

Conservation Advisory Council Agenda

Virtual meeting

Wednesday, June 5, 2024

1:30 – 4:00 p.m.



Zoom meeting registration link: <https://us06web.zoom.us/join/join?from=addon&addon=1>

1:30 Welcome, Introductions and Community Agreements

1:40 CAC Engagement and Recruiting (*inform, feedback*)

Staff will share draft recommendations for engagement, membership and recruiting to help CAC become more inclusive and evolve to be a forum that leads with racial equity. This is based on work done with Kheoshi Owens from Empress Rules Equity Consulting who will also present her thoughts about the CAC.

Presenter: Hannah Cruz, senior stakeholder relations and policy manager

2:10 2025-2030 Strategic Plan Development (*inform, feedback*)

Staff will provide a brief update on the board's recent 2025-2030 Strategic Plan development workshop and preview next steps in the process. We encourage those CAC members who attended the March board workshop to share their perspectives.

Presenter: Greg Stokes, organizational development manager

2:20 UM 1158: Revision of Grant Agreement (*Inform*)

The Oregon Public Utility Commission is modernizing its grant agreement with Energy Trust, through which Energy Trust receives and is held accountable for investment of ratepayer funds in cost-effective energy efficiency, small-scale renewable energy and market transformation. The update will occur within OPUC docket UM 1158. Staff will provide a brief reminder of the [OPUC schedule and process](#). Public comments are due to the OPUC May 30.

Presenter: Debbie Menashe, general counsel

2:25 Break

2:30 Multiyear Planning Update (*inform*)

Staff will provide an overview and update on Energy Trust's plan for transitioning to a multiyear planning framework over the next two years and highlight points of engagement for council members.

Presenter: Melanie Bisonette, operations senior. project manager

3:10 New Homes Impact Evaluation Next Steps (Q&A)

Staff will present the next steps for the 2025 program design from the 2023 impact evaluation of the EPS New Construction program.

Presenter: Scott Leonard, residential program manager, and Dan Rubado, evaluation senior project manager

3:40 CAC Member Announcements

3:50 Public Comment

3:55 Adjourn

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

Next CAC meeting is Wednesday, July 10, 2024.

Conservation Advisory Council Meeting Notes

April 10, 2024

Attending from the council:

Laney Ralph, NW Natural
Corinne Olson, AVEC
Noemi Ortiz, Cascade Natural Gas
Lisa McGarity, Avista
Jonathon Belmont, Bonneville Power
Administration
Charity Fain, Community Energy Project
Peter Kernan, Oregon Public Utility
Commission

Andy Cameron, Oregon Department of
Energy
Becky Walker, Northwest Energy Efficiency
Alliance
Jake Wise, Portland General Electric
Kari Greer, Pacific Power

Attending from Energy Trust:

Hannah Cruz
Alex Novie
Tom Beverly
Elaine Dado
Janelle St. Pierre
Elizabeth Fox
Jeni Hall
Cameron Starr
Chris Lyons
Debbie Menashe
Abi Sloan
Elaine Prause
Kirstin Pinit
Scott Leonard
Maddie Norman
Thad Roth
Fred Gordon
Cory Hertog
Marshall Johnson
Natalia Ojeda
Themba Mutepefa

Jackie Goss
Maddy Otto
Spencer Moersfelder
Oliver Kesting
Julianne Thacher
Amanda Thompson
Michael Hoch
Sue Fletcher
Kathleen Belkhaty
Greg Stokes
Amanda Zuniga
Laura Schaefer
Patrick Urain
Amber Cole
Andrew Shepard
Willa Perlman
Michael Colgrove
Tiffany Hatteberg

Others attending:

John Molnar, Rogers Machinery
Candice Norton, Resource Innovations
Jenny Sorich, CLEAResult
Brooke Landon, CLEAResult

Kris Grube, City of Portland
Zac Gomez, Resource Innovations
Heath Heiberg, TRC Companies
Henry Lorenzen, Energy Trust board

1. Welcome and announcements

Hannah Cruz, senior stakeholder relations and policy manager, convened the meeting at 1:30 p.m. via Zoom. The agenda, notes and presentation materials are available at <https://www.energytrust.org/wp-content/uploads/2023/11/CAC-Packet-April-2024.pdf>

She then introduced Janelle St. Pierre, senior project manager for Energy Trust's communities and new initiatives sector, who will take over as council facilitator starting in June. Hannah also introduced new

council members: Corinne Olson, who takes over for Tyler Pepple representing Alliance of Western Energy Consumers, and Peter Kernan, who represents the Oregon Public Utility Commission.

Hannah Cruz noted an opportunity to give feedback and public comment on Energy Trust's 2023 Annual Report. The OPUC directed Energy Trust to gather feedback on what is include in the report, and staff will use any feedback as inputs into the 2024 report. More information is available at www.energytrust.org/reports.

