Oregon Department of Environmental Quality

Clean Fuels Program Electricity 2021 Rulemaking

Rulemaking Advisory Committee Meeting #3: Adjustments to the Carbon Intensity of Electricity

Oct. 22, 2020

Today's Agenda

- Introductions and Overview
- **Topic 1:** Changes to the Statewide Mix and Utility-Specific Carbon Intensity Calculations
- **Topic 2:** What Qualifies as Renewable Electricity for the Clean Fuels Program
- Break
- **Topic 3:** Who is Eligible to Claim the Incremental Credits?
- **Topic 4:** Changes to the Frequency of Residential Base Credit Generation
- **Topic 5:** Spending Requirements on Revenue Generated from Residential Charging Credits
- 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

Timeline for this Rulemaking

- 5 meetings are scheduled
  - Meeting 1: Sept. 24
  - Meeting 2: Oct. 8
  - **Meeting 3: Today**
  - 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

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1. Changes to the statewide mix and utility-specific CI calculations

Current Electricity Carbon Intensities

- For a detailed look at how the carbon intensities of electricity are currently 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

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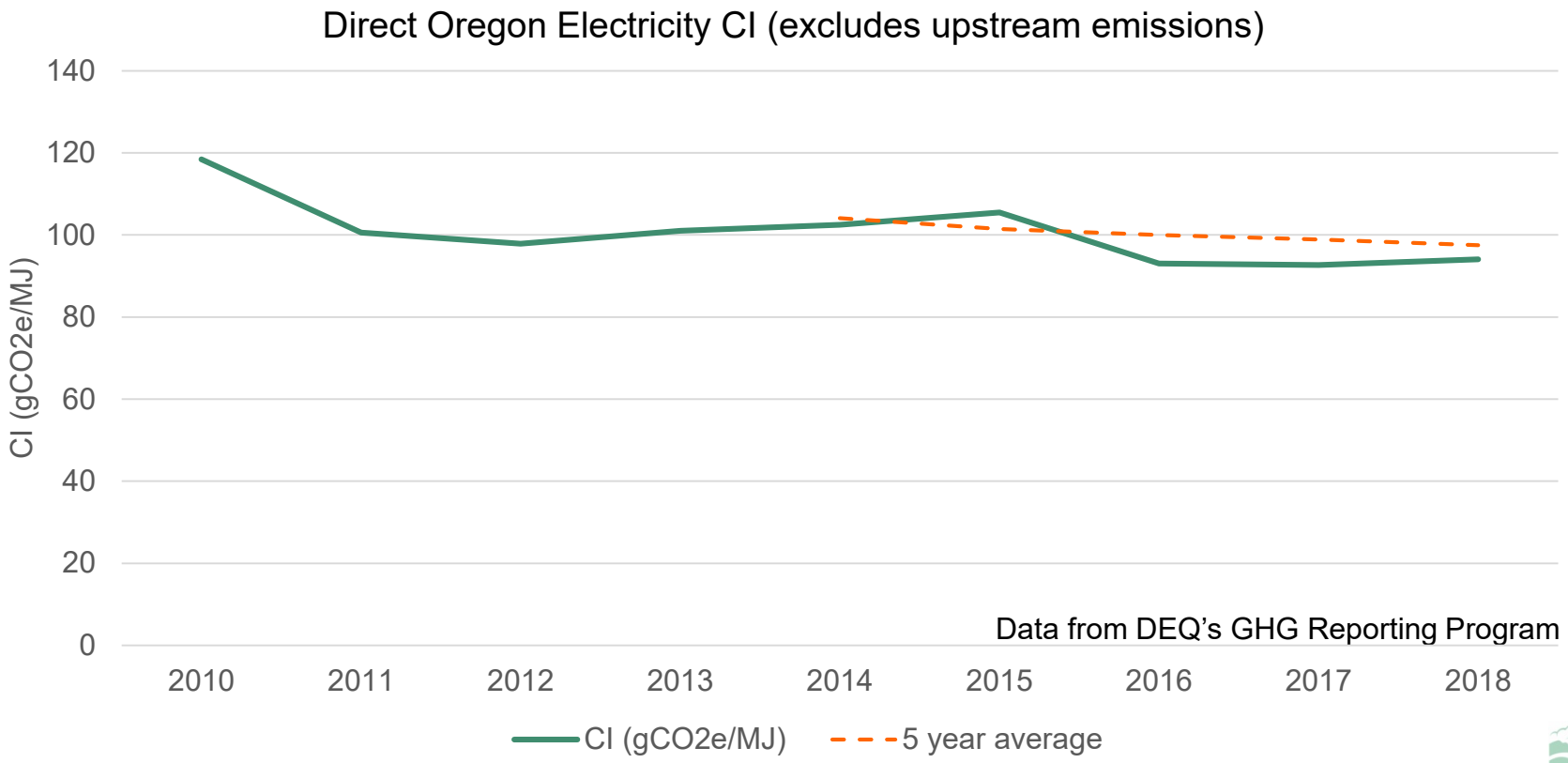
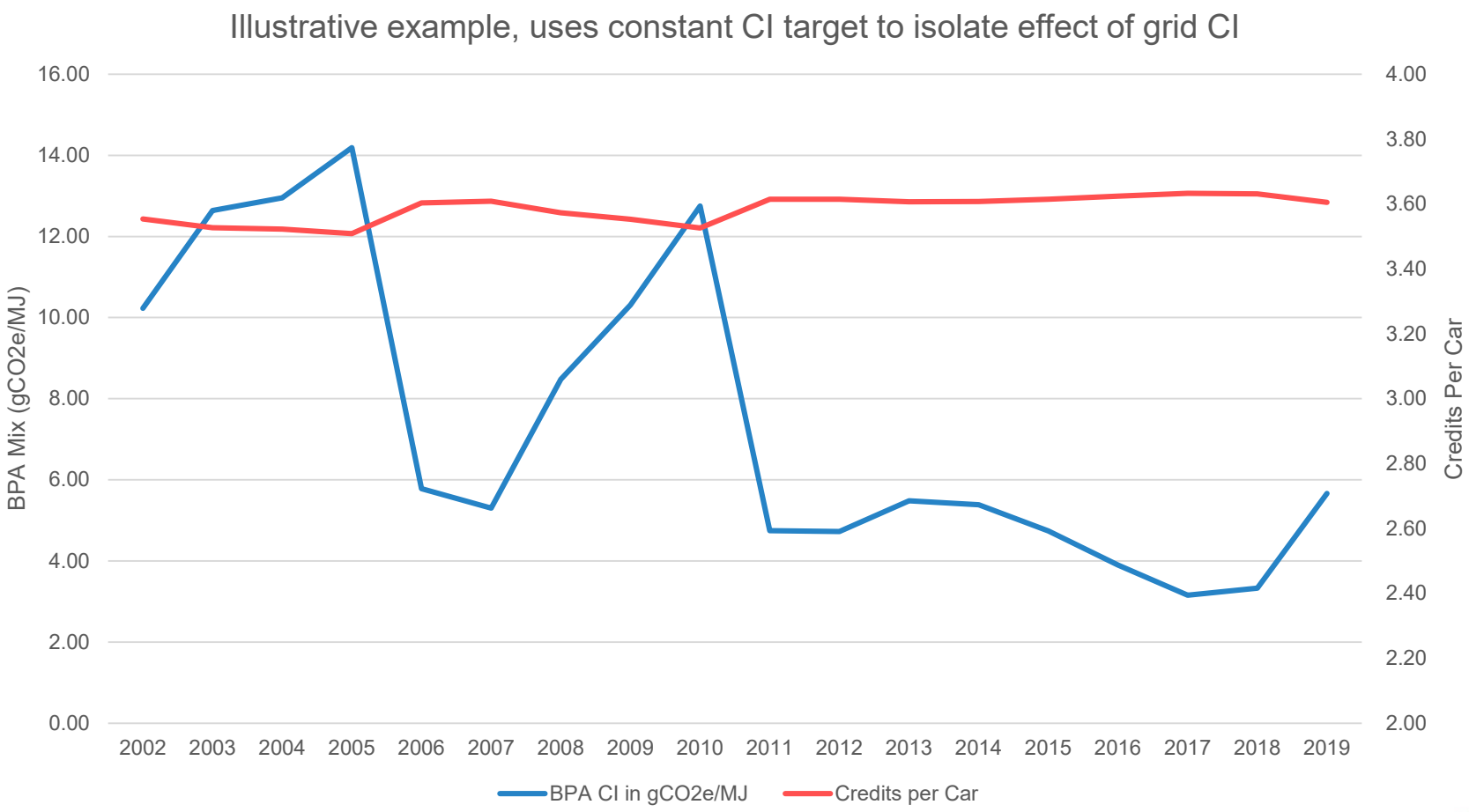
Trends in Electricity CI

