

# Rulemaking, Agenda Item H Clean Fuels Program Electricity 2021

#### **Table of Contents**

DEQ Recommendation to EQC	2
ntroduction	3
Statement of Need	7
Rules Affected, Authorities, Supporting Documents	11
Fee Analysis	12
Statement of Fiscal and Economic Impact	12
Federal Relationship	16
Land Use	17
EQC Prior Involvement	18
Advisory Committee	18
Public Engagement	19
Summary of Public Comments and DEQ Responses	21
mplementation	36
Five-Year Review	37
Accessibility Information	38

### **DEQ Recommendation to EQC**

DEQ recommends that the Environmental Quality Commission adopt the proposed new rules and rule amendments in Attachment A as part of Chapter 340 of the Oregon Administrative Rules.

#### Language of proposed EQC motion:

"I move that the commission adopt the proposed new rule and rule amendments seen in Attachment A as part of Chapter 340 of the Oregon Administrative Rules."

### Introduction

The Department of Environmental Quality invites public input on proposed permanent rule amendments to division 253 of chapter 340 of the Oregon Administrative Rules.

#### **Brief History**

The 2009 Oregon Legislature authorized the Oregon Environmental Quality Commission (EQC) to adopt rules to reduce lifecycle emissions of greenhouse gases from Oregon's transportation fuels by 10 percent over a 10-year period. The 2015 Oregon Legislature authorized the removal of the Dec. 31, 2015 sunset date of the authorizing statute and further authorized the EQC to adopt rules for managing and containing the costs of compliance with the Clean Fuels Program (CFP). The 2017 Oregon Legislature authorized additional provisions to manage and contain the costs of compliance with the CFP. The EQC adopted Phase 1 rules in Dec. 2012, Phase 2 rules in Jan. 2015, and several rule revisions in Dec. 2015, April 2016, Aug. 2016, Nov. 2017, and May 2020 to implement legislative mandates, update to the latest science, and improve the program.

#### **Discussion of the Proposed Rule Changes**

The objective of the CFP Electricity 2021 Rulemaking is to enable further greenhouse gas emissions reductions by advancing methods to accelerate the generation and aggregation of clean fuels credits by utilities and others to advance transportation electrification. This will also help DEQ manage and contain the costs of program compliance. The proposed changes or additions to the regulations that will further incent the generation and aggregation of electricity credits to a broader range of stakeholders including both public and private sector fleets.

Proposed Rule	Discussion
Encou	uraging New Types of Electric Vehicles
Add new energy economy ratios (EERs)	DEQ is proposing to add two new categories of EERs – for electric cargo handling equipment and for electric ocean-going vessels.
Delegate authority to DEQ to approve new EERs	DEQ is proposing that the EQC delegate authority to DEQ to approve new EERs in a more limited fashion than those that appear in a rule table. The process would mirror the Tier 2 fuel pathway process in that an applicant would have to request the new EER and submit information to support the application. The process would also include a public comment period consistent with a rulemaking to ensure that stakeholders have the opportunity to examine and respond to the underlying assumptions, operating conditions specified in the issuance of an EER-adjusted carbon intensity (CI) value, and policy rationale for granting the EER. This EER-adjusted CI is specific to the applicant and cannot be

Proposed Rule	Discussion	
	used by any other party until sufficient information supports a new categorical EER that could then be adopted by the EQC through a rulemaking.	
Allow new forklifts to generate displacement credits	DEQ is now proposing to grant displacement credits to electric forklifts that have been placed in service since 2016 to further encourage the transition to this lower carbon option.	
Adjustm	ents to the Carbon Intensity of Electricity	
Update the methodology to calculate the CI of electricity	DEQ is proposing to update this methodology in several ways. First, DEQ is proposing to switch to a single year value as opposed to a 5-year rolling average. Second, DEQ is proposing to remove the load that is allocated to a utility-specific CI from the statewide average CI. This will allow for more accurate accounting of what is left in the statewide grid mix. Third, DEQ is proposing to replace the emissions associated with the closed Boardman coal-fired power plant with the value used for unspecified market power purchases of 0.428 MT/MWh to calculate the 2021 and 2022 CIs until actual data can be incorporated.	
Allow for the retirement of RECs to claim zero carbon electricity	DEQ is proposing to allow for the retirement of renewable electricity credits (RECs) against the electricity used as a transportation fuel. This increases demand and use of low-carbon electricity generation and enables the generation of additional credits referred to as incremental credits which represents the difference in the current CI of electricity to zero. RECs must be Green-e certified, be generated from facilities that are 2015 and newer except in the case of biogas, and be generated from facilities located in the Western Electricity Coordinating Council. RECs can be retired individually, or from participation in a utility green power product (such as Blue Sky and Green Source programs), or through participation in a power purchase agreement for renewable electricity. RECs can be retired for both residential and non-residential vehicle charging.	
Establish parties eligible to generate incremental credits	DEQ is proposing to allow many of the same parties to generate the incremental credits as those who are eligible to generate the base credits.  • DEQ is proposing to allow the EV charger owner to generate the incremental credits for non-residential (for example, public, fleets, workplaces, multi-unit dwellings) charging; the transit agency to generate the incremental credits for light rail, street car, aerial tram, or electric	

Proposed Rule	Discussion	
	<ul> <li>buses; and the fleet owner or operator to generate the incremental credits for forklifts. Any unclaimed non-residential incremental credits may be claimed by the Incremental Aggregator.</li> <li>For residential charging, DEQ is proposing to allow the utilities to generate the residential incremental credits on behalf of their EV-owning customers. If utilities opt not to retire RECs to generate incremental credits, that opportunity would be available to the Incremental Aggregator.</li> <li>The role of the Incremental Aggregator will mimic that of the existing Backstop Aggregator for the base credits with the addition of an equity advisory committee that DEQ will convene to assist in developing criteria to ensure that the revenue from the incremental credits will be focused on projects that prioritize underserved communities and those that are most vulnerable to the impacts of climate change. The equity advisory committee will also assist DEQ in developing the annual work plan of projects and evaluating the utility annual reports.</li> </ul>	
Addit	ional Credit Generation Opportunities	
Allow for advance crediting for certain fleets	DEQ is proposing to allow fleets to "advance credits" to be paid back over a specified period of time. These credits that will be generated in future quarters and paid back against the up-front allocation until the entire amount is made up. In order to mitigate risks, DEQ is proposing to limit this advance crediting provision to transit agencies, school districts, public fleets and fleets that are contracted by those entities. Fleets will have to submit an application to DEQ to request a number of credits to be advanced, supported by information that will estimate the number of miles driven, the duty cycle, the electricity consumed, etc. DEQ and the applicant will negotiate the terms of the advance including the number of years' worth of credits that will be advanced, the payback period, and what happens if the terms are violated. If the number of credits advanced are not paid back by the end of the payback period, the applicant will have to retire additional credits to repay the remaining number of credits that were advanced.	
	Miscellaneous Provisions	
Increase the frequency of	DEQ is proposing to allow DEQ to issue residential EV credits at least twice per year. DEQ expects to receive EV registration data from DMV in early March for the second half of the previous	

Proposed Rule	Discussion	
residential EV crediting	calendar year and in early September for the first half of the current calendar year. DEQ could issue the residential credits in later March and later September. This would apply to both base and incremental residential credits.	
Reporting requirements for electric utilities	DEQ is proposing to require utilities to report to DEQ annually. For base credits, the report should describe how the revenue was spent. This report for the investor-owned utilities should be consistent with the guiding principles contained in UM 1826, under the authority of the Oregon Public Utility Commission. For incremental credits, the report should provide additional detail about how the revenue was spent in alignment with guiding principles developed by DEQ and an equity advisory committee.	

### **Regulated and Impacted Businesses**

The regulated parties of the CFP are Oregon producers of transportation fuels and importers of gasoline, diesel, ethanol, biodiesel, and renewable diesel. In addition, providers of electricity, natural gas, propane, and hydrogen can elect to participate in order to generate credits, which importers of gasoline and diesel may purchase to meet their compliance obligations. There are approximately 200 businesses that are registered to participate in the CFP.

For this rulemaking, since the scope is limited to the electricity provisions of the regulation, there are approximately 50 businesses that might be directly impacted. Those businesses include owners of EV chargers, electric utilities, forklift fleets, transit agencies, and local governments.

# **Statement of Need**

Proposed Rule or Topic	Discussion		
Add new energy economy ratios			
What need would the proposed rule address?	CFP strives to comprehensively account for the many ways in which the CI of transportation fuels can be lowered.		
How would the proposed rule address the need?	EERs are used to compare alternative vehicle fuel technologies to their gasoline or diesel counterparts and are the way credits are equitably generated in the CFP. The proposal would add EERs for two new engine types.		
How will DEQ know the rule addressed the need?	DEQ will monitor the reports submitted to see how many vehicles took advantage of these EERs.		
Delegate authority to DEQ to approve new energy economy ratios			
What need would the proposed rule address?	CFP strives to allow for more flexibility within the program to more quickly and easily accommodate crediting of new ways in which the market is decarbonizing.		
How would the proposed rule address the need?	The current regulation requires that new EERs be adopted by the EQC through rulemaking and the proposal would speed up the time that new EERs can be utilized to generate credits in CFP.		
How will DEQ know the rule addressed the need?	DEQ will monitor and approve the applications for EER-adjusted CIs.		
Allow new forklifts to gene	erate displacement credits		
What need would the proposed rule address?	CFP would like to further incentivize electric forklifts.		
How would the proposed rule address the need?	The granting of displacement credits would provide additional value to the more energy efficient alternative fuel vehicle relative to a less-efficient gasoline or diesel vehicle.		

Proposed Rule or Topic	Discussion	
How will DEQ know the rule addressed the need?	DEQ will monitor the registration of new forklifts.	
Update the methodology to calcu electricity	late the carbon intensity of	
What need would the proposed rule address?	CFP strives to better capture contemporaneous changes in the electricity sector to calculate its carbon intensity. The current CFP calculates the carbon intensity of electricity as a transportation fuel using data collected by DEQ's Greenhouse Gas Reporting Program using the most recently-available 5-year rolling average of electricity consumed in Oregon.	
How would the proposed rule address the need?	The proposal would update the way the CI of the statewide mix is calculated to make it more accurate and contemporaneous.	
How will DEQ know the rule addressed the need?	DEQ will monitor the sources of electricity generation provided to Oregon.	
Allow for the retirement of renewa	able electricity credits to claim	
What need would the proposed rule address?	The CFP wants to expand the use of zero carbon electricity to charge electric vehicles. The current regulation only allows zero carbon electricity to be claimed if the renewable source is connected directly to an EV charger behind the meter.	
How would the proposed rule address the need?	The retirement of RECs creates incremental credits which represent the difference in the statewide grid mix or utility-specific CI and the zero carbon claim. This differs from the base credits which represent the difference between the gasoline or diesel standard and the carbon intensity of the statewide electric grid mix or utility-specific mix. This proposal allows for additional ways entities can acquire zero-emission electricity to attribute to their EV charging.	

Proposed Rule or Topic	Discussion	
How will DEQ know the rule addressed the need?	DEQ will monitor the retirement of RECs used and the generation of incremental credits.	
Establish parties eligible to	generate incremental credits	
What need would the proposed rule address?	The generation of incremental credits will significantly increase the value of investing in transportation electrification in Oregon.	
How would the proposed rule address the need?	The proposal will designate specific parties that will be allowed to generate the incremental credits through the retirement of RECs.	
How will DEQ know the rule addressed the need?	DEQ will monitor the retirement of RECs used and the generation of incremental credits. DEQ will also oversee the Incremental Aggregator.	
Allow for advance cree	diting for certain fleets	
What need would the proposed rule address?	CFP strives to offer effective incentives upfront to defray capital costs. The current regulation allows for credit generation as quarterly reports on the amount of electricity dispensed are submitted to DEQ. This method takes a long time to accrue the value of the investment.	
How would the proposed rule address the need?	The proposal would speed up credit generation for fleet vehicles owned by certain established entities by advancing credits for a long period of time and move those credits to be allocated at the beginning of an electric vehicle's service.	
How will DEQ know the rule addressed the need?	DEQ will approve applications from fleets that wish to participate in this provision and monitor the amount of credits advanced and paid back.	
Increase the Frequency of Residential Electric Vehicle Crediting		
What need would the proposed rule address?	The current regulation allows DEQ to issue residential EV credits to utilities and the Backstop Aggregator once per year for the	

Proposed Rule or Topic	Discussion
	previous calendar year. More frequent credit generation could increase market liquidity.
How would the proposed rule address the need?	The proposal would allow for residential credit generation at least twice per year.
How will DEQ know the rule addressed the need?	DEQ will issue the credits semi-annually and monitor the credit market.
Reporting Requiremen	nts for Electric Utilities
What need would the proposed rule address?	The current regulation does not have any reporting requirements for electric utilities so DEQ does not know how they are using the revenue they receive from the sale of residential credits.
How would the proposed rule address the need?	The proposal would require electric utilities to submit reports about how they spent the revenue from the sale of residential credits.
How will DEQ know the rule addressed the need?	DEQ will receive the electric utility reports annually.

# Rules Affected, Authorities, Supporting Documents

#### Lead division

Office of Greenhouse Gas Programs

#### **Program or activity**

Oregon Clean Fuels Program

#### **Chapter 340 action**

Adopt OAR				
340-253-0460	340-253-1100			
Amend OAR				
340-253-0040	340-253-0060	340-253-0100	340-253-0330	340-253-0400
340-253-0450	340-25-0470	340-253-0600	340-253-0640	340-253-1000
340-253-1010	340-253-1020	340-253-1055	340-253-8010	

Statutory Authority - ORS			
468.020	468A.266	468A.277	

Statutes Implemented - ORS		
468.020 468A.265 through 2'		

#### Legislation

House Bill 2186 (2009), Senate Bill 324 (2015), House Bill 2017-A (2017)

### Documents relied on for rulemaking

Document title	Document location
CFP Electricity 2021 Rulemaking materials, Sept. through Dec. 2020	https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcfpe2021.aspx
2018 Amendments to the California Low Carbon Fuel Standards	https://www.arb.ca.gov/regact/2018/lcfs18/lcfs18.htm

# Fee Analysis

This rulemaking does not involve fees.

# Statement of Fiscal and Economic Impact

The Oregon Clean Fuels Program is a technology-neutral, market-based regulatory program to reduce carbon pollution from transportation fuels and promote the commercialization and deployment of innovative low-carbon fuels. The program allows for many strategies to be employed for meeting the clean fuel standards, giving each regulated party the flexibility to consider its particular circumstance, perspective and business needs when devising its own strategy to meet the standard. This also provides maximum compliance flexibility, which helps to manage and contain the costs of compliance.

#### Fiscal impact of the proposed rules

The scope of this fiscal and economic impact statement is limited to the impact of the proposed rule changes contained in this rulemaking; it does not re-assess the existing CFP in its entirety. Overall, the proposals contained in this rulemaking will result in the generation of more credits and therefore may lower the program's overall cost of compliance to regulated parties, applying the basic economic principle of supply and demand.

Proposed Rule	Fiscal and economic impact	
Enco	uraging New Types of Electric Vehicles	
Add new energy economy ratios	This proposal will have a positive fiscal and economic impact to fleets that will be able to generate credits from the deployment of these EVs. There is no way for DEQ to anticipate the number of EVs that will take advantage of this proposal, but fleets with electric cargo handling equipment and electric ocean-going vessel shorepower will benefit from this provision.	
Delegate authority to DEQ to approve new EERs		
Allow new forklifts to generate displacement credits	This proposal will have a positive fiscal and economic impact to electric forklift owners and operators as the number of credits they	

Proposed Rule	Fiscal and economic impact		
Adjustm	Adjustments to the Carbon Intensity of Electricity		
Update the methodology to calculate the CI of electricity	This proposal will result in an increase in the statewide CI which will slightly decrease the amount of base credits generated per unit of fuel used and could therefore cause a negative fiscal impact on regulated parties (but which is more than offset of the increase in credits that are anticipated to be generated under the other changes in this rulemaking).		
Allow for the retirement of RECs to claim zero carbon electricity	This proposal will have a significant positive fiscal and economic benefit to those who can retire RECs to generate incremental credits due to the large increase in credit generation, along with renewable electricity generators that produce RECs along with their power. There is a cost to the acquisition and management of RECs in this provision, but that cost is offset by the revenue from selling incremental credits resulting in a net benefit to the credit generator.		
Establish parties eligible to generate incremental credits	This proposal will have a significant positive fiscal and economic benefit to the parties eligible to generate the incremental credits – EV charger owners, transit agencies, forklift owners and operators, utilities, and the Incremental Aggregator.		
Addit	tional Credit Generation Opportunities		
Allow for advance crediting for certain fleets	This proposal will have slight positive fiscal and economic benefit to the fleets that participate in this provision. The impact is slight since the advancing of credits effectively is a loan rather than granting extra credits; and that loan helps quicken the fuel cost and operations and maintenance benefits realized from switching from a petroleum fuel to electricity. As envisioned, the advancing of credits is intended to incentivize additional purchases of EVs and a quicker conversion of an entire fleet.		
	Miscellaneous Provisions		
Increase the frequency of residential EV crediting	This proposal does not have a significant fiscal and economic impact. Approximately the same number of credits will be generated, but on a more frequent cycle; and the revenue from the sale of those credits will not significantly differ. This proposal may provide additional liquidity to the clean fuels market as the number of electricity credits that are generated in the future increases but this will not be significant in the near term.		

Proposed Rule	Fiscal and economic impact	
Reporting requirements for electric utilities	This proposal has a minor fiscal and economic impact to the utilities as these are new reporting requirements. DEQ intends to work with the utilities and the Oregon Public Utility Commission to streamline the report content and submittal date to minimize the amount of resources needed by stakeholders who are interested in this information.	

#### **Statement of Cost of Compliance**

#### **Oregon Department of Environmental Quality**

For DEQ, implementing these proposals will require several new processes but they can all be accomplished with existing resources. DEQ believes that its existing reporting tool can accommodate many of the additional data requirements and that some minor manual adjustments might be needed for everything else. Most significantly, the establishment of the equity advisory committee and the Incremental Aggregator will require significant resources in the initial years and should decrease in future years.

#### Other state agencies and local governments

Many other state agencies and local governments are generators of credits since they own EVs and chargers. Changes to the CI of electricity will affect the number of base credits generated. They will also have the option of generating the incremental credits for those chargers. Additionally, the advance crediting provision are available to these public entities which might be a strong incentive to advance fleet electrification goals. Many cities are also electric utilities and they will be subject to the additional reporting requirement.

#### **Public**

The fiscal and economic impact to the general public should be negligible in that no additional costs are anticipated. In fact, the public will benefit from lower air pollution wherever EVs replace dirtier vehicles. The members of the public that are EV owners will likely see an increase in charging infrastructure and incentives that benefit the EV ecosystem broadly as credit generators reinvest their credit revenue.

#### Large businesses - businesses with more than 50 employees

Currently, approximately 200 entities are registered to participate in the Clean Fuels Program and approximately 50 of those entities are registered as credit generators and provide electricity as a transportation fuel. These credit generators are a combination of large and small businesses. The large businesses, approximately 45, are a mix of private EV charging companies, electric utilities, and local governments. As generators of electricity credits, large businesses will benefit from these proposed rules due to the potential to generate even more credits. The large businesses that are regulated parties in the CFP are likely to see either no fiscal impact, or a positive fiscal impact, as this rulemaking is anticipated to allow for an increase in credit generation, which should decrease the cost of compliance.

#### Small businesses - businesses with 50 or fewer employees

#### ORS 183.336 Cost of Compliance Effect on Small Businesses

# a. Estimated number of small businesses and types of businesses and industries with small businesses subject to proposed rule.

Approximately five small businesses are affected by these proposed rules. The small businesses are primarily companies that are registered as aggregators to assist larger companies in reporting data and managing credit transactions.

# b. Projected reporting, recordkeeping and other administrative activities, including costs of professional services, required for small businesses to comply with the proposed rule.

There is minimal additional reporting, recordkeeping and other administrative activities that are associated with these proposed changes that will affect the small businesses who will be impacted, and those costs are offset by the revenue those businesses are likely to receive from the additional credit generation that these proposed changes likely will facilitate.

# c. Projected equipment, supplies, labor and increased administration required for small businesses to comply with the proposed rule.

There is minimal additional equipment, supplies, labor and increased administration for the small businesses that will be impacted by these proposed changes and those costs are offset by the revenue from the additional credit generation that these proposed changes likely will facilitate.