2. Revisions to Energy Trust's grant agreement

Topic summary

The OPUC is modernizing its grant agreement with Energy Trust, through which Energy Trust receives and is held accountable for investment of ratepayer funds in cost-effective energy efficiency, small-scale renewable energy and market transformation. The update will occur within OPUC docket UM 1158.

Debbie Menashe, Energy Trust general counsel, provided an overview of the OPUC schedule and process. Many things have changed since the grant agreement was enacted. Energy Trust has been working closely with OPUC staff on the public process of revising the grant agreement. The draft agreement will be open for public comment April 26 to May 10. Commissioners will review the updated document starting in July. Council members are invited to monitor the schedule and engage in the process.

The OPUC has already talked with several utilities and stakeholders and welcomes additional direct conversations. Peter Kernan will be the OPUC point of contact for input and discussions.

Discussion

None.

Next steps

Staff will share materials for public comment when posted by the OPUC later in April.

3. 2025-2030 Strategic Plan development

Topic summary

Greg Stokes, organizational development manager, provided an update on the Energy Trust board's recent 2025-2030 Strategic Plan development workshop and discussed next steps in the process. Council members who attended the workshop were encouraged to share their thoughts.

Discussion

The council stated it was a great experience overall, with good prompts to get everyone thinking and expressed appreciation for the opportunity to contribute (Andy Cameron, Jake Wise and Lisa McGarity). It said the face-to-face conversations were very helpful due to the complexity and nature of issues being faced and it was clear that staff weren't just checking boxes in a process, but instead truly considered the feedback (Jake Wise). The council pointed out it was a great development opportunity for anyone who hasn't been involved in a planning activity of this sort (Lisa McGarity).

Next steps

Updates will be brought to future council meetings. The next board engagement on the strategic plan is at the board's May 13-14 meeting.

4. Legislative update

Topic summary

Chris Lyons and Natalia Ojeda from Energy Trust's policy services team gave a summary of energy-related bills that passed in Oregon's 2024 legislative session:

- SB 1525, which revises some ODOE programs
- SB 1530, which funded existing programs, including Oregon Health Authority Healthy Homes program and ODOE Rental Home Heat Pump program
- SB 4015, which creates a siting pathway for standalone, large-scale battery storage systems
- HB 4080, which establishes a state policy on offshore wind
- SB 1581, which requires Portland General Electric and Pacific Power to report on any activities taken toward participation in a regional energy market

Housing was one of the top issues in the session. The housing package (SB 1537, SB 1530 and HB 4134) commits \$376 million to address homelessness and support housing development. Emerging themes for Oregon's 2025 legislative session include a state transportation package, renewable energy and transmission siting, and state greenhouse gas emissions targets.

The following relevant bills passed in Washington's 2024 legislative session:

- HB 1589, which allows the Washington Utilities and Transportation Commission to implement consolidated planning for "large combination utilities" (gas and electric), which applies only to Puget Sound Energy
- HB 1185, which restricts the sale of mercury-containing lights starting in January 2029
- SB 6058, which allows the Washington Department of Ecology to link the state's carbon market with California's and Quebec's market

Discussion

None.

Next steps

None.

5. Residential program delivery pilots

Topic summary

Scott Leonard, Residential program manager, provided an overview of how Energy Trust is progressing through active program delivery pilots, which are used to test new delivery strategies and models. (See [CAC agenda and presentations](#) for details.) Energy Trust has learned community-based organization (CBO) partners are a viable pathway to reach energy burdened customers. Cost is a key barrier and offers must be made at no cost to the customer. There is considerable demand. Complementary funding is on the horizon via Inflation Reduction Act programs, ODOE community heat pumps, Portland Clean Energy Community Benefits Fund (PCEF), Oregon Health Authority's Healthy Homes and potential outcomes from an OPUC process (docket UM 2211).

Staff is also looking at in-home energy services. Complementary funding will be needed to support it and expand into other areas. This delivery pilot will test whether infrastructure and capacity are available to offer in-home energy services to customers.

Discussion

The council asked how complementary funding offsets costs, such as through incentives or removing other barriers (Jake Wise). Staff responded that complementary funding helps fund technologies that are not cost-effective and helps with critical home repairs that are barriers to energy efficiency. Other sources of funding can help cover those costs that Energy Trust can't.

The council asked if income eligibility criteria are the same as for Savings Within Reach and if Savings Within Reach will continue (Lisa McGarity). The requirements are 60% of state median income, and Savings Within Reach will continue. Staff noted there could be a space where in-home energy services come in. No-cost offers are limited to customers experiencing low income. There could be a future

where in-home services support moderate-income customers, and specific incomes need to be evaluated over the next few months.

The council asked if Energy Trust has any intention of looking at other potential issues that arise because of equipment installed in customer homes (Jon Belmont). Staff explained there are contractor, CBO and customer surveys to determine potential challenges the process may have.

The council pointed out many customers who are energy burdened will still keep their thermostats turned down after completing work and that it should be taken into account with evaluations. There may not be a huge reduction in energy use, and a normal, baseline house might need to be considered (Lisa McGarity).

