). Staff said it plans to integrate data-centric differential baselines into measure development to identify and overcome barriers in underserved markets. This approach considers whether measure elements (such as measure life, consumption patterns, non-energy benefits and incremental costs) are consistent across all markets. If not, it may collect market data to develop differential baselines for the measure.

Members also asked about specific strategies, targets and goals for serving low-income communities (Keith Kueny). Staff provided information after the meeting on this. Primary low-income strategies relate to expanding relationships with low-income agencies to coordinate funding of insulation, windows and heating system improvements. This builds on a co-funding demonstration project over the past 15 months with the Community Action Agency of Washington County. Another strategy is to work with community-based organizations to deliver no-cost ceiling insulation, water heaters and HVAC installations to their clients.

Members asked when results for the reforecast are expected (Lisa McGarity). Staff said results will be available in November, noting it will be an estimate similar the spring forecast related to COVID-19.

Next steps
Staff to follow-up with council members on the measure-specific questions and low-income question.

5. Existing Buildings and Commercial Lighting RFP Results
Topic summary
Energy Trust recently completed a request for proposals for the Existing Buildings program and business lighting. Existing Multifamily will be combined with Existing Buildings under the new

structure. The board approved the staff recommendation. TRC Environmental was selected as the new PMC for Existing Buildings and CLEAResult was selected as the business lighting PDC. Oliver Kesting provided more detail on transition. Tyrone Henry discussed diversity, equity and inclusion components.

Discussion
Council members said they were concerned whether diversity, equity and inclusion goals include people in rural communities (Lisa McGarity). Staff said community-based liaisons will do training and outreach outside the Portland area and staff will work with the Program Management Contractor to identify additional community-based liaisons in other communities.

Next steps
None.

6. Large Electric Customer Funding Activity
Topic summary
Steve Lacey covered the annual analysis of incentive spending provided to large electric customers, those who consumer 1 average megawatt or more of electricity per year at a site. These customers do not pay the supplemental public purpose charge allowed under SB 838 and do not benefit from Energy Trust expenditures of those funds. To monitor this spending cap, staff complete a spending report every year. In Pacific Power territory, the spending threshold is 27% and currently at 19%. In PGE territory, the spending threshold is 20% and currently at 19.9%.

Energy Trust's industrial sector anticipates staying just below the 2021 cap. There may be a PGE megaproject in 2022 that could push it over the threshold. Staff will monitor that to determine if changes are needed.

Discussion
None.

Next steps
None.

7. Public Comment
There were no additional public comments.

8. Adjourn
The meeting was adjourned at 4:25 p.m. The next Conservation Advisory Council meeting will be a virtual budget workshop scheduled on October 14.

Appendix A: 2021 Measure Changes Questions and Answers

1. Residential Gas Tankless Water Heater: Gas Line Upgrades and Snap Back

How is this incentive offer different from the one provided 10 years ago? How do you account for the gas line upgrade (or not)? How do you ensure systems are using existing pipe size? Is there any snap back on the tankless units?

Tankless Water Heater Gas Line Question and Comparison to Past Technology

Up until recently tankless water heater technology almost always required an upgrade to a ¾" gas line so those cost were included in the Energy Trust cost-effectiveness screen and led to the last iteration of the tankless water heater (circa 2010) offer to not be cost effective. Improvements in the technology allow for newer tankless units to operate off a ½" gas line; however, it's understood that the majority of installations still require a ¾" gas line to serve the gas appliance load in the home. The measure is cost effective for those installations that don't require the upgraded gas line or when the cost of upgrading the gas line is not assumed by the customer. Therefore, the offer will be downstream to ensure the contractor can accurately report the cost associated with the installation. This is similar to the 2010 version of this offer in that it was delivered downstream; however, that offer was applicable to any home with gas service and allowed upsizing of gas lines, when needed.

Tankless Water Heater Snap-Back Question

Energy Trust does not study snap back, or increases in energy usage, as a separate issue. When we conduct evaluations of measures like water heaters, we usually do a billing analysis. Any snap back (or increase in use) is captured in the pre/post comparison of energy use. So, we consider it as part of the whole in terms of a savings value, but don't separate it out for measure analysis.

2. Residential Ductless Heat Pump (DHP) Cost: Current Offer and Low-Income Direct-Install Targeted Offer

Questions about cost screening for current market wide DHP offer, including electrical panel upgrades. What costs do you include for the DHP low-income direct-install targeted offer? How many DHP units are targeted for installation at low-income residences? How do you approach increased usage from the addition of cooling when DHPs are added in homes where there had only been zonal heat?

Costs for Current Typical Retrofit DHP Offer in Market

Analysis of past DHP projects determined that a primary driver of high cost was more than one indoor head. The current DHP offers for market rate, Savings Within Reach and single-family rentals are designed for prescriptive DHP installations. Based upon our implementation and market experience, we assume that DHP installations do not regularly require a significant upgrade to the electric system that would drive up the installation cost.

When screening for cost effectiveness in our DHP measure analysis, we used costs from past Energy Trust projects for prescriptive DHP retrofits. In our cost-effectiveness screening, we assume the majority of installation scenarios for these DHP retrofits do not include significant costs from electrical upgrades. Project invoices, however, do not break out installation costs at that level of detail.

Costs and Estimated Volume for Targeted Low-Income Direct Install DHP Pilot

Energy Trust is in the process of developing a targeted offer for DHP direct installs in low-income homes and our measure analysis has yet to be completed. Part of the learning objective of the pilot is to understand the characteristics of suitability of these homes for the prescriptive

DHP upgrades. The program design aims to identify the best candidates for prescriptive direct installation of DHPs in low-income homes. If the home requires significant upgrades for health and safety beyond the prescriptive install, our current thinking is that these projects would be excluded from this pilot offer and referred to low-income agencies for other funding.

Staff anticipates approximately 75 installations of this targeted offer through March 2021. Energy Trust will update CAC on the final program design and lessons learned from implementation in 2021.

Cooling Saturation Assumptions and DHP Retrofits

Energy Trust makes assumptions about what would have happened without the DHP retrofit. In our savings analysis for DHPs, we start with a billing analysis. In a fraction of homes without prior cooling, the added summertime load reduces initial savings estimates. Energy Trust's 2019 DHP evaluation asked participants about planned purchases of cooling equipment and found that approximately 20% of homes would have purchased some form of cooling while maintaining existing heating – which would have added similar or greater summertime loads. This saturation – along with the prevalence of existing cooling – was used to weight savings, costs and non-energy benefits in our measure analysis.

3. Commercial Heat Pump Water Heater (HPWH) Warranty

Would installing a residential HPWH unit in a commercial application void the warranty? Are there concerns about providing an incentive for products in an application they aren't designed for without a warranty?

Commercial HPWH Warranty

According to the Regional Technical Forum, manufacturers limit the warranty of residential grade heat pump water heaters in commercial spaces to one year. There are warranty considerations for this measure, but the market seems to have sorted this out to a degree. We assume that if a customer is making the choice to install this smaller-sized water heater, they believe it will fit their needs.

4. Sharing Energy Trust's Measure Approval Documents (MADs)

Can Energy Trust can share measure approval documents (MADs) with council members, possibly including them in packets once they are developed/published?

Sharing Energy Trust's Measure Approval Documents (MADs)

Energy Trust's Measure Approval Documents (MADs) are the final description of our measures, analysis and demonstration of cost effectiveness for all our prescriptive and semi-prescriptive measures. Energy Trust can continue to provide MADs upon request for members; however, we don't plan to distribute all MADs to members or in meeting notes. We produce between 60-100 documents per year, which is more than we anticipate members wanting to read. MADs are written for internal purposes and not currently written for external audiences or stakeholders. Changing the format and adding content to meet the needs of stakeholders would require more time and resources for our measure development teams than we currently have in our schedule and budget. Additionally, MADs are completed as the final step of our measure development process. Often, they are not yet finalized before we bring a topic to CAC – especially when we're asking for the council's input on something that might change our approach or analysis.

Energy Trust can provide more detail on measure development and analysis for interested members beyond the "Year-End Changes" topic discussed at the September 2020 council meeting. If of interest, Energy Trust staff can work with members to develop potential agenda items on measure development in 2021.

Serving Low-income Oregonians with Energy-saving Solutions

November 18, 2020

EnergyTrust of Oregon

Agenda

- Low-income energy programs in Oregon
- Energy Trust initiatives serving low- to moderate-income customers of Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas and Avista
- Co-funding projects with community partners
  - Case study with Community Action Organization of Washington County
- Looking forward to 2021
- Discussion

Low-income Energy Programs in Oregon

Oregon Housing and Community Services

Weatherization

- Low Income Home Energy Assistance (LIHEAP) weatherization
- US DOE Weatherization Assistance Program
- Energy Conservation Helping Oregonians (ECHO)
- Oregon Multi-Family Energy Program (OR-MEP)
- Bonneville Power Administration Low-income Energy Efficiency Program
- State Home Oil Weatherization (SHOW)

Energy Assistance

- Low Income Home Energy Assistance Program (LIHEAP)
- Oregon Energy Assistance Program (OEAP)
- CARES Act LIHEAP Supplemental Program
- Energy Assistance Coronavirus Relief Fund

Utility ratepayer funded

- NW Natural
  - Oregon Low Income Gas Assistance (OLGA)
  - Oregon Low-income Energy Efficiency (OLIEE)
- Cascade Natural Gas
  - Oregon Low Income Bill Assistance (OLIBA)
  - Oregon Low Income Energy Conservation (OLIEC)
- Avista
  - Oregon Low Income Rate Assistance Program (LIRAP)
  - Oregon Low Income Energy Efficiency Program (AOLIEE)
- Idaho Power
  - Project Share (Billing Assistance)
  - Weatherization Assistance Program

Community Action Agencies

- Delivery program services leveraging weatherization and energy assistance funding
- ~17 jurisdictions across the state

Energy Trust's Role

- Objective
  - Deliver benefits to all utility customers while acquiring cost-effective energy efficiency
  - Serve low-income customers in support of our Diversity, Equity and Inclusion objectives
    - Including through the Residential program, Solar program and multifamily initiatives
  - Remain a resource to OPUC and stakeholders looking to help customers with high energy burdens and/or impacted by COVID-19

- Approach
  - Support existing low-income programs to achieve greater levels of energy efficiency
  - Partner with entities directly serving low-income customers

- Key Strategies
  - Targeted incentives and outreach
    - No- and low-cost offers
    - Modified eligibility requirements
    - Increased incentives, bonuses
  - Coordination and partnerships
    - State agencies
    - Local service providers
    - Community-based organizations
    - Utilities

Energy Trust Residential Initiatives Serving Low- to Moderate-Income Customers

- Low- and no-cost services
  - Free LED bulb distribution
  - Energy saver kits
  - Smart thermostats
- Savings Within Reach enhanced incentives and financing
- Single-family rental enhanced incentives
- Fixed price promotions
  - Heat pumps and ductless heat pumps in manufactured homes
  - Region-specific promotions
- Manufactured homes free services
- Manufactured homes replacement pilot
- Community Partner Funding
  - Audits and highest incentive levels

Savings Within Reach

- Enhanced incentives for HVAC, weatherization and water heating
- On Bill Repayment financing
- Targets moderate-income customers
- Temporary eligibility for COVID-employment constraints

