

Oregon Department of Environmental Quality

Clean Fuels Program Electricity 2021 Rulemaking

Rulemaking Advisory Committee Meeting #1
Webinar
Sept. 24, 2020

Today's Agenda

- Introductions and Overview
- Topic: General Provisions
- Topic: Encouraging New Types of Electric Vehicles
- Break
- Topic: Lowering the Carbon Intensity of Electricity as a Transportation Fuel
- Topic: Additional Credit Generation Opportunities
- Public Comment
- Wrap Up and Next Steps

Ground Rules

- Honor the agenda
- Provide a balance of speaking time
- Listen to understand and ask questions to clarify
- Respect each other's viewpoints, values and interests
- Focus comments on topics at hand – **be hard on the issues and soft on the people**
- Please stay on mute when not speaking
- Please set your display name to your name and organization
- For questions or comment, **use “Raise Your Hand” button to get in the queue**; if joined by phone, press *9 to raise hand
 - When it is your turn to speak, we will call on you
 - Say your name and affiliation before speaking
 - Use the “Chat” feature for help troubleshooting any issues

RAC and DEQ Staff introductions

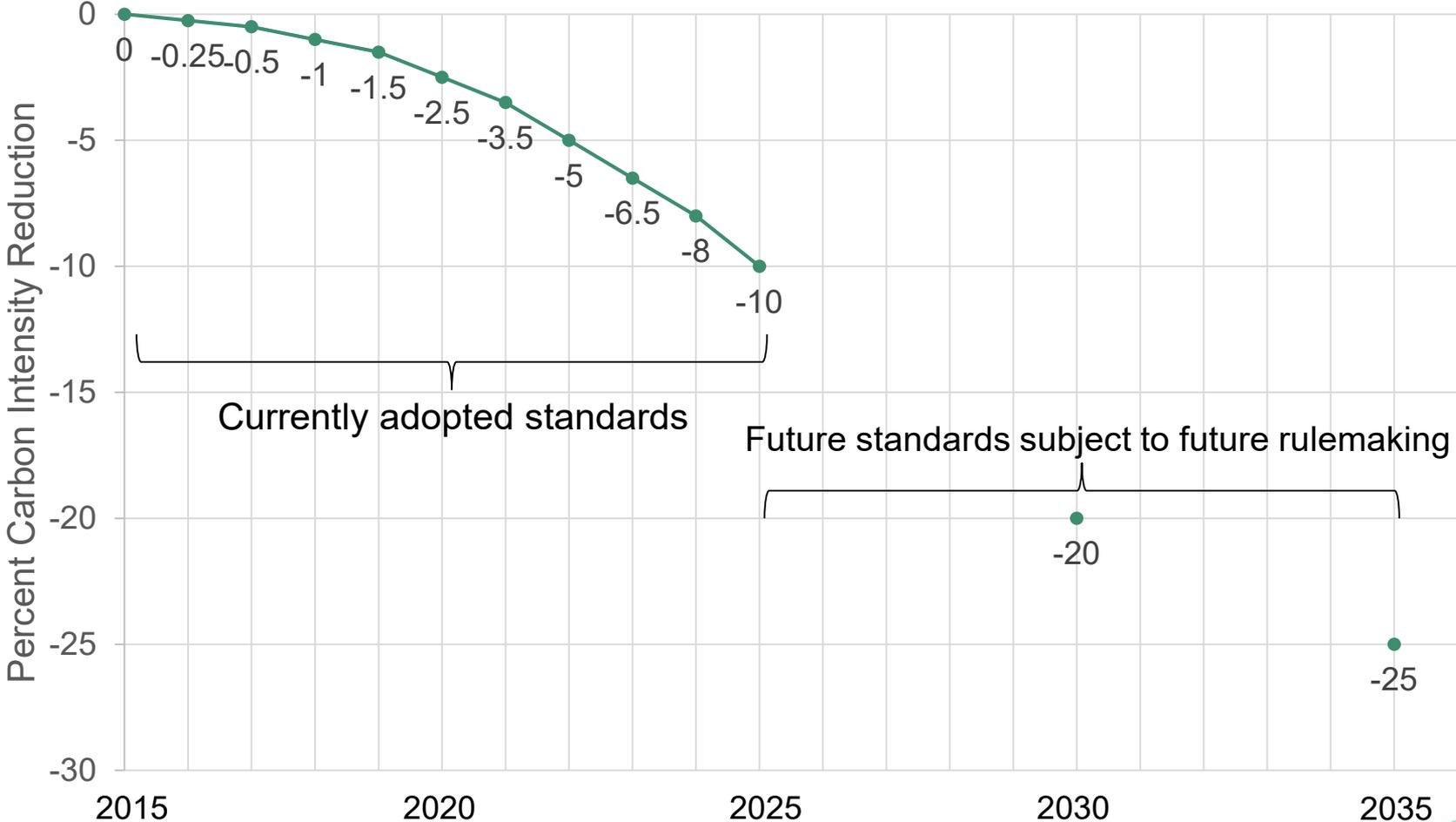
- When called on, please let us know:
 - Who you are
 - What you're representing on this committee
 - And your goals for this rulemaking