The council noted the in-home energy services pilot very closely follows what Community Energy Project offers, including an identical name (Charity Fain).

Next steps

None.

6. Existing Buildings program updates

Topic summary

Patrick Urain, senior Existing Buildings program manager, reviewed adjustments made to the small business offering to increase participation, including changes to the Trade Ally Network and application process.

Discussion

The council asked if Energy Trust is looking at other pathways for participation, like community-based organizations or customers who do their own journey (Lisa McGarity). Staff replied Energy Trust is looking at everything within the capacity of the contractor and Energy Trust to prioritize what can be tackled, adding that there is room for expansion, and it's up to the program to determine ways to find and engage customers.

Next steps

None.

7. Multifamily workshop expansion

Topic summary

Kathleen Belkhat, commercial program manager, discussed plans to expand affordable multifamily strategic energy management (SEM) workshops. Energy Trust initially worked with Community Energy Project to deliver renter workshops, then rolled out an SEM offer for affordable multifamily. Energy Trust released requests for proposals and qualifications for curriculum and delivery in 2023 to expand education across the state. There is room for additional community-based organizations and small businesses around the state to facilitate these workshops.

Discussion

The council asked how Energy Trust envisions working with community action agencies and community-based organizations as this expands, adding these organizations offer the same type of education with the same qualifiers for participation (Lisa McGarity). Staff responded Energy Trust will work with them to deliver and more outreach will be necessary to ensure coordination.

The council noted Community Energy Project previously ran the same program statewide (Charity Fain).

The council noted community partners sometimes do outreach, workshops, education or installation with Energy Trust, and may even play multiple roles. With program delivery pilots, program management contractors are also involved. It would be helpful to understand the various pathways for participation. UM 2211 is an opportunity to take inventory of the dollars going especially to low-income customers and how they are delivered in partnership with state agencies (Jake Wise). Staff replied this will be brought forward to Energy Trust's leadership team, adding there was a questionnaire related to this topic with UM 2211.

Next steps

Staff will follow-up on the various approaches Energy Trust uses to serve customers with low incomes and discuss feedback that program approaches replicate Community Energy Project programs.

8. Council member announcements

Becky Walker, NW Energy Efficiency Alliance, announced that the [Residential Building Stock Assessment](#) was just released on April 8. NEEA will host a workshop for people to learn more about it.

9. Public comment

There was no public comment.

10. Adjournment

The meeting was adjourned at 3:30 p.m. The next meeting will be held June 5, 2024.



Strategic Planning for 2025-2030

Advisory Council Update

June 2024



2025-2030 Strategic Plan Development Update

Strategic plan development continued in April and May, as the board focused on these building blocks:

- **Vision and Purpose** (April)
- **Unique Role of Value** (April)
- **Areas of Focus** (May)
- **Outcomes and Goals** (May)

Strategic Plan Aspirational Statements

Vision

Clean, affordable energy for everyone

Purpose

Working together with customers, communities and utilities, we save energy and maximize adoption of clean energy solutions, reducing costs and accelerating community-centered benefits.

Unique Role of Value

Through its strong and growing network of relationships, Energy Trust is uniquely positioned to support utility customers and communities in saving energy and adopting customer-sited clean energy solutions that reduce energy costs, while contributing to:

- Community-centered benefits.
- Energy justice outcomes.
- State, local, and tribal energy objectives.

Plan Development – Advisory Councils Engagement

Month		Activity
January – February	➔	Input from broad, diverse stakeholder groups, including advisory councils in joint meeting : <ul style="list-style-type: none"> • Oregon Public Utility Commission, Utilities, Energy Trust Advisory Councils, Executive Team and staff • NW Power Council, Northwest Energy Efficiency Alliance, Northwest Energy Coalition, Citizens' Utility Board • Agencies: Oregon Department of Energy, Business Oregon • Funding orgs: Portland Clean Energy Fund, Seeding Justice, and Tribes • Delivery partners and contractors: Community Based Organizations, Trade Allies, CLEAResult, Energy 350, Home Depot and others
February - June	➔	Board workshops to build strategic plan elements; including joint workshop with advisory councils in March
June - July		Staff & Strategic Planning Committee draft strategic plan based on board outputs
August		Draft plan presented to board (8/14) and published for public review/comment
August – September	➔	Stakeholder outreach and engagement on draft plan, including with advisory councils <ul style="list-style-type: none"> • Includes meetings, focus groups and direct communication to elicit feedback
October		Board receives summary of discussions and comments on draft plan (10/9)
October – November		Draft plan revision period
December		Final proposed strategic plan presented to board (12/13) and published



Questions?

Follow the process online at the [2025-2030 Strategic Plan Development web page](#), updated monthly as materials become available



Advancing CAC and RAC Diversity, Equity and Inclusion Recommendations Report

January 25, 2024

Problem Statement

- The Conservation Advisory Council and Renewable Energy Advisory Council (CAC/RAC) are to advise the board and staff on strategic matters and achieving organization objectives; however, the current charter, membership recruitment and retention processes, and meeting management techniques present some barriers to having conversations in the organizational focus areas of diversity, equity and inclusion, which are integral to meeting those objectives.