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



BPA mix and credit generation



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Potential Changes

DEQ asked for input on the following:

A. Switching from a 5-year rolling average to a single-year value to calculate the CI of electricity.
B. Whether the statewide mix should remove the load and emissions from utilities that have opted-in to utility-specific CIs.
C. Factoring in the closure of the Boardman facility.

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Changes to the CI Calculation

Electricity CI Description	Electricity CI (gCO2e/MJ)
2020 Electricity CI under current rules	107.92
A & B: Single year (2018) Statewide mix with specified utility adjustment	135.77
A & C: Single year (2018) statewide mix, Boardman at 0.428 MT/MWh	104.02
A, B & C: Single year statewide mix with Boardman and specified utility adjustment	130.59
Single year (2018) BPA CI	3.54

Note: Some of the rise in the electricity CIs under A&B&C is due to a ~5gCO2e/MJ adjustment to the upstream carbon intensity of natural gas due to the OR-GREET 2.0 to OR-GREET 3.0 update

Staff Proposal: Statewide and utility-specific carbon intensities

Our current proposal is to:

- Move all grid mixes to a 1-year value.
- For 2021 and 2022, replace Boardman's emissions in the statewide mix with a direct emissions factor of 0.428MT/MWh (roughly the emissions intensity of a moderately efficient natural gas generator).
- Adjust the statewide mix to remove the power that has been broken out into utility-specific mixes.

This approach represents the most accurate and balanced accounting of emissions at this time.

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Discuss: Electricity Carbon Intensities

Questions?

Comments?

Smart Charging

- DEQ is reviewing comments on smart charging that were received in the last two weeks.

2. What qualifies as renewable electricity for CFP?

Renewable Electricity Provisions

- DEQ's goal with these provisions is to provide a clear signal for more renewable electricity (RE) generation
- As the numbers of electric vehicles grow, DEQ believes that the additional demand imposed on 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

Parameters to Consider

Broader

Narrower

Which electricity qualifies?	What timespan counts?	Geographic eligibility?	Generator start date?
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
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

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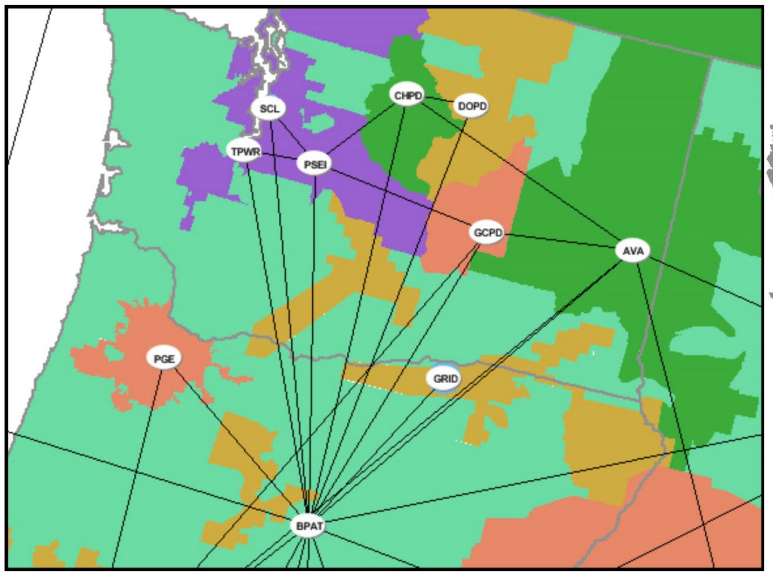
Staff Proposal: Qualifying Sources

Our current proposal is that:

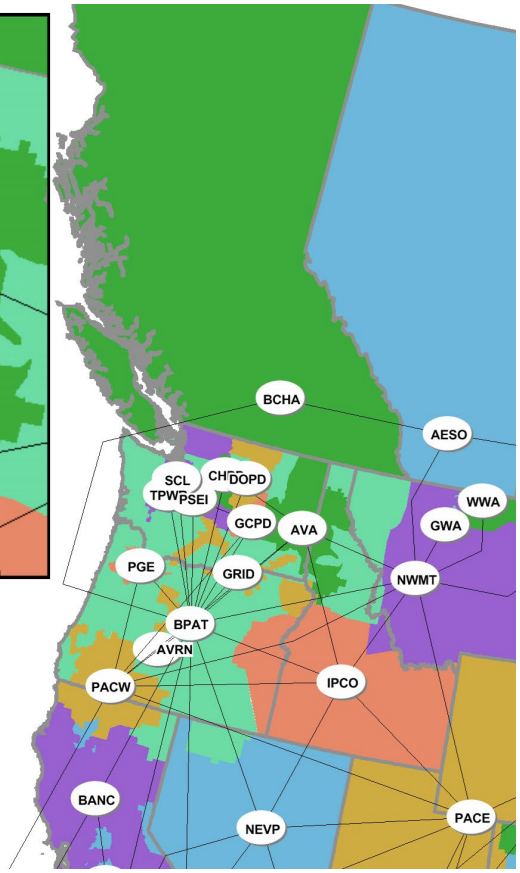
- RECs must be certified under Green-e's current standard which includes electricity generated from:
  - Solar electric.
  - Wind.
  - Geothermal.
  - Hydropower from new capacity on a non-impoundment or new capacity at an existing impoundment, *subject to certain conditions*.
  - Solid, liquid, and gaseous forms of biomass, *subject to certain conditions*.
  - Biodiesel, *subject to certain conditions*.
  - Fuel cells if powered by hydrogen from a qualifying source.
  - Tidal and wave generation.
- In the case of biogas, biodiesel, or biomass-generated RECs, the facility operator must apply for an electricity CI through a Tier 2 fuel pathway application.

Staff Proposal: Deliverability to Oregon

Our current proposal is RECs must demonstrate that generation occurred within a balancing authority area that includes Oregon or the electricity from the facility is delivered to one of those balancing authorities on a real-time basis without shaping, storage, or integration services.



Northwest Inset



PGE, BPAT, PACW, IPCO, GRID, AVRN
https://www.wecc.org/Administrative/Balancing_Authorities_JAN17.pdf

Map from the North American Electric Reliability Council (NERC):
https://www.nerc.com/AboutNERC/keyplayers/PublishingImages/BA%20Bubble%20Map%2020191106.tif

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Staff Proposal: Additional Requirements