Household size	Gross annual income minimum	Gross annual income maximum
1 resident	$25,520	$51,966
2 residents	$34,480	$67,955
3 residents	$43,440	$83,945
4 residents	$52,400	$99,934
5 residents	$61,360	$115,922
6 residents	$70,320	$131,912
7 residents	$79,280	$134,910
8 residents	$88,240	$137,909

Single-family Rental Properties

- Enhanced incentives for HVAC, weatherization and water heating measures
- Deliver benefits to renters
- Ductless heat pump promotion
- Gas furnace promotion in development

Savings Within Reach (OR) / Rental Incentives (OR/WA)

Energy Improvement	Oregon Incentive	Washington Incentive
Ductless heat pump	$1,000	N/A
Ducted heat pump	$1,000	N/A
Extended capacity heat pump	$1,650	N/A
Gas furnace	~~$550~~ $1,000*	~~$550~~ $1,000*
Heat pump water heater	$270	N/A
Gas tankless water heater	N/A	~~$200~~ $400
Smart thermostat	$100	$100
Attic insulation	~~$0.50~~ $1.25* per square foot	~~$0.50~~ $1.25* per square foot
Wall insulation	$0.50 per square foot	~~$0.60~~ $0.75 per square foot
Floor insulation	$0.40 per square foot	~~$0.60~~ $0.75 per square foot

*Denotes bonus incentive, which expires on March 31, 2021

Fixed Price Promotions

- Solicit competitive pricing through trade ally Request for Qualifications
  - Prioritize most cost-effective installations

- Enhanced incentives

Promotion	Total Average Cost	Energy Trust Incentive	Average Remaining Cost
Manufactured Homes: Ducted Heat Pump	$4,932	$3,000	$1,932
Manufactured Homes: Ductless Heat Pump	$4,050	$2,500	$2,050
Rentals: Ductless Heat Pump	$4,050	$1,750-$2,000	$2,050-$2,300

Energy Trust Co-funding Priorities

- Newest program offer designed to partner with existing community organizations to serve customers
- Contribute maximum funding at cost effective levels
- Prioritize lagging customer groups

Co-funding Case Study

- Worked with OPUC, PGE, Pacific Power, OHCS, Community Action Partnership of Oregon and community action agencies
- OPUC approved attribution, reporting and cost-effectiveness methodology (June 2019)
- Pilot with Community Action Organization of Washington County (CAO)

Co-funding Case Study: Budget and Targets

Goal: To serve more low-income customers and/or acquire more savings at each site

- Achieve 22% increase in eligible measure installations **and/or**
- Achieve 22% increase in kWh savings from baseline

	Measures Installed	**kWh***	**Total Program Funds**
Baseline (CAO Volume 2017/2018)	177	396,805	$1,639,321
CAO Budget 2019/2020 Program Year, without co-funding	146	327,617	$1,353,486
Energy Trust Additionality Goals	32	72,076	$300,000
Total CAO & Energy Trust 2019/2020 Goals	178	399,693	$1,653,486

*using Energy Trust savings calculations, agency-reported savings are different

Co-funding Case Study: Results

- Served 88 homes
- Exceeded savings goal
- Installed more HVAC systems and fewer insulation projects than expected

Energy Trust Co-funding Metrics	'19/'20 Measure Goals	Results	Percent to Goal
Total Sites Served by Energy Trust	N/A	88	N/A
Total Incentives	**$300,000**	**$301,449**	**100.5%**
Total Core Measures	**146**	**192**	**132%**
Total Reportable kWh Savings*	**327,617**	**421,259**	**129%**

*using Energy Trust savings calculations, agency-reported savings are different

Community Partner Funding

- Co-funding Case Study created an infrastructure to position funding as a point of leverage for other community organizations
- Community Partner Funding pathway designed to partner with other community organizations (community-based organizations) to leverage with additional funding sources to serve customers
- Contribute maximum funding at cost-effective levels
- Prioritize lagging customer groups

Community Partner Funding – Incentive Levels

Energy Improvement	Primary Heating Fuel	Incentive
Ductless Heat Pump	Electric Zonal – CAAs	$2,000
	Electric Zonal – CBOs	$2,900
	Electric Forced Air Furnace – CAAs	$2,800
	Electric Forced Air Furnace – CBOs	$3,350
Ducted Heat Pump	Electric	$3,000
New & Existing Heat Pump Controls	Electric	$250
High Efficiency Gas Furnace	Gas	$1,000
Smart Thermostat Direct Install	Electric or gas	$150
Heat Pump Water Heater	Electric (water heat)	$498
Home Energy Assessment	Electric or gas	$250 per site

Energy Improvement	Primary Heating Fuel	Incentive
Attic Insulation	Electric	$1.25 per square foot
	Gas	$1.25 per square foot
Wall Insulation	Electric	$1.50 per square foot
	Gas	$0.95 per square foot
Floor Insulation	Electric	$1.00 per square foot
	Gas	$0.70 per square foot
Windows	Electric	$15.00 per square foot
	Gas	$8.00 per square foot
Windows	Electric	$8.00 per square foot
	Gas	$4.00 per square foot
Windows	Electric	$4.00 per square foot
	Gas	$2.00 per square foot

Looking Forward: 2021 Actions

- **2021 Residential program budget for low-income initiatives***
  - Continue
    - Low- and no-cost services
    - Savings Within Reach enhanced incentives and financing
    - Single-family rental enhanced incentives
    - Fixed price promotions
    - Manufactured homes replacement pilot
    - Marketing support
      - Prioritize do-it-yourself solutions to customers
      - Support for CBOs and trade allies participating in low- to-moderate income initiatives
  - Expand
    - Manufactured homes free services through a redesigned approach
    - Co-funding with community action agencies, building on the successful pilot with CAO and potentially entering into agreements with up to 5 agencies
    - Community Partner Funding pathway to more CBOs, this pathway continues to be relatively new and staff still assessing demand and effectiveness in 2021
- **Participate in OPUC proceedings**
  - COVID-19 consumer protections docket (UM 2114)
  - Executive Order 20-04 work plans on Utility Services and Impacted Communities
- **Be a resource**
  - Remain flexible and solutions-oriented in an uncertain year given the ongoing COVID-19 pandemic and its impact on capacity at low-income agencies and CBOs, and the health and financial well-being of customers

*budget not yet approved by board; board consideration of final proposed budget is Dec. 11

Discussion Questions

- What opportunities exist beyond the current initiatives described today?
- Are there changes we can make to improve coordination efforts with community action agencies and community-based organizations?
- What questions come up for you?

Thank You

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EnergyTrust of Oregon

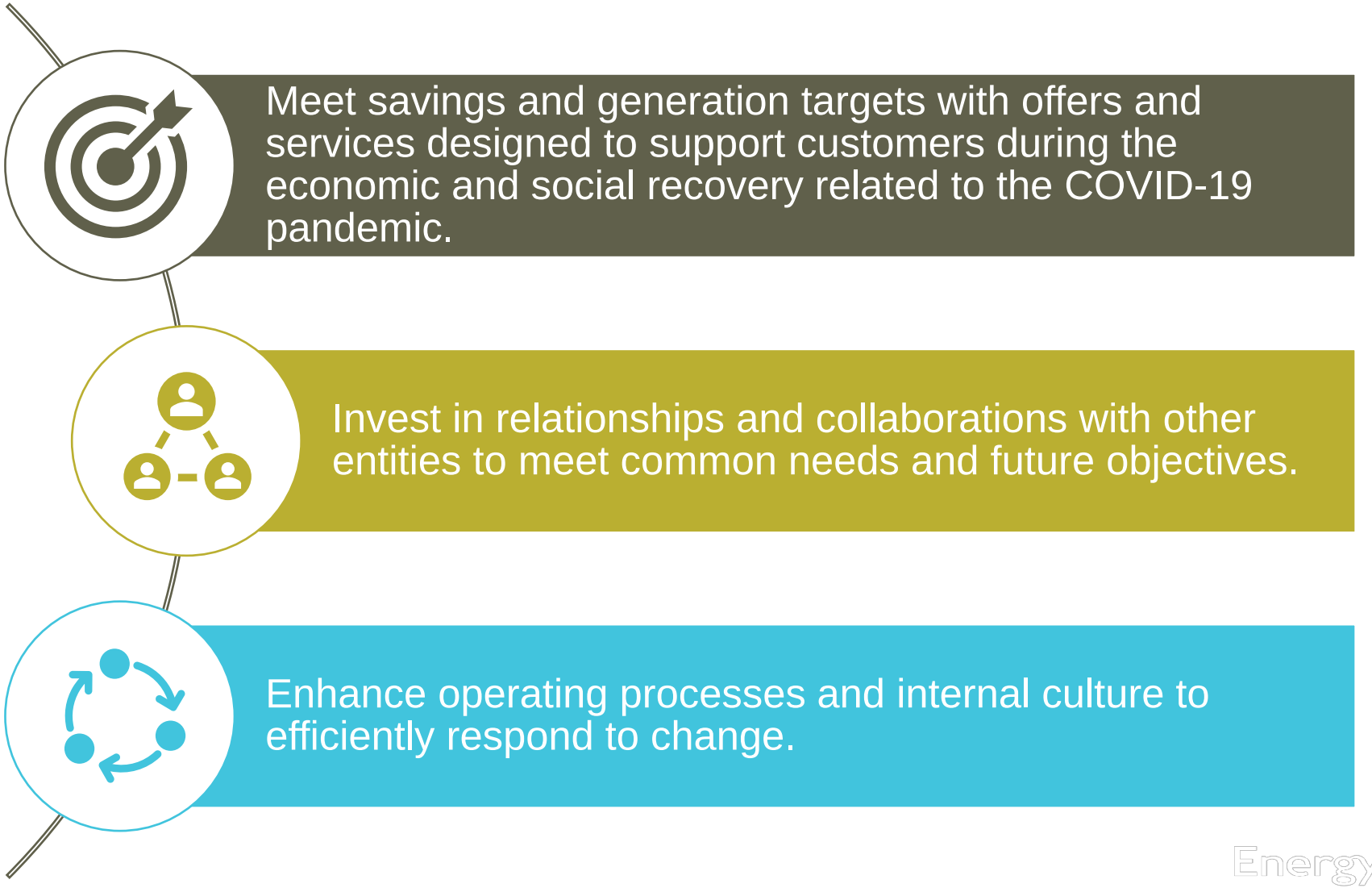
Clean, affordable energy for everyone

Update on 2021 Annual Budget and 2021-2022 Action Plan

November 18, 2020

Energy Trust of Oregon

2021 Organizational Goals



Please see complete goal statements, which include additional detail on how efforts will be focused, in the supplemental section of this presentation

Key Takeaways

1. Adapting to meet customers' needs in an uncertain future, guided by our strategic plan
2. Serving communities and building relationships is key to reach energy goals
3. As forecasted, electric and gas savings declining and costs increasing; remain cost-effective for customers
4. Investments in innovation, outreach, systems and tools will pay off in future savings, generation and cost management
5. Working differently and more efficiently and equitably to operate expanding program portfolio

Workshop Feedback

Written Public Comments Summary

- Formal comments received from 10 organizations or individuals
- Majority supportive of budget
- Common areas of feedback include
  - Residential program
  - Diversity, equity and inclusion
  - Community outreach and collaboration
  - Coordination with utilities
  - Cost management and transparency
  - Response to wildfires and economic recovery
  - Renewable energy programs