Purpose and Objectives

- Advisory councils with diverse perspectives and viewpoints improve the ability of the bodies to advise staff and/or the board on areas of diversity, equity and inclusion, including organizational achievement to DEI goals and equity performance measures
- Staff worked internally and with a consultant (Kheoshi Owens, CEO of Empress Rules Equity Consulting) to examine CAC/RAC to improve their ability to provide effective feedback, and to create councils that are more welcoming and inclusive spaces for all members
- This Recommendations Report summarizes the work of CAC/RAC facilitators and presents takeaways and recommendations for the board/executive team to consider

Background

- Staff
 - Developed and ran a recruitment process based on the Foundational DAC method
 - Contracted with a consultant to execute elements of the recruitment process (DAC identified that staff needed additional expertise to advise in the process)
 - Supported the board Nominating & Governance Review committee and CAC/RAC board liaisons in discussions on purpose/role of CAC/RAC (2023 charter and role conversations with the board have since been left unresolved)
- Staff worked with Kheoshi Owens of Empress Rules Equity Consulting on:
 - Reviewing current council skills and perspective matrix
 - Meeting facilitation skills
 - Recruiting new council members
 - Developing interview questions and conducting interviews of prospective council members that lead with race
 - Developing lessons learned for future recruiting efforts
 - Conducting an anti-racist training for council members
 - Updating the “welcome process” for onboarding new council members
 - Reviewing inclusiveness of meeting processes
 - Developing community agreements for CAC/RAC meetings

Key takeaways

- The councils have evolved from being advisors of the board to being advisors to staff
 - Initial discussion with N&G committee in January 2023, and full board in February/March 2023, indicated agreement
- CAC/RAC recruiting needs to be done regularly
- CAC/RAC need increased and more diverse membership
- Open calls may not result in the diversity of voices needed
 - Intentional efforts are needed to find people who can represent diverse communities and provide needed perspective and expertise
- Serving on the CAC/RAC is a professional development opportunity and needs to be viewed as such
- Onboarding CAC/RAC members needs more attention and time
 - A warm welcoming environment should be created and maintained
- An anti-racist training was well-attended and successful yet singular trainings are not sufficient
- CAC/RAC are administered and used primarily by staff, but altering the foundational document for the councils requires board action
- Staff resources for supporting CAC/RAC are limited and true change requires dedicated time

Staff Recommendations

Governance

1. Complete governance discussions and settle on role of board and staff in managing CAC/RAC. Allow for staff to have full oversight of purpose, role of councils.
2. Assess the charter, last changed in 2007,
 - Including clarifying how and who councils advise
 - If board connection is retained, identify specific council input that would help the board and strengthen or change the channels of communicating between the councils and the board
3. Explore a new council structure to meet present and future needs of Energy Trust
 - Examine the assumptions underlying the creation of three councils and whether they still apply today

Staff Recommendations (cont.)

Membership

1. Institute term limits, e.g., a set amount of years or require reapplying
2. Create stipend policy based on DAC's policy
3. Define membership criteria
4. Define specific expectations for what it means to be a council member, e.g., attendance expectations, engagement/participation expectations
5. Prioritize achieving council composition that includes multiple lived/professional experiences from customers and communities Energy Trust has underserved
6. Ensure balance in perceived and real power dynamics

Recruitment

1. Get support from HR resources and DEI services to enhance recruitment pool in line with membership criteria identified above
2. Maintain documentation, including of decision making and outcomes
3. Be specific in recruitment needs, and from there, expand channels used for recruitment

Staff Recommendations (cont.)

Member and Meeting Management

1. Host welcome meetings and exit celebrations
2. Share welcome packets
3. Continue use of community agreements

Resourcing CAC/RAC

1. Facilitators should be dedicated resources who have facilitation training and training in creating an inclusive environment
2. A dedicated budget and staff resource should be assigned to support and coordinate council needs
 - Budget to accommodate stipend policy, welcome process and ongoing support of members
 - Resourcing to allow for onboarding meetings with new members, regular check-ins with existing members, exit celebrations for members leaving the council
3. Provide ongoing professional development for facilitators, staff, CAC/RAC members
 - Examples: facilitating through conflict and difference, anti-racism, implicit bias, language access, working with people with disabilities

Next Steps

- Review and invite feedback (including on priorities for implementation) on this Recommendations Report from
 - RAC
 - CAC
 - Executive Team or designees
- Create an implementation team to develop a list of priorities and a plan for moving forward that includes timeline and resources
- Host discussion with board or its designees to seek agreement with the implementation plan or resolution on areas of disagreement

Thank You for Valuing Priority Communities



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Update on Multiyear Planning Transition

Conservation Advisory Council

June 5, 2024

Topics

- Context about multiyear plan transition
- Multiyear Plan Process Design
 - Multiyear plan development process and stakeholder engagement
 - Plan management
 - Structure of five-year business plan
- Multiyear Savings Assessment