Executive Order 20-04

Governor Brown issued Executive Order 20-04 directing state agencies to take actions to reduce and regulate greenhouse gas emission.

Section 4A directs EQC and DEQ to amend the low carbon fuel standards, and the schedule to phase in implementation of those standards, with the goal of reducing the average amount of GHG emissions per unit of fuel energy by 20 percent below 2015 levels by 2030, and 25 percent below 2015 levels by 2035.

Clean Fuel Standards

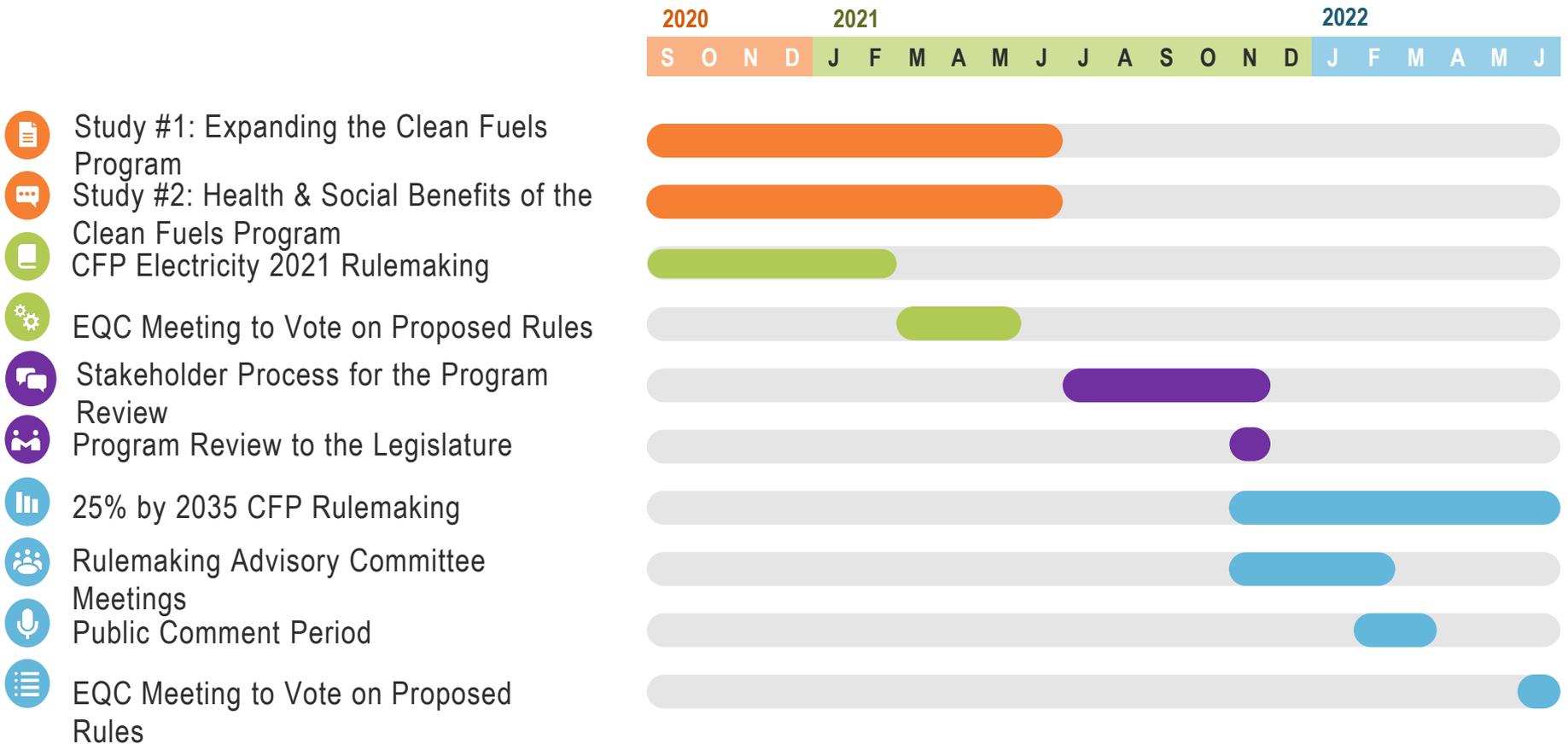


For this Rulemaking...

Section 4B directs:

Clean Fuel Credits for Electrification. The EQC and DEQ are directed to advance methods of accelerating the generation and aggregation of clean fuels credits by utilities that can advance the transportation electrification goals set forth in Senate Bill 1044 (2019).

Timeline for the Expansion of CFP



Timeline for this Rulemaking

- 5 meetings are scheduled
 - Meeting 1: Today
 - Meeting 2: Oct. 8
 - Meeting 3: Oct. 22
 - Meeting 4: Nov. 5
 - Meeting 5 (Fiscal discussion): Nov. 19
- Start of public comment period, issuance of Notice of Proposed Rulemaking: mid-December 2020
- Public hearing: mid-January 2021
- End of public comment period: mid-January 2021
- EQC consideration of rulemaking: March/May 2021

Goals for this Meeting

- Provide a forum to hear stakeholders' ideas about potential changes to the electricity provisions of CFP
- Introduce some initial concepts raised in the discussion paper and provide some of the agency's initial thoughts
- Respond to stakeholder questions
- Highlight areas where the agency is soliciting specific feedback, especially where:
 - multiple options are possible
 - there are both pros and cons that should be considered
- Create a path forward to the targeted discussions in the next 3 breakout meetings

Guiding Principles for CFP

To maintain the integrity of the Clean Fuels Program, we strive to:

- Achieve real and quantifiable GHG reductions
- Employ a technology- and fuel-neutral approach
- Use the best available science
- Provide the incentives for technology development, commercialization, and deployment that will produce permanent paths to decarbonizing the transportation sector

General Provisions

General Provisions