# d. Describe how DEQ involved small businesses in developing this proposed rule.

Several of the registered small businesses participated in the rulemaking advisory committee (RAC) meetings and one was appointed to the RAC.

#### Documents relied on for fiscal and economic impact

Document title	Document location
List of CFP registered parties	DEQ 700 NE Multnomah Portland OR 97232
CFP Scenario Tool	https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/cfpe2021scenariotool.xlsx
Clean Fuels Program Electricity 2021 Rulemaking web page	https://www.oregon.gov/deq/Regulations/rulema king/Pages/rcfpe2021.aspx

#### Advisory committee fiscal review

DEQ appointed the CFP Electricity 2021 Rulemaking Advisory Committee to provide input on the proposed rules and for input on the fiscal and economic impact statement. As ORS 183.33 requires, DEQ asked for the committee's recommendations on:

- Whether the proposed rules would have a fiscal impact,
- The extent of the impact, and
- Whether the proposed rules would have a significant adverse impact on small businesses; if so, then how DEQ can comply with ORS 183.540 reduce that impact.

The committee reviewed the draft fiscal and economic impact statement and its findings are stated in the meeting summary dated Dec. 1, 2020.

The committee did not determine that the proposed rules would have a significant adverse impact on small businesses in Oregon.

# Federal Relationship

#### Relationship to federal requirements

ORS 183.332, 468A.327 and OAR 340-011-0029 require DEQ to attempt to adopt rules that correspond with existing equivalent federal laws and rules unless there are reasons not to do so.

The proposed rules are "in addition to federal requirements" since there are no federal regulations that require the reduction in the average lifecycle content of greenhouse gases in transportation fuels. The proposed rules protect the environment and residents of Oregon by reducing greenhouse gas emissions.

#### What alternatives did DEQ consider if any?

In designing the Clean Fuels Program, DEQ considered many alternatives contained in the proposed rule. Input from advisory committees in 2010, 2012, 2014, 2015, 2016, 2017, 2018, and 2020 and extensive outreach with affected stakeholders throughout the process informed the design of the Oregon Clean Fuels Program. Documentation is in the rulemaking record.

#### **Land Use**

#### Land-use considerations

In adopting new or amended rules, ORS 197.180 and OAR 340-018-0070 require DEQ to determine whether the proposed rules significantly affect land use. If so, DEQ must explain how the proposed rules comply with statewide land-use planning goals and local acknowledged comprehensive plans.

Under OAR 660-030-0005 and OAR 340 Division 18, DEQ considers that rules affect land use if:

- The statewide land use planning goals specifically refer to the rule or program, or
- The rule or program is reasonably expected to have significant effects on:
  - o Resources, objectives or areas identified in the statewide planning goals, or
  - o Present or future land uses identified in acknowledged comprehensive plans

To determine whether the proposed rules involve programs or actions that affect land use, DEQ reviewed its Statewide Agency Coordination plan, which describes the DEQ programs that have been determined to significantly affect land use. DEQ considers that its programs specifically relate to the following statewide goals:

#### Goal Title

5 Open Spaces, Scenic and Historic Areas, and Natural Resources

6 Air, Water and Land Resources Quality

9 Ocean Resources

11 Public Facilities and Services

16 Estuarial Resources

Statewide goals also specifically reference the following DEQ programs:

- Nonpoint source discharge water quality program Goal 16
- Water quality and sewage disposal systems Goal 16
- Water quality permits and oil spill regulations Goal 19

#### **Determination**

DEQ determined that these proposed rules are not expected to significantly affect land use under OAR 660-030-005 because the proposed amendments are not reasonably expected to have significant effects on either: (a) resources, objectives or areas identified in the statewide planning goals; or (b) present or future land uses identified in acknowledged comprehensive plans.

# **EQC Prior Involvement**

DEQ shares general rulemaking information with EQC through the monthly Director's Report. DEQ did not present additional information specific to this proposed rule revision.

# **Advisory Committee**

#### **Background**

DEQ convened the CFP Electricity 2021 Rulemaking Advisory Committee. The committee included representatives from entities involved in providing electricity as a transportation fuel. The committee met six times. The committee's web page is located at: <a href="https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcfpe2021.aspx">https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcfpe2021.aspx</a>.

The committee members were:

Rulemaking Name Advisory Committee		
Name	Representing	
Greg Alderson	Portland General Electric	
Eva DeCesaro	PacifiCorp	
Danelle Romain	Oregon Public Utility District Association	
Stu Green	City of Ashland	
Victoria Paykar	Climate Solutions	
Jana Gastellum	Oregon Environmental Council	
Annabel Drayton	Northwest Energy Coalition	
Mike Goetz	Citizens Utility Board	
John Thornton	CleanFuture Inc.	
Rhett Lawrence	Forth	
David Breen	Port of Portland	
Evan Neyland	ChargePoint	
Erick Karlen	Greenlots	
Tiffany Roberts	Western States Petroleum Association	
Andrew Dick	Electrify America	
Michael Graham	Columbia Willamette Clean Cities Coalition	
Thad Kurowski	Tesla	

#### **Meeting notifications**

To notify people about the advisory committee's activities, DEQ sent a GovDelivery bulletin, a free e-mail subscription service, to the Oregon Clean Fuels subscribers to describe how to participate in the advisory committee process.

#### **Committee discussions**

In addition to the recommendations described under the Statement of Fiscal and Economic Impact section above, the committee was asked to discuss and provide input on ways to advance credit generation and aggregation for electricity.

# **Public Engagement**

#### **Public notice**

DEQ provided notice of the proposed rulemaking and rulemaking hearing by:

- On Dec. 22, 2020, filing notice with the Oregon Secretary of State for publication in the January 2021 Oregon Bulletin;
- Posting the Notice, Invitation to Comment and Draft Rules on the web page for this rulemaking, located at:
  - https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcfpe2021.aspx;
- Emailing approximately 18,657 interested parties on the following DEQ lists through GovDelivery:
  - o Rulemaking
  - o DEO Public Notices
  - o Oregon Clean Fuels Program
- Emailing the following key legislators required under ORS 183.335:
  - o Representative Karin Power
  - o House Speaker Tina Kotek
  - o Senator Jeff Golden
  - o Senate President Peter Courtney
- Emailing advisory committee members,
- Posting on the DEQ event calendar: DEQ Calendar

DEQ asked for public comment on the proposed rules. A person could submit comments:

- Through email at: <u>CFPE2021@deq.state.or.us</u>
- By regular mail at:

Oregon DEQ

Attn: Cory-Ann Wind

700 NE Multnomah St., Room 600

Portland, OR 97232-4100

• At a public hearing via webinar on Jan 28, 2021 at 1:30 p.m.

All comments were received by 4 p.m., on Jan. 29, 2021.

# **Public Hearing**

DEQ held one public hearing on Jan. 28, 2021. DEQ received six comments at the hearing. A summary of those comments are provided below along with DEQ's responses.

#### **Presiding Officers' Record**

Date	Jan. 28, 2021	
Place	Webinar	
Start Time	1:30 p.m.	
End Time	2:14 p.m.	
Presiding Officer	Cory-Ann Wind, Oregon Clean Fuels Program Manager	

The presiding officer convened the hearing, summarized the procedures for the hearing, and asked participants if anyone wanted to present verbal comments. 31 people attended the hearing via webinar and six commented verbally.

# **Summary of Public Comments and DEQ Responses**

DEQ accepted public comment on the proposed rulemaking from Dec. 22, 2020, until 4 p.m. on Jan. 29, 2021. Verbal comments were transcribed and are on file with DEQ and the table below provides a summary.

Name Representing		Summary of Comments
Greg Alderson	Portland General Electric	Proposed changes create a significant opportunity to advance electrification by addressing cost barriers for vehicles and infrastructure. Appreciate the change for RECs to come from across the western grid. Support allowing utilities to generate residential incremental credits. PGE will partner with PacifiCorp to dedicate at least half of the funds from the sale of residential incremental credits towards underserved transportation electrification needs. Avoid duplication with PUC's process of stakeholder engagement. Support advanced crediting and recommends implementation that provides predictability for applicants.
Victoria Paykar	Climate Solutions	Please reverse the decision to have Equity Advisory Committee members serve as volunteers and not be compensated for their service on the committee.
Jana Gastellum  Oregon Environmental Council  the benefits of CFP. Appreciate of new sectors, updates to CIs, inclusion opportunity for advanced credits, align the Equity Advisory Comments.		Appreciate the rulemaking process and pleased with the benefits of CFP. Appreciate expanding credits to new sectors, updates to CIs, inclusion of RECs, opportunity for advanced credits. Need to better align the Equity Advisory Committee and utility processes.
Mike Goetz  Citizens Utility Board  Citizens Utility Board  Supportive of the chan the addition of RECs to electricity. RECs from additionality. Please at RPS or Clean Energy Equity Advisory Comrole in recommending		There's an urgent need to decarbonize ports. Are supportive of the changes to the CI of electricity and the addition of RECs to claim zero carbon electricity. RECs from 2015 or newer helps with additionality. Please avoid double counting with RPS or Clean Energy Standards and CFP. The Equity Advisory Committee should have an active role in recommending dis/approval of programs and that they should be compensated.
Rhett Lawrence Forth		Thinks that the advisory process was beneficial and landed in a good place with the rules. Would have preferred an "aggregator first" model for incremental credits but appreciate PGE and Pacific Power proposing to dedicate 50% of their credits

		towards equity-focused programs. Also disappointed in the Equity Advisory Committee language about the lack of compensation. Also would have supported an opportunity for automakers to claim incremental credits.
Jamie Hall	General Motors	Establishing the Equity Advisory Committee is a good idea and automakers are natural stakeholders in this process. Incremental and advanced crediting revisions are innovative pieces that will accelerate electrification.

The table below contains the names and organizations they are affiliated with for those who submitted written comments about the proposed rules by the deadline.

	List of Commenters with Comment Number			
ID	Name	Affiliation	Comment #	
1	Holly Hansen		1	
2	John		2	
3	Bill and Karen		3	
	Farmer			
4	Todd Fox		4	
5	Todd Trauman	e-Mission Control	5	
6	Ashley Beaty	BTR Energy	6,40	
7	Chris Kroeker	Northwest Natural	7	
8	Tiffany	Western States Petroleum	8,67	
	Roberts	Association		
9	Victoria	Climate Solutions	9, 10	
	Paykar			
10	Rob Currier	Emerald PUD	11,12,13,14,15,16,17,18,56	
11	Ira Dassa	Airlines for America	19	
12	Elise Miller	ACT Commodities	12,20,21,22,23	
13	Todd Jones	Center for Resource Solutions	24	
14	Annabel	Northwest Energy Coalition	9,10,12,25,26,27	
	Drayton			
15	Tim	Oak Lea Dairy	28	
	Bielenberg			
16	Josh Newman	City of Portland	28	
17	Greg Alderson	Portland General Electric	27,29,30,31,60,61,63,66	
18	Maya Kelty	3Degrees	21,32,33,34,35,36	
19	John Thornton	CleanFuture	28	
20	Rhett	Forth	9,26,37,38,39,40,55	
	Lawrence			
21	Evan Neyland	ChargePoint	12,32,41,42,43,44,45,46,47	
22	Julie Witcover	UC Davis	48,49,50,51,52	

23	George	American Biogas Council	28
	Davidson		
24	Jennifer Joly	Oregon Municipal Electric	12,41,53
		Utilities	
25	Jana	Oregon Environmental Council	9,10,12,26,32,33,45,47,49,54,55,
	Gastellum		56
26	Eva DeCesaro	PacifiCorp	34,38,54,55,56,57,58,59,60,61,62
			,63
27	Brandon Price	Maas Energy Works	28,43
28	Thad	Tesla	6,64
	Kurowski		
29	Evan	SRECTrade	31,43
	Rosenberg		
30	Michael	Columbia Willamette Clean	31,43,62
	Graham	Cities Coalition	
31	Martina	Renewable Hydrogen Alliance	7,65
	Steinkusz		
32	Brandon Price	Farm Power	28,43

The table below contains a summary of the comments, divided by categories, and responses from DEQ. Original written comments are posted on the rulemaking web page.

List of Comments with DEQ Responses				
Comment #	Comment Category	Comment	Response	
25		DEQ should monitor and report on the use of RECs.	DEQ requires all of its programs to monitor the implementation of adopted rules for improvements, unintended outcomes, and general workability.	
40	General	DEQ should periodically review if additional credit generators would better support the goals of the CFP.	DEQ requires all of its programs to monitor the implementation of adopted rules for improvements, unintended outcomes, and general workability.	
42	Ger	DEQ should encourage further research into smart charging.	Thank you for your comment. DEQ believes that smart charging will be increasingly important in tracking the amount of electricity dispensed from EV chargers and will be following the evolution and adoption of this technology.	
51		DEQ should consider how new	DEQ requires all of its programs to monitor the implementation of adopted	

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
		EV data can inform methodology for unmetered residential EV credits.	rules for improvements, unintended outcomes, and general workability.	
52		DEQ should consider review of revenue expenditures to inform future program design.	DEQ requires all of its programs to monitor the implementation of adopted rules for improvements, unintended outcomes, and general workability.	
64		DEQ should monitor and report on the impact of advance crediting.	DEQ requires all of its programs to monitor the implementation of adopted rules for improvements, unintended outcomes, and general workability.	
65		Recommend including a capacity crediting provision.	Capacity credits are not allowed in the Clean Fuels Program as credits must represent actual greenhouse gas reductions against the standard under ORS 468A.265(4).	
67		Request for comprehensive fiscal analysis of proposed changes.	DEQ is required to conduct a fiscal analysis for the changes are contained in the rulemaking; not a comprehensive fiscal analysis of the entire program.	
5	ration	For forklifts and TRUs, the fleet operator should be first in line to generate the credits.	Fleet owners and operators are treated equally in the rules; there is no preference given to fleet owners over operators. In implementation, the first entity that registers will generate the credits but that can be changed at a later date if there is a contractual change.	
17	Credit Generation	DEQ should consider developing a standard, minimum credit transaction agreement.	DEQ does not have such an agreement but suggests looking on the internet for publicly-available examples such as the LEAP master agreement for purchasing and selling low carbon fuel standard credits.	
34		Supports granting of displacement credits for newer forklifts.	Thank you for your comment. DEQ believes that granting displacement credits to newer forklifts will provide	

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
			important incentives to further electrify these vehicles.	
44		DEQ should clarify that EV charging station service providers can generate incremental credits.	Thank you for your comment. The proposed rules clarify that whoever is registered to generate the base credits for non-residential charging is eligible to generate the incremental credits as well, whether it be the charger owner or service provider.	
12		Support change from 5-year rolling average to single year value for electricity CI.	Thank you for your comment. DEQ believes that this methodology will produce the most accurate accounting of carbon intensity of electricity used as a transportation fuel with the data available.	
41		Support removal of utility-specific CIs from the statewide average.	Thank you for your comment. DEQ believes that this methodology will produce the most accurate accounting of carbon intensity of electricity used as a transportation fuel with the data available.	
50	rbon Intensity	DEQ should consider including a definition for "major fossil fuel generator".	DEQ has replaced "major fossil fuel generator" with the Boardman coal-fired power plant to eliminate this term.	
57	Carbo	Recommend switching from 5- year rolling average to 2 or 3-year average for electricity CI.	DEQ believes that switching to a single year value will produce the most accurate accounting of carbon intensity of electricity used as a transportation fuel with the data available. A number of changes to the grid will occur over the next decade, and a single-year value will best capture the rate of that change.	
58		Supports removing the utility-specific load from the statewide average only if in tandem with designating the utility to generate	DEQ is proposing to remove the utility- specific load from the statewide average and designating the utility as first in line to generate the incremental residential credits.	

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
		the incremental credits.		
59		Support replacing the closed Boardman coal-fired plant with the value used for an unspecified market power purchase.	Thank you for your comment. DEQ believes that the closed Boardman coalfired plant should be replaced with the value used for an unspecified market power purchase in the Greenhouse Gas Reporting Program. It is also incorporating by reference the definition used for unspecified market power from that program's rules.	
19	(0	Consider ground service equipment as cargo handling equipment until a specific EER for gse is established.	DEQ believes that ground service equipment does not meet the criteria to be considered in the cargo handling equipment category based on the vehicles in the datasets used to establish that EER. If new data emerges, fleets can apply for a new EER through the new provision to do so.	
33	Energy Economy Ratios	Supports addition of EERs for ocean- going vessels and cargo handling equipment.	Thank you for your comment. DEQ believes that the establishment of these EER categories will provide important incentives to electrify these vehicles and have ocean-going vessels switch to grid power while they are at berth.	
48	Energy E	DEQ should consider seasonal variabilities when establishing requirements for new EERs.	DEQ will consider this when implementing this new provision.	
54		Support process for new EERs between rulemakings.	Thank you for your comment. DEQ believes this new provision will allow fleets to generate credits sooner and provide additional incentives to electrify.	
28	Biogas- derived Electricit y	1) establish in- service dates for biogas generators from 2000; 2) do not	DEQ has not proposed an explicit energy efficiency standard for renewable natural gas to electricity projects in the proposed rules. DEQ	

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
		establish an unachievable efficiency standard.	appreciates the comments and will consider them as this provision is implemented.	
35		DEQ should harmonize the treatment of biogas- derived electricity projects and renewable natural gas used as a transportation fuel.	DEQ believes there is good cause to distinguish between renewable natural gas projects that inject methane into pipelines or directly fuel vehicles versus those that generate electricity. Biogas to electricity projects have been around for decades, are well understood, and DEQ's purpose in this rulemaking is to incent new and additional supplies of renewable electricity onto the grid to meet electric vehicle demand. It is not the intent of the program to support legacy generators whose contribution to the electric grid is reflected in the statewide averages.	
10	ergy Certificates (RECs)	Recommend that RECs must be delivered to a balancing authority that has a footprint in Oregon.	DEQ believes that allowing the sourcing of RECs from the western electric grid (WECC) will ensure a broader source of RECs into the future as demand for them expands as the adoption of electric vehicles accelerates. This also aligns more closely with the utility voluntary renewable programs. This streamlined approach will make implementation of this new provision clearer for registered parties to claim the incremental credits versus the more detailed process that would be needed for to implement a balancing authority-specific approach.	
13	Renewable Energy Certifi	REC eligibility should match utility green power pricing programs in the RPS.	DEQ believes that strict alignment with RPS would be inappropriate because that program allows RECs to be used that are generated by energy sources that could not be used by transportation, such as for thermal applications.	
16		OAR 340-253- 0470(5)(a) should be consistent with	DEQ believes that strict alignment with RPS would be inappropriate because that program allows RECs to be used that are generated by energy sources	

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
		Oregon RPS standards.	that could not be used by tranportation, such as for thermal applications.	
20		Does not support the place-in-service date nor the Green-e certification requirements for RECs.	Please see the responses to Comments #35 and #43.	
24		Several suggested changes or clarifications to OAR 340-253-0040(60); OAR 340-253-0470(5); OAR 340-253-0470(7); OAR 340-253-0640(2); and OAR 340-253-1020(4).	DEQ will incorporate these changes into the proposed rules to ensure alignment with the Green-e requirements.	
29		DEQ should ensure consistent documentation for RECs throughout program.	DEQ has clarified the proposed rules to ensure consistent documentation associated with RECs.	
30		Supports WECC-sourced RECs.	Thank you for your comment. DEQ believes that allowing the sourcing of RECs from the western electric grid (WECC) will ensure a broader source of RECs into the future as demand for them expands as the adoption of electric vehicles accelerates. This also aligns more closely with the utility voluntary renewable programs. This streamlined approach will make implementation of this new provision clearer for registered parties to claim the incremental credits versus the more detailed process that would be needed for to implement a balancing authority-specific approach.	
32		Supports RECs to account for use of	Thank you for your comment. DEQ believes that the retirement of RECs will provide the Clean Fuels Program	

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
		renewable electricity.	with a transparent process to document additional credit generation from the use of zero carbon electricity.	
36		DEQ should not allow RECs associated with power associated that has been or will be imported to California as specified power.	DEQ acknowledges that documenting this scenario is difficult but will work towards avoiding double-counting as it implements this provision.	
43		Do not support the requirements for RECs to be Green-e certified.	DEQ believes that the requirement for Green-e certification of RECs used for the Clean Fuels Program is appropriate and in line with the third party verification requirements adopted by the EQC last year. Requiring the certification will help DEQ ensure that RECs used for the Clean Fuels Program embody the full environmental attributes of the renewable electricity and that the emissions reduction benefits are not double-counted.	
49		DEQ should consider the potential for "more than single" counting of RECs.	DEQ will consider this and work to avoid double-counting as it implements this new provision.	
60		DEQ should confirm that use of RECs is confined to the Clean Fuels Program and not the Greenhouse Gas Reporting Program.	DEQ confirms that the proposed rules pertaining to the use of RECs is confined to the Clean Fuels Program, does not apply to the Greenhouse Gas Reporting Program, and this proposed adjustment to the former program is no indication agency staff intend any related changes to the latter program.	
61		Recommend changes to OAR 340-253- 0640(2)(d)(A).	DEQ has made these changes to the proposed rules.	

