Oregon
Tina Kotek, Governor

OREGON DEPARTMENT OF ENERGY

550 Capitol St. NE
Salem, OR 97301
Phone: 503-378-4040
Toll Free: 1-800-221-8035
FAX: 503-373-7806
www.oregon.gov/energy

Meeting Summary

ODOE Oregon Energy Strategy Advisory Group Meeting #9; April 23, 2025

Attendees

Present Advisory Group members: Cassandra Jackson, Charity Fain, Christine Golightly, Cory Scott, Elaine Prause, Emily Griffith, Erin Childs, Fred Heutte, Ivy Quach, Jason Heuser, Jeff Hammarlund, Jimmy Lindsay, Jennifer Hill-Hart, Joshua Basofin, Lauren Link, Mary Kyle McCurdy, Mary Moerlins, Nate Hill, Patrick Mills, Rakesh Aneja, Rebecca Smith, Robert Wallace, Scott Simms, Shannon Souza, Tucker Billman.

Oregon Department of Energy staff: Alan Zelenka, Anne Thrall-Nash, Edith Bayer, Jessica Reichers, Jillian DiMedio, Joni Sliger, Josh Price, Mary Kopriva, Lauren Rosenstein, Michael Freels, Rob Del Mar, Ruchi Sadhir.

Consultant team: Ben Duncan (Kearns & West), María Verano (Kearns & West)

Members of the Public in Attendance: 3

Welcome and Agenda Review

Ben Duncan (Kearns & West) and Edith Bayer (ODOE) opened the meeting, and thanked AG members for joining virtually and in person. Edith reviewed the meeting objectives to

- provide an update on the Energy Strategy process, including Energy Wallet results, and
- collect feedback on emerging policy framing for the strategy and ideas for policy actions.

Edith added that the meeting is intended to be active, with digital- and in-person whiteboard exercises to collect feedback from AG members. Ben reviewed ODOE's mission statement, instructions for use of WebEx, meeting agenda, and group agreements. On the group agreements, Ben highlighted that the group agreements are especially important as the AG begins discussing Energy Strategy policies in detail and requested that members listen and participate in respectful, candid, and constructive ways, with a focus on identifying areas of agreement and having an open mind to differing perspectives. AG members went through roll-call around the table and then through WebEx.

March Meeting Summary Approval

Ben Duncan reiterated the process for formally approving meeting summaries, noting that the process will be a standing agenda item at future Advisory Group meetings. Participants were invited to share any

requested edits to the March Meeting Summary. AG members raised no concerns, and the March 20 AG Meeting Summary was approved.

Update on Energy Strategy Process

PWG Activity

Edith Bayer (ODOE) reviewed the topical coverage of the five Energy Strategy PWGs and the overall structure those groups followed in their breakout meeting process including reviewing relevant, key findings from the energy pathways modeling; brainstorming barriers and challenges associated with those findings; discussing strategies to address the identified barriers; and, in a final breakout meeting, to discuss potential policy actions aligned with the identified strategies in more detail. The policy actions discussed in that final meeting will be more specific and actionable than the strategies provided earlier and will be drafted based on input from other Oregon agencies and the input from this April AG meeting. Edith reviewed the upcoming meeting calendar and the plan to discuss policy actions in more detail with PWGs towards the end of April and with the AG on May 16.

Complementary Analysis

Edith Bayer (ODOE) reviewed the scope of analyses to support the Energy Strategy; this includes economy-wide energy pathways modeling, presented on January 31, as well as Air Quality modeling based on EPA's COBRA model, an Energy Wallet analysis – intended to examine how technology changes might impact representative households' energy budgets over time –, and a jobs analysis that will be conducted on the basis of the energy pathways results. These complementary analyses help support and address in more detail areas that are outside the scope of the energy pathways modeling. Additionally, some geographic mapping is being undertaken to help provide insights and inform the Strategy. Edith stated that the Energy Wallet and Air Quality modeling results were presented in an April 16 webinar[1] and that the jobs analysis results would be forthcoming later in the Summer.

Air Quality Modeling

Edith presented key takeaways from the air quality modeling. Edith explained that the air quality modeling accounted for demand- and supply-side emissions and looks at associated impacts to health, workday impacts, and mortality. The modeling showed a large range of benefits because of uncertainty factors in the COBRA model but that, in all modeled pathways scenarios, significant benefits are anticipated – largely from reduced mortality. Edith presented a map of where the benefits are expected to accrue in Oregon, with higher per-capita benefits expected in southern Oregon based on regional airflow patterns.