- Establishing incremental credits
- Increasing the frequency of residential electric vehicle (EV) crediting
- Directing revenues from electricity crediting

“Base” vs. “Incremental” Credits

In this rulemaking, we propose to introduce a new concept: Incremental Credits for residential charging

- First introduced in the California LCFS in 2018
- A credit still represents a metric ton of GHG reduction
- “Base” credits are what we currently have in CFP and are used for residential EV credits that are issued to registered electric utilities and the backstop aggregator based on the statewide grid mix or utility-specific mixes
- “Incremental” credits cover **additional** actions that **further** lower the carbon intensity of the electricity
 - Examples could include increased access to renewable electricity and/or the use of smart charging technology

More Frequent Residential Crediting

- Currently, DEQ issues credits for the charging of EVs at residences once per year in February-March for the prior year
- As more EVs are purchased by Oregonians, increasing the frequency of credit generation to at least twice a year would provide credits to the market in a more timely fashion

Direct Revenue from Electricity Credits

- As currently designed, the CFP has no requirements for spending the proceeds of electricity credit sales
- The larger investor owned utilities have spending principles for residential EV credits that are adopted by the Public Utility Commission in UM 1826
- As the base credits from residential charging become a larger share of the program, setting permissible uses of credit proceeds would ensure that they are reinvested in transportation electrification
- As we consider incremental credit provisions, entities other than utilities might be the credit generators

Discuss: Direct Revenue

In considering this provision, there are number of issues to consider including the following questions:

- How should it be structured?
- How broad or narrow should the direction be?
Should there be broad categories of projects or specify narrower types of projects?
- Should who generates the credits make a difference in what the permissible uses would be?
- What kind of documentation should be required to demonstrate compliance with the direction?