OPUC Recommendations on the Draft Budget

1. Continue to focus on identifying and developing residential measures, particularly with greater peak impacts
2. Continue to develop peak modeling capability
3. Include measure cost-effectiveness exception costs in future budgets
4. Implement the supplier diversity tracking system
5. Develop a longer-term strategy to align staffing with outreach goals
6. Ensure administrative costs in the 2022 budget do not exceed 8 percent of revenues

Expected Adjustments to Final Proposed Budget

Updated forecasts for 2020

- Exceed goal for NW Natural (Oregon)
- Meet goal for Pacific Power and Avista
- Reach 90-95% for PGE and Cascade Natural Gas
- Results driven by success for bonus incentives, especially lighting and prescriptive gas measures

Adjustments to final proposed budget

- Relatively small decreases in overall expenditures and incentives
- Modest increase in savings
- Maintain electric and gas bonuses at reduced levels
- Lighting incentives decreasing to manage demand

Changes to 2020 Business Lighting Incentives

Given overwhelming success of commercial and industrial lighting bonuses resulting in an unprecedented large pipeline of projects

- Immediate pause on new business lighting incentive agreements through mid-January 2021
- Continue to pay out on all existing reservations
- Communicating now to trade allies, customers, delivery partners and utilities

Pause will allow us to

- Better understand the pipeline
- Adjust incentives for commercial and industrial lighting program next year

Adjustments to Final Proposed Budget by Utility

Utility	Cost Change	Cost % Change	Savings Change (therms or kWh)	Savings% Change
PGE	$ (764,113)	-0.9%	6,943,550	3.4%
Pacific Power	$ (105,208)	-0.2%	14,577,425	9.2%
NW Natural (OR)	$ (1,294,484)	-4.4%	1,280	0.0%
NW Natural (WA)	$ 311,131	10.3%	110,123	39.8%
Cascade Natural Gas	$ (137,503)	-3.3%	11,946	2.1%
Avista	$ (6,928)	-0.3%	15,472	3.5%
Total Gas	$ (1,127,783)	-2.9%	138,820	2.2%
Total Electric	$ (869,322)	-0.6%	21,520,974	5.9%

Official final proposed budget information available December 3

Next Steps

Final Proposed Budget posted December 3

www.energytrust.org/budget

Board will consider for adoption on December 11

SUPPLEMENTAL SLIDES

Budget Outreach Schedule

October & November

- Draft budget online and public comment period open, Oct. 7
- Budget workshop, Oct. 14
- Budget workshop presentations online, Oct. 19
- Public comments due, Oct. 28
- OPUC public meeting, Nov. 12
- Review changes with advisory councils, Nov. 17-18

December

- Final proposed budget online, Dec. 3
- Board action on final proposed budget, Dec. 11
- Submit board-approved budget and action plan to OPUC, Dec. 31

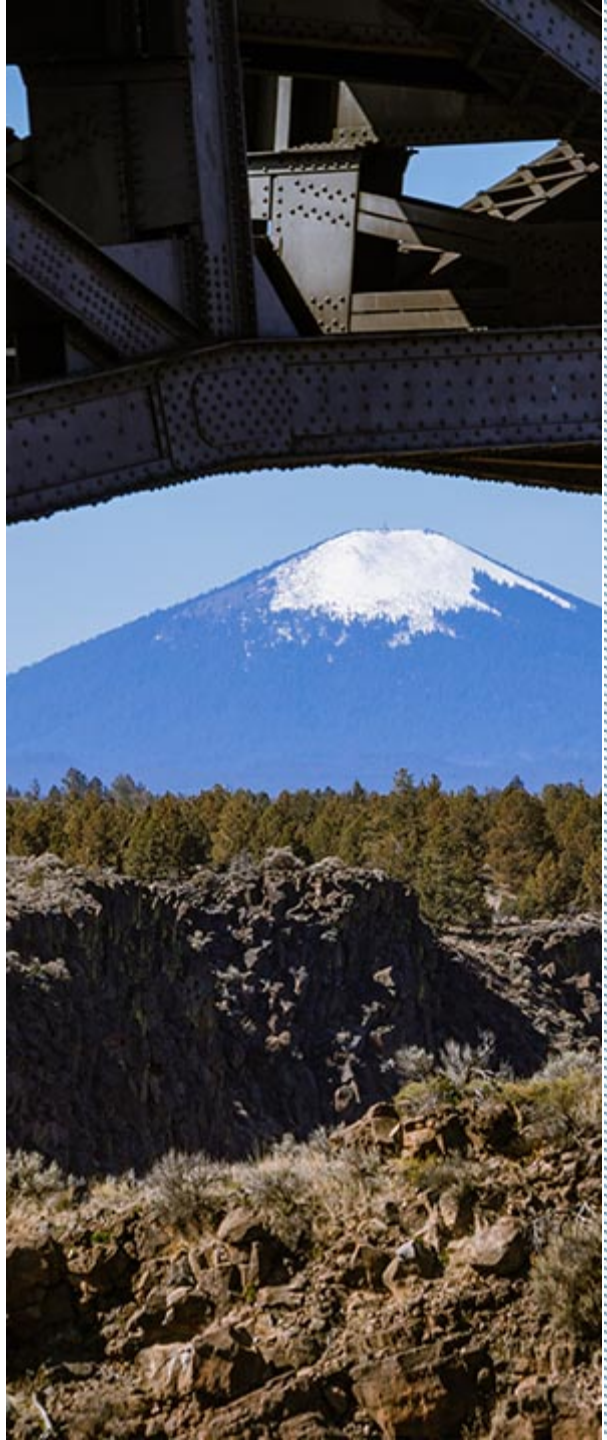
Draft 2021 Budget Summary

- **Investing $209.6 million** of utility customer funds
- **Saving 41.5 aMW and 6.4 MMTh**
- **Generating 3.51 aMW**
- **Distributing $116.1 million in incentives,** 55% of total expenditures
- Delivering highly cost-effective energy
- Administrative costs just under 8%

aMW: average megawatts of electricity
MMTh: million annual therms of natural gas

Customer Benefits from 2021 Investments

- **More access** for diverse and rural communities
- **Lower energy bills and energy burden** for participants—$711 million in future bill savings for participants
- **Opportunities for 1,900 local businesses** and investments in workforce development
- **Cleaner air** by avoiding 3.9 million tons of carbon dioxide
- Local investments that **keep dollars in our communities**



Areas of Diversity, Equity and Inclusion Investment

- **Community Partner Funding** to support delivery of residential offers in diverse communities
- Additional incentives and targeted marketing to support energy saving upgrades in **rentals**
- Support for reduced cost LEDs in retail locations serving **low-income communities**
- Development of **small business offers** delivered by trade allies serving communities of color, low income and rural communities
- Co-funding to work with agencies on affordable, efficient **multifamily housing**
- Higher **solar incentives for nonprofits** that provide services for low income and communities of color, and for affordable multifamily buildings
- Support for **Diversity Advisory Council** and internal DEI committee
- Development of **supplier diversity program**
- DEI lead and additional resources to **build relationships with communities of color**
- **Hiring and retention strategies** for increasing staff diversity
- Formation of a board diversity, equity and inclusion committee

Building Our Budget and Action Plan

2021 Goals

Goal 1: Meet savings and generation targets with offers and services designed to support customers during the economic and social recovery related to the COVID-19 pandemic.

We will meet 2021 targets of 41.5 aMW and 6.4 million therms of savings and 3.51 aMW of generation while creating opportunities for future savings and generation with a particular focus on:

- Continuing to adapt program design to respond to market changes resulting from the recovery related to the COVID-19 pandemic.
- Meeting the OPUC metrics for cost-effectiveness, diversity, customer service and innovation.
- Targeting savings and generation within specific communities when and where they have the greatest value to the utility grid.

2021 Goals

Goal 2: Invest in relationships and collaborations with other entities to meet common needs and future objectives.

We will focus resources on working with utilities, agencies, communities and business- and community-based organizations on joint initiatives that help each entity accomplish its purpose with a particular focus on:

- Collaborating with workforce organizations to enhance the diversity of our Trade Ally Network.
- Resolving funding uncertainties to enable continued delivery of clean energy programs and benefits and identifying other funding sources for complementary initiatives.
- Connecting our programs to community planning, housing affordability, economic recovery, resiliency and greenhouse gas reduction efforts.
- Collaborating with the Portland Clean Energy Fund and prospective grantees.
- Working with the OPUC and state agencies to support implementation of the state's energy- and climate-related policies.
- Working with mid-stream market actors to retain our ability to deliver affordable, clean energy at volume.

2021 Goals

Goal 3: Enhance operating processes and internal culture to efficiently respond to change.

We will enhance operating efficiency through process improvements and continued investment in innovation that results in a flexible workforce and work environment with a particular focus on:

- Enhancing employee development and growth with an emphasis on intercultural awareness and inclusion.
- Improving the efficiency of our budget process.
- Continuing policy development and technology adoption to support remote work arrangements and social distancing for staff.
- Learning from experience and adapting our organizational structure to support progress in the focus areas identified in the strategic plan.
- Furthering our efforts to foster and promote innovation.
- Accelerating our use of digital platforms and increased process automation to enhance our customer and contractor experience through increased efficiency.

Wildfire Update

Council Presentations

November 17 and 18, 2020

EnergyTrust of Oregon

Impacts to Communities

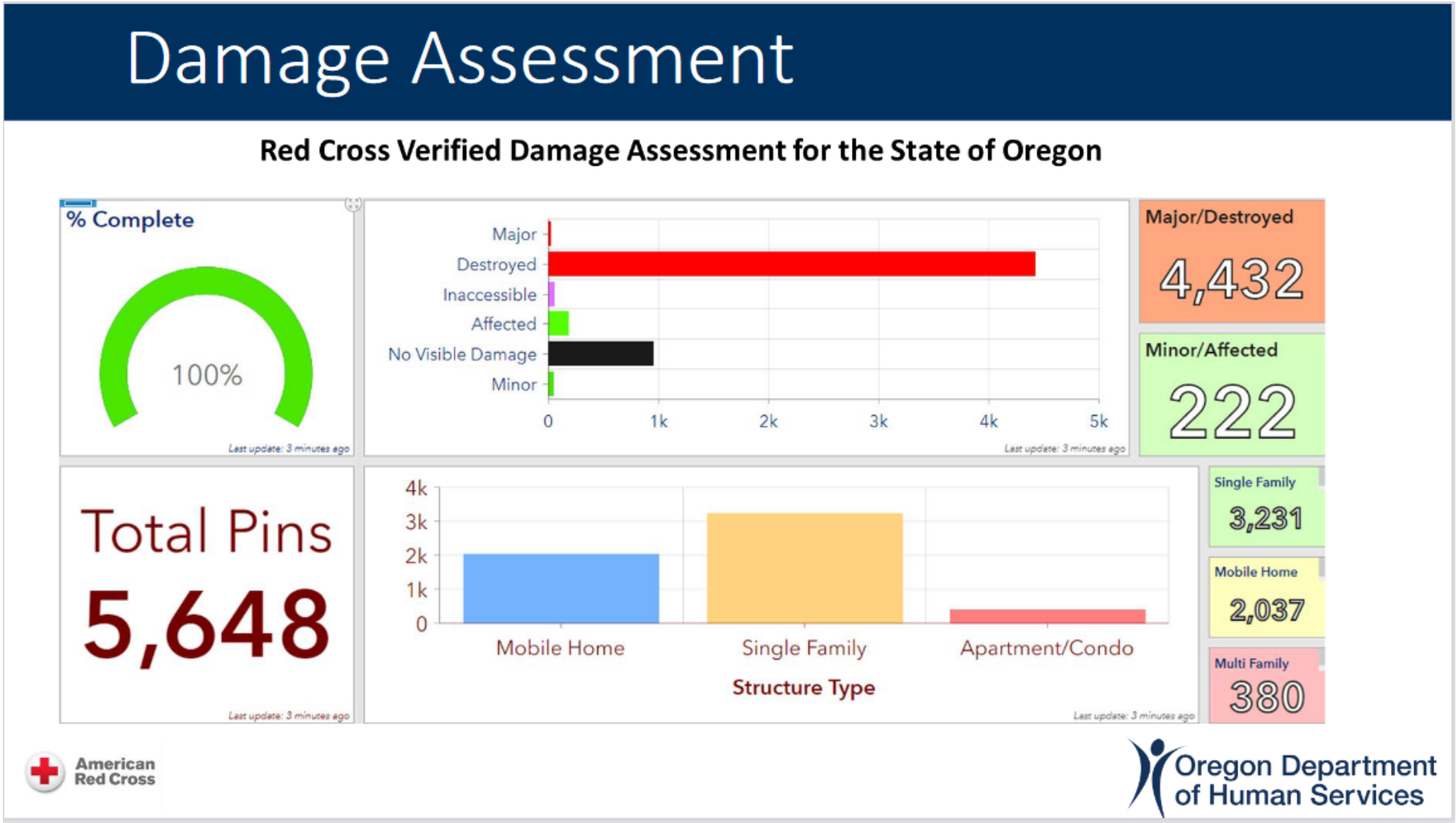
Red Cross and Oregon Department of Human Services report:

- 4,642 residential structures either destroyed or with damage
- 1,868 people sheltering in 66 hotels at least through Dec. 2020
- Many affected people not currently in a formal shelter network, estimated 13,926 people affected
- Mass care and sheltering necessary well into next year until intermediate housing is available

Energy Trust customers:

- Customers of PGE, Pacific Power, NW Natural and Avista affected
- Residential and commercial sites
- 18 manufactured home parks affected

Impacts to Communities – Residential Property Damage



Fire Recovery/Rebuilding Timeline

- Household hazardous waste (clean-up Phase 1) is largely completed in Rogue Valley
  - EPA crews moving to other fire affected areas
- Ash/debris clean-up (Phase 2) statewide can take up to 18 months
- Dec 2020-Jan 2021 target date for intermediate housing
- Some rebuilding may begin soon after individual site clean-up, especially for property owners with resources and available contractors
- Project planning and early design will likely start to ramp up in 2021
- The bulk of rebuilding efforts is not expected until 2022 and beyond

What We Are Hearing From Impacted Communities

- Emergency response and housing
  - Rebuilding follows immediate disaster recovery, will engage as ready
- Budget comments
  - Manufactured Home Replacement Pilot
  - Request for engagement, incentives
- Information requests, coordination and communication
  - Information on building department websites and print materials
  - Request to partner on rebuilding
  - Coordination with utility representatives in region
  - Update and community highlight at Board meeting

Immediate Actions

- Addressed marketing and customer service issues
  - Escalated incentive payments
  - Adjusted marketing and approaches in fire areas
- Formed internal project team
  - Point of Contact in region – Karen Chase
  - Share information/consider options to support rebuilding
- Learned from TRC's experience supporting rebuilding from fires in Sonoma County
- Listening through state and local forums

Current Activities

- Continue to participate at local and state forums, listen to communities, understand needs
- Conduct outreach to impacted communities on services to assist with planning and rebuilding
- Provide support for Housing Recovery Specialist at the Housing Authority of Jackson County
- Consider ways in which our programs and services can propel energy-smart, resilient, and healthy buildings and communities
- Encourage engaging with Energy Trust early and prior to rebuilding for greatest options for incorporating best practices into projects

Explore Potential Offers and Approaches

1. Apply manufactured home replacement pilot
2. Modify the new residential construction program design to accommodate more owner/builders and higher volume of construction
3. Align program baselines with the minimum state code requirements for new construction rebuilding
4. Support resiliency measures, including PV, storage
5. Target offers with increased incentives
6. Support community-wide planning efforts

Feedback from Council Members

- What are you hearing from impacted communities about rebuilding?
- How can we as serve as a resource in rebuilding efforts?
- How can Energy Trust best coordinate, communicate with utility, industry and community partners?

Thank You

- Karen Chase
- Scott Leonard
- Mark Wyman
- Sue Fletcher

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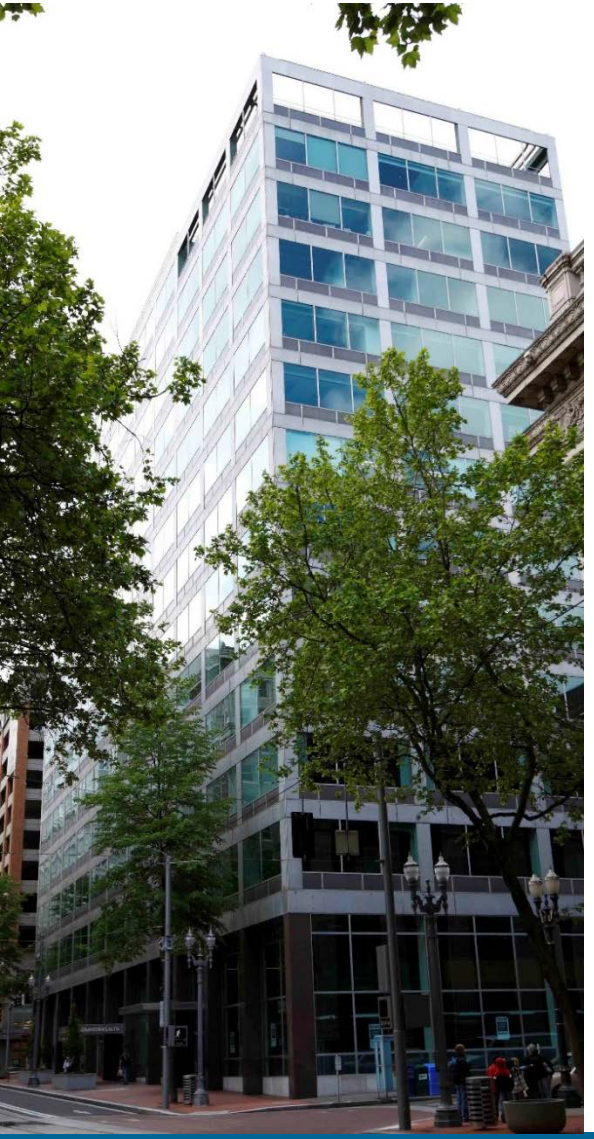
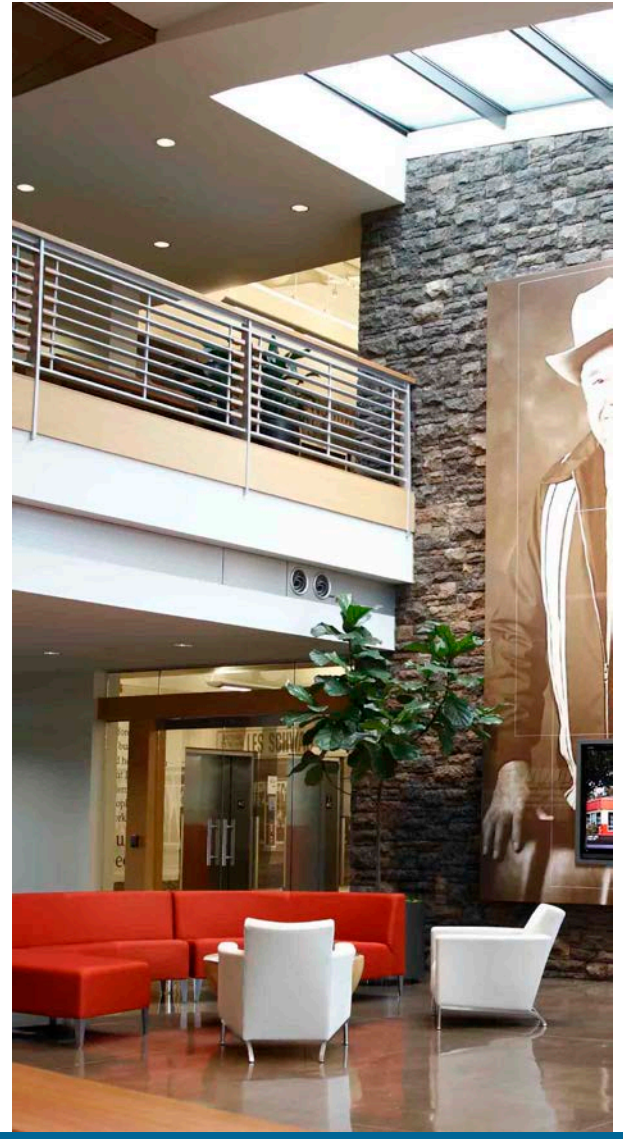
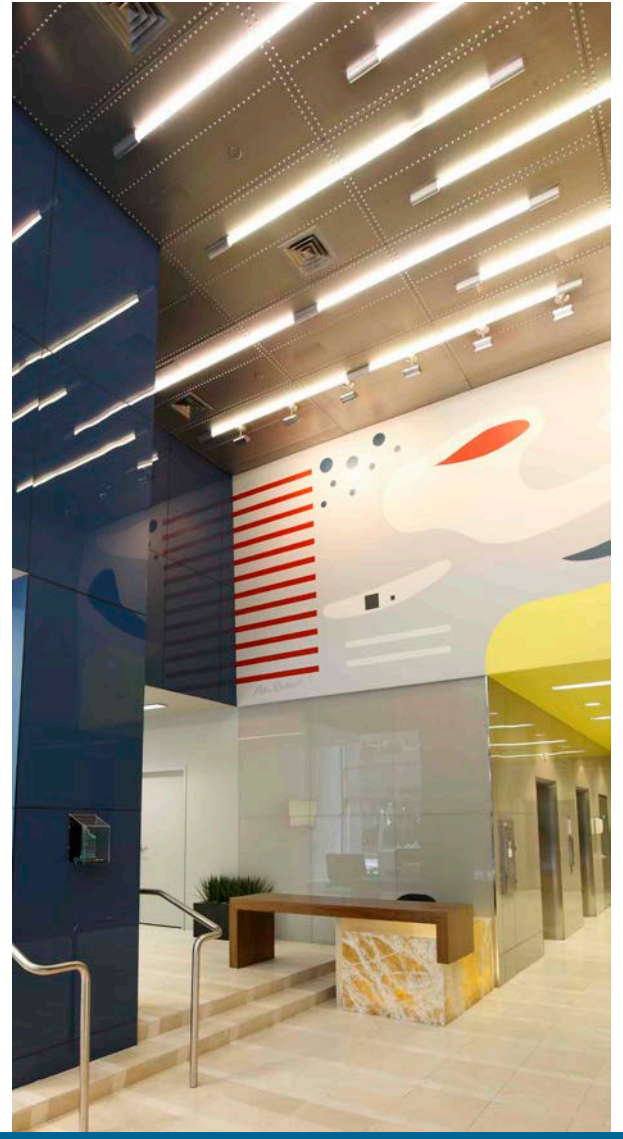
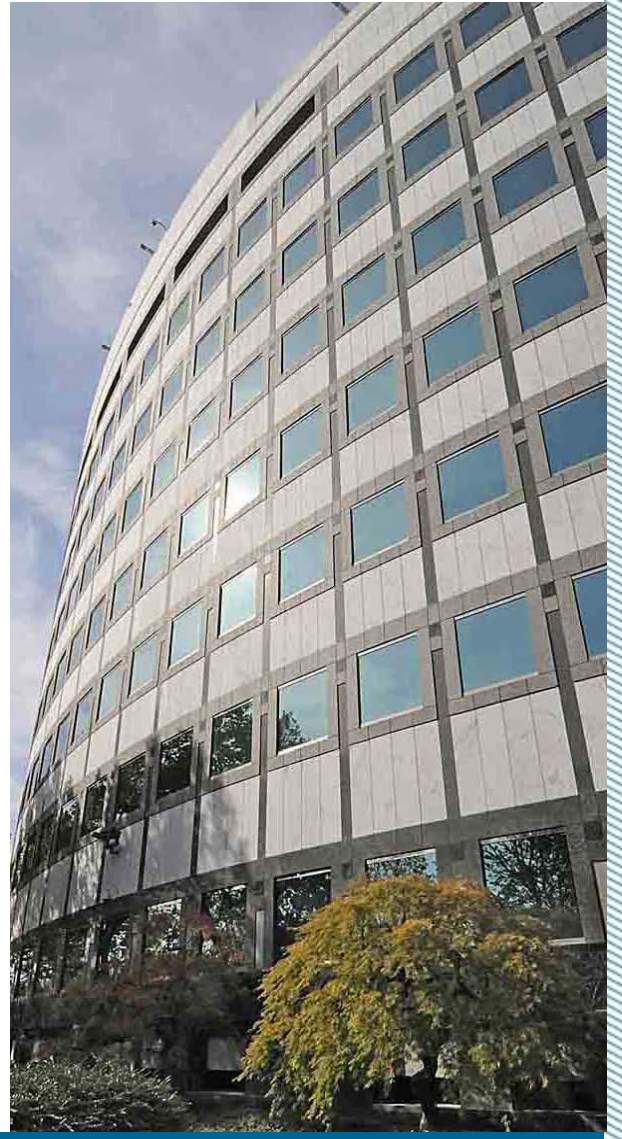