Question: Can you talk about the specific changes or energy and emissions goals that we're achieving that help - is this transportation sector emissions? Where are we getting these benefits from?

Response: Largely transportation, but also point-source emissions. However, it is difficult to attribute benefits to specific causes because of complexities in air flow patterns. Some disparity in air quality impacts is shown under the alternative that delayed implementation of the ACT rule, but those impacts are relatively minor and only apparent in the interim years as all modeled scenarios examine aggressive decarbonization by 2050.

[1] This webinar recording and materials are available at State of Oregon: DATA & REPORTS - Oregon Energy Strategy Engagement Opportunities.

Comment: Despite the airflow uncertainty, it would still be valuable to assess where emissions are projected to come from and be reduced so we can assess the relative value of decarbonization efforts in different sectors.

Response: ODOE can look for more detail on modeled emissions reductions. Baseline emissions from today reflects publicly available data and that transportation accounts for about 30 percent of emissions.

Comment: Recognizing that there is only a small range between scenarios by 2050, that implies there is a greater gap in earlier years where the scenarios differ by delays in decarbonization goals; it's important not just to look at the end point, but also cumulative emissions and dollars so we really have a good sense of what the total differences really are rather than differences at a single point in time.

Energy Wallet Analysis

The Energy Wallet analysis looked at five representative households, developed in coordination with the Environmental Justice and Equity working group and based on public feedback, and how technology adoption would impact their total energy budget for both household transportation, heating, and cooling over time. The purpose of the Wallet is to examine how the modeled least cost pathways may affect sample households; the analysis did not examine a specify utility territory, but did examine a range of housing types, heating technologies, and transportation patterns. The Wallet Analysis also examined the impact of varying electricity rates.

Edith reviewed the sample households and their characteristics and key takeaways from the analysis. Key takeaways include that:

- All five sample households save money with vehicle electrification in most circumstances
- All five sample households save energy from electrification of home heating, but not all sample households save money from heat pump installation, absent policy support
- Multiple factors impact how great the savings could be from electrification of home heating and transportation
    - Energy prices, cost and access to technology based on household income, technological development, production and supply chain challenges
- Policies are important to enable access to cost savings
    - Education, incentive programs, infrastructure development, access to useable technology, and workforce development
- Upfront costs must be addressed to ensure equal access to the savings from electrification
    - Intentional, explicit policies that ensure environmental justice and equitable solutions are required.

Question: Related to the second key finding, did the analysis account for currently available incentives such as those provided by ETO?

Response: the full range of currently available incentives are not included because those differ by territory. However, federal incentives were included in the analysis and the analysis examined the affordability impact of allowing or disallowing federal EV incentives. Mindful of the volatility in current incentive programs, an important finding for heat pumps is that they are especially cost-effective when replacing inefficient electric heating technology.

Question: How does the Wallet vehicle analysis account for VMT reduction goals and impacts such as improved transit options possibly obviating a household's need to purchase a car? About 30 percent of Oregonians do not drive, so vehicle-technology cost savings would not affect this population. Also, what is a "high priority area" in the meaning of customer groups; do these customer groups reflect households in different regions of Oregon?

> *Response: VMT reduction was not accounted for in the Energy Wallet Analysis because of complexities and unknowns about how VMT reductions would be effectuated and with what cost impacts (e.g., VMT reduction supported via additional transit infrastructure versus walkable city design.)*
>
> *High priority areas are defined in ODOE's Ten Year Plan, which developed an index that includes the measure of energy burden along with other factors known to drive energy burden (affordability, poor home energy efficiency, and housing inequity issues, etc.)*

Comment/Questions: Interested in seeing more information from the Energy Wallet. How does the Analysis account for technology stock replacement? How is the upfront cost of technology purchases spread out over time? How does the Analysis of household budgets for things like heat pumps relate to societal or system-wide benefits, such as heat pumps' ability to ameliorate peak demand? How are individual and societal-level discount rates treated? Recognizing that the findings from the instant study are more directional, wonders what would more detailed analysis as to residential and small-commercial building characteristics show.