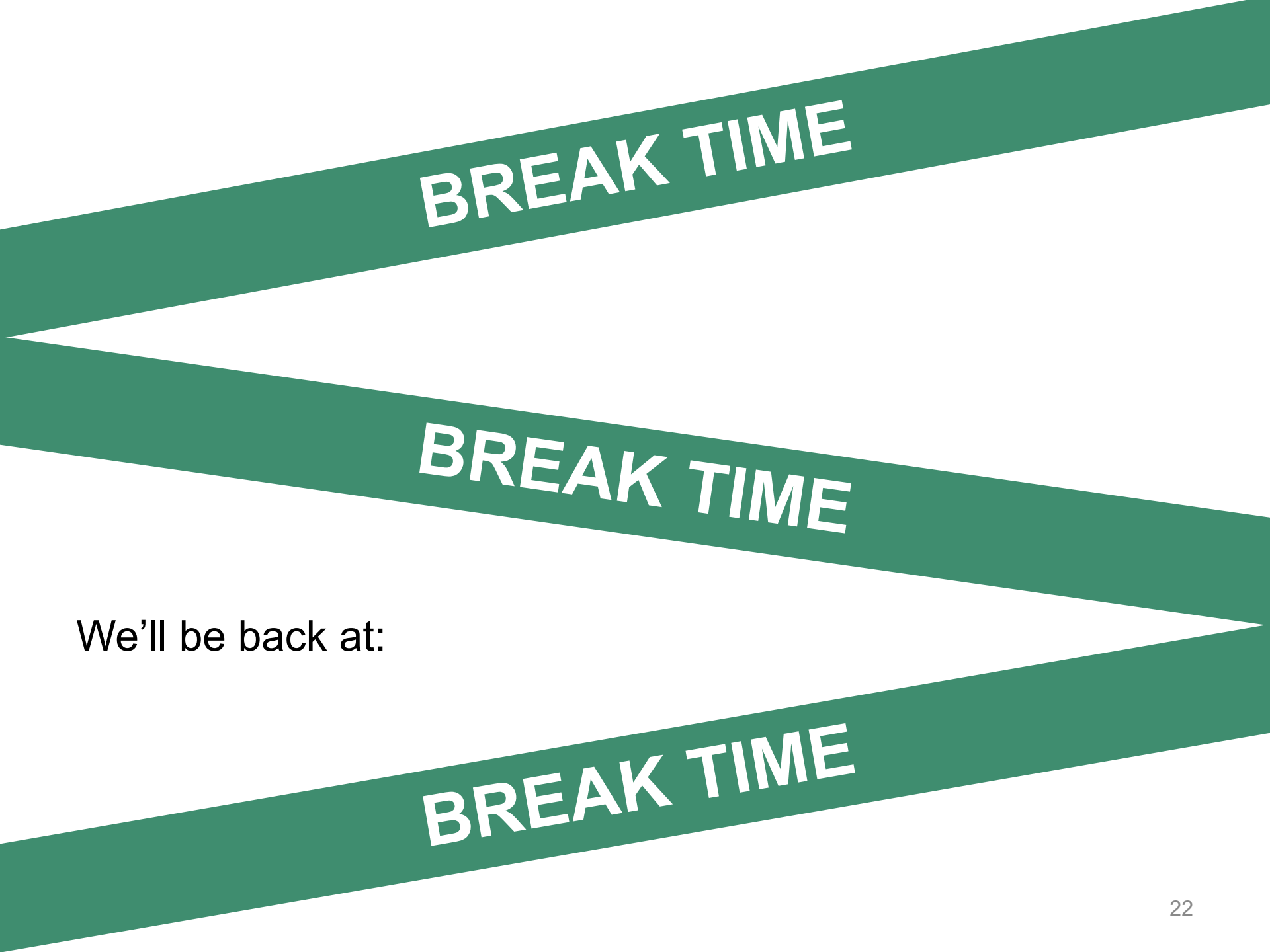
Our current proposal also includes:

- **Placed in-service date:** RECs must be generated from a generator that was placed in service after 2015. We use this year in other areas of our program to allow a displacement credit for Light Rail and Streetcar systems.
- **Vintage:** RECs must be from the same or prior year as the electricity was charged into vehicles. So for 2022 charging, RECs generated in 2021 or 2022 would be eligible for this provision.

Discuss: Renewable Electricity

Questions?

Comments?



We'll be back at:

3. Who is eligible to claim the incremental credits?

“Base” vs. “Incremental” Credits

In this rulemaking, we propose to introduce a new concept for residential EV Charging - Incremental Credits

- 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 based on the difference between gasoline and the statewide or utility-specific grid mixes
- “Incremental” credits cover additional actions that further lower the carbon intensity of the electricity and are based on the difference between the statewide or utility-specific grid mix and a lower or zero-carbon electricity.