Encouraging New Types of Electric Vehicles

Energy Economy Ratios

First, let's generally cover a critical factor in how CFP establishes credit generation for specific vehicle types.

- Energy Economy Ratios (EERs) are how we adjust our credit calculations to account for the higher-efficiency engines in alternative fuel vehicles. For example, a full battery electric passenger vehicle is 3.4 times more efficient than the gasoline version so the EER is set 3.4.
- These EERs allow for accurate credit generation from these vehicles
- Table 7 of the regulation contains EERs for:
 - several types of vehicles, such as transit buses, forklifts, streetcars, etc.
 - general categorical EERs for light and heavy duty EVs, for various alternative fuels

Adding California EERs

- One of the keys to adding new EERs is whether the proper data exists to determine an accurate EER
- There are two electricity EERs that CARB adopted in their last rulemaking that are not currently adopted by us
 - Electric cargo handling equipment (eCHE) with an EER of 2.7
 - Electric ocean going vessel (eOGV) shorepower with an EER of 2.6
- DEQ is proposing to adopt these two EERs in this rulemaking
- DEQ is proposing that the owner of the charging equipment would be eligible to generate the credits

Adding New EERs

- Currently, the only way to adopt a new EER is through rulemaking
- As electrification spreads to new vehicle types, there has been an increase of requests to create new EERs. Waiting for the next rulemaking delays the full credit generation potential of many of these vehicles.
- It will also be important to develop standards to establish whether adequate data exists to support adoption of a new EER, and methodologies to ensure the comparison is accurate

Adding New EERs

- In order to be more efficient in adding new EERs, we are considering two options:
 - Allowing for EER-adjusted CIs
 - Creating a provision that would allow for the administrative approval of new EERs outside of a rulemaking
- As we consider these provision, two of the key questions are:
 - Should it be reserved for cases where none of the existing EERs could apply?
 - Are there cases that should be reserved for a formal rulemaking process? How would that threshold be established?

Discuss: EER-adjusted CI

The California LCFS allows for using their Tier 2 fuel pathway application process to apply for an EER-adjusted CI. In this case, the application must contain the vehicle-specific data to support a new EER in addition to the other data specific to the pathway.

In considering this provision, DEQ must:

- estimate the amount of resources it would take to process these applications
- determine how to handle the multiple electricity CIs in the state. Should there be separate EER-adjusted CIs for each utility?

Discuss: Administrative Approval

In considering this provision to directly approve new EERs administratively, there are number of issues to consider including the following questions:

- What about cases where new data shows that an existing EER is sufficiently inaccurate? What threshold of improvement from that EER should be required to justify a new EER?
- Could we establish subcategories for existing EERs?
- What level and duration of public comment would be necessary for administratively approved EERs?