New Buildings Program and Code Alignment

Conservation Advisory Council Meeting

November 18, 2020

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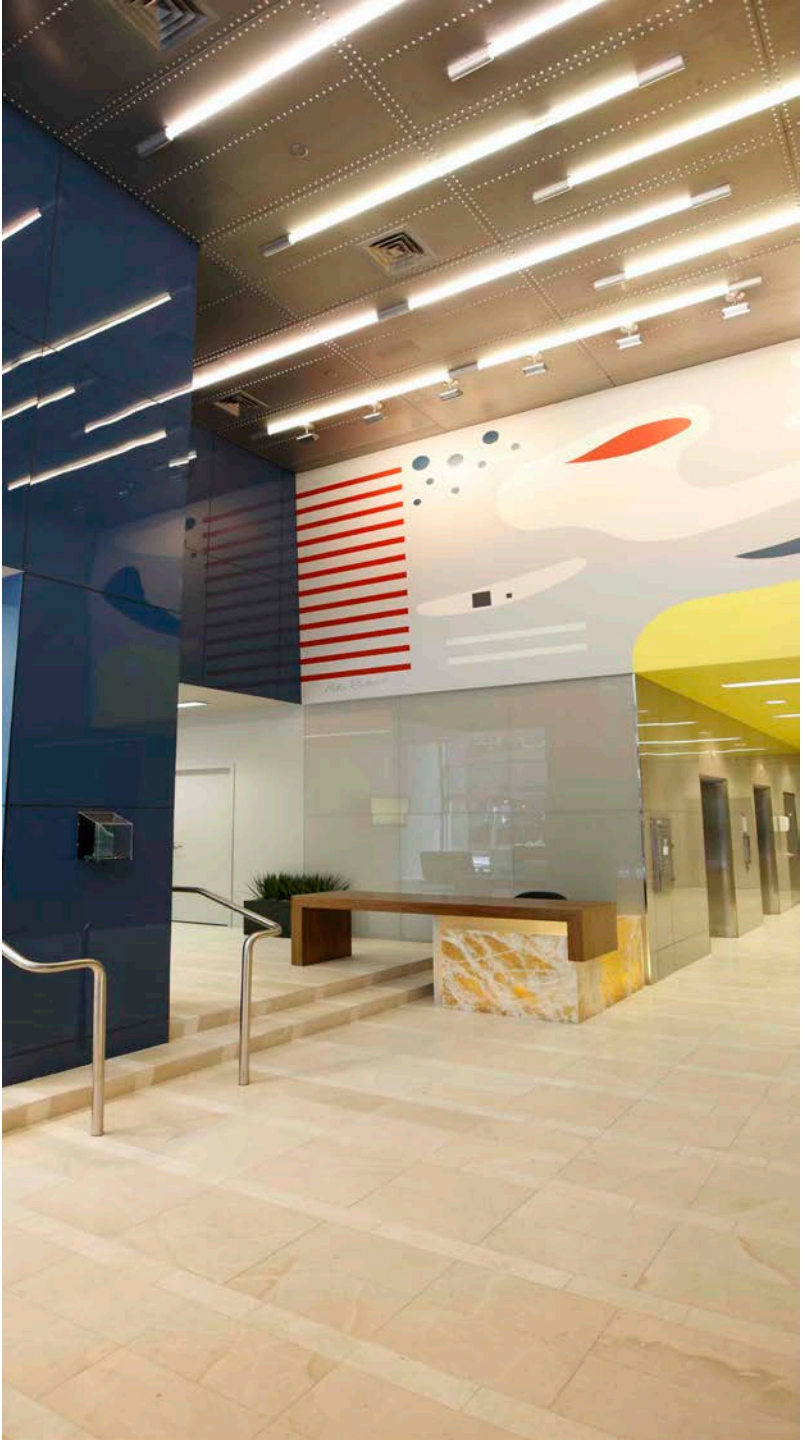
Background



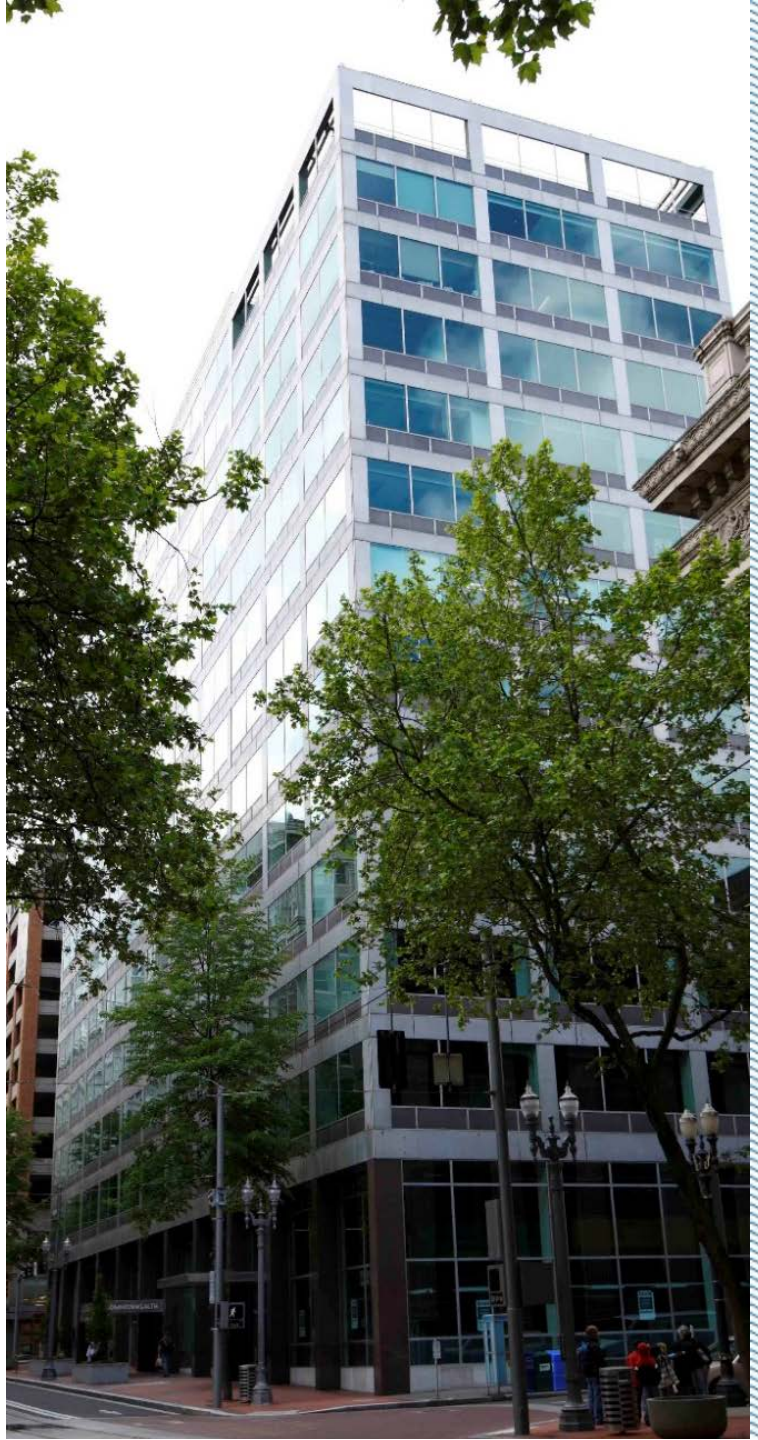
Background and Challenge

- In 2019 the State made changes to the new commercial construction code
- The impacts of these changes, on Energy Trust's New Buildings program, are not commonly understood
- It is not clear how to align the program with both the market and OPUC approaches to cost effectiveness and measure analysis
- In January 2020, the OPUC granted an exception to the total resource cost test and measure level analysis

Why Are We Here?

- New Buildings is a code-based program
  - Savings calculated against a code baseline for regulated loads

- Oregon changed to an ASHRAE-based code in 2019
  - Requires program offering updates
  - Provides opportunity to improve program design
    1. Increase building performance across all project types and thus ‘increase’ program savings (after accounting for the reduction in savings due to code)
    2. Decrease overall program costs



New Buildings Program Under the 2019 Oregon Zero Energy Ready Code (OZERC)

ASHRAE 90.1 – 2016
Appendix G

- Stable baseline with Performance Cost Index that varies with each code version
- Appendix G modeling provides design teams with flexibility in reaching performance goals
- Could result in lower program costs as energy modeling costs decrease for design teams
- Does create a new challenge: how to show measure-level cost effectiveness

OPUC Cost-Effectiveness Exception Granted January 2020

OPUC granted Energy Trust a two-year (2020 - 2021) exception to the Total Resource Cost test (TRC), and the requirement for measure level analysis for custom projects (including Whole Building and Market Solutions Offering)

These projects comprise approximately half of program savings; prescriptive projects, the other half of program savings, are unaffected by the exception

Energy Trust, with key partners, will determine whether there are “reasonable” strategies for the Program to meet current regulations or if a long-term change is necessary to keep the Program relevant to the market and in alignment with current code.