> *Response: The modeling assumes that technologies are replaced at the end of their useful life. A seven-year payback period was used for both vehicles and heat pumps. ODOE will look to respond with further information on discount rates.*

Comment: Interested in how the Analysis accounted for possible electricity rate increases from commercial load growth and electrification of end uses. Also mindful of changes in policies ongoing on the national level.

> *Response: The Analysis included a $.40 per kWh high-end electricity rate to see what affect that would have on affordability. The pathways modeling does not produce electricity rates in Oregon, as those can differ based on territory and rate structure. The Strategy may be a venue to propose recommendations to mitigate electricity affordability risks.*

Comment: It will be important that the Strategy parses out recommendations to account for differences between IOUs and COUs.

Comment: Upfront costs for adopting new technologies can be prohibitive. Strategy should explore financing options to address this barrier. Also, consumers may choose to retain natural gas technology as a resilience resource to address outage risks.

> *Response: ODOE agrees that Oregonian interest in hybrid systems for resilience is an important point; the modeling provided for dual-fuel heat pumps for some households, but for purposes of simplicity, the Energy Wallet analysis used a simple electric heat pump.*

Comment: Recognizes need to select a few representative households; would still be helpful to know how prevalent the analyzed household characteristics are and what Oregon households broadly look like for purposes of this analysis.

> *Response: ODOE appreciates the comment; when selecting the representative households, ODOE considered public input and tried to select households that covered the broadest representation of Oregonians possible. One form of doing this was to examine what heating technologies are most common for a given household type, under RBSA data.*

Comment: When considering heat pump costs, it's important to account for indoor air quality benefits and access to cooling and related health and avoided mortality benefits. Additionally, based on their experience, it is important to provide consumer education on heat pump usage, especially with respect to habits of turning heating on and off, to maximize their energy savings value. In their experience, heat pump water heaters provide the most bang for your buck in efficiency value.

> *Response: ODOE appreciates the comment and would love to see the results of CEP's research to examine in developing the Energy Strategy.*

Comment: Seconds comment above interested in how representative the Energy Wallet households are. Additionally, beyond household budgets, it is important to consider the state's budget for policy expenditures and highlight that replacing low-efficiency resistance heaters with heat pumps would be a high-value policy.

Question/Comment: Are more detailed Analysis results available for review, especially results on the findings for each of the five representative households? Appreciates the Analysis as a tool for shaping recommendations to address equity and affordability risks.

> *Response: More detailed discussion of the Energy Wallet Analysis results are available at State of Oregon: DATA & REPORTS - Oregon Energy Strategy Engagement Opportunities and in the CETI presentation materials. Results broken down for each representative household are available for transportation between slides 29 and 34, and, for home heating and cooling, between slides 37 and 40.*

Policy Framing and Exercise

Edith Bayer (ODOE) presented the key considerations highlighted from HB 3630 as factors that should inform the development of Energy Strategy policy. ODOE wants to hear AG perspectives on these factors, especially insofar as they are not quantifiable or addressed in the technical analyses up to this point. Ben Duncan (Kearns & West) explained that ODOE would be providing an update on the framing of policy strategies before inviting AG members to participate in an activity to solicit feedback on strategies beginning to be elevated from PWG meetings.

Edith reviewed the proposed policy framing of the Energy Strategy. This framing includes three layers of increasing specificity, and, in particular, five high-level strategies that are to be directional and organized around decarbonization pillars; under these strategies, a number of broad recommendations that support the identification and orientation of policy actions; and, under recommendations, policy actions that are intended to be fairly specific and actionable. Today's AG meeting is focused on the middle layer, the policy recommendations, and seeing whether these recommendations resonate with AG members, whether anything is missing, and whether AG members would recommend any changes or edits. Edith further explained that strategies are directions that Oregon needs to pursue to meet state energy

objectives; are based on the Energy Strategy technical analyses and engagement; are organized around key elements or pillars of Oregon's energy system; and that these strategies provide direction meant to guide Oregon over time. Edith reviewed current drafting on strategies and recommendations to be reviewed and discussed on the day's exercise.[2] Edith explained that a PWG process of discussing key modeling insights, relevant barriers, and means to address those barriers has led to the present drafting of strategies presented today.

Ben explained the instructions of the exercise as providing sticky notes on boards associated with the described strategies and recommendations highlighting what AG members like, dislike; where AG members have concerns or see risks; and where AG members would recommend rewording the materials as drafted. Based on AG member feedback, ODOE added an area for suggesting alterations to the current strategy framing or providing input on topics that do not neatly fall into the strategies as drafted.