BREAK TIME

BREAK TIME

We'll be back at 10:40 a.m. PST

BREAK TIME

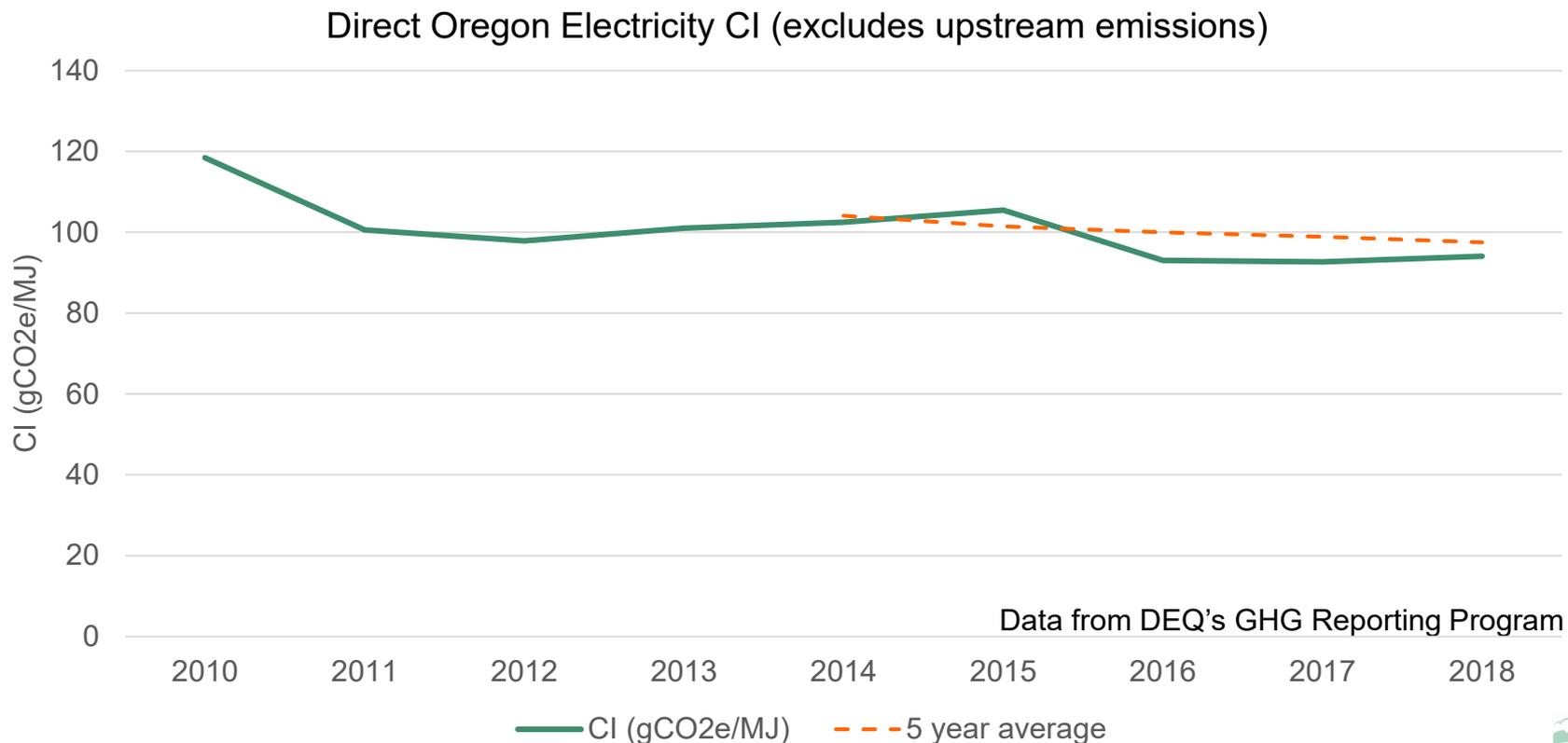
Lowering the Carbon Intensity of Electricity as a Transportation Fuel

Current Electricity Carbon Intensities

- For a detailed look at how the carbon intensities of electricity are calculated, go to:
<https://www.oregon.gov/deq/aq/Documents/cfp-carbcalc.pdf>
- The carbon intensity of Oregon's electricity is currently calculated on a 5-year rolling average
- We have the statewide grid mix and over a dozen utility-specific mixes
- Zero-carbon electricity is only available to be claimed from a renewable source that is on the same site as a charger

Trends in Electricity CI

Recent year-to-year variability in the overall carbon intensity of electricity has been relatively limited



Adjustments to the Statewide Mix

- The retirement of coal-fired power plants as called for via agreements and SB 1547, along with the increased RPS requirements, will lower the carbon intensity of Oregon's grid mix over the next few years.
- In order to more quickly account for the lowering carbon intensity of Oregon's electricity, DEQ considered two approaches:
 - shortening the averaging time
 - retaining the 5-year averaging period but removing emissions and energy related to fossil plants upon retirement

Discuss: Adjustments to the Statewide Mix

In considering this provision, there are number of issues to consider including the following questions:

- For the first option, should we move to a single year average or stay with a five year average?
- For the second option,
 - Should we simply remove the fossil source and not replace it with anything?
 - Should we replace it with something and what would that be? Could we be reasonably certain of the replacement power ahead of time? Or could it be the actual replacements for the energy supplied by retired power?
- Also, now that utility-specific CI scores make up about 25% of Oregon's annual load served, should the statewide grid mix be adjusted to remove that load?