	List of Comments with DEQ Responses				
Comment #	Comment Category	Comment	Response		
6		Automakers should be first in line to generate incremental credits.	DEQ is proposing to move forward with having the same entities that generate base electricity credits be the first in line to also generate the incremental credits. DEQ believes that this streamlined approach will make implementation of this new provision clearer for registered parties to claim the incremental credits.		
14		Do not require existing registered parties to re-register to generate incremental credits.	DEQ agrees and will clarify the language to make this explicit.		
21	edits	Supports incremental crediting provisions.	Thank you for your comment. DEQ believes that these provisions will play a significant role in advancing credit generation from electric vehicles and incenting the use of zero-carbon electricity to fuel them.		
26	Incremental Credits	Supports utilities and/or a non-profit aggregator to generate incremental credits.	Thank you for your comment. DEQ believes that this streamlined approach will make implementation of this new provision clearer for registered parties to claim the incremental credits.		
39	ЗUI	If automakers were allowed to generate incremental credits, revenue could be used to benefit support transportation electrification like they do in California.	DEQ is not proposing to allow automakers to generate the incremental credits.		
55		Support a statewide incremental aggregator to generate incremental credits.	At this time, DEQ is proposing to move forward with having the same entities that generate base electricity credits be the first in line to also generate the incremental credits, along with creating an Incremental Aggregator as a backstop. DEQ believes that this streamlined approach will make		

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
			implementation of this new provision clearer for registered parties to claim the incremental credits.	
9	ttee	Equity Advisory Committee members should be reasonably resourced.	DEQ agrees that resources should be made available to entities that participate in the Equity Advisory Committee if they are needed. The Clean Fuels Program does not currently have a process to do so but will continue to investigate ways to provide compensation.	
15	Equity Advisory Committee	The Equity Advisory Committee should: be informed by the make-up of incremental credits that are generated; better define the role of rural Oregon; and not have authority to dis/approve projects.	The intent behind the creation of the Equity Advisory Committee is for its members to provide DEQ with guidance on the best ways to invest in transportation electrification programs and projects that benefit Oregon's Environmental Justice Communities. DEQ will strive to recruit members that represent those interests.	
47		Supports formation of the Equity Advisory Committee.	DEQ believes the Equity Advisory Committee will provide invaluable guidance on the best ways to invest in transportation electrification programs and projects that benefit Oregon's Environmental Justice Communities.	
7	iting	Advance crediting should also apply to hydrogen fuel cell vehicles.	Hydrogen fuel cell technology is out of scope of this rulemaking. If there is interest, this topic could be considered in the next rulemaking to expand the Clean Fuels Program.	
8	Advance Crediting	Advance crediting does not maintain fuel neutrality, is a risk to the program's integrity, and could violate state law.	DEQ believes it has developed the advance crediting provision to meet all of the statutory requirements of the Clean Fuels Program. The scope of this rulemaking is limited to electricity, but the topic of expanding this provision to other clean fuels could be considered in the next rulemaking to expand the Clean Fuels Program.	

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
11		1) Recommend that advance crediting can apply to forklifts, 2) clarify the process to grant displacement credits. 3) consder that forklifts don't need to be sub-metered.	At this time, DEQ is being cautious about overextending the advance crediting provision until it can determine the interest amongst public fleets, the number of credits that might be generated, its impact on the overall program, and the workload associated with administering it. Once this is assessed, DEQ will decide whether to make this provision available to other fleets in the upcoming rulemaking to expand the program. DEQ will be developing an implementation guidance document on granting displacement credits. Forklifts do not need to be submetered to generate credits.	
31		Recommend advance crediting to apply to private fleets.	At this time, DEQ is being cautious about overextending the advance crediting provision until it can determine the interest amongst public fleets, the number of credits that might be generated, its impact on the overall program, and the workload associated with administering it. Once this is assessed, DEQ will decide whether to make this provision available to other fleets in the upcoming rulemaking to expand the program.	
45		Support advance crediting provisions.	Thank you for your comment. DEQ believes that this advance crediting provision can be an important incentive to electrify fleets.	
46		Recommend that advance crediting can apply to public charging infrastructure.	At this time, DEQ is being cautious about overextending the advance crediting provision until it can determine the interest amongst public fleets, the number of credits that might be generated, its impact on the overall program, and the workload associated with administering it. Once this is assessed, DEQ can consider whether to make this provision available to other	

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
			fleets in the upcoming rulemaking to expand the program.	
62		DEQ should reconsider 15-year plan for public fleet conversion.	DEQ's intent to the advance crediting provision to focus on public mediumand heavy-duty fleet conversion since we believe that additional incentives are needed to proceed. DEQ also believes that sufficient incentives exist for conversion of individual or small batches of light-duty vehicles; but it might be needed for a full light-duty fleet conversion. To ensure that this is the case, DEQ included the 15 year horizon as part of the eligibility criteria but this detail can be addressed through an actual application.	
66		Recommend advance crediting to allow for a third party working with a public body to generate credits.	DEQ believes that the current proposed language does not preclude the involvement of a third party to work with an applicant. If there is such an arrangement, the applicant can state in its application that there is a third party involved.	
18	ilities	Do not support requirement to report administrative costs from utilities.	DEQ has inserted a minimum threshold for this requirement to be triggered.	
22	Requirements Specific to Utili	Supports bi-annual credit generation for utilities.	The proposal is for semi-annual credit generation, not bi-annual. DEQ believes that more frequent credit generation will help with the liquidity of the clean fuels credit market and provide additional flexibility to generate revenue to credit generators.	
23	Requireme	Supports spending requirements on revenue generated from residential charging credits.	Thank you for your comment. To clarify, DEQ is proposing to require utilities to report on how the revenue from residential credits are spent as opposed to directing the actual expenditures. DEQ believes this will	

	List of	Comments with I	DEQ Responses
Comment #	Comment Category	Comment	Response
27		DEQ should require	provide transparency to stakeholders that are interested in what investments are being made to expand transportation electrification.  Thank you for your comment. To
21		utilities reinvest all base and incremental electricity credits in transportation electrification.	clarify, DEQ is proposing to require utilities to report on how the revenue from residential credits are spent as opposed to directing the actual expenditures. DEQ believes this will provide transparency to stakeholders that are interested in what investments are being made to expand transportation electrification.
37		PGE and PacifiCorp propose to dedicate 50% of their incremental credit revenue towards transportation electrification programs that specifically benefit communities of color, communities experiencing lower incomes, tribal communities, frontier communities, frontier communities and other communities adversely harmed by environmental and health hazards.	DEQ is greatly appreciative that these utilities and stakeholders agree that these programs are an important strategy to electrifying Oregon's fleet in an equitable manner and that the proposed incremental credit provisions are a good way to secure future investments are made. This language is not included in these proposed rules as a requirement since it represents a voluntary agreement between the parties, but DEQ is committed to supporting this effort in any manner that will be helpful.
38		Recommend that the PUC processes be used to explore models for compensating organizations.	DEQ agrees that coordinating with the Oregon Public Utility Commission in transportation electrification efforts provides efficiency and transparency for stakeholders.

	List of Comments with DEQ Responses			
Comment #	Comment Category	Comment	Response	
53	<u> </u>	DEQ should clarify the timing and requirements of the annual utility report.	The annual utility report is due by April 30th for the expenditures from the previous calendar year. For example, credit revenue spent in 2021 should be reported by April 30, 2022.	
56		Support reporting of utility credit revenue.	Thank you for your comment. To clarify, DEQ is proposing to require utilities to report on how the revenue from residential credits are spent as opposed to directing the actual expenditures. DEQ believes this will provide transparency to stakeholders that are interested in what investments are being made to expand transportation electrification.	
63		Recommend harmonization with PUC reporting and stakeholder involvement processes.	DEQ agrees that coordinating with the Oregon Public Utility Commission in transportation electrification efforts provides efficiency and transparency for stakeholders.	
1		Wants clean air for those living downtown.	Thank you for your comment. Electric vehicles produce no tailpipe emissions and thus will reduce air pollution wherever they are deployed.	
2	snoe	Decisions need to be based on scientific evidence.	Thank you for your comment. DEQ has prioritized science throughout the development and implementation of the Clean Fuels Program and will continue to do so into the future.	
3	Miscellaneous	Wants 12 months not 24 months between electric cars.	Thank you for your comment. DEQ believes that this comment was intended for the Oregon Clean Vehicle Rebate Program and have forwarded it to them for their consideration.	
4		What happens to the batteries that cannot be recycled?	Thank you for your comment. DEQ is encouraged by the level of effort being put into reusing old batteries such as for storage and resiliency planning however, this topic is out of scope of this rulemaking.	

# **Implementation**

#### **Notification**

The proposed rules would become effective upon filing on approximately March 26, 2021. DEQ would notify affected parties by GovDelivery notification and by updating its web page to reflect the changes.

#### **Compliance and enforcement**

The affected parties are credit generators and aggregators registered in the Clean Fuels Program and will be notified by GovDelivery.

#### Reporting

Utilities will be required to submit annual reports regarding the expenditures of revenue from the sale of residential credits.

#### **Training**

DEQ will be providing technical assistance to affected parties to implement the many provisions of this rulemaking including: how to submit a Tier 2 pathway for a new energy economy ratio; how to retire RECs to claim zero carbon electricity; what is the incremental aggregator and the role of the CFP Equity Advisory Committee; how a utility can get their voluntary green power program approved to generate incremental credits; how a fleet (transit buses, school buses, etc.) can apply for advanced credits; etc.

## **Five-Year Review**

## Requirement

Oregon law requires DEQ to review new rules within five years after EQC adopts them. The law also exempts some rules from review. DEQ determined whether the rules described in this report are subject to the five-year review. DEQ based its analysis on the law in effect when EQC adopted these rules.

## **Exemption from five-year rule review**

The Administrative Procedures Act exempts some of the proposed rules from the five-year review because the proposed rules would:

• Amend or repeal an existing rule. ORS 183.405(4).

## Five-year rule review required

The following rules are subject to the five year review:

- 340-253-0460
- 340-253-1100

No later than March 26, 2026, DEQ will review the newly adopted rules for which ORS 183.405 (1) requires review to determine whether:

- The rule has had the intended effect
- The anticipated fiscal impact of the rule was underestimated or overestimated
- Subsequent changes in the law require that the rule be repealed or amended
- There is continued need for the rule.

DEQ will use "available information" to comply with the review requirement allowed under ORS 183.405 (2).

DEQ will provide the five-year rule review report to the advisory committee to comply with ORS 183.405 (3).

# **Accessibility Information**

You may review copies of all documents referenced in this announcement at: Oregon Department of Environmental Quality 700 NE Multnomah St., Ste. 600 Portland, OR, 97232

To schedule a review of all websites and documents referenced in this announcement, contact:

Cory-Ann Wind, Oregon Clean Fuels Program Manager Wind.cory@deq.state.or.us
700 NE Multnomah Street
Portland, OR 97232
503-229-5388

800-452-4011, ext. 5622 toll-free in Oregon

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email <u>deqinfo@deq.state.or.us</u>.

### Key to Identifying Changed Text:

Strikethrough: Deleted Text Underline: New/inserted text

# Division 253 OREGON CLEAN FUELS PROGRAM

# **340-253-0040 Definitions**

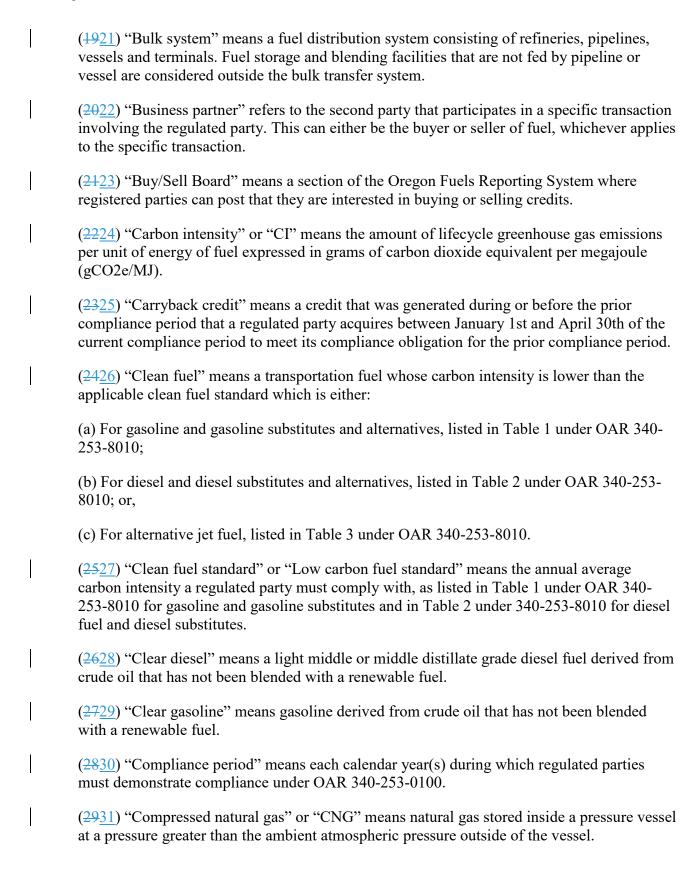
The definitions in OAR 340-200-0020, OAR 340-272-0020, and this rule apply to this division. If the same term is defined here and in either of the other two divisions, the definition in this rule applies to this division.

- (1) "Above the rack" means sales of transportation fuel at pipeline origin points, pipeline batches in transit, barge loads in transit, and at terminal tanks before the transportation fuel has been loaded into trucks.
- (2(2) "Advance Credits" refers to credits advanced under OAR 340-253-1100 for actions that will result in real reductions of the carbon intensity of Oregon's transportation fuels.
- (3) "Aggregation indicator" means an identifier for reported transactions that are a result of an aggregation or summing of more than one transaction. An entry of "True" indicates that multiple transactions have been aggregated and are reported with a single transaction number. An entry of "False" indicates that the record reports a single fuel transaction.
- (34) "Aggregator" or "Credit aggregator" means a person who registers to participate in the Clean Fuels Program, described in OAR 340-253-0100(3), on behalf of one or more credit generators to facilitate credit generation and trade credits.
- (45) "Aggregator designation form" means a DEQ-approved document that specifies that a credit generator has designated an aggregator to act on its behalf.
- (56) "Alternative Fuel Portal" or "AFP" means the portion of the Oregon Fuels Reporting System where fuel producers can register their production facilities and submit fuel pathway code applications and physical pathway demonstrations.
- (67) "Alternative Jet Fuel" means a fuel, made from petroleum or non-petroleum sources, which can be blended and used with conventional petroleum jet fuels without the need to modify aircraft engines and existing fuel distribution infrastructure. The fuel must have a lower carbon intensity than the applicable annual standard under Table 3 under OAR 340-253-8010. This includes alternative jet fuel derived from co-processed feedstocks at a conventional petroleum refinery.

LDV/MDV or HDV.

(89) "B5" means diesel fuel containing 5 percent biodiesel. (910) "Backstop aggregator" means a qualified entity approved by DEQ under OAR 340-253-0330(6) to aggregate credits for electricity used as a transportation fuel, when those credits would not otherwise be generated. (1011) "Battery electric vehicle" or "BEV" means any vehicle that operates solely by use of a battery or battery pack, or that is powered primarily through the use of an electric battery or battery pack but uses a flywheel or capacitor that stores energy produced by the electric motor or through regenerative braking to assist in vehicle operation. (11(12) "Base Credits" refers to electricity credits that are generated by the carbon reduction between the gasoline or diesel standard and the carbon intensity of grid or utility electricity. (13) "Below the rack" means sales of clear or blended gasoline or diesel fuel where the fuel is being sold as a finished fuel for use in a motor vehicle. (1214) "Bill of lading" means a document issued that lists goods being shipped and specifies the terms of their transport. (4315) "Bio-based" means a fuel produced from non-petroleum, biogenic renewable resources. (1416) "Biodiesel" means a motor vehicle fuel consisting of mono-alkyl esters of long chain fatty acids derived from vegetable oils, animal fats, or other nonpetroleum resources, not including palm oil, designated as B100 and complying with ASTM D6751. (4517) "Biodiesel Blend" means a fuel comprised of a blend of biodiesel with petroleumbased diesel fuel, designated BXX. In the abbreviation BXX, the XX represents the volume percentage of biodiesel fuel in the blend. (1618) "Biogas" means gas, consisting primarily of methane and carbon dioxide, produced by the anaerobic decomposition of organic matter. Biogas cannot be directly injected into natural gas pipelines or combusted in most natural gas-fueled vehicles unless first upgraded to biomethane. (4719) "Biomethane" or "Renewable Natural Gas" means refined biogas, or another synthetic stream of methane from renewable resources, that has been upgraded to a near-pure methane content product. Biomethane can be directly injected into natural gas pipelines or combusted in natural gas-fueled vehicles. (1820) "Blendstock" means a fuel component that is either used alone or is blended with one or more other components to produce a finished fuel used in a motor vehicle. A blendstock that is used directly as a transportation fuel in a vehicle is considered a finished fuel.

(78) "Application" means the type of vehicle where the fuel is consumed, shown as either



Attachment A: Redline rules March 25-26, 2021, EQC meeting Page 4 of 80

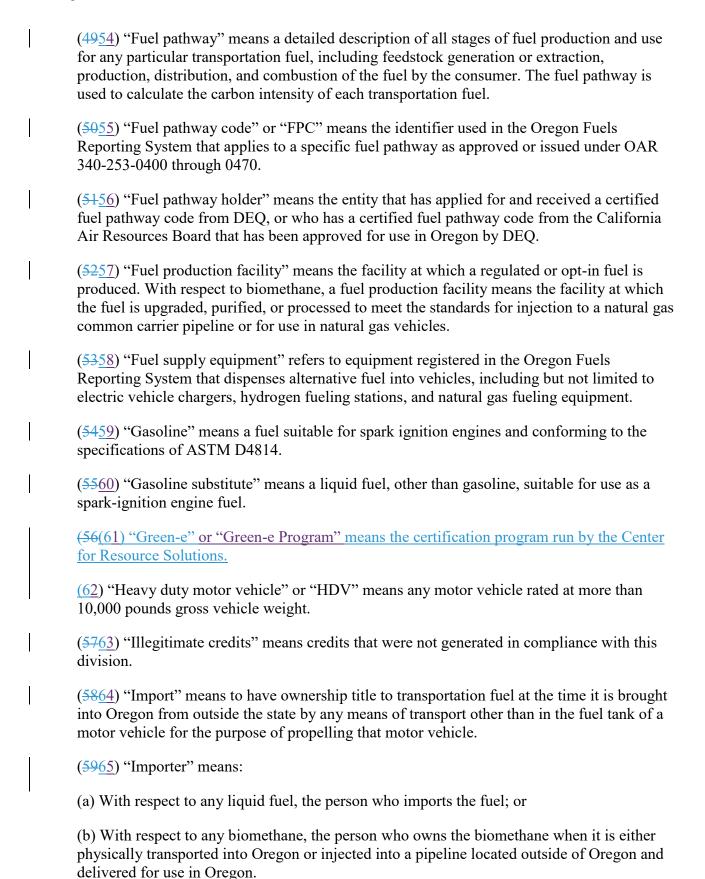
specifications of ASTM D7467.