Break and Exercise Time

Discussion

Ben Duncan (Kearns & West) reconvened the meeting and facilitated a round-table discussion on input AG members provided on the strategies posted.

Comment: Energy efficiency (EE) and VMT reduction should be treated as primary strategies to reducing Oregon's energy demand and meeting energy objectives.

Comment: Echoes comment to prioritize EE in the Strategy. Concerned with federal funding opportunities and how the Energy Strategy recommendations will be met. Appreciates integrated system planning and distributed energy resources (DERs) as ways to meet Oregon energy objectives. Agrees with prioritizing EE first and then considering these other avenues.

Comment: Echoes support for synthesis done thus far, says it reflects a lot of feedback in a few statements. From a hydrogen perspective, but thinks we need to get more specific and technical and closer to policy actions.

Comment: Adds support for prioritization of EE for carbon reduction and affordability. Another important flag is regional resource adequacy; wants to be clear that Strategy recommendations do not exacerbate reliability challenges.

Comment: Emphasizes the point that the Strategy should be mindful of regional resource adequacy. Regarding the clean electricity recommendation drafting, recommends revising to specify "development and expansions." Additionally, note that BPA and PacifiCorp are 6-state systems; there is a need to plan on a regional basis for transmission. Regarding low-carbon fuels, enabling legislation for small modular reactors (SMRs) would be valuable; note that Washington is moving ahead on SMR path, and consider a potential role for SMRs permitted at specific sites to support low-carbon fuel development and as a DER. Further, on DERs, consider California's Strategic Energy Reliability Reserve, which provides a system of emergency use natural gas infrastructure that is hydrogen-ready. Also, providing for the retirement of diesel fleets, especially in rural areas, that may be replaced with natural gas or hydrogen fueling would also be able to provide benefits towards decarbonization and resilience goals. Also, notes that there are

[2] These are available at April 23, 2025 Oregon Energy Strategy Advisory Group Meeting Presentation at slide 27.

federal workforce issues across many agencies, including NOAA, EPA, BPA, FWS, BLM, Corps of Engineers; the Strategy should think about state resiliency on a stand-alone basis. We'll be doing decades of damage control to respond to first 100-days impacts of this administration.

Comment: Agrees EE is foundational to the Strategy; Oregon has done a lot in this field, but much work remains. Uncertainty regarding demand puts EE front and center. Power Council was focused on uncertainty in future demand when it was founded, but industrial and commercial load growth is now materializing. We cannot reduce uncertainty in load growth at this point; we can only prepare for what gives best options going forward. EE is very valuable in that context. There is also tremendous innovation ongoing in clean electricity generation.

Additionally, we're not an isolated state but instead part of a regional network; gas comes from British Columbia, power grid is across a 90 million-person western system. We should behave accordingly and act in concert with all of the West. Finally, notes that federal support comes and goes. Agrees we have to rely on our own bootstraps.

Comment: Regarding definitions of grid-efficiency and lower cost in the clean electricity recommendations, consider planning opportunities like prioritizing improving existing transmission lines. Also wants to call out that lower costs should emphasize reduced costs to consumers, natural working lands, and communities. Notes that the devil is in the details, wants to be clear that those interests are reflected in policy actions.

Comment: Agrees a lot with earlier comments, especially regarding EE and DERs. Supports a balance in the Strategy between actions towards low-hanging fruit, but also addressing a need for integrated planning to more efficiently address urgent energy needs. Thinks efficiencies in collaboration for resource delivery, energy efficiency, and innovation.

Comment: They see barriers because there may be ongoing processes and rulemakings on Strategy recommendations in other venues; urges caution about adding possible bureaucratic or red-tape barriers. Says that's already an issue in fuels and other resource areas; so, devil is in details in understanding how to integrate local, state, and federal-level activities. Don't want to discourage business because of onerous regulations; says this occurs in low-carbon fuels. Also, influencing behavior we want to see by providing more incentive programs would help develop end-uses in Oregon.

Comment: Important to keep in mind role of load-growth in shaping operational environment of policies. We need to mitigate impacts of this load-growth vis-à-vis large energy use facilities, especially when considering clean electricity generation. Adds that, consistent with earlier comments, the strategies discussed today are high-level; we need to be sure that the scope of recommendations is appropriate and fits what needs to be addressed. Thinks a broad-definition of DERs is valuable and should include microgrids, DPPs, small-scale renewables, community renewables, microgrids; capture everything that can be useful and valuable.