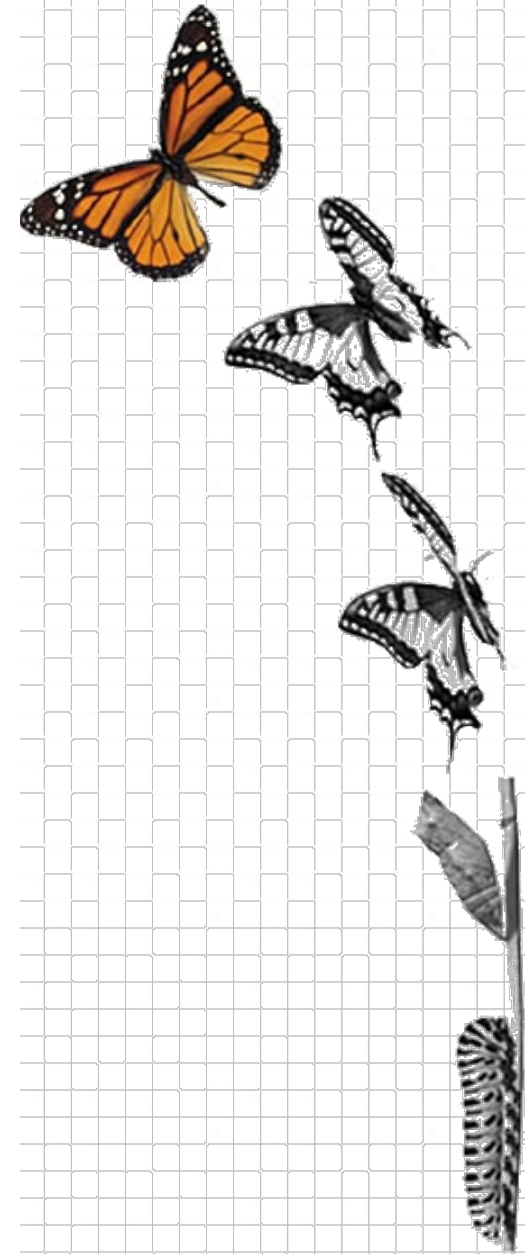
Transition to a Multiyear Plan - 2024

Multiyear Savings Assessment

- Outline approach to maximize acquisition of cost-effective savings by 2030
- Explore program strategies to accelerate savings
- Engage utilities and other stakeholders

Multiyear Plan Design

- Develop process documentation
- Outline information & data needs
- Create stakeholder engagement plan



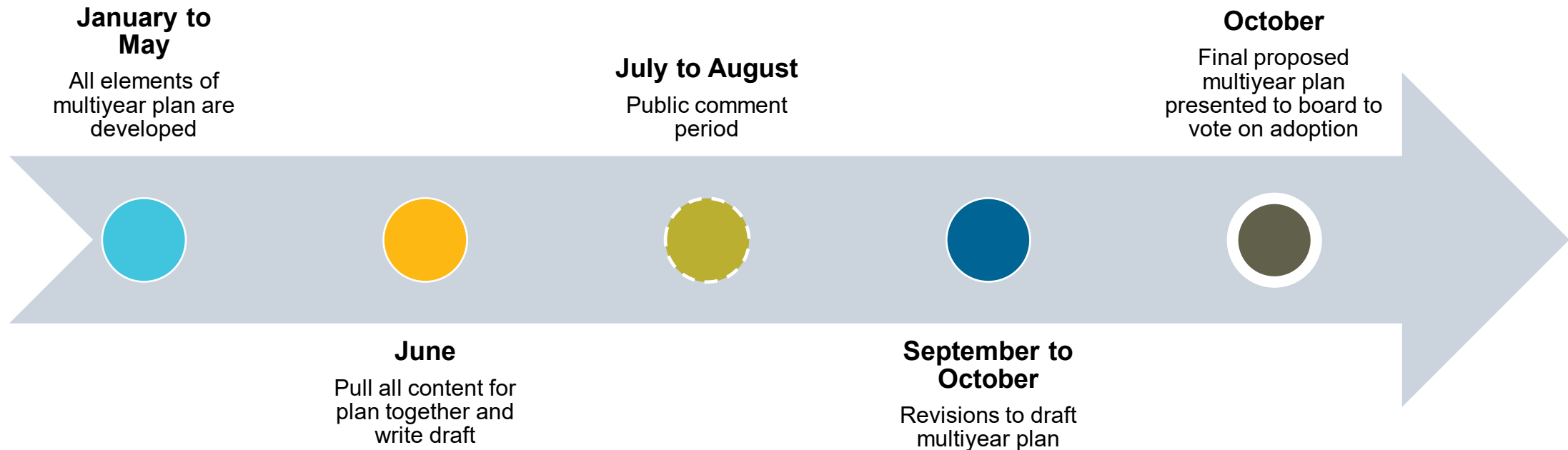


Transition to a Multiyear Plan - 2025

- Set savings & generation targets
- Develop of our first Multiyear Plan
 - Business Plan
 - Human Capital Management Plan
 - Supplemental Funding Strategy
 - Financial Plan
- Engage stakeholders
- Transition to 6-quarter rolling forecast