(3032) "Co-processing" means the processing and refining of renewable or alternative lowcarbon feedstocks intermingled with crude oil and its derivatives at petroleum refineries. (3+33) "Credit" means a unit of measure generated when a fuel with a carbon intensity that is less than the applicable clean 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 not emitted as a result of the use of the fuel as compared to a fuel that precisely met the clean fuel standard. (3234) "Credit facilitator" means a person in the Oregon Fuels Reporting System that a regulated party designates to initiate and complete credit transfers on behalf of the regulated party. (3335) "Credit generator" means a person eligible to generate credits by providing clean fuels for use in Oregon and who voluntarily registers to participate in the Clean Fuels Program, described in OAR 340-253-0100(2), and specified by fuel type under OAR 340-253-0320 through 340-253-0340. (3436) "Crude oil" means any naturally occurring flammable mixture of hydrocarbons found in geologic formations. (3537) "Deferral" means a delay or change in the applicability of a scheduled applicable clean fuel standard for a period of time, accomplished pursuant to an order issued under OAR 340-253-2000 or -2100, or under ORS 468A.273 and 468A.274. (3638) "Deficit" means a unit of measure generated when a fuel with a carbon intensity that is more than the applicable clean fuel standard is produced, imported, or dispensed for use in Oregon, such that one deficit is equal to one metric ton of carbon dioxide equivalent that is emitted as a result of the use of the fuel as compared to a fuel that precisely met the clean fuel standard. (3739) "Denatured Fuel Ethanol" or "Ethanol" means nominally anhydrous ethyl alcohol meeting ASTM D 4806 standards. It is intended to be blended with gasoline for use as a fuel in a spark-ignition internal combustion engine. Before it is blended with gasoline, the denatured fuel ethanol is first made unfit for drinking by the addition of substances approved by the Alcohol and Tobacco Tax and Trade Bureau. (3840) "Diesel fuel" or "diesel" means either: (a) A light middle distillate or middle distillate fuel suitable for compression ignition engines blended with not more than 5 volume percent biodiesel and conforming to the specifications of ASTM D975 or;

(b) A light middle distillate or middle distillate fuel blended with at least 5 and not more than 20 volume percent biodiesel suitable for compression ignition engines conforming to the

- (3941) "Diesel substitute" means a liquid fuel, other than diesel fuel, suitable for use as a compression-ignition piston engine fuel.
- (4042) "Duty-cycle testing" means a test procedure used for emissions and vehicle efficiency testing.
- (43) "E10" means gasoline containing 10 volume percent fuel ethanol.
- (4144) "Energy economy ratio" or "EER" means the dimensionless value that represents:
- (a) The efficiency of a fuel as used in a powertrain as compared to a reference fuel; or
- (b) The efficiency of a fuel per passenger mile, for fixed guideway applications.
- (4245) "Electric Transport Refrigeration Units (eTRUs)" means refrigeration systems powered by electricity designed to refrigerate or heat perishable products that are transported in various containers, including semi-trailers, truck vans, shipping containers, and rail cars.
- (43(46) "Electric Service Supplier" has the same definition as in OAR 860-038-005.
- (47) "Emergency period" is the period of time in which an Emergency Action under OAR 340-253-2000 is in effect.
- (48) "Environmental Justice Community" means communities of color, communities experiencing lower incomes, tribal communities, rural communities, coastal communities, communities with limited infrastructure and other communities traditionally underrepresented in public processes and adversely harmed by environmental and health hazards, including but not limited to seniors, youth and persons with disabilities.
- (4449) "Export" means to have ownership title to transportation fuel from locations within Oregon, at the time it is delivered to locations outside Oregon by any means of transport, other than in the fuel tank of a motor vehicle for the purpose of propelling the motor vehicle.
- (4550) "Feedstock transfer document" means a document, or combination of documents, that demonstrates the delivery of specified source feedstocks from the point of origin to the fuel production facility as required under OAR 340-253-0400(7).
- (4651) "Finished fuel" means a transportation fuel that can legally be used directly in a motor vehicle without requiring additional chemical or physical processing.
- (4752) "Fixed guideway" means a public transportation facility using and occupying a separate right-of-way for the exclusive use of public transportation using rail, using a fixed catenary system, using an aerial tramway, or for a bus rapid transit system.
- (4853) "Fossil" means any naturally occurring flammable mixture of hydrocarbons found in geologic formations such as rock or strata. When used as an adjective preceding a type of fuel (e.g., "fossil gasoline," or "fossil LNG"), it means the subset of that type of fuel that is derived from a fossil source.

Attachment A: Redline rules March 25-26, 2021, EQC meeting Page 6 of 80



- (60(66) "Incremental aggregator" means a qualified entity approved by DEQ under OAR 340-253-0330(10) to earn incremental credits, when those credits would not otherwise be claimed.
- (67) "Incremental credit" means a credit that is generated by an action to further lower the carbon intensity of electricity. Incremental credits are calculated from the difference between the carbon intensity of grid electricity and the carbon intensity of renewable electricity.
- (68) "Indirect land use change" means the average lifecycle greenhouse gas emissions caused by an increase in land area used to grow crops that is caused by increased use of crop-based transportation fuels, and expressed as grams of carbon dioxide equivalent per megajoule of energy provided (gCO2e/MJ). Indirect land use change values are listed in Table 10 under OAR 340-253-8010.
- (a) Indirect land use change for fuel made from corn feedstocks is calculated using the protocol developed by the Argonne National Laboratory.
- (b) Indirect land use change for fuel made from sugarcane, sorghum, soybean, canola and palm feedstocks is calculated using the protocol developed by the California Air Resources Board.
- (6169) "Invoice" means the receipt or other record of a sale transaction, specifying the price and terms of sale, that describes an itemized list of goods shipped.
- (6270) "Large importer of finished fuels" means any person who imports into Oregon more than 500,000 gallons of finished fuels in a given calendar year.
- (6371) "Light-duty motor vehicle" or "LDV" means any motor vehicle rated at 8,500 pounds gross vehicle weight or less.
- (6472) "Lifecycle greenhouse gas emissions" are:
- (a) The aggregated quantity of greenhouse gas emissions, including direct emissions and significant indirect emissions, such as significant emissions from changes in land use associated with the fuels;
- (b) Measured over the full fuel lifecycle, including all stages of fuel production, from feedstock generation or extraction, production, distribution, and combustion of the fuel by the consumer; and
- (c) Stated in terms of mass values for all greenhouse gases as adjusted to CO2e to account for the relative global warming potential of each gas.
- (6573) "Liquefied compressed natural gas" or "L-CNG" means natural gas that has been liquefied and transported to a dispensing station where it was then re-gasified and compressed to a pressure greater than ambient pressure.
- (6674) "Liquefied natural gas" or "LNG" means natural gas that has been liquefied.

Attachment A: Redline rules March 25-26, 2021, EQC meeting Page 8 of 80

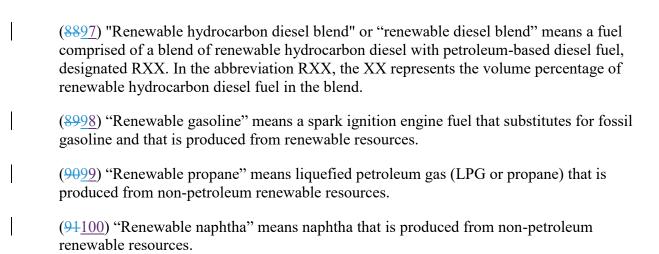
butanes and butylenes maintained in the liquid state. (6876) "Material information" means: (a) Information that would result in a change of the carbon intensity of a fuel, expressed in a gCO2e/MJ basis to two decimal places; or (b) Information that would result in a change by any whole integer of the number of credits or deficits generated under OAR 340-253-1000 through OAR 340-253-1030. (6977) "Medium duty vehicle" or "MDV" means any motor vehicle rated between 8,501 pounds and 10,000 pounds gross vehicle weight. (7078) "Motor vehicle" means any vehicle, vessel, watercraft, engine, machine, or mechanical contrivance that is self-propelled. (71179) "Multi-family housing" means a structure or facility established primarily to provide housing that provides four or more living units, and where the individual parking spaces that an electric vehicle charger serves, and the charging equipment itself, are not deeded to or owned by a single resident. (7280) "Natural gas" means a mixture of gaseous hydrocarbons and other compounds with at least 80 percent methane by volume. (7381) "Oregon Fuels Reporting System" means the interactive, secured, web-based, electronic data tracking, reporting and compliance system that DEQ develops, manages and operates to support the Clean Fuels Program. (7482) "Oregon Fuels Reporting System reporting deadlines" means the quarterly and annual reporting dates in OAR 340-253-0630 and in 340-253-0650. (7583) "OR-GREET" means the Greenhouse gases, Regulated Emissions, and Energy in Transportation (GREET) model developed by Argonne National Laboratory that DEQ modifies and maintains for use in the Oregon Clean Fuels Program. The most current version is OR-GREET 3.0. DEQ will make available a copy of OR-GREET 3.0 on its website (https://www.oregon.gov/deg/Pages/index.aspx). As used in this rule, OR-GREET refers to both the full model and the fuel-specific simplified calculators that the program has adopted. (7684) "Physical Transport Mode" means the applicable combination of actual fuel delivery methods, such as truck routes, rail lines, pipelines and any other fuel distribution methods through which the regulated party reasonably expects the fuel to be transported under contract from the entity that generated or produced the fuel, to any intermediate entities and ending in Oregon.

(6775) "Liquefied petroleum gas" or "propane" or "LPG" means a petroleum product

composed predominantly of any of the hydrocarbons, or mixture thereof; propane, propylene,

- (7785) "Plug-In Hybrid Electric Vehicle" or "PHEV" means a hybrid vehicle with the capability to charge a battery from an off-vehicle electric energy source that cannot be connected or coupled to the vehicle in any manner while the vehicle is being driven.
- (7886) "Position holder" means any person that has an ownership interest in a specific amount of fuel in the inventory of a terminal operator. This does not include inventory held outside of a terminal, retail establishments, or other fuel suppliers not holding inventory at a fuel terminal.
- (79(87) "Power Purchase Agreement" means a written agreement between an electricity service supplier and a customer that specifies the source or sources of electricity that will supply the customer.
- (88) "Producer" means:
- (a) With respect to any liquid fuel and renewable propane, the person who makes the fuel; or
- (b) With respect to any biomethane, the person who refines, treats or otherwise processes biogas into biomethane.
- (8089) "Product transfer document" or "PTD" means a document, or combination of documents, that authenticates the transfer of ownership of fuel between parties and must include all information identified in OAR 340-253-0600(2). A PTD may include bills of lading, invoices, contracts, meter tickets, rail inventory sheets or RFS product transfer documents.
- (8190) "Public transportation" means regular, continuing shared passenger-transport services along set routes which are available for use by the general public.
- (8291) "Public transit agency" means an entity that operates a public transportation system.
- (8392) "Registered party" means a regulated party, credit generator, or aggregator that has a DEQ-approved registration under OAR 340-253-0500 to participate in the Clean Fuels Program.
- (8493) "Regulated fuel" means a transportation fuel identified under OAR 340-253-0200(2).
- (8594) "Regulated party" means a person responsible for compliance with requirements listed under OAR 340-253-0100(1).
- (8695) "Related entity" means any direct parent company, direct subsidiary, or a company with common ownership or control.
- (8796) "Renewable hydrocarbon diesel" or "renewable diesel", means a diesel fuel that isproduced from non-petroleum renewable resources but is not a monoalkylester and which is registered as a motor vehicle fuel or fuel additive under Title 40, part 79 of the Code of Federal Regulations. This includes the renewable portion of a diesel fuel derived from co-processing biomass with a petroleum feedstock.

Attachment A: Redline rules March 25-26, 2021, EQC meeting Page 10 of 80



- (92101) "Small importer of finished fuels" means any person who imports into Oregon 500,000 gallons or less of finished fuels in a given calendar year. Any fuel imported by persons that are related, or share common ownership or control, shall be aggregated together to determine whether a person meets this definition.
- (93102) "Specified source feedstocks" are feedstocks for fuel pathways that require chain of custody evidence to be <u>elegibileeligible</u> for a reduced CI associated with the use of a waste, residue, by-product, or similar material under the pathway certification process under OAR 340-253-0400(7).
- (94103) "Substitute fuel pathway code" means a fuel pathway code that is used to report transactions that are sales or purchases without obligation, exports, loss of inventory, not for transportation use, and exempt fuel use when the seller of a fuel does not pass along the credits or deficits to the buyer and the buyer does not have accurate information on the carbon intensity of the fuel or its blendstocks.
- (95104) "Tier 1 calculator", "Simplified calculator" or "OR-GREET 3.0 Tier 1 calculator" means the tools used to calculate lifecycle emissions for commonly produced fuels, including the instruction manuals on how to use the calculators. DEQ will make available copies of these simplified calculators on its website (https://www.oregon.gov/deq/Pages/index.aspx). The simplified calculators used in the program are:
- (a) Tier 1 Simplified Calculator for Starch and Corn Fiber Ethanol;
- (b) Tier 1 Simplified CI Calculator for Sugarcane-derived Ethanol;
- (c) Tier 1 Simplified CI Calculator for Biodiesel and Renewable Diesel;
- (d) Tier 1 Simplified CI Calculator for LNG and L-CNG from North American Natural Gas;
- (e) Tier 1 Simplified CI Calculator for Biomethane from North American Landfills;
- (f) Tier 1 Simplified CI Calculator for Biomethane from Anaerobic Digestion of Wastewater Sludge;

- (g) Tier 1 Simplified CI Calculator for Biomethane from Food, Green and Other Organic Wastes; and
- (h) Tier 1 Simplified CI Calculator for Biomethane from AD of Dairy and Swine Manure.
- (96105) "Tier 2 calculator" or "OR-GREET 3.0 model" means the tool used to calculate lifecycle emissions for next-generation fuels, including the instruction manual on how to use the calculator. Next-generation fuels include, but are not limited to, cellulosic alcohols, hydrogen, drop-in fuels, or first-generation fuels produced using innovative production processes. DEQ will make available a copy of the Tier 2 calculator on its website (https://www.oregon.gov/deq/Pages/index.aspx).
- (97106) "Transaction date" means the title transfer date as shown on the PTD.
- (98107) "Transaction quantity" means the amount of fuel reported in a transaction.
- (99108) "Transaction type" means the nature of the fuel transaction as defined below:
- (a) "Produced in Oregon" means the transportation fuel was produced at a facility in Oregon;
- (b) "Import within the bulk system" means the transportation fuel was imported into Oregon and placed into the bulk system;
- (c) "Import outside the bulk system" means the transportation fuel was imported into Oregon and delivered outside the bulk system;
- (d) "Purchased with obligation" means the transportation fuel was purchased with the compliance obligation passing to the purchaser;
- (e) "Purchased without obligation" means the transportation fuel was purchased with the compliance obligation retained by the seller;
- (f) "Sold with obligation" means the transportation fuel was sold with the compliance obligation passing to the purchaser;
- (g) "Sold without obligation" means the transportation fuel was sold with the compliance obligation retained by the seller;
- (h) "Position holder sale" means the transportation fuel was sold below the rack without a transfer of the compliance obligation;
- (i) "Position holder sale for export" means the transportation fuel was sold below the rack to an entity who exported the fuel.
- (j) "Purchase below the rack for export" means the transportation fuel was purchased below the rack and exported.
- (k) "Export" means a transportation fuel that was reported under the Clean Fuels Program but was later moved from a location inside of Oregon to a location outside of Oregon;

- (l) "Loss of inventory" means the fuel exited the Oregon fuel pool due to volume loss, such as through evaporation or due to different temperatures or pressurization;
- (m) "Gain of inventory" means the fuel entered the Oregon fuel pool due to a volume gain, such as through different temperatures or pressurization;
- (n) "Not used for transportation" means a transportation fuel that was used in an application unrelated to the movement of goods or people, such as process heat at an industrial facility, home or commercial building heating, or electric power generation.;
- (o) "EV charging" means providing electricity to recharge EVs including BEVs and PHEVs;
- (p) "LPGV fueling" means the dispensing of liquefied petroleum gas at a fueling station designed for fueling liquefied petroleum gas vehicles;
- (q) "NGV fueling" means the dispensing of natural gas at a fueling station designed for fueling natural gas vehicles;
- (r) "Exempt fuel use Aircraft", "Exempt fuel use Racing Activity Vehicles (ORS 801.404)", "Exempt fuel use Military tactical and support vehicle and equipment", "Exempt fuel use Locomotives", "Exempt fuel use Watercraft", "Exempt fuel use Farm vehicles, tractors, implements of husbandry", "Exempt fuel use Motor trucks primary used to transport logs", "Exempt fuel use Off-highway construction vehicles which must meet OAR 340-253-0250(2)(a)(J)" means that the fuel was delivered or sold into the category of vehicles or fuel users that are exempt under OAR 340-253-0250; or
- (s) "Production for Import into Oregon" means the out-of-state production of a fuel that will be imported into Oregon.
- (100109) "Transportation fuel" means gasoline, diesel, any other flammable or combustible gas or liquid and electricity that can be used as a fuel for the operation of a motor vehicle. Transportation fuel does not mean unrefined petroleum products.
- (101110) "Unit of fuel" means fuel quantities expressed to the largest whole unit of measure, with any remainder expressed in decimal fractions of the largest whole unit.
- (102111) "Unit of measure" means either:
- (a) The International System of Units defined in NIST Special Publication 811 (2008) commonly called the metric system;
- (b) US Customer Units defined in terms of their metric conversion factors in NIST Special Publications 811 (2008); or
- (c) Commodity Specific Units defined in either:
- (A) The NIST Handbook 130 (2015), Method of Sale Regulation; or

Attachment A: Redline rules March 25-26, 2021, EQC meeting Page 13 of 80

(B) OAR chapter 603 division 027.

(112) "Unspecified source of electricity" or "unspecified source" means a source of electricity that is not a specified source at the time of entry into the transaction to procure the electricity. Such electricity will be assigned an emissions factor of 0.428 metric tons per megawatt-hour.

(113) "Utility Renewable Electricity Product" means a product where a utility customer has elected to purchase renewable electricity through a product that retires RECs or represents a bundled purchase of renewable electricity and its RECs.

[NOTE: Publications referenced are available from the agency.]

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020

DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019

DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019

DEQ 160-2018, minor correction filed 04/12/2018, effective 04/12/2018

DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017

DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16

DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15

DEQ 8-2014, f. & cert. ef. 6-26-14

DEO 15-2013(Temp), f. 12-20-13, cert. ef. 1-1-14 thru 6-30-14

DEQ 8-2012, f. & cert. ef. 12-11-12

## 340-253-0060

### **Acronyms**

The following acronyms apply to this division:

- (1) "AFP" means Alternative Fuel Portal.
- (2) "ASTM" means ASTM International (formerly American Society for Testing and Materials).
- (3) "BEV" means battery electric vehicle.
- (4) "CARB" means the California Air Resources Board.
- (5) "CA-GREET" means the California Air Resources Board adopted version of GREET.
- (6) "CFP" means the Clean Fuels Program established under OAR chapter 340, division 253.
- (7) "CI" means carbon intensity.
- (8) "CNG" means compressed natural gas.

- (9) "CO2e" means carbon dioxide equivalents.
- (10) "DEQ" means Oregon Department of Environmental Quality.
- (11) "EER" means energy economy ratio.
- (12) "EN" means a European Standard adopted by one of the three European Standardization Organizations.
- (13) "EQC" means Oregon Environmental Quality Commission.
- (14) "EV" means electric vehicle.
- (15) "FEIN" means federal employer identification number.
- (16) "FFV" means flex fuel vehicle.
- (17) "FPC" means fuel pathway code.
- (18) "gCO2e/MJ" means grams of carbon dioxide equivalent per megajoule of energy.
- (19) "HDV" means heavy-duty vehicle.
- (20) "HDV-CIE" means a heavy-duty vehicle compression ignition engine.
- (21) "HDV-SIE" means a heavy-duty vehicle spark ignition engine.
- (22) "L-CNG" means liquefied-compressed natural gas.
- (23) "LDV" means light-duty vehicle.
- (24) "LNG" means liquefied natural gas.
- (25) "LPG" means liquefied petroleum gas.
- (26) "LPGV" means liquefied petroleum gas vehicle.
- (27) "MDV" means medium-duty vehicle.
- (28) "mmBtu" means million British Thermal Units.
- (29) "NERC" means the North American Electric Reliability Corporation.
- (30) "NGV" means natural gas vehicle.
- (3031) "PHEV" means partial hybrid electric vehicle.
- (3132) "PTD" means product transfer document.
- (3233) "REC" means Renewable Energy Certificate.

- (3334) "RFS" means the Renewable Fuel Standard implemented by the US Environmental Protection Agency.
- (3435) "scf" means standard cubic foot.
- (3536) "ULSD" means ultra low sulfur diesel.
- (3637) "WREGIS" means the Western Renewable Energy Generation Information System run by the Western Electricity Coordinating Council.
- (38) "WECC" means the Western Electricity Coordinating Council.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020

DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019

DEQ 161-2018, minor correction filed 04/12/2018, effective 04/12/2018

DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017

DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16

DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15

DEQ 8-2014, f. & cert. ef. 6-26-14

DEQ 15-2013(Temp), f. 12-20-13, cert. ef. 1-1-14 thru 6-30-14

DEQ 8-2012, f. & cert. ef. 12-11-12

### 340-253-0100

#### Oregon Clean Fuels Program Applicability and Requirements

- (1) Regulated parties.
- (a) All persons that produce in Oregon, or import into Oregon, any regulated fuel must comply with the rules in this division.
- (b) The regulated parties for regulated fuels are designated under OAR 340-253-0310 and must comply with sections (4) through (8) below;
- (c) An out-of-state producer of ethanol, biodiesel, renewable diesel, alternative jet fuel, renewable natural gas, or renewable propane that is not an importer is not required to participate in the program. Any out-of-state producer that is not an importer who chooses voluntarily to participate in the program in order to initially generate credits from the volumes of their fuel that is imported into Oregon must comply with sections (4), (5), (7), (8), and (9) below;
- (d) Small importers of finished fuels are exempt from sections (6) and (7) below;
- (e) Regulated parties must comply with OAR chapter 340, division 215.
- (2) Credit generators.

