2026-27 Rulemaking Kickoff Listening Session

Oregon Clean Fuels Program

December 2025

State of Oregon
DEQ Department of Environmental Quality

Agenda for today

- Review Governor Kotek's direction in Executive Order 25-29

- Draft Clean Fuels Program rulemaking
  - Timeline & Scope
  - Policy topics
  - Specific requests for early public feedback into the rulemaking process

Questions and feedback

- In order to move efficiently through the presentation, we will take clarifying questions on the materials at several points using Zoom's Q&A function (not the chat). Use the Q&A button at the bottom of the Zoom screen to ask your question when you have one and we will take them in batches.

- We also welcome public feedback at the end of the presentation.

Direction from EO 25-29: Standards

- Update Oregon's Clean Fuels Program rules to strengthen the low-carbon fuels standard by establishing new carbon intensity reduction targets of at least 50% by 2040.

- Evaluate the scope and stringency of the LCFS programs in neighboring states and propose new targets and rule revisions as needed to better align the Oregon CFP with neighboring jurisdictions.

Direction from EO 25-29: Electrification

- Propose amendments aimed at advancing transportation electrification in a cost-effective and equitable manner.

- Work with the Public Utility Commission to ensure that revenues collected by utilities through the CFP are strategically invested to advance equitable transportation electrification.

Tentative rulemaking scope

- Extending the program's targets through at least 2040.
- Using new modeling to determine if changes to existing standards are warranted.
- Explore how the program can better incent transportation electrification and adopt new provisions.
- Review offsite renewable electricity provisions to incent additional renewable generation.