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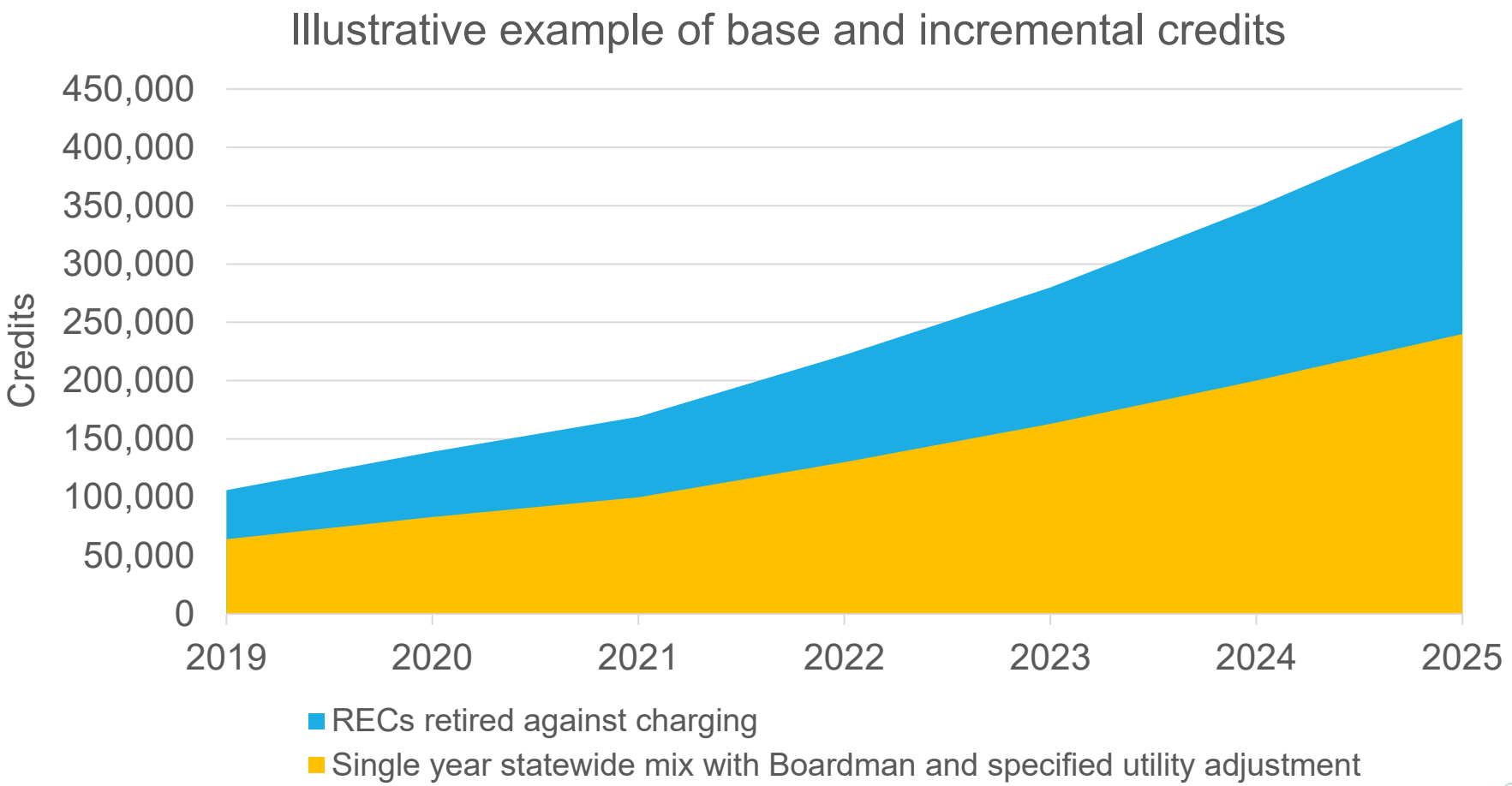
Residential charging incremental credits



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Staff Proposal: Non-Residential Charging

Our current proposal is:

- For metered charging at EV charging stations in public, for fleets, workplaces and multi-unit dwellings, or by transit agencies, the current credit generators should be allowed to generate the incremental credit.
- 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 WREGIS, or another REC tracking system, to demonstrate REC retirement on behalf of their EV charging.

Residential Incremental Credit Generation

For residential EV charging, DEQ is considering three models which may be structured to exist individually, in combination, or in a waterfall:

- Utility Model
- Backstop Aggregator Model
- Automaker Model

Residential Charging – Utility Model

Utility Model:

- DEQ would continue to provide the utility with the amount of estimated residential charging.
- The utility would retire RECs on behalf of that charging.
- DEQ would issue the incremental credits to the utility.
- The utility would not be required to participate in this model.

Residential Charging – Backstop Aggregator Model

Backstop Aggregator Model:

- Based on the existing framework for aggregating residential base credits, DEQ would seek an entity to aggregate the incremental credits not claimed by a utility.
- The entity would retire RECs on behalf of that charging and then receive and monetize the incremental credits.
- In this case, the entity would prioritize projects to address equity issues and assist income-limited individuals and communities that are vulnerable to the impacts of climate change.
- DEQ would convene an advisory committee to help guide spending by the entity.