Timeline & Workshops

Timeline of Work

Key Steps	2020												2021	
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY
OPUC Exception (expires Dec 31, 2021)														
Program Launched Whole Building Offering														
Develop Code Alignment Stakeholder Working Group														
Workshop's 1-3 (6/1, 6/12, 6/26)														
Proxy Approach Analysis														
Develop & Launch Market Solutions Offering (MSO) for Multifamily														
OPUC/Working Group Progress Report														
Proxy+ Analysis														
Reconvene on findings of proxy approach														

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Workshop Agreements

- We want to find a **reasonable way to meet current OPUC measure-level cost effectiveness regulations** (i.e. our conversation does not start with the assumption that regulations must change)

- If we can't find a reasonable approach, within current measure-level regulations, we will pursue a **solution that best meets code, market, savings and regulatory needs that ensure sound ratepayer investments**

- Any program revisions that respond to current code, should **create flexibility** that enables responsiveness to future code changes as well

Phase 1 Work Plan
“Proxy Approach”

The Proxy Approach - Details

Demonstrate cost effectiveness through total resource cost test (TRC) for various levels of above code performance at the building level:

- Complete for multiple building types
- Base on U.S. Department of Energy prototype energy models
- Analyze a finite set of building characteristics
- Obtain incremental costs from third-party cost consultant
- Use Energy Trust cost-effectiveness calculator to determine TRC benefit/cost ratio

Phase 1 – Proxy Approach: What We've Learned

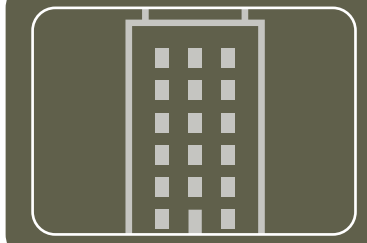
Can we reasonably meet regulations (TRC) in a way that also meets program and market needs?	What level of analysis is required to approximate a measure-level TRC with prototype buildings?
• ~50% of packages meet TRC requirement • Some savings may not be accounted for with prototype buildings but would also be difficult to cost • Did not include an interactive cost analysis (i.e. reduced HVAC cost due to reduced loads)	• What is an acceptable cost for completing the analysis? • How often the costing exercise would need to be updated? • Should more options be considered, both at the building attribute level and at the total building savings level?

Limitations of the Proxy Approach

- Lack of precision at building and measure level
- Requires regular updates of costs and data
- Only one building type completed

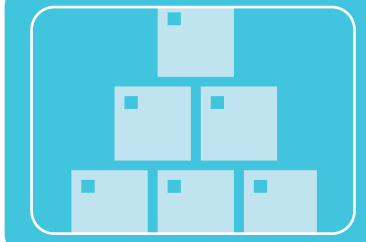
Phase 2 Work Plan
“Proxy+”

What’s Different from Phase 1?



Additional building types (primary and secondary school, and small-, medium- and large-office)

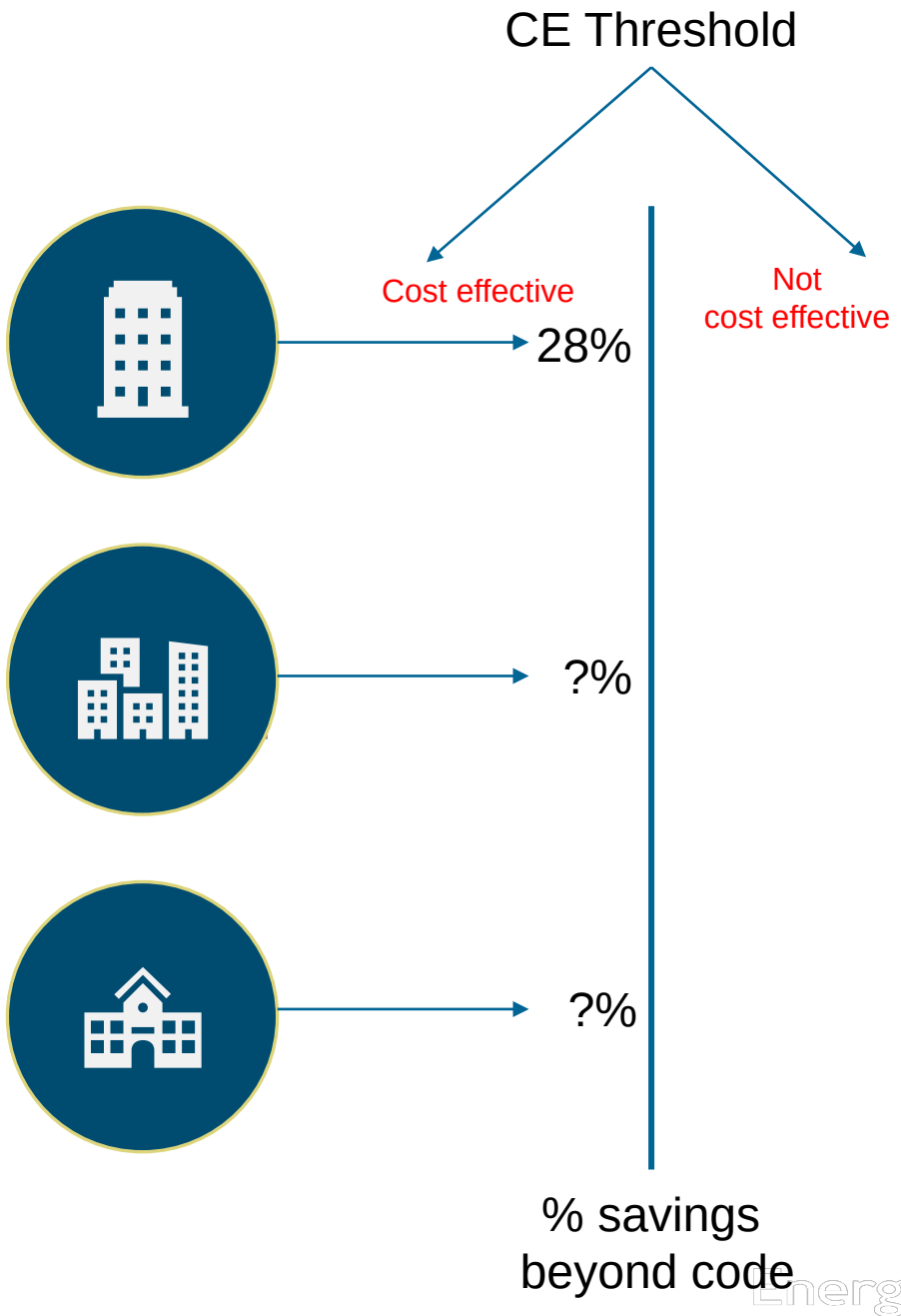
Account for interactive effects in both savings and costs



Develop packages with savings approaching levels required by Path to Net Zero

Proxy Approach Objectives

- Is there a cost-effective performance threshold that is nearly the same across all building types?
- Do results apply to mixed use buildings and building types not analyzed?
- Should non-energy benefits or other reasons for installing above-code features be considered?



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Why Office, MF and K-12?

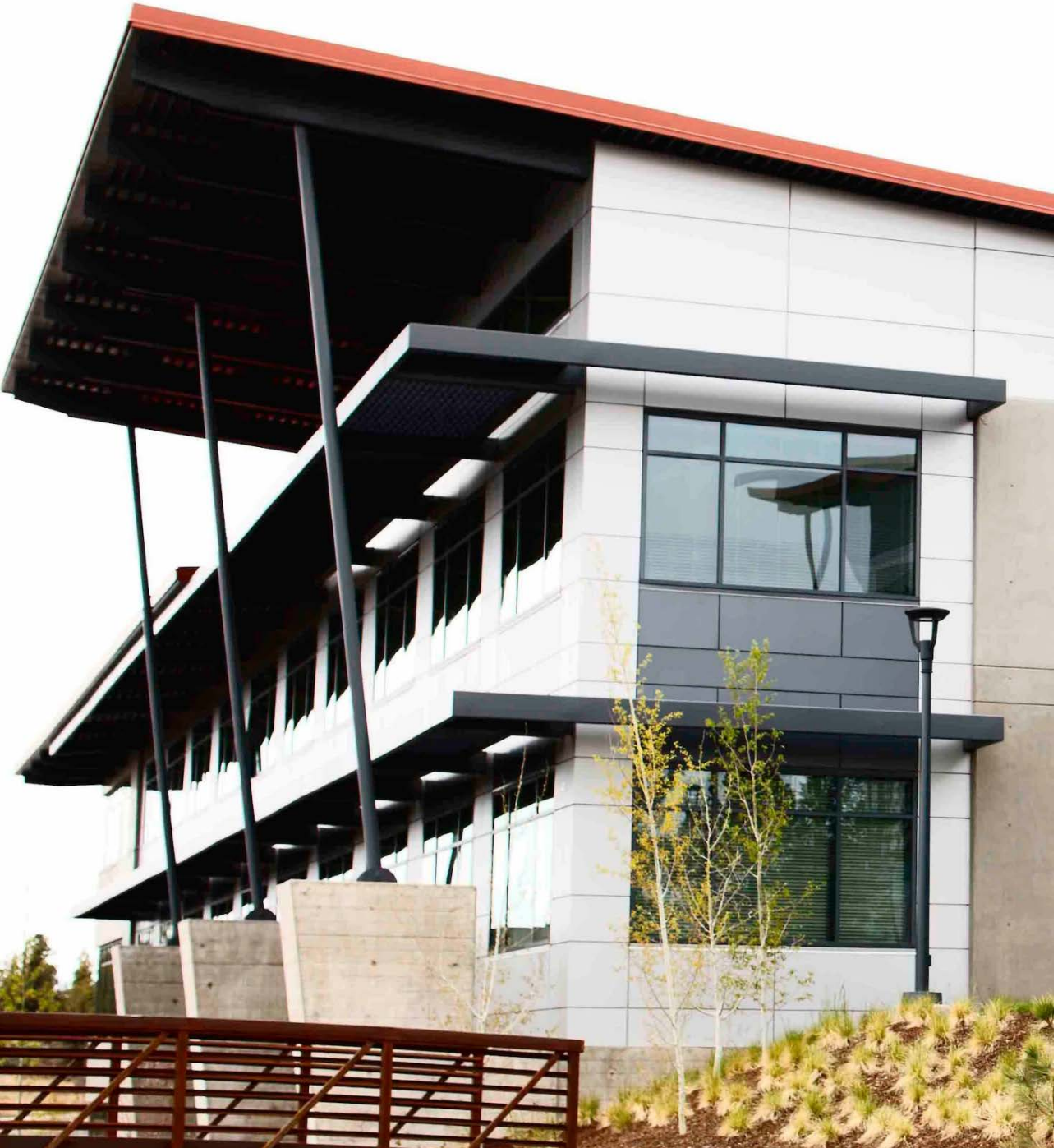
- These sectors are a substantial representation of the custom project pipeline (Whole Building & Market Solutions)
- Anticipate results will identify trends that are applicable to other building types
- Custom projects comprise approximately half of program savings; prescriptive projects, the other half of program savings, are unaffected by the exception

Next steps – in progress

1. Update prototype models to allow running multiple packages against the 90.1 Appendix G modeling ruleset
2. Develop matrix of building attributes to be included in costing exercise
3. Complete energy modeling
4. Provide model details required for cost estimation to cost consultant
5. Analyze multiple packages of measures across all five building types for cost effectiveness at the building level
6. Compare results to determine if proxy approach sufficiently demonstrates whole building cost effectiveness