- (a) The following rules designate persons eligible to generate credits for each of the following fuel types:
- (A) OAR 340-253-0320 for compressed natural gas, liquefied natural gas, liquefied compressed natural gas, and liquefied petroleum gas;
- (B) OAR 340-253-0330 for electricity;
- (C) OAR 340-253-0340 for hydrogen fuel or a hydrogen blend; and
- (D) OAR 340-253-0350 for alternative jet fuel.
- (b) Any person eligible to be a credit generator, and that is not a regulated party, is not required to participate in the program. Any person who chooses voluntarily to participate in the program in order to generate credits must comply with sections (4), (5), (7), (8), and (9) below.
- (3) Aggregator.
- (a) Aggregators must comply with this section and sections (4), (5), (7), and (8) below.
- (b) Aggregators facilitate credit generation and trade credits only if a regulated party or a credit generator has authorized an aggregator to act on its behalf by submitting an Aggregator Designation Form. An eligible credit generator may designate an aggregator for its credit generation. The only exception to that designation by a credit generator is the backstop aggregator designated under OAR 340-253-0330(7). A regulated party or credit generator already registered with the program may also serve as an aggregator for others. An aggregator is responsible for notifying DEQ when its authorization to act on behalf of a credit generator or regulated party has been withdrawn. Aggregator designations may only take effect at the start of the next full calendar quarter after DEQ receives such notice.

  Aggregator withdrawals may only take effect at the end of the current full calendar quarter when DEQ receives such notice.
- (4) Registration.
- (a) A regulated party must submit a complete registration application to DEQ under OAR 340-253-0500 for each fuel type on or before the date upon which that party begins producing the fuel in Oregon or importing the fuel into Oregon. The registration application must be submitted using DEQ approved forms.
- (b) A credit generator must submit a complete registration application to DEQ under OAR 340-253-0500 for each fuel type before it may generate credits for fuel produced, imported, or dispensed for use in Oregon. DEQ will not recognize credits allegedly generated by any person that does not have an approved, accurate and current registration.
- (c) An aggregator must submit a complete registration application to DEQ under OAR 340-253-0500 and an Aggregator Designation Form each time it enters into a new contract with a regulated party, a credit generator, or another aggregator to facilitate credit generation or

trade credits. Any violations by the aggregator may result in enforcement against both the aggregator and the party it was designated to act on behalf of.

- (5) Records. Regulated parties, credit generators, and aggregators must develop and retain all records OAR 340-253-0600 requires.
- (6) Clean fuel standards. Each regulated party must comply with the following standards for all transportation fuel it produces in Oregon or imports into Oregon in each compliance period. Each regulated party may demonstrate compliance in each compliance period either by producing or importing fuel that in the aggregate meets the standard or by obtaining sufficient credits to offset the deficits it has incurred for such fuel produced or imported into Oregon. The initial compliance period is for two years, 2016 and 2017, and after that compliance periods will be for each single calendar year.
- (a) Table 1 under OAR 340-253-8010 establishes the Oregon Clean Fuel Standard for Gasoline and Gasoline Substitutes; and
- (b) Table 2 under OAR 340-253-8010 establishes the Oregon Clean Fuel Standard for Diesel and Diesel Substitutes.
- (7) Quarterly report. Each regulated party, credit generator, and aggregator must submit quarterly reports under OAR 340-253-0630, unless they are exempt under subsection (1)(b) or they are a credit generator solely registered for residential charging of electric vehicles.
- (8) Annual report. Each regulated party, credit generator, and aggregator must submit an annual report under OAR 340-253-0650. Each regulated party must submit an annual report for 2016 notwithstanding that the initial compliance period is for 2016 and 2017.
- (9) Voluntary participation. The voluntary participation in the program by any person shall conclusively establish that person's consent to be subject to the jurisdiction of the State of Oregon, its courts, and the administrative authority of DEQ to implement this program. If a person does not consent to such jurisdiction, then the person may not participate in the program.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020

DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019

DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017

DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16

DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15

DEO 8-2014, f. & cert. ef. 6-26-14

DEQ 15-2013(Temp), f. 12-20-13, cert. ef. 1-1-14 thru 6-30-14

DEQ 8-2012, f. & cert. ef. 12-11-12

340-253-0330

**Credit Generators: Providers of Electricity** 

- (1) Applicability. This rule applies to providers of electricity used as a transportation fuel.
- (2) For residential charging. For electricity used to charge an electric vehicle at a residence, subsections (a) and (b) determine the person who is eligible to generate credits.
- (a) Electric Utility. In order to generate credits for the following year, an electric utility must notify DEQ by October 1 of the current year whether it will generate credits or designate an aggregator to act on its behalf. The utility or its aggregator must have an active registration approved by DEQ under OAR 340-253-0500. Once a utility has made a designation under this section that designation will remain in effect unless the utility requests a change in writing to DEQ.
- (b) Backstop Aggregator.and Incremental Aggregators. If an electric utility does not register or designate an aggregator under subsection (a), then a backstop aggregator is and incremental aggregators are eligible to claim any credits that the utility could have generated for the following year, as provided in under sections (610) and (11), as applicable. The backstop aggregator may claim any base credits and the incremental aggregator may claim any incremental credits.
- (3) For non-residential charging. For electricity used to charge an electric vehicle at non-residential locations, such as in public, for a fleet, at a workplace, or at multi-family housing sites, subsections (a) through (c) determine the person who is eligible to generate credits.
- (a) Owner or service provider of the electric-charging equipment. The owner or service provider of the electric-charging equipment may generate the credits. Only one entity may generate credits from each piece of charging equipment.
- (b) Electric Utility. If the owner or service provider of the electric-charging equipment does not generate the credits, then an electric utility or an aggregator designated to act on the utility's behalf is eligible to generate the credits. The utility or its aggregator must have an active registration approved by DEQ under OAR 340-253-0500. Once a utility has made a designation under this section that designation will remain in effect unless the utility requests a change in writing to DEQ.
- (c) Backstop Aggregator and Incremental Aggregators. If an electric utility does not register or designate an aggregator under subsection (b), then a backstop aggregator is and incremental aggregators are eligible to claim any credits that the utility could have generated for the following year under section (6). that the utility could have generated for the following year, as provided in sections (10) and (11), as applicable. The backstop aggregator may claim any base credits and the incremental aggregator may claim any incremental credits.
- (4) Public Transit. For electricity used to power fixed guideway vehicles such as light rail systems, streetcars, and aerial trams, or transit buses, a transit agency may generate the credits or designate an aggregator. The transit agency or aggregator must have an active registration approved by DEQ under OAR 340-253-0500.

- (5) Forklifts. For electricity used to power forklifts, the forklift fleet owner or fleet operator may generate the credits or designate an aggregator. Only one entity may generate credits from each piece of equipment. The fleet owner has precedence to generate credits or designate an aggregator.
- (6) Transportation Refrigeration Units. The fleet owner or fleet operator of the electric transportation refrigeration unit may generate credits, or designated an aggregator, for electricity used in transport refrigeration units. Only one entity may generate credits from each piece of equipment. The fleet owner has precedence to generate credits or designate an aggregator.
- (7) <u>Electric Cargo Handling Equipment. The owner or service provider of the electric-charging equipment may generate the credits or designate an aggregator. Only one entity may generate credits from each piece of charging equipment.</u>
- (8) Electric Ocean-Going Vessel powering. The owner of the equipment that provides electrical power from the shore to the vessel is eligible to generate credits or designate an aggregator.
- (9) Responsibilities to generate credits. Any person specified under sections (2) through (68) may generate clean fuel credits by complying with the registration, recordkeeping and reporting requirements of this division.
- (<u>§10</u>) Backstop Aggregator. The backstop aggregator that serves as the credit generator of electricity credits that have not been claimed by an electric utility, an aggregator designated by an electric utility, or an owner or service provider of electric charging equipment under sections (2) and (3).
- (a) To qualify to submit an application to be a backstop aggregator, an organization must:
- (A) Be an organization exempt from federal taxation under section 501(c)(3) of the U.S. Internal Revenue Code;
- (B) Complete annual independent financial audits.
- (b) An entity that wishes to be the backstop aggregator must submit an application with DEQ that includes:
- (A) A description of the mission of the organization and how being a backstop aggregator fits into its mission;
- (B) A description of the experience and expertise of key individuals in the organization who would be assigned to work associated with being a backstop aggregator;
- (C) A plan describing:
- (i) How the organization will promote transportation electrification statewide or in specific utility service territories, if applicable;

- (ii) Any entities that the organization might partner with to implement its plan;
- (iii) How the organization plans to use the revenue from the sale of credits, which may include, without limitation, programs that provide incentives to purchase electric vehicles or install electric vehicle chargers, opportunities to educate the public about electric vehicles, and anticipated costs to administer its plan; and
- (iv) The financial controls that are, or will be put, in place to segregate funds from the sale of credits from other monies controlled by the organization.
- (D) Its last three years of independent financial audits and I.R.S. form 990s, and proof that the I.R.S. has certified them as qualifying as an exempt organization under 501(c)(3);
- (c) Initial applications to be a backstop aggregator are due to DEQ no later than March 15, 2018, to be eligible to be the backstop aggregator beginning in 2018. If the EQC does not approve the designation of a backstop aggregator under subsection (e), then DEQ may set a new deadline for applications if it decides to undertake a new selection process.
- (d) Applications will be evaluated by DEQ with the assistance of relevant experts selected by DEQ. DEQ will evaluate applications based on the likelihood that the applicant will maximize the benefits from the credits it receives to expand the use of alternative fuel vehicles and reduce greenhouse gas emissions from the transportation sector in Oregon.
- (e) DEQ may recommend an organization be designated as the initial backstop aggregator to the EQC by May 31, 2018. If DEQ does not recommend an organization to be the backstop aggregator or the EQC does not approve DEQ's recommendation, then DEQ may undertake a new selection process at a later date under the same criteria in subsections (b) and (d).
- (f) Following EQC approval of an organization to be the backstop aggregator, DEQ and the organization may enter into a written agreement regarding its participation in the program. A written agreement must be in place prior to the backstop aggregator registering an account in the CFP Online System and receiving credits for the first time. The backstop aggregator must:
- (A) By March 31st of each year, submit a report that summarizes the previous year's activity including:
- (i) How much revenue was generated from the credits it received;
- (ii) A description of activities including the status of each activity, where each activity took place, and each activity's budget, including administrative costs, and an estimate of its outcomes; and
- (iii) The results of its most recent independent financial audit.
- (B) Maintain records and make them available upon request by DEQ, including records required to be maintained under OAR 340-253-0600 and, in addition, any records relating to

its application, the programs it operates using the proceeds from the sale of credits under this program, and any of the organization's financial records.

- (g) If DEQ determines that a backstop aggregator is in violation of this division or the agreement that it enters into with DEQ to be the backstop aggregator, DEQ may rescind its designation and solicit applications to select a new backstop aggregator.
- (h) If backstop aggregator wishes to terminate its agreement with DEQ, then DEQ may solicit applications to select a new backstop aggregator.
- (i) After a backstop aggregator has been in place for three years, DEQ may hold a new selection process to appoint a backstop aggregator for future years. Unless DEQ has rescinded an organization as backstop aggregator under subsection (g), the current backstop aggregator may apply to be re-designated as the backstop aggregator for future years.
- (11) Incremental credits.
- (a) Other than for residential charging, incremental credits may be claimed by the eligible credit generator or its aggregator identified in sections (3)-(8) of this rule or the incremental aggregator.
- (b) For residential charging, the following entities may claim incremental credits:
- (A) An electric utility claiming base credits for the same vehicles under subsection (2)(a) or its designated aggregator if it notifies DEQ by June 15 or December 15 that it wishes to begin generating incremental credits starting with the charging covered by the next period of residential electric vehicle charging. A utility's election remains in place until it informs DEQ otherwise; or
- (B) Incremental Aggregator. The incremental aggregator that serves as the credit generator of incremental electricity credits that have not been claimed by an electric utility, an aggregator designated by an electric utility, or the eligible credit generator under sections (3)-(8). The incremental aggregator will be selected as provided in subsection (c).
- (c) Selection of the incremental aggregator.
- (A) To qualify to submit an application to be the incremental aggregator, an organization must:
- (i) Be an organization exempt from federal taxation under section 501(c)(3) of the U.S. Internal Revenue Code; and
- (ii) Complete annual independent financial audits.
- (B) An entity that wishes to be the incremental aggregator must submit an application with DEQ that includes:

- (i) A description of the mission of the organization and how being the incremental aggregator fits into its mission;
- (ii) A description of the experience and expertise of key individuals in the organization who would be assigned to work associated with being the incremental aggregator;
- (iii) How the organization plans to promote transportation electrification statewide in an equitable manner and conduct programs on a statewide basis;
- (iv) The financial controls that are, or will be put, in place to segregate funds from the sale of credits from other monies controlled by the organization; and-
- (v) Its last three years of independent financial audits and I.R.S. form 990s, and proof that the I.R.S. has certified them as qualifying as an exempt organization under 501(c)(3).
- (C) Initial applications to be the incremental aggregator are due to DEQ no later than July 1, 2021, to be eligible to be selected by the EQC to be the incremental aggregator beginning with 2020 residential EV crediting. If the EQC does not approve the designation of an incremental aggregator under subsection (11)(e), then DEQ may set a new deadline for applications if it decides to undertake a new selection process.
- (D) Applications to be the incremental aggregator will be evaluated by DEQ in partnership with the equity advisory committee selected under subsection (11)(j). DEQ will evaluate applications based on the likelihood that the applicant will use the revenue from the credits it receives to advance transportation electrification statewide with a focus on actions that will help vulnerable populations and communities impacted by air pollution and climate change.
- (E) Based on DEQ's review of applications to be the incremental aggregator, DEQ may recommend that an applicant organization be designated as the initial incremental aggregator to the EQC by August 15, 2021. If DEQ does not recommend an organization to be the incremental aggregator or the EQC does not approve DEQ's recommendation, then DEQ may undertake a new selection process at a later date under the same process and criteria in paragraphs (11)(c)(A) through (D).
- (F) Following EQC approval of an organization to be the incremental aggregator, DEQ and the organization may enter into a written agreement regarding the selected organization's participation in the program. In addition to the requirements described in paragraph (11)(c)(K), a written agreement must be in place prior to the incremental aggregator receiving credits for the first time. The incremental aggregator must:
- (i) By March 31st of each year, submit a report that summarizes the previous year's activity including:
- (I) How much revenue was generated from the credits it received;
- (II) A description of activities including the status of each activity, where each activity took place, and each activity's budget, including administrative costs, and an estimate of its outcomes; and

- (III) The results of its most recent independent financial audit-; and
- (ii) Maintain records and make them available to DEQ upon request by DEQ, including records required to be maintained under OAR 340-253-0600 and, in addition, any records relating to its application, the programs it operates using the proceeds from the sale of credits under this program, and any of the organization's financial records.
- (G) If DEQ determines that an incremental aggregator is in violation of this division or the agreement that it enters into with DEQ to be the incremental aggregator, DEQ may rescind its designation and solicit applications to select a new incremental aggregator.
- (H) If the incremental aggregator wishes to terminate its agreement with DEQ, then DEQ may solicit applications to select a new incremental aggregator.
- (I) After an incremental aggregator has been in place for three years, DEQ may hold a new selection process to appoint an incremental aggregator for future years. Unless DEQ has rescinded an organization as incremental aggregator under paragraph (11)(c)(G), the current backstop aggregator may apply to be re-designated as the incremental aggregator for future years.
- (J) Equity advisory committee. DEQ will appoint and convene an advisory committee to help the agency design projects and programs for the incremental aggregator to implement that prioritize the revenue for transportation electrification projects that equitably distribute benefits and address the needs and interests of impacted communities that are the most vulnerable to the adverse effects of transportation air pollution and climate change. The committee will also advise DEQ in its review of reports on utility spending, and:
- (i) The committee will advise DEQ in:
- (I) The selection of the incremental aggregator;
- (II) Establishing criteria that will be used to set priorities to be carried out by the incremental aggregator;
- (III) Developing the annual work plan for the incremental aggregator;
- (IV) Identifying areas of need that should be prioritized by utility projects and programs paid for by revenue from CFP incremental credit sales in order to ensure equitable outcomes and benefits;
- (V) Reviewing the utility reports submitted under OAR 340-253-0640(9); and
- (VI) Reviewing the performance of the incremental aggregator;
- (ii) DEQ will solicit applications for residents of the state of Oregon to be appointed to the equity advisory committee. DEQ will seek representatives with the following interests and areas of expertise as well as representatives from the following communities:

- (I) Transportation and transportation electrification; and
- (II) Environmental Justice Communities
- (iii) DEQ will solicit applications to serve on the equity advisory committee in May 2021 and may select the committee from those applicants. Committee members may serve terms of three years and DEQ may annually solicit applications and make additional selections to serve on the committee.
- (K) The incremental aggregator must consult with DEQ and the equity advisory committee to propose an annual workplan to guide its spending for the next year, subject to approval by DEQ. DEQ will not award credits to the incremental aggregator unless DEQ has approved such workplan and the incremental aggregator has followed such workplan. The incremental aggregator and DEQ may mutually agree to modify the annual workplan at any time, after consultation with the equity advisory committee. Projects to be undertaken by the incremental aggregator may include:
- (i) Electrification and battery swap programs for school or transit buses;
- (ii) Electrification of drayage trucks;
- (iii) Investment in public EV charging infrastructure and EV charging infrastructure in multifamily residences;
- (iv) Investment in electric mobility solutions, such as EV sharing and ride-hailing programs;
- (v) Multilingual marketing, education, and outreach designed to increase awareness and adoption of EVs and clean mobility options that includes information about their benefits to individuals, the environment, and human health;
- (vi) Additional rebates and incentives for low-income individuals beyond existing local, federal and state rebates and incentives, for:
- (I) Purchasing or leasing new or previously owned EVs;
- (II) Installing EV charging infrastructure in residences and related electrical work;
- (III) Promoting the use of public transit and other clean mobility; and
- (IV) Off-setting costs for residential or non-residential EV charging; and-
- (vii) Other projects that promote transportation electrification in or for Environmental Justice Communities and that are reviewed by the equity advisory committee and approved by DEQ. Individuals and organizations may submit proposals for such projects to DEQ for consideration, and the application must include:

- (I) A complete description of the project, the demonstration that the project promotes transportation electrification in Environmental Justice, or that the project provides increased access to electric transportation for those communities; and
- (II) Evidence that the project was developed in coordination with local environmental justice advocates, local community-based organizations, local units of government, or multiple such entities.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 1-2019, minor correction filed 01/03/2019, effective 01/03/2019

DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019

DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017

DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16

DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15

DEQ 8-2012, f. & cert. ef. 12-11-12

## 340-253-0400

#### **Carbon Intensities**

- (1) OR-GREET. Carbon intensities for fuels must be calculated using OR-GREET 3.0 or a model approved by DEQ. If a party wishes to use a modified or different lifecycle carbon intensity model, it must be approved by DEQ in advance of an application under OAR 340-253-0450.
- (2) DEQ review of carbon intensities. Every three years, or sooner if DEQ determines that new information becomes available that warrants an earlier review, DEQ will review the carbon intensities used in the CFP and must consider, at a minimum, changes to:
- (a) The sources of crude and associated factors that affect emissions such as flaring rates, extraction technologies, capture of fugitive emissions, and energy sources;
- (b) The sources of natural gas and associated factors that affect emissions such as extraction technologies, capture of fugitive emissions, and energy sources;
- (c) Fuel economy standards and energy economy ratios;
- (d) GREET, OR-GREET, CA-GREET, GTAP, AEZ-EF or OPGEE;
- (e) Methods to calculate lifecycle greenhouse gas emissions;
- (f) Methods to quantify indirect land use change; and
- (g) Methods to quantify other indirect effects.
- (3) Statewide carbon intensities.