Multiyear plan process & stakeholder engagement

Draft multiyear plan development process for 2025



Stakeholder engagement points in plan development

- Advisory councils will be engaged in January, early Spring and July
- Board Finance & Audit Committee, OPUC and utilities will get review opportunities or updates throughout plan development (Jan-May)
- Other industry and environmental justice stakeholders will be engaged in early Spring and July
- All stakeholders and the public will have 8 weeks to comment on the draft multiyear plan (July-August)

Plan management

2026-2030 Multiyear Plan

5-year business plan



5-year project roadmap
Internal business planning process

5-year financial plan



6-quarter rolling forecast

5-year human capital
management plan



Annual staffing plan

Supplemental funding strategy



Development plan



Overarching plan management framework

Plan Management

Draft plan management process

- Produce 6-quarter incentives forecast and financial report
- Compare progress toward targets and ranges of expected expenditures, revenues and reserves
- Identify any areas that are off track
- Use plan management framework to take appropriate response actions depending on extent of deviation from targets and ranges



Structure of 5-year business plan & example

Strategic Plan Focus Areas

Multiyear Plan Focus Areas

Same as or aligned with Strategic Plan focus areas



Outcomes

Changes desired by 2030

Same as outcomes identified in Strategic Plan, plus additional outcomes as needed

Activities

Actions planned to achieve outcomes

Goals

Things we can measure to show achievement of outcomes; direct result of activities

Targets

Specific numbers we expect to achieve corresponding to each goal

Resources

Staff, funding, knowledge and influential factors needed to accomplish activities and achieve outcomes for each focus area

Focus area	Engage customers with relevant EE & RE programs, including services for underserved customers		
Outcomes	Underserved customers have more opportunities to participate in our programs	Energy Trust maximizes our contribution utility decarbonization requirements	Our Trade Ally Network is larger and more diverse
Activities	Engage with trade ally contractors, including minority and women owned, to reach customers Do more whole home energy upgrades for customers with low-to-moderate incomes	Deliver residential, commercial and industrial programs Launch new offers	Expand contractor development pathway Launch trade ally mentorship program in rural areas
Goal & targets	<u>Goal:</u> Number of income-qualified customers served <u>Target:</u> 500 income-qualified customers served	<u>Goal:</u> aMW and therms saved <u>Target:</u> 1 million aMW and 1 million therms	<u>Goal:</u> Number of trade allies in network <u>Target:</u> Trade Ally Network increased by 10%
Resources	Funding to enable whole-home energy upgrades	Supplemental funding to address participation barriers	Additional staff to support expanded trade ally trainings