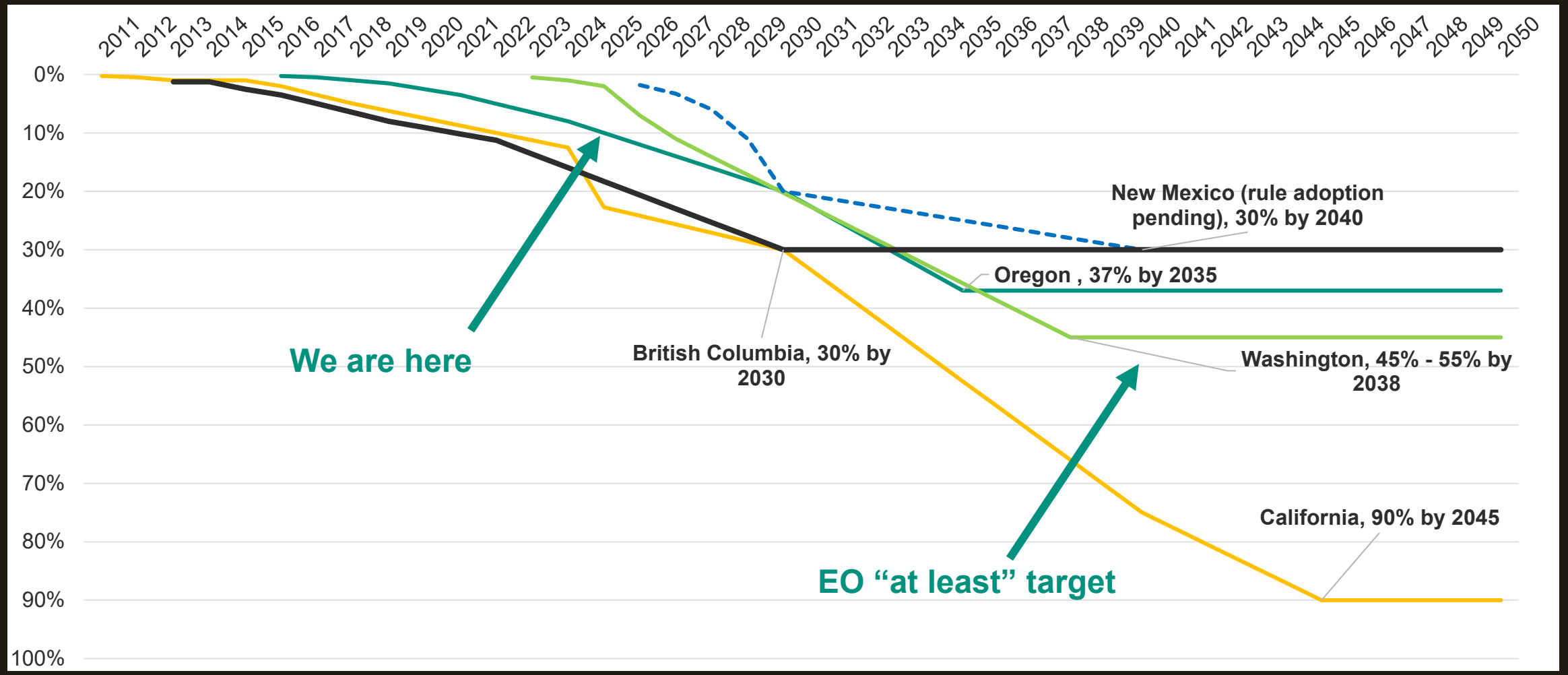
Tentative rulemaking timeline

- January/February – Appoint Rulemaking Advisory Committee (RAC)
- March/April – First RAC meeting
- Spring through Summer – RAC meetings, modeling work
- Fall/early Winter – Notice of proposed rulemaking
- Winter 2026/2027 – Environmental Quality Commission

Any clarifying questions?

Target setting

Current program standards



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CFP cost containment mechanisms

- Annual Fuel Supply Forecast conducted with the Office of Economic Analysis provides an annual check on the program's feasibility for next compliance year.
- The Credit Clearance Market sets a maximum price for credits.
- Emergency deferral mechanism.
  - Recently demonstrated that we can also request our commission use their variance authority when needed to address urgent circumstances.

Approach to evaluating CFP targets

- Target-setting starts with forecasting what Oregon's vehicle fleet will look like over the coming decades.
- Vehicle fleet used to discern possible future compliance scenarios because they dictate demand for different fuel types.
- Compliance scenarios will inform where to propose setting new program targets.

Work with UC Davis

- DEQ working with UC Davis Institute for Transportation Studies to adapt their transportation fleet and California LCFS modeling tool for Oregon.
- DEQ staff training on maintaining and adapting tool for informing future program planning.
- Model will be used to support this rulemaking.
- Initial results in spring/early summer.

Oregon Fleet and Fuel Modeling Overview

18 December 2025

Colin Murphy Ph.D.
Co-Director - Energy Futures Research Group
Co-Director - Low Carbon Fuel Policy Research Initiative
Director – Biofuel Land Use Change Research Program

ITS-Davis Clean Fuels Research

- Setting future Clean Fuels Program targets requires predicting future vehicle and fuel trends *under a range of market and technology conditions.*
- UC Davis Institute of Transportation Studies (ITS-Davis) has extensive track record of research & modeling transportation systems as they transition to sustainability.
  - Largest university research group on sustainable transportation in U.S.
  - ITS-Davis founder Dan Sperling co-created the Low Carbon Fuel Standard
  - ITS-Davis researchers have been leading scholars on fuels policy since 2010
- ITS-Davis researchers evaluated air quality impacts of previous Oregon Clean Fuels Program amendment package
  - Published as: Modeling expected air quality impacts of Oregon's proposed expanded clean fuels program – Atmospheric Environment (2023)

Modeling and the Clean Fuels Program

1. **Projecting vehicle fleet and activity changes in Oregon.**

   EVs are the primary tool for reducing on-road emissions. Recent Federal changes have likely slowed EV adoption. To project total fuel demand, we need to understand how Oregon's fleet will evolve in coming decades after these changes.