- (a) Regulated parties, credit generators and aggregators must use the statewide average carbon intensities listed in Tables 3 and 4 under OAR 340-253-8010 and -8010 for the following fuels:
- (A) Clear gasoline or the gasoline blendstock of a blended gasoline fuel;
- (B) Clear diesel or the diesel blendstock of a blended diesel fuel;
- (C) Fossil CNG;
- (D) Fossil LNG; and
- (E) Fossil LPG.
- (b) For electricity suppliers,
- (A) The statewide average electricity carbon intensity is calculated annually under OAR 340-253-0470 and posted on the DEQ website.
- (B) Credit generators or aggregators may use a carbon intensity different from the statewide average under subsection (b)(A) if:
- (i) The utility has applied for an individual carbon intensity under OAR 340-253-0470; or
- (ii) The party generates lower carbon electricity at the same location as it is dispensed into a motor vehicle consistent with the conditions of the approved fuel pathway code under OAR 340-253-0470(3).
- (c) A hydrogen supplier may use the applicable value in Table 4 under OAR 340-253-8010, or apply for a specific carbon intensity under OAR 340-253-0450.
- (4) Carbon intensities for established fuel pathways. Except as provided in sections (3) or (5), regulated parties, credit generators, and aggregators can use a carbon intensity that:
- (a) CARB has certified for use in the California Low Carbon Fuel Standard program, as adjusted for fuel transportation distances and indirect land use change, and that has been reviewed and approved by DEQ as being consistent with OR-GREET 3.0; or
- (b) Matches the description of a fuel pathway listed in Table 4 under OAR 340-253-8010. For Hydrogen produced using biomethane or renewable power, the producer of the hydrogen will have to demonstrate to DEQ that the value in Table 4 is appropriate for its production facility and must submit attestations on an annual basis that the renewable power and biomethane attributes, as applicable, were not claimed in any other program except for the federal RFS. Any such claims under the federal RFS must be made for the same use and volume of biomethane or its derivatives as it is being claimed for in the CFP, or the claim under the CFP is invalid.
- (5) Transition to OR-GREET 3.0.

- (a) Pathways certified under OR-GREET or CA-GREET 2.0 will be deactivated by DEQ in the Oregon Fuels Reporting System for reporting after the fourth quarter of 2020. Fuel pathway holders with pathways certified under OR-GREET or CA-GREET 2.0 that wish to keep generating credits from those fuels from January 1, 2021 onward must follow the pathway application and certification process in this rule to obtain a new pathway under OR-GREET 3.0, or request DEQ approval of a CARB-certified CA-GREET 3.0 pathway.
- (b) Table 4 pathways. Entities reporting fuels using Table 4 pathways that do not require an application under subsection (a) will have those pathways automatically updated to the OR-GREET 3.0 values on January 1, 2019 for first quarter 2019 reporting.
- (c) New pathway applications. DEQ will not consider new applications using OR-GREET 2.0.
- (6) Primary alternative fuel pathway classifications. If it is not possible to identify an applicable carbon intensity under either section (3) or (4), then the regulated party, credit generator, or aggregator has the option to develop its own fuel pathway and apply for it to be certified under 340-253-0450. Fuel pathway applications fall into one of two tiers:
- (a) Tier 1. Conventionally-produced alternative fuels of a type that have been well-evaluated in the Oregon and California low carbon fuel standards. Tier 1 fuels include:
- (A) Starch- and sugar-based ethanol;
- (B) Biodiesel produced from conventional feedstocks (plant oils, tallow and related animal wastes and used cooking oil);
- (C) Renewable diesel produced from conventional feedstocks (plant oils, tallow and related animal wastes and used cooking oil);
- (D) Natural Gas; and
- (E) Biomethane from landfills; anaerobic digestion of dairy and swine manure or wastewater sludge; and food, vegetative or other organic waste.
- (b) Tier 2. All fuels not included in Tier 1 including but not limited to:
- (A) Cellulosic alcohols;
- (B) Biomethane from other sources;
- (C) Hydrogen;
- (D) Renewable hydrocarbons other than renewable diesel produced from conventional feedstocks;
- (E) Biogenic feedstocks co-processed at a petroleum refinery
- (F) Alternative Jet Fuel;

- (G) Renewable propane; and
- (H) Tier 1 fuels using innovative methods, including but not limited to carbon capture and sequestration or a process that cannot be accurately modeled using the simplified calculators.
- (7) Specified source feedstocks. Fuels that are produced from a specified source feedstock may be eligible for a reduced carbon intensity <u>scorevalue</u> when applying under OAR 340-253-0450 so long as they meet all of the following requirements:
- (a) Specified source feedstocks are non-primary products of commercial or industrial processes for food, fuel or other consumer products and include, but are not limited to, used cooking oil, animal fats, fish oil, yellow grease, distiller's corn oil, distiller's sorghum oil, brown grease, and other fats, oils, and greases;
- (b) The specified source feedstocks are used in pathways for biodiesel; renewable diesel; alternative jet fuel; co-processed refinery products; biomethane supplied using book and claim accounting and claimed as a feedstock for CNG, LNG, L-CNG; or steam-methane reformation produced hydrogen;
- (c) Under OAR 340-253-0450(9)(d), any feedstock can be designated as a specified source feedstock if requested by a supplier using site-specific carbon intensity data or if it is specified in a pathway approval condition; and -
- (d) Chain-of-custody evidence must be used to demonstrate the proper characterization and accuracy of the quantity of the specified source feedstocks going into a fuel production facility or claimed as biomethane, subject to all of the following provisions:
- (A) Chain-of-custody evidence must be provided to the verifier and to DEQ upon request;
- (B) Joint applicants may assume responsibility for different portions of the chain-of-custody evidence;
- (C) Fuel pathway applicants using specified source feedstocks must maintain either:
- (i) Delivery records that show shipments of feedstock type and quantity directly from the point of origin to the fuel production facility; or
- (ii) Information from material balance or energy balance systems that control and record the assignment of input characteristics to output quantities at relevant points along the feedstock supply chain between the point of origin and the fuel production facility; and
- (e) In order to maintain the pathway, the fuel production and any joint applicant must meet the following requirements:
- (A) Maintain records of the type and quantity of feedstock obtained from each supplier, including feedstock transaction records, feedstock transfer documents pursuant to (f), weighbridge tickets, bills of lading or other documentation for all incoming and outgoing feedstocks;

- (B) Maintain records used for material balance and energy balance calculations; and
- (C) Ensure DEQ staff and verifier access to audit feedstock suppliers to demonstrate proper accounting of attributes and conformance with certified CI data.
- (8) The carbon intensity value certified under OAR 340-253-0450, including any margin of safety requested by the fuel producer, is the maximum carbon intensity value that a fuel can be reported in the CFP. The actual operational carbon intensity of a fuel will be calculated from the most recent production data covering 24 months of the fuel production facility's operation. Registered parties shall not report fuel sales under any CFP carbon intensity unless the actual operational carbon intensity is equal to or less than the certified CI.
- (9) Fuel producers labeling fuel sold in Oregon with a carbon intensity under the CFP and registered entities using those labeled carbon intensities to report in the Oregon Fuels Reporting System, must ensure that the fuel so labeled and reported will be found to have an actual operational lifecycle carbon intensity equal to or below its certified carbon intensity.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020

DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019

DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017

DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16

DEO 3-2015, f. 1-8-15, cert. ef. 2-1-15

DEQ 8-2014, f. & cert. ef. 6-26-14

DEQ 15-2013(Temp), f. 12-20-13, cert. ef. 1-1-14 thru 6-30-14

DEQ 8-2012, f. & cert. ef. 12-11-12

#### 340-253-0450

### **Obtaining a Carbon Intensity**

- (1) Fuel producers can apply to obtain a carbon intensity by following the process to obtain a carbon intensity under this rule.
- (2) Applicants seeking approval to use a carbon intensity that is currently approved by the CARB must provide:
- (a) The application package submitted to CARB;
- (b) The CARB-approved Tier 1 or Tier 2 CA-GREET 3.0 calculator, and the OR-GREET 3.0 equivalent with the fuel transportation and distribution cells modified for that fuel's pathway to Oregon;
- (c) The CARB review report for the approved fuel pathway;
- (d) Any other supporting materials relating to the pathway, as requested by DEQ; and

- (e) If the applicant is seeking to use a provisional pathway approved by CARB, then the applicant must submit to DEQ the ongoing documentation it provides to CARB, and as required in section (6). The applicant must provide DEQ within fourteen days:
- (A) Any additional documentation it has submitted to CARB; and
- (B) A notification of any changes to the status of its CARB-approved provisional pathway.
- (3) Applicants seeking to obtain a carbon intensity using either the Tier 1 or Tier 2 calculator must submit the following information:
- (a) Company name and full mailing address.
- (b) Company contact person's contact information including the name, title or position, phone number, mobile phone number, facsimile number, email address, and website address.
- (c) Facility name (or names if more than one facility is covered by the application).
- (d) Facility address (or addresses if more than one facility is covered by the application).
- (e) Facility ID for facilities covered by the RFS program.
- (f) Facility geographical coordinates (for each facility covered by the application).
- (g) Facility contact person's contact information including the name, title or position, phone number, mobile phone number, facsimile number, and email address.
- (h) Facility nameplate production capacity in million gallons per year (for each facility covered by the application).
- (i) If applicable, consultant's contact information including the name, title or position, phone number, mobile phone number, facsimile number, email address, and website URL.
- (j) Declaration whether the applicant is applying for a carbon intensity for a Tier 1 or Tier 2 fuel.
- (4) In addition to the items in section (3), applicants seeking to obtain a carbon intensity for a Tier 1 fuel using one of the simplified calculators must submit the following:
- (a) The applicable simplified calculator with all necessary inputs completed, following the instructions in the applicable manual for that calculator;
- (b) A positive verification statement from an approved verification body, provided in compliance with OAR chapter 340, division 272, stating that it has reviewed and validated all of the data used to form the inputs for the Tier 1 calculator submitted under (a), or the invoices and receipts for all forms of energy consumed in the production process, all fuel sales, all feedstock purchases, and all co-products sold for the most recent 24 months of full commercial production, along with a summary of those invoices and receipts; and

- (c) The most recent RFS third party engineering report, if one has been conducted for the facility.
- (5) In addition to the items in section (3), applicants seeking to obtain a carbon intensity for a Tier 2 fuel using the full OR-GREET 3.0 model must submit the following:
- (a) A positive verification statement from an approved verification body, provided in compliance with OAR chapter 340, division 272, stating that it has reviewed and validated all of the data used to form the inputs for the Tier 2 calculator submitted under (c), or the invoices and receipts for all forms of energy consumed in the production process, all fuel sales, all feedstock purchases, and all co-products sold for the most recent 24 months of full commercial production, and a summary of those invoices and receipts;
- (b) The geographical coordinates of the fuel production facility;
- (c) A completed Tier 2 model;
- (d) Process flow diagrams that depict the complete fuel production process;
- (e) Applicable air permits issued for the facility;
- (f) A copy of the RFS third party engineering report, if available;
- (g) A copy of the RFS fuel producer co-products report; and
- (h) A lifecycle analysis report that describes the fuel pathway and describes in detail the calculation of carbon intensity for the fuel. The report shall contain sufficient detail to allow staff to replicate the carbon intensity the applicant calculated. The applicant must describe all inputs to, and outputs from, the fuel production process that are part of the fuel pathway.
- (6) Applicants seeking a provisional carbon intensity. If a fuel production facility has been in full commercial production for at least 90 days but less than 24 months, it can apply for a provisional carbon intensity.
- (a) The applicant shall submit operating records covering all periods of full commercial operation in accordance with sections (2) through (5).
- (b) DEQ may approve the provisional carbon intensity under section (9).
- (c) At any time before the plant reaches a full 24 months of full commercial production, DEQ may revise as appropriate the operational carbon intensity based on the required ongoing submittals or other information it learns.
- (d) If, after a plant has been in full commercial production for more than 24 months of full commercial production, the facility's operational carbon intensity is higher than the provisionally-certified carbon intensity, DEQ will replace the certified carbon intensity with the operational carbon intensity in the Oregon Fuels Reporting System and adjust the credit balance accordingly.

- (e) If the facility's operational carbon intensity appears to be lower than the certified carbon intensity, DEQ will take no action. The applicant may, however, petition DEQ for a new carbon intensity that reflects the operational data. In support of such a petition, the applicant must submit a revised application packet that fully documents the requested reduction.
- (7) Applicants employing co-processing at a petroleum refinery. Applicants employing co-processing of biogenic feedstocks at a petroleum refinery must submit all information required under sections (3) and (5).
- (a) For the renewable diesel or other renewable refinery product of the fuel, the applicant must also submit:
- (A) The planned proportions of biogenic feedstocks to be processed;
- (B) A detailed methodology for the attribution of biogenic feedstocks to the renewable products; and
- (C) The corresponding carbon intensities from each biogenic feedstock.
- (b) The attribution methodology will be subject to approval by DEQ and may be modified at DEQ's discretion based on ongoing quarterly reporting of production data at the refinery.
- (c) DEQ may adjust the carbon intensities applied for under this section as it determines is appropriate.
- (8) Temporary Fuel Pathway Codes for Fuels with Indeterminate Carbon Intensities. A regulated party or credit generator that has purchased a fuel without a carbon intensity must submit a request to DEQ for permission to use a temporary fuel pathway code found in Table 9 under OAR 340-253-8010, or a temporary fuel pathway code otherwise approved and posted by DEQ under OAR 340-253-0450(11).
- (a) The request must:
- (A) Be submitted within 45 days of the end of the calendar quarter for which the applicant is seeking to use a temporary fuel pathway code; and
- (B) Explain and document that the production facility is unknown or that the production facility is known but there is no approved fuel pathway code.
- (b) Temporary fuel pathway codes may be used for up to two calendar quarters. If more time is needed to obtain a carbon intensity, the party that obtained the temporary fuel pathway must submit an additional request to DEQ for an extension of the authorization to use a temporary fuel pathway code.
- (c) If DEQ grants a request to use a temporary fuel pathway code, credits and deficits may be generated subject to the quarterly reporting provisions in OAR 340-253-0630.
- (9) Approval process to use carbon intensities for fuels other than electricity.

- (a) For applications proposing to use CARB-approved fuel pathways, including provisional pathways, DEQ will:
- (A) Confirm that the proposed fuel pathway is consistent with OR-GREET 3.0; and
- (B) Review the materials submitted under subsection (2).
- (b) For applications proposing to use the Tier 1 or Tier 2 calculators, DEQ may approve the application if it can:
- (A) Replicate the calculator outputs; and
- (B) Verify the energy consumption and other inputs.
- (c) If DEQ has approved or denied the application for a carbon intensity, DEQ will notify the applicant of its determination.
- (d) DEQ may impose conditions in its approval of the carbon intensity. Conditions may include specific limitations, recordkeeping or reporting requirements, adherence to protocols to assure carbon reduction or sequestration claims, or operational conditions that DEQ determines should apply to assure the ongoing accuracy of the approved carbon intensity. Failure to meet those conditions may result in the carbon intensity approval being revoked.
- (A) For applicants seeking a provisional pathway, DEQ will specify the conditions used to establish the pathway.
- (i) In order to maintain an active provisional pathway eligible to generate credits, the applicant must file the annual fuel pathway report and seek third-party verification if required under OAR 340-253-0700.
- (ii) At any point during the 24 months following the certification of a provisional pathway, DEQ may revise as appropriate the CI score for the provisional pathway based on new information or a better understanding of the pathway.
- (iii) DEQ may remove the The the provisional status of the pathway after the applicant provides 24 months of operational data with a positive or qualified positive verification status.
- (iv) For pathways that are not subject to verification, DEQ may remove the provisional status upon review of 24 months of operational data demonstrating that the pathway data supports the provisional CI...
- (B) For a CARB-approved fuel pathway that DEQ has approved for use in Oregon, if at any time the pathway's approval is revoked by CARB then:
- (i) The fuel pathway holder must inform DEQ within seven days of the revocation and provide DEO with documentation related to that decision.

- (ii) Upon DEQ request, the fuel pathway holder must provide to DEQ additional documentation.
- (iii) DEQ may at its discretion revoke its approval of the pathway's use in Oregon at any time.
- (iv) If CARB modifies its approval of the pathway then the fuel pathway holder must notify DEQ of the modification not later than 14 days after CARB's modification and must provide to DEQ any accompanying documentation the fuel pathway holder received from CARB.
- (v) Based on the underlying facts that led to CARB's modification of the pathway's status, within 30 days DEQ may modify its approval, take no action, or revoke its approval and will provide the fuel pathway holder with written notice of its decision.
- (e) In order to receive and maintain an active fuel pathway code, the producer of any fuel must:
- (A) Maintain an active registration with the AFP;
- (B) Provide proof of delivery to Oregon through a physical pathway demonstration in the quarter in which the fuel is first reported in the Oregon Fuels Reporting System;
- (C) Beginning in calendar year 2021, each fuel pathway holder must submit an annual fuel pathway report into the AFP no later than March 31st of each calendar year. The annual fuel pathway report must include:
- (i) The certified version of the simplified OR-GREET or full OR-GREET calculator, as applicable, updated to include the most recent two calendar years of operational data;
- (ii) The annual fuel pathway report for renewable electricity and hydrogen lookup table pathways, in lieu of the CI calculator, must include invoices or metering records substantiating the quantity of renewable or low-CI inputs procured from a qualifying source.;
- (iii) If the fuel or fuel production process involves biomethane or renewable electricity, the fuel producer must provide the attestation regarding environmental attributes or proof of non-generation or retirement of any RECs as required by OAR 340-253-0640(1)(d) or OAR 340-253-0470(3)(d);
- (iv) Any fuel pathway holder, including a joint applicant, who is not subject to site visits by a third party verifier, whose pathway involves the use of renewable or low-CI process energy, must submit invoices for that energy to the AFP. Additionally, for any <u>on-site or directly connected renewable</u> electricity that is used to reduce the carbon intensity of electricity used as a transportation fuel or hydrogen production via electrolysis, the pathway holder must upload records demonstrating that any renewable <u>energyenrgyenergy</u> certificates generated were retired in WREGIS <u>or another comparable, recognized REC tracking system</u> for the purpose of lowering the certified CI, or for credit generation;

- (v) Any temporally-variable information that was requested or required by DEQ to be included in the initial application as supplemental information, or any required data or documentation listed in the pathway's operating conditions. The information required to be submitted under this section must cover the same time period as the updated OR-GREET model required under subparagraph (i);
- (vi) If the verified operational CI as calculated from the operational data covering the prior two calendar years of production is found to be lower than the certified CI, and a positive verification statement is issued for this period, the fuel pathway holder may elect to keep the original certified CI, or may request to replace the certified CI with the verified operational CI. The pathway holder may elect to add a margin of safety to the new certified CI, and must submit an attestation that the new CI can be maintained through the next reporting period with the acknowledgement that exceeding the newly certified CI in subsequent annual reports or verifications is a violation of the requirements of this division; and
- (vii) If the operational CI is found to be greater than the certified CI, the fuel pathway holder is out of compliance with this division and may be subject to investigation and enforcement by DEQ;
- (D) Comply with the requirements of this division and OAR chapter 340, division 272. Failure to timely submit an annual fuel pathway report or a required verification statement for a facility's pathways will result in the deactivation of those pathways; and
- (E) If a pathway employs carbon capture and sequestration, the fuel pathway holder or joint applicant must submit annual reports of greenhouse gas emissions reductions, project operations, and ongoing monitoring results. Reports must include measurements of relevant parameters sufficient to ensure that the quantification and documentation of CO2 sequestered is replicable and verifiable. DEQ may specify a protocol for measuring and reporting such information in its approval of such an application.
- (f) If DEQ determines the proposal for the carbon intensity has not met the criteria in subsection (b), DEQ will notify the applicant that the proposal is denied and identify the basis for the denial.
- (g) DEQ may modify an approved fuel pathway's CI or approval conditions upon receipt of a verification statement that shows that the verified operational CI is higher than the certified CI.
- (h) Any applicant may include a margin of safety in its application which will increase its certified CI in order to account for potential process variability and to reduce the risk that it will violate this division by having its operational CI exceed its certified CI.
- (10) Completeness determination process.
- (a) For applications calculated using the Tier 1 or Tier 2 calculator, DEQ will determine whether the proposal is complete within 1 month after receiving a registration application.