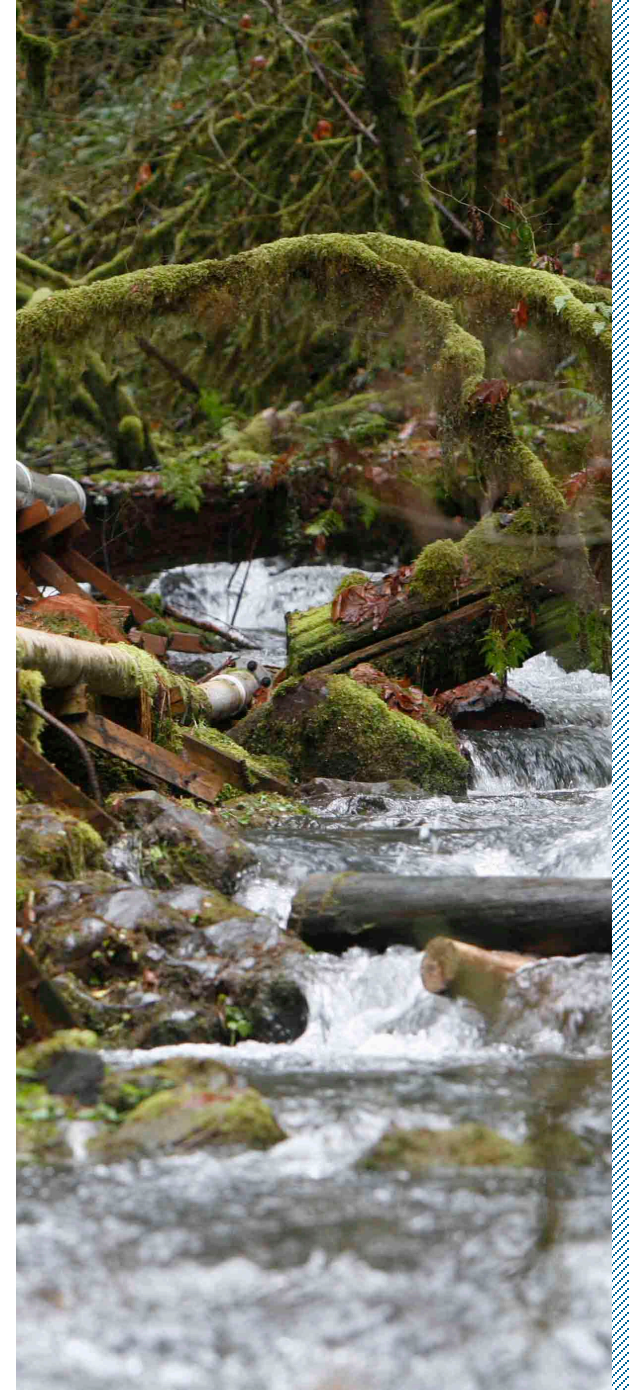
Multiyear Savings Assessment update

Savings Assessment project update

- Working out how to set savings targets in a multiyear framework
- Thinking through how 2030 savings targets & associated acquisition curves interact with ongoing IRP processes
- Brainstorming strategies/tactics to accelerate acquisition of all cost-effective energy savings between 2026-2030
- Holding working sessions with utility partners to discuss strategies and opportunities for collaboration, as well as barriers, timing of deployment and savings impact

Savings Assessment project outcomes

- List of strategies by sector with associated data points (e.g., relative savings, cost, timing, etc.)
- Rough range of savings estimates by fuel
- Lessons learned that can be applied to setting savings targets in Q1 2025





Program Response to New Homes Impact Evaluation 2012-2019

CAC Meeting

June 5, 2024

Agenda

1. EPS New Construction program background
2. Evaluation methods and summary of findings
3. Evaluator's recommendations & staff response
4. Program analysis and response

EPS New Construction Program Background

EPS New Home Construction

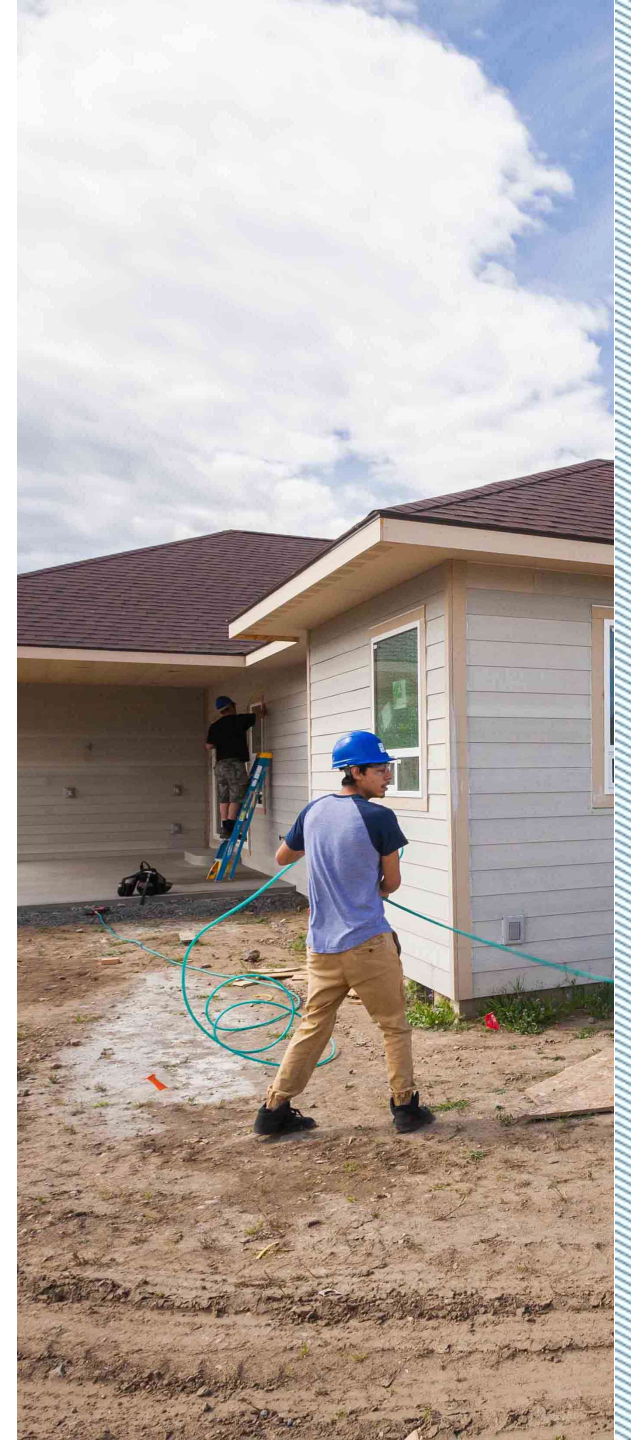
- Encourages building beyond code with EPS™ requirements
- Works with builders, contractors, architects and third-party verifiers
- Offers EPS support, technical assistance, marketing materials and cash incentives for trade ally builders and owner-builders
- 10% above code entry threshold
- 100% file and 5% field QA

The average EPS home is over 20% more efficient than a typical newly built home.