Residential Charging – Automaker Model

Automaker Model:

- This option would allow automakers or a designated aggregator to use their precise telematics data to demonstrate how much residential charging occurs for EVs charging in Oregon.
- The automaker/aggregator would retire RECs on behalf of that charging
- DEQ would issue the incremental credits to the automaker/aggregator

Net Potential Impact to Credit Generation

		Base Credit Generation	Potential Impact of Section 1 on base credit generation	Potential Impact of Section 2 allowing incremental credits generation	Net Impact on potential credit generation
2019	2020 Electricity CI under current rules	71,000		+35,000	+33,000 to +44,000
	Section 1.A & 1.B: Single year (2018) Statewide mix w/ specified utility adjustment		62,000 (-9,000)	+44,000	
	Section 1.A & 1.C: Single year (2018) statewide mix, Boardman at 0.428 MT/MWh		73,000 (+2,000)	+33,000	
	Section 1.A, 1.B, & 1.C: Single year statewide mix with Boardman at 0.428 MT/MWh and specified utility adjustment		64,000 (-7,000)	+42,000	

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Net Potential Impact to Credit Generation

		Base Credit Generation	Potential Impact of Section 1 on base credit generation	Potential Impact of Section 2 allowing incremental credits generation	Net Impact on potential credit generation
2025	2020 Electricity CI under current rules	272,000		+153,000	+147,000 to +192,000
	Section 1.A & 1.B: Single year (2018) Statewide mix w/ specified utility adjustment		233,000 (-39,000)	+192,000	
	Section 1.A & 1.C: Single year (2018) statewide mix, Boardman at 0.428 MT/MWh		278,000 (+6,000)	+147,000	
	Section 1.A, 1.B, & 1.C: Single year statewide mix with Boardman at 0.428 MT/MWh and specified utility adjustment		240,000 (-32,000)	+185,000	

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Discussion

Questions?

Comments?

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4. Changes to the frequency of residential base credit generation

More Frequent Residential Crediting

- Currently, DEQ issues credits for the charging of EVs at residences once per year in February–March for the prior calendar year.

- Our current proposal is to issue credits twice a year for all residential crediting.
  - Late August/early September for January through June
  - Late February/early March for July through December

Discussion

Questions?

Comments?

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5. Spending requirements on revenue generated from residential electricity credits

Staff Proposal: Reporting Requirement

- Currently, there is no reporting required by DEQ for how revenue from residential credits is spent except for the Backstop Aggregator.

- Our current proposal is to require all recipients of base and incremental credits for residential EV charging to annually file a report with the agency on how they have used the revenue from their credit sales, starting with credits issued in 2021. Any entity that receives base or incremental credits for 2021 charging would need to file the report in 2022.

Staff Proposal: Report Contents

Our current proposal is that the report must include:

- Total revenue from the sale of their base and incremental residential credits.
- The percentage of that revenue that went to CFP-related administration costs (including but not limited to submitting reports, selling credits, etc.).
- The percentage of that revenue that went to administering any programs (including, but not limited to, project management, developing and managing contracts, etc.).
- A description of the programs that were funded by CFP revenue and the amount spent in each category. Categories could include:
  - Ongoing operations and maintenance of existing transportation electrification equipment (including, but not limited to, the cost of electricity, staff costs related to maintenance and upkeep, etc.).
  - Grants, rebates, or other incentives to purchase electric vehicles or charging equipment to residential or non-residential customers.
  - Direct deployment of public charging equipment.
  - EV specific electricity tariffs.
- A description of their plan for credit revenue in the current year.

Staff Proposal: Direct Spending

- There are currently no requirements regarding what the revenue from the sale of credits should be spent on.

- If DEQ moves forward with the automaker model for residential EV incremental credits, we will propose to define and require spending on specific activities.
  - This provision would not apply if DEQ moves forward with the utility model.
  - This provision is already contained in the Backstop Aggregator model.

Discussion

Questions?

Comments?

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Public Comment Period

Is there anybody from the public that has comments they wish to make at this time?

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Next Steps

- Next meetings:
  - Nov. 5 – Additional Credit Generation Opportunities
  - Nov. 19 – Draft rules and economic and fiscal impact
- 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.
- Please send all written comments to: CFPE2021@deq.state.or.us