   Led by Dr. Lew Fulton, Co-Director of the ITS-Davis Energy Futures program

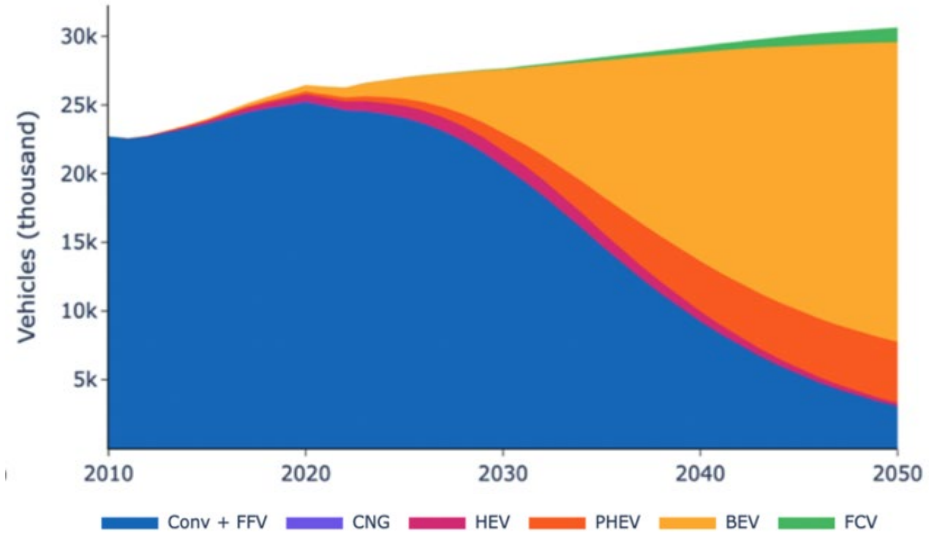
2. **Projecting alt fuel deployment and assessing CFP credit/deficit generation.**

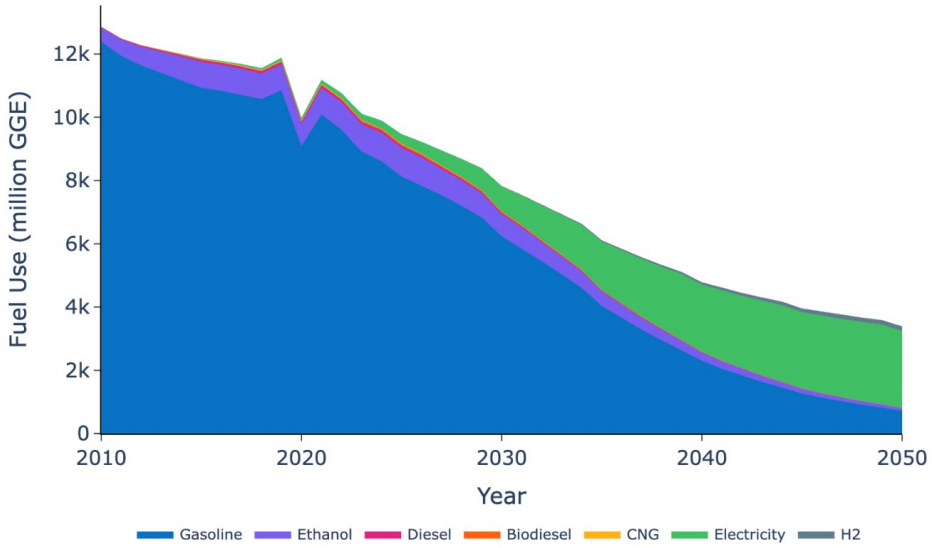
   Demand for fuels can be satisfied by a variety of conventional and lower-carbon options. We will project several scenarios for future CFP targets as well as packages of conventional and alternative fuels, to determine likely CFP credit and deficit generation under each.