Anticipated Timeline

Key Steps	2020			2021											
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Proxy+ Analysis															
Reconvene on findings of proxy approach															
Anticipated Code Change (ASHRAE 90.1-2019)															
Program design development															
Reconvene with OPUC/Working Group on final proposed solutions															
New measure development - Whole Building and MSO															
Marketing, Form, and workbook updates															
Roll out new offerings to market January 1, 2022															



Thank You

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EnergyTrust of Oregon

Industry and Agriculture 2021 RFP/RFQs

November 18, 2020

EnergyTrust of Oregon

Agenda

- Production Efficiency Program Overview
- Standard Track Request for Proposals
  - Standard Track Overview
  - Standard Track RFP Goals
  - Relevant Experience
  - Draft Scoring Criteria
  - Schedule
- Technical Review Request for Qualifications
  - Technical Review Overview
  - Relevant Experience
  - Draft Scoring Criteria
  - Schedule

Production Efficiency Overview

Production Efficiency Program

Custom Track (Custom PDCs)

- Custom Analysis (Technical Leads)
- Strategic Energy Management (Coaches)
- Capital Upgrades
  - Retrofits
  - Custom O&M
- SEM Practices
  - Energy Intensity Modeling
  - O&M

Standard Track (Standard PDC)

- Prescriptive Rebates (Trade Ally and Vendor Network)
- Calculator Tools (Trade Ally and Vendor Network)
- Compressed Air
  - Greenhouse
  - Irrigation
  - HVAC
- Compressed Air
  - Greenhouse
  - Irrigation
  - HVAC

Who We Serve

- Industrial + manufacturing facilities
  - Wood products, high tech, food processing, food distribution/storage, breweries, wineries, aerospace, metals, general manufacturing
- Agriculture
  - Farms, nurseries, dairies, cannabis/hemp
- Water + wastewater treatment facilities

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Standard Track RFP

Standard Track Overview

- Drive and deliver electric and gas prescriptive and calculated energy efficiency projects through trade allies and other vendors
- Recruit, train, mentor and manage Trade Ally Network
- Develop new energy efficiency measures
- Process prescriptive and calculated projects

Standard Track Project Types

Prescriptive Rebates

- Greenhouse equipment
- Insulation
- Irrigation widgets
- Cannabis dehumidifiers

Customers submit within 6 months and before end of year

Calculated Projects

- Compressed air VFDs
- High-speed doors
- Irrigation system upgrades
- Refrigeration controls

Customers call before purchase
Pre-approval required

Standard Track Results

- 14 million - 21 million kWh
- 170,000-300,000 therms
- 575-640 project quantity
- $1.7 million - $1.9 million delivery budget

** Based on 2017-2019 results*

Standard Track RFP Goals

- Cost-effectively achieve energy savings targets
- Broaden and strengthen the Trade Ally Network, especially with diverse trade allies
- Equitably provide services across Energy Trust's territory
- Help evolve the standard track offering through development of new energy efficiency measures
- PDC commitment to diverse hiring practices and robust DEI plans for internal company operations

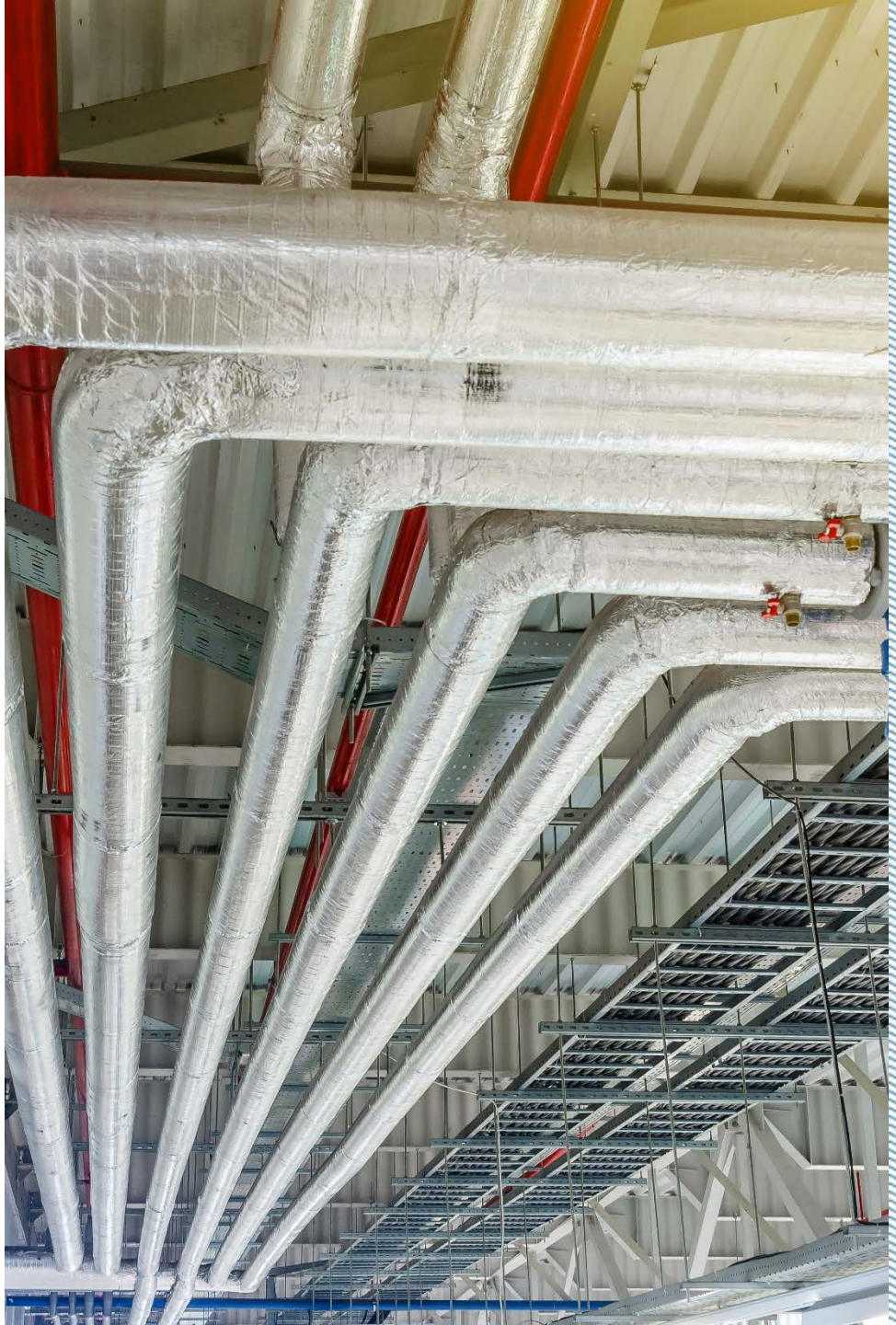
Relevant Experience

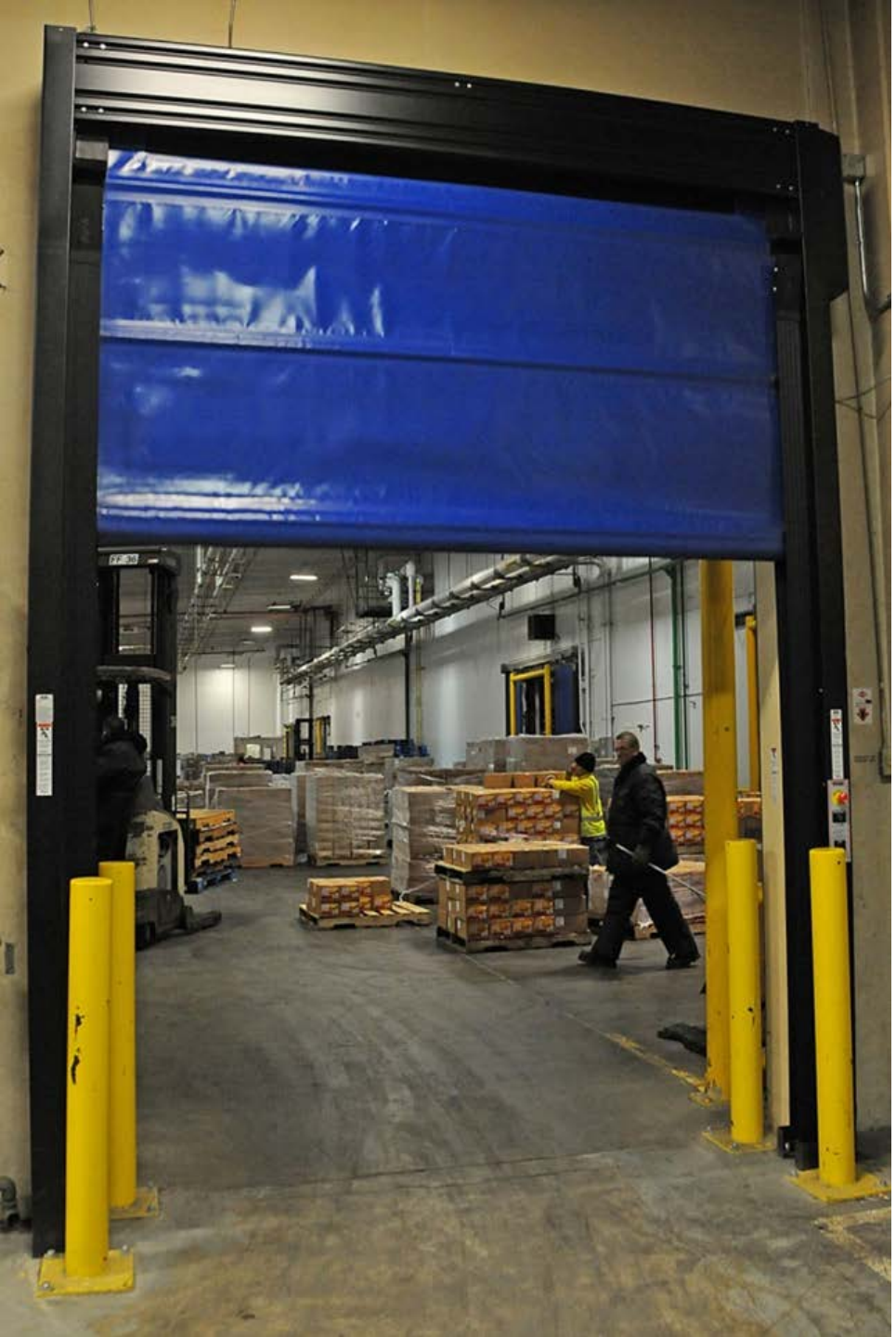
- Industrial energy efficiency experience
- Five years energy efficiency program implementation experience
- Three years trade ally management experience
- Measure development experience
  (key examples listed below)
  - Air Abatement
  - Chilled Water
  - Compressed Air
  - HVAC
  - Industrial Pumping
  - Refrigeration
  - Greenhouses
  - Irrigation

Draft Scoring Criteria

- 40% Pricing and Energy Savings
- 25% DEI*
  - DEI Qualifications
  - DEI Implementation Strategy
  - DEI Contracting Plan
- 20% Strength of Proposal
- 15% Strength of Team

* Energy Trust anticipates requiring a minimum 20% of the PDC bid be contracted to Oregon COBID-certified firms (MBE, WBE, SDVE) and/or qualifying CBOs. Emerging Small Businesses would not be considered for this requirement.





Draft RFP Schedule

- January 2021 – Informational webinar
- March 2021 – RFP release/Q&A period
- Late April 2021 – Proposals due
- Summer 2021 – Selection process, followed by board decision
- Late 2021 – Transition period, if needed
- Jan 1, 2022 – New contract begins

Standard Track RFP Questions?