Program savings claims

- Program home characteristics and efficiency features entered in energy simulation software
 - Assumptions about occupancy, plug loads, and other factors entered
 - Software outputs weather normalized annual gas and electricity usage estimates
- Minimally code compliant version of program home created in simulation software
 - Same basic characteristics and assumptions used, with lower efficiency levels (“code reference home”)
 - Software outputs gas and electricity usage estimates
- Energy savings computed as difference between program and code home usage estimates



Evaluation methods and summary of findings



Evaluation Goals and Methods

- Hired Apex Analytics to evaluate the accuracy of EPS home energy models compared to actual home energy use
 - Program home models
 - Code reference home models
 - Program savings and realization rates
- Identified program homes, obtained detailed program data and energy model outputs
- Selected matched non-program homes from tax assessor data to represent actual "code" homes
- Obtained utility billing data and computed post-occupancy weather normalized electricity and gas usage for all homes
- Assessed energy simulation model accuracy by comparing:
 - Program home actual usage to simulated usage
 - Non-program home actual usage to reference home simulated usage
- Estimated program savings and realization rates by comparing energy usage between program and matched non-program homes
- Conducted interviews with program staff, verifiers, and builders

Summary of Findings

- Simulation models did not accurately reflect actual energy use for program or non-program homes
- EPS homes used more energy than predicted by energy models, translating to much lower actual savings than predicted (2017 code)
 - 24% higher than predicted for electricity use
 - 20% higher than predicted for gas use
 - Non-program home energy use deviated from predicted in both directions
- Program homes saved energy, but realization rates were low when compared to non-program home performance (2017 code)
 - 35% electric RR and 18% natural gas RR overall
 - Some home types had higher RRs, but no clear patterns were evident
- Low RRs may have resulted from many factors
 - Energy model calibration, uncertainty in model assumptions, program tracking errors
 - Uncertainty in efficiency levels and code compliance methods for non-program homes
 - Spillover effects of program on non-program home construction

Recommendations & staff response

Recommendations & Staff Response (1)

Multiple recommendations to improve savings estimates by adjusting assumed “code” baseline, if evidence of market transformation impacts cannot be found, by examining energy use of homes built outside of program areas

- Implicitly recommend using market baseline to determine energy savings, comparing EPS homes to those built outside the program, *if evidence of program market transformation cannot be found*
- Staff believe EPS should continue using current energy code as the baseline, but consider transitioning to market baseline **if** follow-up research does not confirm the program’s role in transforming the market
- New homes market is a special case, due to long-term impacts of Energy Trust and NEEA efforts on codes and building practices in Oregon
- Strong case for long-term market transformation effects and many indicators point to significant program influence
- Program has updated and calibrated energy models to improve accuracy and has developed realization rates to apply to program savings

Recommendations & Staff Response (2)

Recommendation to measure market effects: Energy Trust may consider additional research to help identify market effects and how influential program has been in advancing above-code construction.

- Market research is necessary to confirm influence of the program and NEEA on market transformation and residential energy codes
- Existing research from NEEA shows evidence of influence, but Energy Trust will conduct follow-up market research starting in 2024
- NEEA is conducting field research to assess code compliance and building practices in both program and non-program homes
- Energy Trust will develop a more formal market transformation strategy and logic model to ensure program is designed to continue pushing new construction market and codes

2025 Program

2025 Program Development Progress

- Timeline for developing the 2025 offer

Step	March	April	May	June
Finalize code reference homes				
Finalize 2012-2019 impact evaluation response				
Model above-code home scenarios				
Collect installed costs for above-code measures				
Determine 2025 program incentives & finalize MAD				

Actions to improve accuracy of modeling results

- Based the impact evaluation and program's analysis and response
 - Continue to use the code as the baseline, versus switching to a market baseline
 - Chose the 2017 code impact evaluation results
 - Switch to the newer version of REM/Rate
 - Update reference home file with newer RBSA thermostat setpoints
- With these changes, modeling results were closer, but not fully aligned to billing data
- Apply realization rate to savings

kWh

- Electric space heat = 93%
- Gas space heat = 29%

Therms

- Electric space heat = 56%
- Gas space heat = 53%

2025 Program changes

- In 2025, the program will:
 - Switch to new REM version and
 - Update thermostat setpoints in UDRH
 - Adjust savings by relevant realization rate
 - Adjust the program's baseline to the most recent code (2023 ORSC)
- Derating savings will impact % above code for program purposes
- Try to maintain market share by

**Lowering 2025 program
entry threshold from 10%
above code to 5%**

**Providing tools to run
common home models
and predict what the %
above code will be**

**Providing example
measures and training for
what we know to impact %
above code (e.g., ducts
inside, HRV/ERV)**



Dan Rubado, Sr. Project Manager – Evaluation
Scott Leonard, Program Manager - Residential