Comment: Regarding 2nd bullet of clean electricity generation: recommends something more proactive than supporting existing opportunities. Grid efficiency needs to add discussion of grid-capacity. Transmission and land-use are greatest barriers to clean electricity development and should be addressed explicitly in formal recommendation. From walking around the room, notes that strategies appear integrated; will appreciate meeting discussing how recommendations interact. Add agreement to concern around federal uncertainty and need to protect state resiliency and policies.

Comment: Coming from tribal fishery and resource perspective, underscores EE as a primary fish-friendly tool to realizing Oregon goals. Includes DERs as a valuable tool to shave peak needs and associated hydro reliance, as well as transmission needs. Understands transmission is a big issue with load growth, but is concerned with land-use and protecting tribal lands and resources.

Comment: Appreciates thoughts around the room. Focused on how Oregon will expand the resource categories discussed; electricity looms large and encourages AG to think about how to focus on allocating costs in a direct and rational way. Thinks there has been useful dialogue in the state around discussing large industrial customers, but also need to think about realizing aims through policy funding beyond simply increasing electricity bills and rates alone. Need to recognize that electric customers differ and will assess tradeoffs differently, so electricity bills can be an inequitable way of distributing costs. The Energy Wallet and consumer energy budgets is a useful tool towards considering how to allocate costs.

Regarding clean electricity generation, consider regionalization; agrees with earlier comments that Oregon should consciously plan for coordinating decarbonization and electrification as part of a regional system with power exchange with neighboring states. Thinks the strategy language should be more specific than discussing geography and should instead consider promoting electric market integration in contrast to market divisions.

Comment: Regarding building electrification and EE in low-income households; thinks the goal as expressed is too timid. It's unclear as stated that building electrification is emphasized sufficiently. Drafting should provide more clarity around improving "quality of buildings"; additionally "advance" of heat pumps and "other technology"; there are two goals here and it's unclear how they relate. Improvement alone can mean installing gas furnaces in place of inefficient electric appliances; instead, recommendation should specify electrification if that is the intent; improvement-oriented goals alone have not gotten Oregon to where it needs to be.

Comment: Seconds earlier comment about the history of the Power Council. Biggest concern is withdrawal of federal funding and especially E.O. regarding state energy transition and how the federal Supreme Court would treat that Executive Order. Is currently working on Oregon constitutional amendment to right to clean air and environment as a means to protect Oregon state initiatives. Also wants to echo earlier emphasis on VMT reduction and single-occupancy vehicle usage. Also concerned regarding natural gas pipeline safety, and recommends adding liability insurance requirements to gas pipelines.

Comment: Adds appreciation to other recommendations and comments on regionality; wants to touch on integrated systems, adding that it is an electricity, natural gas, and other liquid fuels system and all three of these need to be considered together as part of supply, demand, and markets.

Comment: Thinks there are many ongoing changes being navigated in Strategy. There are very valuable elements in MIRO, but concerned there is insufficient time to address changing environment for energy in Oregon. More research and discussion would be valuable.

Comment: Agrees EE is a central component in the strategy. Also wants to emphasize success in net-metered customer generation projects. Thinks that's a great way for members of the public involved and to increase generation figures.

Comment: Expresses agreement with comments raised earlier. Regarding MHDV class 6,7,8 vehicles; wants to emphasize the importance of, and divergence in federal and state policy, especially regarding

California ACT regulation. More divergence will further exacerbate challenges to MHDV electrification. There needs to be consistency, even on a global basis, in lock-step. Adds appreciation to cost-of-ownership and affordability examination; adds there are still cost-of-ownership barriers to HDV electrification.

Comment: There are many benefits that come from EE in addition to energy savings. Thinks financing should be an area of focus. Also, we sometimes want "all or nothing"; instead thinks we should focus on what's achievable in the near-term. Adding major concerns on federal funding, staffing, and programs and impacting Oregon activities.

Meeting Conclusion and Next Steps

Ben Wallace (Kearns & West) and Edith Bayer (ODOE) confirmed that ODOE would capture and share the in-person and digital whiteboards from the meeting. Edith reviewed the schedule of upcoming PWG meetings, emphasizing these meetings' focus on identifying and discussing policy actions.