   Led by Dr. Colin Murphy, Co-Director of the ITS-Davis Energy Futures program

Vehicle Fleet Transitions

- Using the Transportation Transitions Model (TTM), developed at ITS-Davis and based on the DOE VISION model.
- Projects fleet evolution through stock turnover based on policy scenarios
- Uses ASIF framework (Activity × Stock × Intensity × Fuel carbon) to calculate annual statewide energy demand, fuel use, and GHG emissions.
- Outputs provide demand projections that FPSM uses to model fuel portfolio compliance

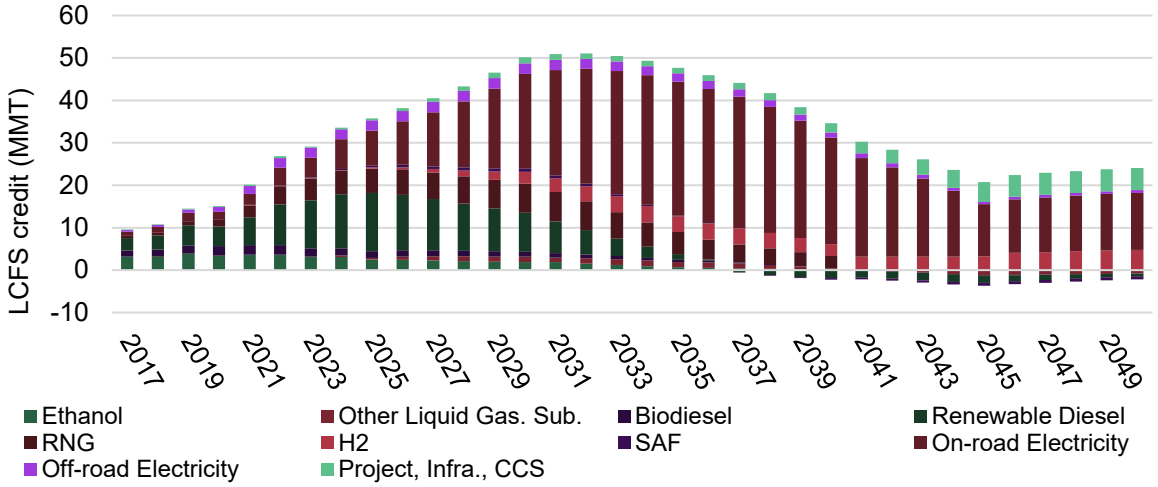


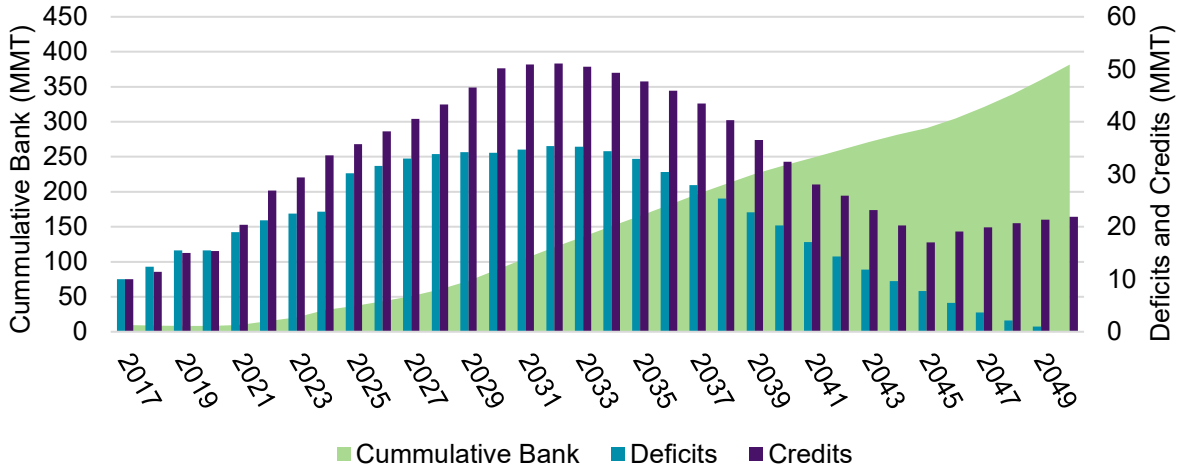


Examples of TTM outputs from analysis of California. See: Miller, et al. (2025)

Fuel Scenario Modeling

- Using the Fuel Portfolio Scenario Model (FPSM), developed at ITS-Davis and based on the 2017 CARB Illustrative Compliance Scenario Calculator.
- Used in CA & NY to project clean fuel standard compliance
- Assembles portfolios of fuels that satisfy total demand projected by TTM & assesses CFP credit and deficit generation.
- FPSM projects net supply, demand, and bank of CFP credits, but not credit prices or retail fuel prices.