Preview - Renewable Electricity Provisions

- DEQ's goal with these provisions is to provide a clear incentive for more renewable electricity (RE) generation
- As the numbers of electric vehicles grow, DEQ believes that the additional demand imposed upon the grid can and should be met with electricity supplied by zero-carbon resources
- DEQ believes that allowing a range of options will help send that signal, but that the qualifications for RE should be carefully defined to maintain the integrity of the program

Renewable Electricity in the LCFS

- In 2018, CARB added new provisions to allow for incremental credit generation from renewable electricity
- Several conditions apply that define what renewable electricity qualifies
- Utilities, automakers, and others are allowed to claim they are delivering renewable power through RECs to EVs in California
- Load Serving Entities (utilities, community choice aggregators, etc.) can petition ARB to recognize their green tariffs as meeting the above requirements

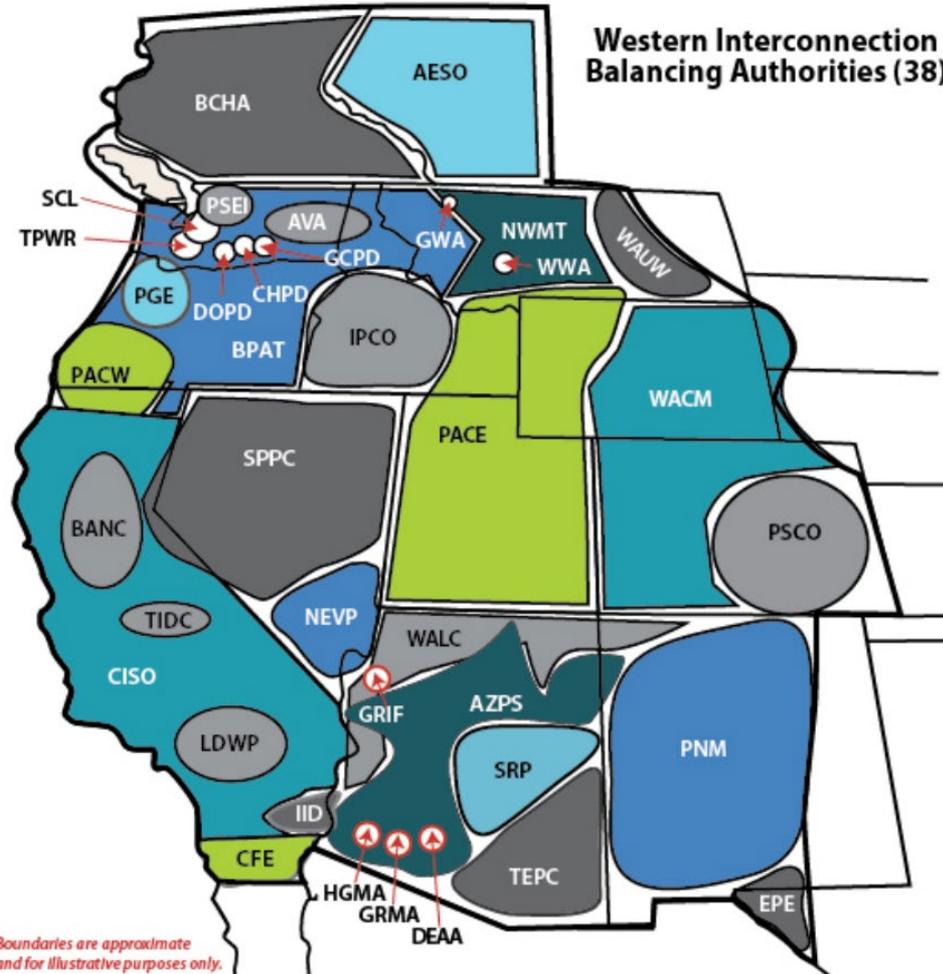
What Qualifies as Renewable Electricity?