Comment: Regarding earlier tribal lands comment, tribes should be in an enabling place for collecting benefits from distributed generation. Thinks this is an area to explore, especially because of diminishing federal funding for these types of projects; thinks coordinating state, utility, and private engagement is important.

Comment: Agrees; there was Federal agreement to explore these areas; state stepping up would be valuable.

Comment: Federal government has historically led development in these types of projects that has been successful; thinks a state partnership consortia could help fill this gap.

Edith reviewed the next steps for the AG and reflected themes heard in the current meeting as elevating and prioritizing EE, a need to frame the Strategy in the context of risks to federal support and funding, a need to focus on near-term actions and coordinated planning, themes of regionality in the energy system, and a theme of needing to discuss recommendations with some detail and specificity, and recommendations to provide more specificity in the language and drafting of the recommendations shared today. Edith expressed appreciation for this constructive feedback on ODOE's drafting and asked that members continue to share this feedback on framing up strategies and recommendations.

Edith reviewed upcoming PWG meetings and an interagency steering group meetings scheduled to focus on policy actions and precede the next, 5/15 AG meeting. Edith explained that ODOE is asking for comments to round out the Phase 2 policy discussions and PWG breakouts by May 9 and stated that comments can be submitted via ODOE's comment portal. These meetings will be followed by a mid-June publication of draft recommendations and an open written comment period. Edith thanked the AG members for their participation and adjourned the meeting.

Transcription from white boards (in-person and online), Oregon Energy Strategy Advisory Group

Strategies

To meet its energy policy objectives, Oregon must advance along the following pathways:

- *Energy efficiency and electrification of buildings;*
- *Electrification of Transportation and Reduced VMT*
- *Distributed Energy Resources (including photovoltaic, distributed batteries, and flexible loads)*
- *Clean Electricity*
- *Low-Carbon Fuels*

Comments

- Fair allocation of costs
    - Energy wallet misses the pain of rising electricity rates
- Promote policy which funds policy – not just on electric bill.

Clean Electricity

Promote in-state and regional development of clean electricity generation, storage, and transmission.

Support regional market and planning opportunities to enhance grid efficiency and lower costs.

Comments

- Add "and expansion" after "development" in "Promote in-state and regional development of clean electricity…."
- Might rephrase 2nd bullet to be more proactive rather than only "supporting" existing opportunities
- Also enhance grid "capacity" in addition to "efficiency" on bullet 2
- Explore options for different utility types, eg consumer-owned vs IOU
- Like: support of (1) regional market. Suggest more active verb and more clarity regarding market integration. - Markets are bifurcating.
    - Responsive comment[3]: need to define what "regional market" means in this context (second bullet)
- Dislike/concern: Geography is confusing - 'in-state & regional'? Suggest focusing on what is best for energy system. Geography language not adding.
    - Responsive comment: Need to acknowledge Oregon is not an island – BPA system is six states and PacifiCorp's system is six states
- What does "grid efficiency" encompass? Prioritization of existing lines/corridors?
- Planning should include a recognition of load growth projections and opportunities to mitigate large energy facility impact on the grid
- Maybe "land use" deserves a specific call-out. Land-use must formally consider renewable energy in order to keep developing.
- Create the enabling conditions for long lead-time resources, esp. OSW.

---

[3] Note; these two "responsive comments" were separate, purple stickies attached to parent yellow stickies.

- Include “integrated system planning” – how IOU plans can overlap to meet clean energy, distribution, Tx, resiliency [including wildfire mitigation] needs and save money
- Shift resource adequacy perspective from capacity to energy-when-needed
- Maximize colocation of load and generation to minimize need for new transmission
- Lower costs? Is this just $ to consumers or does it include least impact to communities, ecosystems, etc.?
- Establish incentives and market signals for utility-scale flexible load (electrolyzers, data centers)
- State-level roadmap for electricity sector decarbonization, including generation, transmission, and demand-side factors

Online Miro Comments

- Policy recommendation: recommend Oregon repeal the ban on nuclear energy facilities. This promotes development of baseload resources, which can meet demand projections and facilitate the development of wind and solar..
- Support reduced spill operations at existing federal dams to increase power production.
- Prioritize clean electricity technologies with minimal water demand that do not negatively impact salmonids.
- Provide transparent access to hosting capacity, transmission planning & resource valuation to expand in state market competition.
- Look at policy that prevents net-meter PV with MOUs
- Incentive to locate large energy loads to areas near the power source.