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Technical Review RFQ

Technical Review RFQ

- Seeking energy-efficiency engineering contractor to perform technical reviews of:
  - Custom Track Technical Analysis Studies
  - Incentive offers and project verifications for Standard Track and Commercial/Industrial lighting projects
- Three-year contract, $120,000 - $150,000 annually

Relevant Experience

- Industrial energy efficiency experience
- Five years demonstrated project management experience
- Three years demonstrated energy efficiency engineering experience with at least 12 of 28 system/technology types
  (key examples listed below)
    - Air Abatement
    - Chilled Water
    - Compressed Air
    - HVAC
    - Industrial Pumping
    - Irrigation (Agricultural)
    - Lighting
    - Primary Process Equipment
    - Process Cooling & Heating
    - Refrigeration

Draft Scoring Criteria

- 45% Strength of Team
- 30% Pricing
- 25% DEI Qualifications

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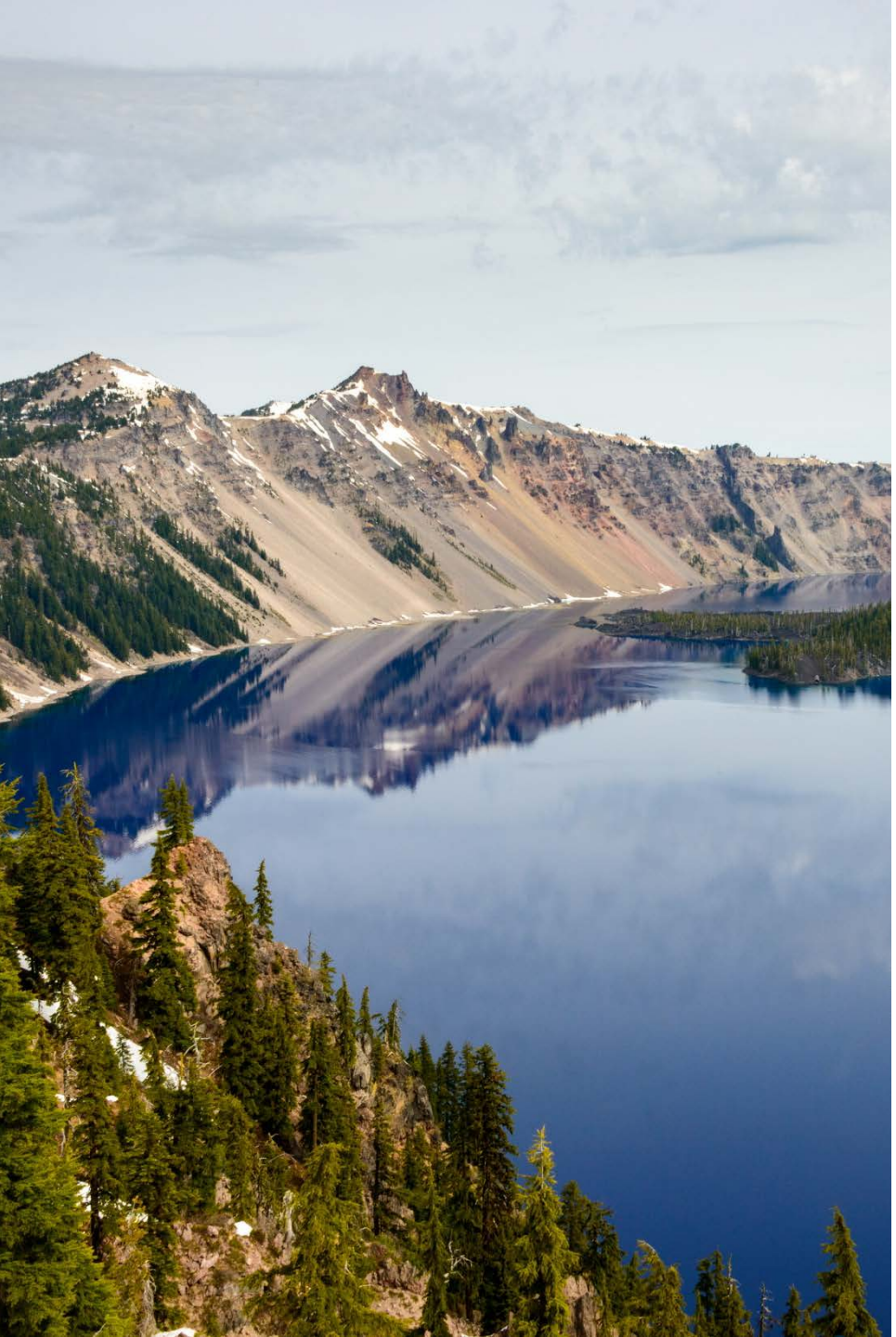
Draft RFQ Schedule

- January 2021 – Informational webinar
- February 2021 – RFQ release
- March 2021 – Proposals due
- April 2021 – Selection process
- May 2021 – New contract begins



Thank You

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EnergyTrust of Oregon

Residential Non-energy Benefits Research

Residential & Renewable Team Project Update

18-Nov-2020

EnergyTrust of Oregon

Agenda

- Inform and Engage Advisory Committees
- Project Background & Overview
- Benefits Explored
- Next Steps

Timeline

2018: Planning

- **Initial Research Scoping:** Began planning 2019 research effort to understand available and emerging distributed energy resource (DER) technologies for new homes

2019: Phase 1

- Identified value beyond PV & EE in the New Homes Program
- **2020 EPS Offering:** Developed 2020 net zero and energy smart home offerings, promoting additional DERs (e.g. EV Ready)

2020: Phase 2

- **2020 EPS Offering Deployment:** Launch net zero and energy smart home
- **Investigate non-energy benefits:** Propose quantifiable, participant facing benefits associated with DER technologies

Phase 2: Project Parameters

- Investigate participant facing non-energy benefits
- Focus on residential, either new or existing
- Seek existing primary research and data
- Prioritize values that can be quantified at the household or site level
- Do not investigate utility system benefits

Improved Healthcare Costs

Summary

- Avoided healthcare costs due to energy efficiency improvements
- Substandard housing conditions can exacerbate health issues because of several triggers such as allergens, irritants, moisture or mold, etc.

Results

- Total improved healthcare costs for low-income households identified with Asthma ~**$476**/household
- Total improved healthcare costs for general low-income population from reduced Asthma **~$79/household**
- Total improved healthcare costs from cold and heat related thermal stress: **~$28/household**

Applications

- Low-income households
- Low-income households with Asthma
- Relevant measures:
  - Building envelope and shell measures
  - Heating and cooling measures

Sources

[1] Massachusetts Special and Cross-Cutting Research Area :Low- Income Single-Family Health- and Safety-Related Non-Energy Impacts Study

[2] Non-Energy Benefits: Status, Findings, Next Steps, and Implications for Low Income Program Analyses in California

[3] Health and Household-Related Benefits Attributable to the Weatherization Assistance Program

Reduced Missed Workdays

Summary

- Reduced missed days at work attributable to energy efficiency improvements by mitigating health risks and illness leading to fewer missed days at work and avoiding earning reductions
- Dollar value of reduced missed days at work before and after intervention

Results

- Total reduced missed workdays in low-income households: **~$70/household**
- Total reduced missed workdays in non low-income households: **~$228/household**

Applications

- Residential households (low-income and non low-income)
- Relevant measures:
  - Building envelope and shell measures
  - Heating and cooling measures

Sources

- NMR Group, Tetra Tech. Massachusetts Special and Cross Sector Studies Area, Residential and Low-Income Non-Energy Impacts (NEI) Evaluation, 2011.
- Health and Household-Related Benefits Attributable to the Weatherization Assistance Program

Time of Use—Battery

Summary

- On-bill financial savings of a household that has the combination of a behind the meter battery storage system and a time of use (TOU) rate schedule
- Shifts charging of battery from peak rates to off-peak rates

Applications

- Residential single-family home
- Assumptions:
  - Behind the meter home battery
  - TOU rate schedule
  - 10-year measure life

Results

- Portland General Electric:
  - TOU Rate Bill Savings: **$206**
- Pacific Power:
  - TOU Rate Bill Savings: **$118**

Sources

- Spreadsheet based modeling analysis
- RTF residential load profile; https://nwcouncil.app.box.com/s/ph0by9u53vygowx42rms5oytojhdmg5x
- PGE & PAC published TOU Rates
- PGE Flex Pilot Evaluation https://edocs.puc.state.or.us/efdocs/HAH/um1708hah16432.pdf

Time of Use—Electric Vehicle Chargers

Summary

- Bill savings associated with charging their EV to maximize the benefits of the available TOU rates. Shifts their EV charging from peak to off-peak hours
- Difference between the annual cost of charging an EV on the base rate and TOU rates.

Applications

- Residential single-family home
- Assumptions:
  - Must have an EV
  - TOU rate schedule

Results

- Portland General Electric:
  - High-Efficiency EV: **~$53**
  - Low-Efficiency EV: **~$98**
- Pacific Power:
  - High-Efficiency EV: **~$18**
  - Low-Efficiency EV: **~$33**

Sources

- Smart Electric Power Alliance - Residential Electric Vehicle Rates That Work

Energy Resilience (site level)

Summary

A site's ability to withstand hazard events and to regain normal operational activity after such events occur

Applicable Measures:

- Solar, Battery Storage

Methodologies

- Interruption Cost Estimate (ICE) Calculator
- Value of Lost Load (VoLL) estimate
- Willingness-to-pay survey
- FEMA Benefit-Cost Analysis (BCA) tool

Results

Benefit:

- Value of eliminating or reducing the duration of power outages
- Avoided damages to property/goods
- Avoided cost of displacement

Sources

- Michael J. Sullivan, Josh Schellenberg, and Marshall Blundell, Nexant, Inc. Updated Value of Service Reliability Estimates for Electric Utility Customers in the United States, 2015.
- Bryndis, Woods and Elizabeth A. Stanton, Massachusetts Non-Energy Benefits of Battery Storage, 2019.
- Mullendore, Seth and Marriele Robinson, Clean Energy Group, Exploring Opportunities for Solar+Storage in Five Cities Technical Appendix, 2019.
- FEMA BCA Reference Guide

Energy Burden

Summary

Energy efficiency measures may help reduce energy bills and provide energy burden relief to households.

Applicable Measures:

- Air sealing, insulation, furnace repair or replacement, refrigerator replacement, lighting upgrade, duct sealing

Results

- Increased feeling of control over bill : $23
- Reduced outage time and time spent trying to return power: $12

Methodologies

- The Low-Income Public Purpose Test (LIPPT) (CA)
  - Frequency of shutoffs
  - Duration of shutoffs
  - Reduction in shutoffs due to program and value to customer
  - Time to return power and minimum wage

Sources

- The Low-income Public Purpose Test (LIPPT)
- Non-Energy Benefits: Status, Findings, Next Steps, and Implications for Low Income Program Analyses in California

Next Steps

- Energy Trust, in accordance with the schedule in the OPUC work plan for addressing the governor's climate change order (EO 20-04), will coordinate with the OPUC to continue work on non energy benefits
  - Project may incorporate utility facing benefits
- Incorporate values into energy efficiency measure approval documents, as they come up for renewal
- Pursue program partnerships that may help target interventions to discreet populations and in some cases help reduce cost effectiveness issues

Thank You

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