- Using the list of qualifying generation in the Oregon Renewable Portfolio Standard as a starting point, DEQ considered that the following could be categorically eligible for a zero carbon claim: wind, solar photovoltaic and solar thermal electricity, wave, tidal, small hydro, ocean thermal electricity, and geothermal
- Biomass and biogas sources of electricity generation could also be included if these generators go through the Tier 2 fuel pathway application process to determine the lifecycle carbon intensity of their electricity

How to Incentivize Renewable Electricity

- As stated previously, our goal with crafting these provisions is to incentivize additional renewable energy deployment
- In order to achieve that goal, DEQ is considering what parameters could be designed into the program such as temporal, generator start date, or geographic restrictions
- This would be in addition to the requirement that the renewable electricity being claimed is being retired in addition to any other legal requirement or program (though not including the green tariff itself)

Balancing Authorities



From the Western Electricity Coordinating Council (WECC)

Parameters to Consider

	Which electricity qualifies?	What timespan counts?	Geographic eligibility?	Generator start date?
Broader ↓	Follow Oregon RPS	All valid RECs qualify	All RECs count	All RECs count
	Follow Green-e or another standard	Renewable electricity must be generated within 2 years of EV charging	RECs in the western electric grid count	Within 15 years of the claim
Narrower ↓	Create own requirements	Renewable electricity must be generated within 3 quarters of charging	RECs must be generated in Oregon or a balancing area that includes Oregon	Generator placed in service after the CFP's start date of 2016

Discuss: Renewable Electricity

Considerations:

- How can we ensure that actual **additional** reductions are achieved?
- Who should be able to claim they are delivering renewable power to vehicles?
- Does it make sense to require that RECs retired under this provision meet a voluntary standard such as Green-e?
- Should there be geographic restrictions on what renewable electricity qualifies? Should eligible generators be located in the WECC? In an electricity balancing authority that includes Oregon? In Oregon? The same utility service territory?
- Could utility green tariffs meet a vintage/temporal restriction on when renewable electricity is being generated to meet the zero carbon claim?

How to Claim Zero-Carbon Electricity

DEQ is considering two approaches:

- Participation in a utility green tariff program
- Retirement of renewable energy credits (RECs)

DEQ is also considering how it applies to both residential and non-residential charging.

Non-Residential Charging

For metered charging at EV charging stations in public, workplaces, multi-unit dwellings, or by transit districts, DEQ believes the current credit generators for those activities could be allowed to make the zero carbon claim

The credit generators would need to provide utility bills on a quarterly or annual basis to show the chargers are covered by a green tariff, or would need to show retirement records from a REC tracking system to demonstrate REC retirement on behalf of their EV charging

Residential Charging

For residential EV charging, DEQ considered two paths forward:

- DEQ could calculate the amount of electricity that is being charged in each of the utility service territories, as we currently do. This could be on a semi-annual (as proposed) or annual basis. Then the utilities could retire RECs on behalf of their customers and be issued the incremental credits.
- DEQ could allow automakers or other entities to retire RECs and generate the incremental credits, if they provide detailed information about electric vehicle charging of those vehicles

Discuss: Generating Incremental Credits

In reviewing this provision, there are number of issues to consider including the following questions:

- For residential charging, should the utility have priority to generate the incremental credits? What about the automakers or charger owners? What should the hierarchy be?
- For non-residential charging, should the current credit generator not also generate the incremental credits?
- Is there some other proxy like enrollment in a time of use program that could substitute for actual charging activity data? What parameters would have to be considered?