Distributed Energy Resources (DERs)

Support integration of electric loads while reducing impact on the electricity system, and support integration of variable renewable resources.

Support distributed clean energy resource development to reduce system costs and the need for new transmission while increasing the resilience of household and local communities.

Comments

- Include flexible electrolytic load as a DER and establish tariffs
- Need to analyze best practices from California’s “strategic electricity reliability reserve”, including natural gas with selective catalyst system and emergency/peak regulations.
- Broad definition of DERs, including microgrids, DPPs, resilience hubs, community renewables
- Focus on customer needs and interests
- Policies specifically targeting dispatch of large electric loads (tariffs, DR calls, etc)
- Concern: We must acknowledge the limits of DERs to avoid new Tx supported by Evolved? Or aspirational? Suggest focus on resilience + cost + land use.
- Yes to DERs and resilience – important to think of opportunities for high fire risk zones
- DERs are an opportunity to include resilience as a value/goal
- Transmission congestion assessment and local transmission peak demand benefits to encourage target of local development
- Yes to DERs as also a way to reduce impacts to communities from new large Tx corridors
- “Support” too high level – need more active/certain
- Like: Resilience. Concern: DERs might not reduce system costs but other benefits quantif.

- Suggest rewording #1 “support integration of electric loads”
- Include hydrogen fuel cells as a DER

Online Miro Comments

- Ensure that consumer-owned utility governing boards maintain the operational flexibility to accept DERs on to their systems, and ensure electric utilities to control/operate the DER when necessary to ensure safety and maximize benefits.
- Continue to support and incentivize net-metered customer generation projects. This is a highly effective way to garner public involvement in greater numbers for expediting efforts.
- Provide clear pathways for Tribal and other community lead development of VPPs, microgrids & DRs
- Explore more Virtual Power Plant Technology

Energy Efficiency and Electrification of Buildings

Improve the energy efficiency and quality of existing residential and commercial buildings.

Advance energy efficient heat pumps (and other high efficiency equipment) while maintaining electricity system reliability and protecting customers from high future costs and volatility.

Comments

- “Improve” could “improve” with more advanced gas vs say oil heated; not good enough, need electrification.
- What do you mean by “quality” of existing buildings?
- EE + Electrification are not one and same; you can promote EE w/o electrification. What is the actual goal here?
- Does EE include reducing overall need by increasing insulation, efficient appliances, etc.? Start with reducing need for energy from any source.
- Second point also seems weak
- Continue to focus on gas as well as electric energy efficiency
- First bullet may need more work on understanding local building codes prior to recommendation
- Clarify: what is the benefit of “while maintaining electricity system…”? Applicable generally. Suggest striking.
- Would like to set measurable EE goals.
- Call out water-heaters? IN #2.
- Like: Inclusion of quality=other benefits. Considering system reliability.
- Concerns: Too broad with “improve”; stronger language.
- Opportunity to highlight economic development opportunities of installation + equipment/insulation manufacturing.
- Risks: that we
    - Don’t prioritize energy burdened HHs;
    - Take a blanket approach to improvements;
    - Don’t have WF
- Prioritize reducing HH costs first. Ex. Moving homes off resistance heat to heat pumps.

- Policies focused on time of use are important to consider but have to do equitably.
- Concerned about funding available to meet these objectives
- Must consider grid capacity/demand and impact on affordability (+1)
- Peak hour energy system adequacy must be considered in how incentives are designed.
- Appreciate that EE and electrification are considered together.

Online Miro Comments

- Allow consumer-owned utilities to lead the energy efficiency discussions with their customers in their service territories, with the state providing supplemental financial and overhead resources.
- Concerns on electric prices increasing as compared to natural gas prices. Consumers will focus on economics to make purchases.
- Electrically efficient heating and cooling systems are important, but so is thermal efficiency so building weatherization should also be prioritized with financial incentives.
- Remember resiliency and backup energy/heat sources.
- Financing Programs for EE
- Increased Programs/Rebates and TA for EE
- Funds for Utility Infrastructure upgrades to allow for conversion to electric.
- Major concerns of Federal Funding situation...
- Concern -Reduction of Staff at Federal Agencies

Low-Carbon Fuels

Promote development of low-carbon fuels to increase their overall supply, affordability, and availability to all Oregon communities.