Examples of FPSM from analysis of California. See: Murphy & Ro (2024)

Questions and discussion welcome!

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To receive updates regarding the Institute of Transportation Studies research, policy briefs and related work, sign up on our listserv via this link: ***its.ucdavis.edu/join-our-mailing-list/.***

Additional Resources

- Lowcarbonfuel.ucdavis.edu (UCD LCFS Research Group site)
- LCFS Web Data Explorer
- Driving California's Transportation Emissions to Zero by 2045
- Fuel Policy Scenario Modeling (FPSM) of Low Carbon Fuel Standard Targets for 2030 and Beyond
- Updated Fuel Portfolio Scenario Modeling to Inform 2024 Low Carbon Fuel Standard Rulemaking
- Technology and Fuel Transition Scenarios to Low Greenhouse Gas Futures for Cars and Trucks in California to 2050
- Comparative Assessment of the EU and US Policy Frameworks to Promote Low-Carbon Fuels in Aviation and Shipping
- Multijurisdictional Status Review of Low Carbon Fuel Standards, 2010–2020 Q2; California, Oregon, and British Columbia
- Improving Credit Quantification Under the LCFS: The Case for a Fractional Displacement Approach
- Modeling expected air quality impacts of Oregon's proposed expanded clean fuels program - ScienceDirect
- Current Methods for Life Cycle Analyses of Low-Carbon Transportation Fuels in the United States (National Academies report)
- Making Policy in the Absence of Certainty: Risk-Aware Consideration of Indirect Land Use Change (ILUC) Estimates for Biofuels

Target setting considerations

Balancing multiple priorities:

- Greenhouse gas reductions
- Commercializing new fuels and vehicles
- Investments in alternative fueling infrastructure
- Health benefits to local communities from lower tailpipe emissions
- Emission reductions from existing fleet via greater use of biofuels

How RAC members ranked priorities back in 2022

Any clarifying questions?

Request for input: Standards

- Are those still the right priorities for target setting?
- Is that ranking still correct?
- If the answer is no to either of the above, what has changed in the intervening years that affects your answer?
- Where we are out of alignment with the other neighboring LCFS jurisdictions?

Request for input: Standards

- Is there good cause to consider adjustments to the existing standards prior to 2035?
- What should we consider as we conduct this modeling?
- What else does DEQ need to keep in mind as we consider how to set post-2035 standards? Is there a planning value in going out to 2045 like the California program recently has?

CFP & Transportation Electrification

Why EVs are necessary for deeper targets

- Previous modeling shows that shifting away from combustion engines is necessary to meet deep decarbonization targets
  - Crop and waste-based biofuels are limited by feedstock supplies
  - RNG and hydrogen will likely be needed by other sectors, or for long-haul vehicles
  - Other low-carbon liquid fuel technologies (e.g., electrofuels, Fischer-Tropsch) still need to be proven out commercially and are likely to be expensive absent significant breakthroughs

What previous modeling shows

- EVs are an increasingly competitive technology to meet transportation decarbonization needs across many use cases:
  - While up-front cost may be higher, can have significantly lower operating costs and an overall cheaper total cost of operation for consumers and fleets
  - Electricity as a fuel can get closer to a zero-carbon intensity than other fuels
  - Electricity credits help contain costs within the Clean Fuels Program

Value of existing CFP support for EVs

- Since 2023, utilities, charger owners, and others have generated >1.1 million credits worth >$100 million based on the average credit prices for those years
- All electricity credits are tied to real emissions reductions
- Over 90% of all charging is matched with renewable electricity or a utility-specific grid mix

What we did in the last electricity rulemaking

- Updates to how the utility and statewide grid mixes are calculated.
- Adopting the renewable electricity provisions.
- Adding utility residential spending credit proceeds reporting.
- Advance crediting for public fleets & their contractors (finally launching this spring).