- (b) If DEQ determines the proposal is complete, DEQ will notify the applicant in writing of the completeness determination.
- (c) If DEQ determines the proposal is incomplete, DEQ will notify the applicant of the deficiencies. The applicant has 30 calendar days to address the deficiencies or DEQ will deny the application. Upon request, DEQ may grant an extension of up to 30 additional days.
- (d) If the applicant submits supplemental information, DEQ has 30 calendar days to determine if the supplemental submittal is complete, or to notify the party and identify the continued deficiencies. This process may repeat until the application is deemed complete or 180 calendar days have elapsed from the date that the applicant first submitted the registration application.
- (11) Issuing additional substitute and temporary fuel pathway codes. For new fuels or new fuel blends being provided within Oregon, registered parties may request that DEQ issue additional fuel pathway codes that can be used in the same manner as those in Tables 8 or 9 (substitute or temporary pathway codes) under OAR 340-253-8010. DEQ may approve such substitute or temporary pathway codes if it concludes they are technically sound and supported by appropriate evidence. If any are approved, DEQ will post these additional pathway codes in the Oregon Fuels Reporting System and on its public website for the Clean Fuels Program. All of the following requirements apply to such requests:
- (a) Requests must be made in writing to DEQ.
- (b) If DEQ concludes the proposed pathway may be technically sound and supported by appropriate evidence, then it will post the proposed new substitute or temporary pathway codes on its website and take comments for:
- (A) 14 calendar days in the case of a substitute fuel pathway code; or
- (B) 45 calendar days in the case of a temporary fuel pathway code.
- (c) DEQ will consider any comments received, make any modifications, if necessary, and make a final decision on the proposed pathway.
- (d) If DEQ concludes the proposed pathway is technically sound and supported by appropriate evidence, then DEQ may approve it and publish its final decision on its website.
- (e) Any newly approved substitute or temporary fuel pathway code will be effective for use in the quarter in which it is approved.
- (12) Measurement accuracy.
- (a) All measurement devices that log or record data for use in a fuel pathway application must comply with the manufacturer-recommended calibration frequency and precision requirements. If manufacturer-recommendations are not provided, the measurement devices must be calibrated at least every six years.

- (b) Requests to Postpone Calibration. For units and processes that operate continuously with infrequent outages, it may not be possible to meet manufacturer-recommended calibration deadlines for measurement devices. In such cases, the owner or operator may submit a written request to DEQ to postpone calibration or inspection until the next scheduled maintenance outage. Such postponements are subject to the procedures of paragraphs (A) and (B) below and must be documented in the monitoring plan required under OAR 340-253-0600.
- (A) A written request for postponement must be submitted to DEQ not less than 30 days before the required calibration, recalibration or inspection date. DEQ may request additional documentation to validate the operator's claim that the device meets the accuracy requirements of this section. The operator shall provide any additional documentation to DEQ within ten (10) business days of a request for documentation.
- (B) The request must include:
- (i) The date of the required calibration, recalibration, or inspection;
- (ii) The date of the last calibration or inspection;
- (iii) The date of the most recent field accuracy assessment, if applicable;
- (iv) The results of the most recent field accuracy assessment, if applicable, clearly indicating a pass/fail status;
- (v) The proposed date for the next field accuracy assessment, if applicable;
- (vi) The proposed date for calibration, recalibration, or inspection which must be during the time period of the next scheduled shutdown. If the next shutdown will not occur within three years, this must be noted and a new request must be received every three years until the shutdown occurs and the calibration, recalibration or inspection is completed; and.
- (vii) A description of the meter or other device, including at a minimum the: make, model, installation date, location, parameter measured by the meter or other device, the rate of data capture by the meter or other device, description of how data from the meter or other device is used in a fuel pathway, calibration or inspection procedure, reason for delaying the calibration or inspection, proposed method to ensure that the precision requirements listed by the manufacturer are upheld, and the contact details for an individual at the fuel production facility who can answer questions about the meter or other device.
- (C) DEQ will approve or deny the request at its discretion based on whether or not it concludes that the device's calibration is reasonably reliable.
- (13) Missing Data Provisions.
- (a) Meter Record, Accuracy, or Calibration Requirements Not Met. If a measurement device is not functional, not calibrated within the time period recommended by the manufacturer, or fails a field accuracy assessment, the fuel production facility operator must otherwise

demonstrate to a verifier or DEQ that the reported data are accurate within +/-5 percent. The following requirements apply to such demonstration:

- (A) If the operator can demonstrate to the verifier or DEQ that reported data are accurate, the data are acceptable. The entity must then provide a detailed plan describing when the measurement device will be brought into calibration. This plan is subject to approval by DEQ; and
- (B) If the operator cannot demonstrate to the verifier or DEQ that reported data are accurate, the data is not acceptable and the missing data provisions in subsection (b) apply.
- (b) Missing Data Provisions. If missing data exists, the entity must submit for DEQ approval an alternate method of reporting the missing data. Alternate methods shall be evaluated on a case-by-case basis for reasonableness and continuity with the rest of the dataset. DEQ may choose to require a more conservative approach to the missing data if it is concerned that the alternative method may understate actual lifecycle emissions associated with the fuel or fuels produced by the facility.
- (c) Force Majeure Events. In the event of a facility shutdown or disruption drastically affecting production attributable to a force majeure event, the fuel pathway applicant or holder must notify DEQ.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020 DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019 DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017 DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16 DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15 DEQ 8-2012, f. & cert. ef. 12-11-12

#### 340-253-0460

#### **Energy Economy Ratio-Adjusted carbon intensity applications**

- (1) Energy Economy Ratio-Adjusted CI Applications. Applications submitted under this rule are modified Tier 2 pathway applications under OAR 340-253-0450.
- (2) The following persons are eligible to submit an application under this rule:
- (a) Vehicle owners or operators that would be eligible to generate credits for their vehicles;
- (b) Manufacturers of vehicles that would be eligible to generate credits may make a joint application with an owner or operator of their vehicles based in Oregon; and
- (c) A single, joint application may be submitted on behalf of, and combining data from, any combination of multiple vehicle owners, operators, and manufacturers.

- (3) Applications made under this <u>rule</u> must be for electric vehicles capable of full normal operation using energy from onboard batteries or fuel cells.
- (4) Application requirements for an Energy Economy Ratio-Adjusted CI under this rule. In addition to the application requirements for a Tier 2 pathway application under OAR 340-253-0450, the applicant or applicants must include:
- (a) A letter of intent to request an Energy Economy Ratio (EER)-adjusted carbon intensity and why the EER values provided in OAR 340-253-8010 are inapplicable;
- (b) A detailed description of the methodology used in its calculations, all assumptions made, and provide all data and references to calculations. The methodology used must compare the useful output from the alternative fuel-vehicle technology under consideration to comparable conventional fuel-vehicle technology;
- (c) Supplemental information including records and datasets used to establish any part of the application provided under (b); and
- (d) If the applicant or applicants plan to use a value in the lookup table in OAR 340-253-8010 for the carbon intensity of the fuel, or an electricity fuel pathway code issued under OAR 340-253-0470, to request an EER-adjusted carbon intensity then they do not need to provide the fuel facility information required under OAR 340-253-0450(3)(e) through (h) and (5).
- (5) Minimum data requirements to apply for an Energy Economy Ratio-Adjusted CI under this rule:-
- (a) Any application made under this rule must include at least three months of operating data that represents typical usage for each individual vehicle included in the application, except that the application must cover at least 300 hours of operating data for each individual vehicle included in the application; and-
- (b) Notwithstanding subsection (a), an application from a manufacturer may provide data from duty-cycle testing. A manufacturer seeking to apply using duty-cycle testing data must consult with DEQ prior to submitting an application and receive written, advanced approval from the agency for the duration and test cycles it is including in the application in addition to or in lieu of operational data.
- (6) Application review process to apply for an Energy Economy Ratio-Adjusted CI under this rule:
- (a) DEQ will review an application for completeness, soundness of the assumptions and comparison to the conventional fuel technology, and accuracy of the data. DEQ may deny an application without prejudice if it is incomplete. DEQ may deny any application that it believes is adequately covered by an existing EER value in OAR 340-253-8010 or that it believes does not fit the intent and purpose of the Clean Fuels Program;

- (b) DEQ may prioritize its review of applications under this provision to those that cover a greater number of entities or that the agency believes are critical to the state's transportation electrification goals;
- (c) If DEQ intends to approve an application, it first must present a review report with a proposed EER value and pathway conditions to the applicant or applicants. If the applicant or applicants accept the proposed review report and EER value, DEQ will post the review report and application on its website for a 30-day public comment period. DEQ staff will work with the applicant to aggregate and summarize any submitted data in order to ameliorate concerns regarding trade secrets included in the application. The aggregated data must still allow external stakeholders to understand and replicate the EER value that DEQ is proposing to approve; and-
- (d) Based on comments received during that public comment period, DEQ may move forward with approving the application as provided in section (7), deny the application, request additional information from the applicant or applicants, or modify the review report. If DEQ modifies the review report or receives additional information that has a material bearing on the proposed EER value, it will issue the modified review report and any affected supplemental materials for another round of public comment.
- (7) Based on its review of the application materials and any comments submitted upon the application under section (6), DEQ may issue an EER-adjusted fuel pathway or issue a value that it would post on its website that could be used similarly to the EER values contained in Table 7 of OAR 340-253-8010. Values issued under this rule can only be used by the applicant or applicants for that value.
- (8) Adding Joint Applicants after a value is approved. If DEQ has issued a value under section (7) as part of an application that includes the manufacturer of the vehicle(s), owners or operators who begin to operate the same vehicle(s) covered in that application in Oregon may request to be added as a joint applicant. In order to do so they must provide the following:
- (a) A letter from the manufacturer stating that the manufacturer supports the addition of the joint applicant;
- (b) Any current operational data by the new joint applicant, or other data elements required to be reported under the value's pathway conditions; and
- (c) A statement by the new joint applicant that they understand and accept any and all pathway conditions associated with the value.
- (9) Ongoing reporting requirements.
- (a) For any EER-adjusted fuel pathway approved by DEQ under section (7), the applicant for such approval must annually submit vehicle usage and energy consumption data for each individual vehicle using the value approved by DEQ to generate credits or deficits in the Clean Fuels Program. DEQ may specify additional data elements that must be reported annually as part of its pathway conditions for an application that is approved under this rule.

- (b) Notwithstanding the applicability requirements of OAR chapter 340, division 272, for any EER-adjusted fuel pathway approved by DEQ under section (7), DEQ may require third party verification of the annual fuel pathway report submitted by the applicant or joint applicants for such approval. If DEQ determines that third party verification is required, DEQ will include that as a pathway condition presented to the applicant or applicants under this rule as part of its approval of such fuel pathway.
- (10) Modifications to values issued under this rule. Based on the ongoing reported data required under section (9) or additional applications for vehicles that DEQ determines to be in the same category, DEQ may modify any value issued under this provision for reporting beginning with the next full calendar quarter following its notice that the agency is modifying the value. DEQ will provide notice to the applicant(s) for such fuel pathway prior to doing so, and may request comment from them and the public prior to modifying the value.

<u>Statutory/Other Authority: ORS 468.020, 468A.266, 468A.268 & 468A.277</u> <u>Statutes/Other Implemented: ORS 468.020 & ORS 468A.265 through 468A.277</u>

#### 340-253-0470

#### **Determining the Carbon Intensity of Electricity**

- (1) Statewide electricity mix. The carbon intensity for the statewide electricity mix will reflect the average carbon intensity of electricity served in Oregon and be calculated by using the carbon-intensity of electricity overfrom the most recent five years and determining the average of the five values. For 2018 and beyond, the carbon intensities for electricity will be calculated using the rolling five—year average of dataas submitted to DEQ under OAR chapter 340, division 215. In calculating the statewide mix DEQ will exclude the energy and emissions related to utilities that have received utility-specific carbon intensity values under section (3) of this rule for that year. No later than December 31 of each year, except that DEQ may revise the 2021 value no later than June 15, 2021, DEQ will:
- (a) Post the updated statewide electricity mix carbon intensity for the next year on the DEQ webpage;
- (b) Post the updated utility-specific carbon intensities for the next year on the DEQ webpage; and
- (c) Add the new fuel pathway codes to the Oregon Fuels Reporting System effective for Q1 reporting for the next year.
- (2(2) Retirement of major fossil-fuel generators. For the 2021 and 2022 statewide mixes and any applicable utility-specific mixes, DEQ will replace the direct emissions associated with power from the Boardman coal-fired power plant with an emissions rate of 0.428 metric tons CO2e per megawatt-hour. For indirect emissions, DEQ will continue to use the most recent fuel mix data available.
- (3) Utility-specific carbon intensity. An electric utility may apply to obtain a utility-specific carbon intensity under OAR 340-253-0400 that reflects the average carbon intensity of electricity served in that utility district.

- (a) The carbon intensity will be calculated by using the carbon intensity of electricity over the most recent five years and determining the average of the five values recently reported year.
- (b) Once DEQ has calculated a utility-specific carbon intensity, DEQ will propose its draft carbon intensity to the utility.
- (A) If the utility does not agree with DEQ's proposed carbon intensity, then it must provide DEQ with an explanation of why it believes the proposed carbon intensity is not accurate within seven days of receiving DEQ's proposal. DEQ will consider whether to change its proposed carbon intensity based on the information it receives from the utility. If DEQ determines not to change it proposed carbon intensity within 30 days, then the utility may choose to accept the proposed carbon intensity or use the statewide electricity mix carbon intensity.
- (B) If the utility agrees with DEQ's proposed carbon intensity, then the draft carbon intensity is made final and approved.
- (C) If the utility fails to submit a timely objection to the calculation, then the draft carbon intensity is made final and approved.
- (c) A utility that wants to discontinue a utility-specific carbon intensity may submit a written request to DEQ by October 31 for the following year. A utility can reapply for a utility-specific carbon intensity at any time in the future.
- (34) For on-site generation of electricity using renewable generation systems such as solar or wind, applicants must document that:
- (a) The renewable generation system is on-site or directly connected to the electric vehicle chargers;
- (b) The fuel pathway codes listed in Table 3 under OAR 340-253-8010 for solar-generated or wind-generated electricity can only be used for the portion of the electricity dispensed from the charger that is generated by that dedicated renewable energy system;
- (c) Any grid electricity dispensed from the charger must be reported separately under the statewide electricity mix or utility-specific fuel pathway codes; and
- (d) RECs are not generated from the renewable generation system or, if they are, then an equal number of RECs generated from that facility to the number of MWh reported in the Oregon Fuels Reporting System from that facility must be retired in the <a href="recognized">recognized</a> REC tracking system.
- (5) Offsite renewable electricity. In order to lower the carbon intensity of electricity claimed as a vehicle fuel in the Clean Fuels Program, credit generators and aggregators may retire renewable electricity certificates that meet the following qualifications:

- (a) Renewable Energy Certificates (RECs) retired in order to claim a carbon intensity other than the statewide mix or utility-specific mix must be certified by the Green-e Program under the Green-e Renewable Energy Standard for Canada and the United States version 3.5, or by a certification system approved by DEQ as being substantially equivalent. Unbundled RECs being used to claim low-carbon electricity through book and claim accounting must be certified at the wholesale level, while RECs used in a power purchase agreement or Utility Renewable Electricity Product may be certified at the retail level.;-
- (b) RECs must be generated by an electric generator that was placed into service after 2015, or in the case of biogas generators they must meet the new date requirements of the Green-e Standard;
- (c) RECs must be generated from facilities located in the Western Electricity Coordinating Council; and
- (d) RECs must be recorded and retired in a recognized REC tracking system. In addition to recognizing the Western Renewable Energy Generation Information System, DEQ may recognize additional REC tracking systems upon a request from a registered party. In reviewing those requests, DEQ will consider whether the tracking system is comparable to WREGIS and if it has systems in place to ensure accurate issuance and tracking of RECs.
- (6) Carbon intensity of renewable electricity. The carbon intensity of solar, wind, geothermal, hydropower, and ocean power renewable electricity is deemed to be zero. For renewable electricity generated from biomass, biogas, biodiesel, and hydrogen, the generator must file a Tier 1 or Tier 2 fuel pathway application to determine the carbon intensity of its electricity. DEQ may adopt an efficiency adjustment factor for biogas to electricity pathways that include emissions reduction credits in order to maintain the program's incentive for energy efficiency.
- (7) Utility Renewable Electricity Products and Power Purchase Agreements. Electric utilities and Electric Service Suppliers may apply via a Tier 2 fuel pathway application for DEQ to assign a carbon intensity to one or more of their renewable electricity products or a specific power purchase agreement, which may then be used to generate credits from charging electric vehicles attributable to the use of such products or agreements. All of the following requirements apply to such applications:
- (a) Notwithstanding OAR 340-253-0450, Tier 2 applications made under this section must include:
- (A) A letter describing the power purchase agreement or Utility Renewable Electricity Product, the existing or planned source, or sources, of electricity and environmental attributes, and the terms by which it is being offered to customers;
- (B) Samples or examples of bills, invoices, contracts, or other documentation that an entity claiming renewable energy under this product could provide to DEQ to prove that their electric vehicle charging is covered by the product or agreement;

Attachment A: Redline rules March 25-26, 2021, EQC meeting Page 44 of 80

- (C) In the case of a Utility Renewable Electricity Product, any filings with, and orders by, the Oregon Public Utility Commission or a local governing board that approves the product; and
- (D) An estimate of the amount of electric vehicle charging attributable to customers for the product or agreement.
- (b) DEQ will review pathway applications under this section to determine if they result in a substantially similar environmental outcome to the sources of renewable energy required under section (5) of this rule. In reviewing a utility product or agreement that contains multiple sources of power, DEQ may use the estimate under paragraph (a)(C) of this section to determine if sufficient renewable energy that is substantially similar to the requirements of section (5) is included in the product to cover transportation-related charging that may be claimed under the CFP. DEQ may revisit this determination annually using the annual fuel pathway report.
- (c) Annual Fuel Pathway Report. The annual fuel pathway report for pathways covered by this section must include information to update the sources or sources of electricity or environmental attributes that were used in the prior year and are planned for use in the year in which the report is submitted. That documentation must include retirement records for any RECs used to lower the claimed carbon intensity of the electricity being used by customers of those products in the Clean Fuels Program for the prior year. If the product is certified by the Green-e Program, proof of completion of final verification of the product must be included, or a validation statement if the product is undergoing the program's Customer Procurement Review. That documentation must also update the estimate of the amount of electric vehicle charging attributable to customers using the products or agreements. Fuel pathway reports required by this section are due by June 30, notwithstanding OAR 340-253-0450 (9)(e)(C).

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020 DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019 DEQ 27-2017, adopt filed 11/17/2017, effective 11/17/2017

#### 340-253-0600 Records

- (1) Records Retention. Regulated parties, credit generators, and aggregators must retain the following records for at least seven years:
- (a) Product transfer documents as described in section (2);
- (b) Records related to obtaining a carbon intensity described in OAR 340-253-0450;
- (c) Copies of all data and reports submitted to DEQ;
- (d) Records related to each fuel transaction;

- (e) Records used for compliance or credit calculations;
- (f) Records used to establish that feedstocks are specified source feedstocks; and
- (g) Records related to third-party verification, if required under OAR 340-253-0700.
- (2) Documenting Fuel Transactions. A product transfer document must prominently state the information specified below.
- (a) Transferor company name, address, and contact information;
- (b) Recipient company name, address, and contact information;
- (c) Transaction date;
- (d) Fuel pathway code;
- (e) Carbon intensity;
- (f) Volume/amount;
- (g) A statement identifying whether the transferor or the recipient has the compliance obligation; and
- (h) The EPA fuel production company identification number and facility identification number as registered with the RFS program.
- (3) For transactions of clear and blended gasoline and diesel below the rack where the fuel is not destined for export, only the records described in subsections (2)(a), (b), (c), (f), and (g) are required to be retained.
- (4) Documenting Credit Transactions. Regulated parties, credit generators, and aggregators must retain the following records related to all credit transactions for at least seven years:
- (a) The contract under which the credits were transferred;
- (b) Documentation on any other commodity trades or contracts between the two parties conducting the transfer that are related to the credit transfer in any way; and
- (c) Any other records relating to the credit transaction, including the records of all related financial transactions.
- (5) Review. All data, records, and calculations used by a regulated party, a credit generator, or an aggregator to comply with OAR chapter 340, division 253 are subject to inspection and verification by DEQ. Regulated parties, credit generators, and aggregators must provide records retained under this rule within 60 days after the date DEQ requests a review of the records, unless DEQ specifies otherwise.