Reduce demand for fossil fuel resources and ease the transition burden to low-carbon fuels in hard-to-electrify applications in transportation, industry, and electricity generation while retaining resilience and safety, including industrial sectors.

Comments

- Focus on local (in-state + in-region) production for economic and workforce benefits, plus displacing fossil fuels.
- Keep LCF policies inclusive of both current and emerging fuel pathways/supply
- Appreciate the focus on low-carbon fuels for hard-to-electrify sectors
- Interim year targets (between 2030 and 2050) to track progress
- Focus on pipeline integrity to ensure the aging system is safe – reduce leaks, explosions, etc.
- Make sure pipeline carriers have adequate liability insurance
- Add capacity credits to clean fuels program for H2 and other clean fueling station support
- Regional coordination on clean fuel pricing and supply (across WA and CA)
- Add first bullet; identify and increase fuel infrastructure plus incentives for end users
- Take advantage of synergies in SAF, RD, RNG, hydrogen
- Clean Fuels Program updates to incorporate up-front capital costs for new tech adoption
- Carbon-intensity rather than technology-based goals, definitions, etc.
- Permitting streamlining, state support for local permitting leads/county planners
- Small modular reactors – state needs legislation that is enabling this technology!!!
- State roadmap on clean fuels production

Online Miro Comments

- Provide demonstration project funding for biomass based renewable diesel or other syngas products.
- Renewable Diesel. Drop in fuel for today.
- Shift fossil fuel demand away from the public sector through centralized production of sustainable low and zero carbon fuels where carbon management is most economical (at scale).

Electrification of Transportation and VMT Reduction

Reduce barriers to transportation electrification to ensure vehicles in the state electrify at the pace and scale necessary to meet our goals.

Prioritize policies and programs that increase transportation options and efficiency.

Comments

- 2nd bullet is not comprehensive enough @ VMT reduction. While investment in options is PART of it, we must also reduce the need to drive at all, or to drive as far. This reduces VMT, reduces need to buy a 1st or 2nd car of any energy source, makes converting to an e-bike (not EV) more feasible, and saves HH money. It also benefits society.
    - Reduced need for electricity and transmission;
    - Reduced impervious surface (roads, parking lots) which are heat islands
    - Reduction in roads, etc., saves society in infrastructure $ and saves health $.
    - Reduces negative impact of EVs (mining, lithium need, etc.)
    - Increases HH + community resiliency. Reliable!
- Dedicated program for FCEV enablement and fueling stations
- Tools and resources for fleet transition, including charging and fueling infrastructure
- Clean transportation solutions specifically for rural/non-Portland communities
- Suggest defining “efficiency” in second bullet. Efficiency in terms of emissions
- Update carbon planning and development codes to encourage public transit, bicycle and pedestrian travel rather than single-occupancy travel
- Focus on MHD sector to help reduce particular emissions/exposure levels
- Recommend strong policies in emissions reductions and transportation is a high contributor to GHG
- Concern: missing connection of charging to distribution system planning
- First bullet, I am assuming this includes the access to charging outside of the home
- Second bullet seems broad and scaled to large urban areas

Online Miro Comments

- Provide demonstration project funding for public transit FCEV charging & H production.
- Case studies to show economic benefits of driving EV. Don't just focus on environmental & climate. Real experiences from Oregonian's.
- Provide economic studies of cost savings benefits to driving EVs.
- Do not be overly reliant on this. EV adoption is not just a discussion of upfront costs or potential savings on fuel. In the vast majority of the state, there is real concern over charging infrastructure and the applicability of EVs for the jobs and ways of life of most rural Oregonians.

EVs are a solution for some people in some places, but attempts at one-size-fits all approaches can be divisive and may create additional, unanticipated consequences.

- Hard to reduce VMT in Rural
- Worry less about reduction of VMT and more about the efficiency of those miles. For rural areas, VMT is a direct reflection of someone's independence and is often connected with their ability to see family, find jobs, etc.
- Infrastructure Challenges specifically for EV Charging
- Prioritize policies aimed at reducing overall travel needs and VMT to reduce mobility sector GHG emissions across the board. This applies to those who drive an EV and those who continue using an ICE vehicle; fewer miles driven = reduced energy consumption = less GHG emissions.
- Include V2G and Bidirectional charging for backup power and demand balance.
- Focus on EVs where they make sense and work well.