Additional Credit Generation Opportunities

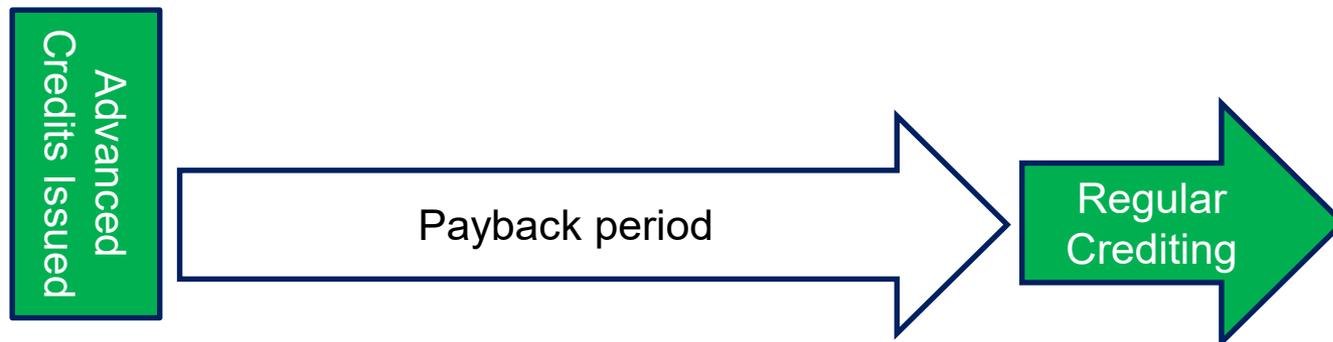
Definition of a Credit

ORS 468a.265(4): “Credit” means a unit of measure generated when a fuel with a CI that is less than the applicable low carbon fuel standard is produced, imported or dispensed for use in Oregon, such that one credit is equal to one metric ton of carbon dioxide equivalent.

DEQ interprets this statutory definition to mean that we cannot issue credits that are not tied to an actual reduction of greenhouse gases. Therefore, previous discussions about CFP granting credit multipliers or extra credits for special projects lie outside the authority of DEQ.

Advance Crediting

- One concept that can be further discussed is to advance credits since the assumption is that actual reductions will occur in the future
- The aim is to help lower the upfront costs of conversion to electric vehicles by issuing advanced credits
- Advanced credits are 'paid back' and then the vehicle begins generating credits normally



Example of Advance Crediting

- What is needed to implement this concept is a way to estimate what typical credit generation would be for the first few years
- For example, let's apply this to a transit agency
 - A transit bus is estimated to generate 100 credits/year given its expected annual mileage
 - The transit agency and DEQ agree to advance 5 years of credits when the bus is placed in service
 - The transit agency monetizes the credits to help with its up-front costs
 - The transit agency reports electricity charging for that bus on a quarterly basis, consistent with standard reporting requirements
 - DEQ keeps track of how many credits are being generated
 - Once the bus pays back its first 500 credits worth of charging, credit generation proceeds as normal

Advance Crediting - General

Some general questions with this concept include:

- Should there be a limit on the total amount of advanced credits issued in a year?
- What requirements would need to be put on the recipient?
- How could this concept incorporate the principles laid out in the executive order that we prioritize actions that will help vulnerable populations and impacted communities adapt to climate change?

Advance Crediting - Fleets

As we apply this concept to fleets, we have the following questions for stakeholders:

- Should this concept be limited to public fleets?
- Are there private fleets whose vehicles would remain in-state for long periods that could make sense?
- How should we limit the number of years of advance crediting allowed? Should we limit the payback period?
- Should this provision be available to light-duty EVs and/or medium- and heavy duty EVs?

Advance Crediting - Infrastructure

DEQ is also considering if this concept could be successfully applied to public charging infrastructure.

Considerations here include:

- Would public charging developers be interested in this sort of a provision?
- How reliable would the forecast for credit generation be?
- Should we limit it to certain types of EV infrastructure, such as high voltage public chargers?
- Should we limit it to certain types of applications, such as at multi-unit dwellings?

Public Comment Period

Is there anybody from the public that have any additional comments at this time?

Next Steps

- Next meetings:
 - Oct. 8 – Encouraging New Types of Electric Vehicles
 - Oct. 22 – Lowering the Carbon Intensity of Electricity as a Transportation Fuel
 - Nov. 5 – Additional Credit Generation Opportunities
- Comments are generally due 2 weeks prior to meetings in order for us to consider them in the next discussion paper but the sooner the better.
- For the Oct. 8 meeting, please get your comments to us as soon as possible or let us know if you plan to submit comments on this topic so we can plan ahead for them.
- Please send all written comments to:
CFPE2021@deq.state.or.us