Any clarifying questions?

Request for input: Electrification

- Given current market conditions, what is needed to support more Oregonians choosing to go electric?
- What strategic investments are needed for transportation electrification?
- Are there existing program provisions that could be modified to better support electricity?
- Are there new provisions we should consider and what are they?
- How can CFP best target equity in our program both generally and in incenting additional transportation electrification?

Renewable Electricity Provisions

Renewable electricity

- To create a better incentive for both transportation electrification and additional renewable generation, in 2021 we adopted the use of renewable energy certificates (RECs) to match renewable electricity generation with EV charging

- To ensure the environmental integrity of those RECs, we required them to be certified under the Green-e standard

Green-e

- Green-e is a standard for voluntary renewable electricity claims that helps ensure that purchasers of renewable electricity through RECs get the full environmental benefits of that renewable electricity generation.

- Given DEQ staff constraints, adopting this standard allowed us to more easily implement the REC provisions while ensuring the environmental integrity of the additional credits they create by making sure the low carbon attribute of that power wasn’t being double-counted across multiple entities or jurisdictions.

Carbon accounting and HB 2021

- HB 2021 requires the two large investor-owned utilities in Oregon reduce their emissions intensity by 80% by 2030, 90% by 2035, and 100% by 2040
- Both the baselines and how the utilities' progress towards those targets are set via reporting into DEQ's Greenhouse Gas Reporting Program

Carbon accounting and HB 2021

- HB 2021 states that for reporting into the GHG RP, the emissions intensity of power consumed by the utility is not affected by the presence or absence of RECs for that power.

- However, this means that there can be double-counting between a REC being used to claim renewable electricity by an end user and separately the utility also having that counted as renewable power against the HB 2021 targets.

Green-e decision on HB 2021

- Green-e's standard is used for voluntary claims, which means they have different drivers than our regulatory programs. Because of their view of HB 2021, they have made the decision that "RECs associated with generation reported to the Oregon DEQ for compliance with Oregon HB2021 (2021) are not eligible for use in a Green-e certified renewable energy product."

- That prevents double-counting of the emissions reduction and as CRS wrote in explaining its decision:

  "A key principle in these opt-in programs is that the renewable energy people buy voluntarily is above and beyond what the law requires. Without this requirement, customers aren't actually making a difference—they're just underwriting utility efforts to meet state regulations."

Green-e decision on HB 2021

- DEQ is working through the impact on the program to ensure that we can continue to support renewable electricity development and matching with EV charging

- That decision has made it more difficult for electricity reporting entities to find certified RECs for CFP as they generally have to find RECs from renewable electricity projects further away from Oregon

Request for input: Renewable Electricity

- Are RECs still the best method for tying renewable electricity generation to charging?
- Are there other standards that could make sense here?
- What is the best way to ensure the environmental integrity of renewable electricity claims in the program?
- Should we be concerned if RECs where the underlying power is consumed in Oregon are also matched to charging in the same service territory? Or in another utility's service territory?

Questions

- At this point, we'll take one last round of clarifying questions on the presentation via the Q&A feature in Zoom

- Next, we'll take public comment. Please use the raise hand function in Zoom and we'll do our best to call on folks in the order they raised their hand. You can also submit written comments via email

Feedback

- We want to hear from you!
- To help facilitate this, we'll also post all of the questions we had on the Request for Input slides in the Zoom chat
- We will call on people in the order in which they raise their hands

- Please email additional thoughts or questions to DEQ by Friday, Jan. 9 to OregonCleanFuels@deq.Oregon.gov with "Listening Session Feedback" in the subject line

Title VI and alternate formats

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