- (6) Initial 2016 Inventory. All regulated fuels held in bulk storage in the state on January 1, 2016 are subject to the program and must be reported as the initial inventory of fuels by regulated parties.
- (7) Information exempt from disclosure. Pursuant to the provisions of the Oregon public records law, ORS 192.410 to 192.505, all information submitted to DEQ is subject to inspection upon request by any person unless such information is determined to be exempt from disclosure under the Oregon public records law or other applicable Oregon law.
- (8) Attestations regarding environmental attributes.
- (a) An entity reporting any biomethane as a transportation fuel in the CFP, and a fuel pathway holder using biogas or biomethane as process energy, must obtain and keep attestations from each upstream party collectively demonstrating that:
- (A) The entity claiming the environmental attributes has the exclusive right to claim environmental attributes associated with the sale or use of the biogas or biomethane; and
- (B) The environmental attributes have not been used or claimed in any other program or jurisdictions with the exception of the federal RFS. Any such claims under the federal RFS must be made for the same use and volume of biomethane or its derivatives as it is being claimed for in the CFP, or the claim under the CFP is invalid.
- (b) Any) attestation under subsection (a) must be provided to DEQ within seven days of receiving a request for such attestation frombyby DEQ. Failure to provide such attestations is grounds for credit invalidation under OAR 340-253-0670.
- (9) Monitoring plan for entities and fuel producers who are required to obtain third-party verification services under OAR 340-253-0700. Each entity responsible for obtaining third-party verification of their data under OAR chapter 340, division 272 must complete and retain a written monitoring planMonitoring Planplan for review by a verifier or DEQ. If a fuel production facility is required to complete and maintain a monitoring plan by the California LCFS, the same monitoring plan may be used to meet the requirements of this rule unless therethethere are substantive differences between the two programs' treatment of the fuel production process. A monitoring plan must include the following, as applicable:
- (a) All of the Thethe following general items are required for all monitoring plans:
- (A) Information to allow DEQ and the verification team to develop a general understanding of boundaries and operations relevant to the entity, facility, or project, including participation in other markets and other third-party audit programs;
- (B) Reference to management policies or practices applicable to reporting pursuant to this division, including recordkeeping;
- (C) Explanation of the processes and methods used to collect necessary data for reporting pursuant to this subarticle, including identification of changes made after January 1, 2020;

- (D) Explanations and queries of source data to compile summary reports of intermediate and final data necessary for reporting pursuant to this division;
- (E) Reference to one or more simplified block diagrams that provide a clear visual representation of the relative locations and positions of measurement devices and sampling locations, as applicable, required for calculating reported data (e.g., temperature, total pressure, LHV or HHV, fuel consumption); the diagram(s) must include storage tanks for raw material, intermediate products, and finished products, fuel sources, combustion units, and production processes, as applicable;
- (F) Clear identification of all measurement devices supplying data necessary for reporting pursuant to this subarticle, including identification of low flow cutoffs as applicable, with descriptions of how data from measurement devices are incorporated into the submitted report;
- (G) Descriptions of measurement devices used to report CFP data and how acceptable accuracy is demonstrated, e.g., installation, maintenance, and calibration method and frequency for internal meters and financial transaction meters; this provision does not apply to data reported in the Oregon Fuels Reporting System for generating credits for EV charging;
- (H) Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems, flow meters, and other instrumentation used to provide data for CFP reports;
- (I) Original equipment manufacturer (OEM) documentation or other documentation that identifies instrument accuracy and required maintenance and calibration requirements for all measurement devices used to collect necessary data for reporting pursuant to this division;
- (J) The dates of measurement device calibration or inspection, and the dates of the next required calibration or inspection;
- (K) Requests for postponement of calibrations or inspections of internal meters and subsequent approvals by DEQ. The entity must demonstrate that the accuracy of the measured data will be maintained pursuant to the measurement accuracy requirements of OAR 340-253-0450(12);
- (L) A listing of the equation(s) used to calculate flows in mass, volume, or energy units of measurement, and equations from which any non-measured parameters are obtained, including meter software, and a description of the calculation of weighted average transport distance;
- (M) Identification of job titles and training practices for key personnel involved in CFP data acquisition, monitoring, reporting, and report attestation, including reference to documented training procedures and training materials;
- (N) Records of corrective and subsequent preventative actions taken to address verifier and DEQ findings of past nonconformance and material misstatements;

- (O) Log of modifications to a fuel pathway report conducted after attestation in response to review by third-party verifier or DEQ staff;
- (P) Written description of an internal audit program that includes data report review and documents ongoing efforts to improve the entity's CFP reporting practices and procedures, if such an internal audit program exists; and
- (Q) Methodology used to allocate the produced fuel quantity to each fuel pathway code;
- (b) Any monitoring plan related to a fuel pathway carbon intensity or reporting quantities of fuels must also include the following elements specific to fuel pathway carbon intensity calculations and produced quantities of fuels per fuel pathway code:
- (A) Explanation of the processes and methods used to collect necessary data for fuel pathway application and annual fuel pathway reports and all site-specific OR-GREET 3.0 inputs, as well as references to source data;
- (B) Description of steps taken and calculations made to aggregate data into reporting categories, for example aggregation of quarterly fuel transactions per fuel pathway code;
- (C) Methodology for assigning fuel volumes by fuel pathway code, if not using a method prescribed by DEQ. If using a DEQ <u>perscribed prescribed</u> methodology, the methodology should be referenced;
- (D) Methodologies for testing conformance to specifications for feedstocks and produced fuels, particularly describing physical testing standards and processes;
- (E) Description of procedure taken to ensure measurement devices are performing in accordance with the measurement accuracy requirements of OAR 340-253-0450(12);
- (F) Methodology for monitoring and calculating weighted average feedstock transport distance and modes, including the specific documentation records that will be collected and retained on an ongoing basis;
- (G) Methodology for monitoring and calculating fuel transport distance and modes, including the specific documentation records that will be collected and retained on an ongoing basis;
- (H) References to contracts and accounting records that confirm fuel quantities were delivered into Oregon for transportation use in carbon intensity determination, and confirm feedstock and finished fuel transportation distance; and
- (I) All documentation required pursuant to OAR 340-253-0600(10) for specified source feedstocks, defined in OAR 340-253-0400(7); and)
- (c) The monitoring plan must also include documentation that can be used to justify transaction types reported for fuel in the Oregon Fuels Reporting System, including the production amount, sale/purchase agreements and final fuel dispensing records. Such documentationDocumentationdocumentation must be specific to quarterly fuel transactions

Attachment A: Redline rules March 25-26, 2021, EQC meeting Page 49 of 80

reports for importers of blendstocks, importers of finished fuels, Oregon producers, credit generators, aggregators, and out-of-state producers.

- (10) Feedstock Transfer Documents. A feedstock transfer document for specified source feedstocks must prominently state the following information:
- (a) Transferor company name, address and contact information;
- (b) Recipient company name, address and contact information;
- (c) Type and amount of feedstock, including units; and
- (d) Transaction date.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020

DEO 199-2018, amend filed 11/16/2018, effective 01/01/2019

DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017

DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16

DEO 3-2015, f. 1-8-15, cert. ef. 2-1-15

DEQ 8-2014, f. & cert. ef. 6-26-14

DEQ 15-2013(Temp), f. 12-20-13, cert. ef. 1-1-14 thru 6-30-14

DEQ 8-2012, f. & cert. ef. 12-11-12

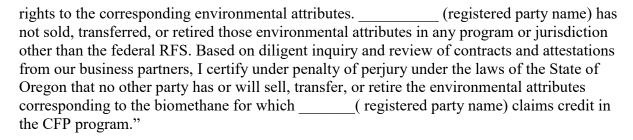
#### 340-253-0640

#### **Specific Requirements for Reporting**

- (1) For natural gas or biomethane (inclusive of CNG, LNG, and L-CNG), any registered party must report the following as applicable:
- (a) For CNG and L-CNG, the amount of fuel in therms dispensed per reporting period for all LDV and MDV, HDV-CIE, and HDV-SIE.
- (b) For LNG, the amount of fuel dispensed in gallons per compliance period for all LDV and MDV, HDV-CIE, and HDV-SIE.
- (c) For CNG, L-CNG, and LNG, the carbon intensity as listed in 4 under OAR 340-253-8040.
- (d) For biomethane-based CNG, LNG, and L-CNG, the carbon intensity as approved under OAR 340-253-0450 and the EPA production company identification number and facility identification number. Additionally, the registered party must submit the following attestation at the time of filing the annual report:

'I certify that to the extent that the gas used in th	ne fuel pathway or supplied as transportation
fuel is characterized as biomethane,	(registered party name) owns the exclusive

Attachment A: Redline rules March 25-26, 2021, EQC meeting Page 50 of 80



- (2) For electricity, any registered party must report the following as applicable:
- (a) The information specified for electricity in Table 5 under OAR 340-253-8010;
- (b) For each public access charging facility, fleet charging facility, workplace private access charging facility, or multi-family dwelling, the amount of electricity dispensed in kilowatt hours to vehicles.
- (c) For each public transit agency, the amount of electricity dispensed to or consumed by vehicles used for public transportation in kilowatt hours. The report must be:
- (A) Separated by use for light rail, streetcars, aerial trams, or electric transit buses; and
- (B) Separated by electricity used in portions of their system placed in service before and after January 1, 2012-;
- (d) To claim a carbon intensity other than a statewide or utility-specific mix, or directly connected renewable power under the Lookup Table in OAR 340-253-8010, a registered party must:
- (A) Submit documentation that qualifying RECs were retired in a recognized renewable electricity tracking system for the unique purpose of covering that specific charging at the same time as the submittal of the Quarterly; or
- (B) Submit documentation at least annually that the electric vehicle chargers are covered by a Utility Renewable Electricity Product or a power purchase agreement that has been approved by DEQ for a carbon intensity. The carbon intensity assigned to the product or agreement can only be used for reporting if the electric vehicle chargers are covered by that same product or agreement for the time period which is being reported;
- (e) Any entity that claims a carbon intensity using paragraph (2)(d)(A) must annually submit proof of completion of final verification or a validation statement from the Green-e Program for the RECs used to generate incremental credits. Failure to submit such proof is grounds for DEQ to invalidate any incremental credits issued to the entity under the procedures of OAR 340-253-0670; and
- (f) For entities reporting forklift charging, the amount of electricity dispensed to or consumed by forklifts. The report must be separated by electricity used to charge forklifts built in or before model year 2015 and electricity used to charge forklifts built in model year 20165 and after.

- (3) For renewable hydrocarbon diesel or gasoline co-processed at a petroleum refinery, any registered party must report the following information as applicable:
- (a) If the registered party is also the producer, then DEQ may require the registered party to report the ongoing information required under OAR 340-253-0450.
- (b) If the registered party is not the producer, and the producer has not met its obligations under OAR 340-253-0450, then DEQ may require the registered party to report the volume of fuel under a temporary fuel pathway code or the fuel pathway code for clear gasoline or diesel, as applicable.
- (4) Temperature Correction. All liquid fuel volumes reported in the Oregon Fuels Reporting System must be adjusted to the standard temperature conditions of 60 degrees Fahrenheit as follows:
- (a) For ethanol, using the formula: Standardized Volume = Actual volume \* ((-0.0006301 \* T) + 1.0378), where standardized volume refers to the volume of ethanol in gallons at 60°F, actual volume refers to the measured volume in gallons, and T refers to the actual temperature of the batch in °F.
- (b) For Biodiesel, one of the following two methodologies must be used:
- (A) Standardized Volume = Actual Volume \* ((-0.00045767 \* T) + 1.02746025), where Standardized Volume refers to the volume in gallons at 60°F, Actual Volume refers to the measured volume in gallons, and T refers to the actual temperature of the batch in °F; or
- (B) The standardized volume in gallons of biodiesel at 60°F, as calculated using the American Petroleum Institute Refined Products Table 6B, as referenced in ASTM 1250-08.
- (c) For other liquid fuels, the volume correction to standard conditions must be calculated by the methods described in the American Petroleum Institute Manual of Petroleum Measurement Standards Chapter 11 Physical Properties Data, the ASTM Standard Guide for the Use of Petroleum Measurement Tables (ASTM D1250-08), or the API Technical Data Book, Petroleum Refining Chapter 6 Density.
- (d) If a registered party believes the methods in (a) through (c) are inappropriate, they may request to use a different method and DEQ may approve that method if it finds that it is at least as accurate as the methods in (a) through (c).
- (5) Reporting Exempt Gallons. When a registered party is reporting that it sold gallons of fuel to exempt fuel users as defined in OAR 340-253-0250, the registered party must designate in the transaction description field of the Oregon Fuels Reporting System the categories of exempt fuel users to which the registered party delivered fuel and the number of gallons delivered. For blended fuels, all components must be reported as exempt.
- (6) Reporting "Not For Transportation" Gallons. When reporting that fuel was sold as not for transportation in the Oregon Fuels Reporting System, the registered party must report in the transaction description field of the Oregon Fuels Reporting System which stationary source.

or category of stationary fuel combustion, the fuel was sold to and the number of gallons sold. For blended fuels, all components must be reported as not being used for transportation.

- (7) Reporting Position Holder Transactions.
- (a) Registered parties that are position holders must report fuel sold below the rack.
- (b) Registered parties that are position holders that sell fuel to entities not registered in the CFP may be aggregate and report those sales in a single transaction using the ""Undefined Business "Undefined" business partner" transaction category descriptor.
- (c) Registered parties that are position oldersholders that sell fuel below the rack for export must identify each recipient of such fuel that is registered in the CFP.
- (8) Reporting Below the Rack Exports. Purchasers of fuel from a position holder that is directly exported without modification must report such fuel using the "Purchase below the rack for export" transactioncategory.transaction category.
- (9) Annual reporting of utility credit revenue. Starting in 2022, all electric utilities that receive base or incremental credits must annually report the following items to DEQ no later than April 30<sup>th</sup>. Failure to file such a report will result in the backstop aggregator or the incremental aggregator receiving credits for that utility until the utility files any past-due reports. Each utility must report the following information, for the prior calendar year:
- (a) Total revenue from the sale of base and incremental credits attributable to residential vehicle charging, if applicable in the prior year;
- (b) For entities whose revenue or expenditures exceed \$250,000 in a given year, the percentages that result when dividing the utility's CFP-related administrative costs, including but not limited to submitting reports, selling credits, and to administer any programs that were funded by CFP revenue from the utility's sale of incremental credits, including but not limited to project management and development and management of contracts to operate such programs by the amount of revenue reported under subsection (a);
- (c) A description of the programs that were funded by CFP revenue the utility received from its sale of base credits and the amount spent in each category in the prior year; and
- (d) A description of the programs that were funded by CFP revenue from incremental credits, the amount spent in each category in the prior year, a description of the class of individuals or listing of organizations that benefited from the programs, and any other data elements that DEQ informs each utility receiving incremental credits that it will require following consultations with the Equity Advisory Committee created under OAR 340-253-0330(9)(j).

**Statutory/Other Authority:** OAR 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** OAR 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEO 14-2020, amend filed 05/07/2020, effective 05/07/2020

DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019 DEQ 27-2017, adopt filed 11/17/2017, effective 11/17/2017

#### 340-253-1000 Credit and Deficit Basics

- (1) Carbon intensities.
- (a) Except as provided in subsections (b),(c), or (d), when calculating carbon intensities, regulated parties, credit generators, and aggregators must use a carbon intensity approved by DEQ under OAR 340-253-0450.
- (b) If a regulated party, credit generator, or aggregator has an approved provisional carbon intensity approved under OAR 340-253-0450, the regulated party, credit generator, or aggregator must use the DEQ-approved provisional carbon intensity.
- (c) If a regulated party, credit generator, or aggregator has an approved temporary carbon intensity under OAR 340-253-0450, the regulated party, credit generator, or aggregator must use the temporary carbon intensity for the period which it has been approved, unless DEQ has subsequently approved a permanent carbon intensity for that fuel.
- (d) If a registered party purchases a blended finished fuel and the seller does not provide carbon intensity information, then the registered party must:
- (A) Use the applicable substitute fuel pathway code in Table 8 under OAR 340-253-8010 or otherwise approved and posted by DEQ under OAR 340-253-0450(11) if the fuel is exported, not used for transportation, or used in an exempt fuel use; and
- (B) Report the volume using the applicable Table 8 fuel pathway code, or a fuel pathway code otherwise approved and posted by DEQ under OAR 340-253-0450(11), for the fossil fuel and the applicable substitute fuel pathway code for the biofuel or biofuels if the finished fuel blend is not listed.
- (2) Fuel quantities. Regulated parties, credit generators, and aggregators must express fuel quantities in the unit of fuel for each fuel.
- (3) Compliance period. The annual compliance period is January 1 through December 31 of each year, except:
- (a) The initial compliance period is January 1, 2016, through December 31, 2017; and
- (b) The initial compliance period for large importers of finished fuels is January 1, 2016 through December 31, 2018.
- (4) Metric tons of CO2 equivalent. Regulated parties, credit generators, and aggregators must express credits and deficits to the nearest whole metric ton of carbon dioxide equivalent.
- (5) Deficit and credit generation.

- (a) Credit generation. A clean fuel credit is generated when fuel is produced, imported, or dispensed for use in Oregon, as applicable, and the carbon intensity of the fuel approved for use under OAR 340-253-0400 through -0470 is less than the clean fuel standard for gasoline and gasoline substitutes in Table 1 under OAR 340-253-8010, for diesel fuel and diesel substitutes in Table 2 under 340-253-8010, or for alternative jet fuel in Table 3 under 340-253-8010. Credits are generated when a valid and accurate quarterly report is submitted in the Oregon Fuels Reporting System.
- (b) Deficit generation. A clean fuel deficit is generated when fuel is produced, imported, or dispensed for use in Oregon, as applicable, and the carbon intensity of the fuel approved for use under OAR 340-253-0400 through -0470 is more than the clean fuel standard for gasoline and gasoline substitutes in Table 1 under OAR 340-253-8010 or for diesel fuel and diesel substitutes in Table 2 under 340-253-8010. Deficits are generated when a valid and accurate quarterly report is submitted in the Oregon Fuels Reporting System.
- (c) No credits may be generated or claimed for any transactions or activities occurring in a quarter for which the quarterly reporting deadline has passed, unless the credits are being generated for residential charging of electric vehicles or for claiming incremental credits by a utility or the incremental aggregator.
- (6) Mandatory retirement of credits. When filing the annual report at the end of a compliance period, a registered party that possesses credits must retire a sufficient number of credits such that:
- (a) Enough credits are retired to completely meet the registered party's compliance obligation for that compliance period, or
- (b) If the total number of the registered party's credits is less than the total number of the regulated party's deficits, the registered party must retire all of its credits.
- (7) Credit Retirement Hierarchy. The Oregon Fuels Reporting System will use the following default hierarchy to retire credits for the purposes of meeting a compliance obligation, first retiring credits under subsection (a), next retiring credits under subsection (b), and last retiring credits under subsection (c):
- (a) Credits acquired or generated in a previous compliance period prior to credits generated or acquired in the current compliance period;
- (b) Credits with an earlier completed transfer "recorded date" before credits with a later completed transfer "recorded date;" and
- (c) Credits generated in an earlier quarter before credits generated in a later quarter.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020 DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019

DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017 DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16 DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15 DEQ 8-2012, f. & cert. ef. 12-11-12

#### 340-253-1010

#### **Fuels to Include in Credit and Deficit Calculation**

- (1) Fuels included. Credits and deficits must be calculated for all regulated fuels and clean fuels, except that:
- (a) Credits may be generated only for B100 that complies with an oxidation stability induction period of not less than 8 hours as determined by the test method described in the European standard EN 15751;
- (b) B100 that does not comply with subsection (a) can still be imported into Oregon and must be reported, but cannot generate credits for the CFP.
- (2) Fuels exempted. Except as provided in sections (3), (4), and (5), credits and deficits may not be calculated for fuels exempted under OAR 340-253-0250.
- (3) Voluntary inclusion. A regulated party, credit generator, or aggregator may choose to include in its credits and deficits calculations fuel that is exempt under OAR 340-253-0250(1) and fuel that is sold to an exempt fuel user in Oregon under 340-253-0250(2), provided that the credit and deficit calculation includes all fuels listed on the same invoice.
- (4) When fuels are exported from Oregon:
- (a) Any bulk quantity of fuel that is exported must be reported by the person who holds title to the fuel when it is exported;
- (b) If the exporter purchased the fuel with the compliance obligation, the exported fuels will not generate deficits or credits;
- (c) If credits or deficits were generated and separated from the fuel through a transfer without obligation, the exporter will incur credits or deficits, as appropriate, to balance out the deficits or credits detached from the fuel; and
- (d) If the fuel was imported in one quarter and exported in another quarter, the exporter will incur credits or deficits, as appropriate, to balance out the deficits or credits, respectively, associated with the fuel when it was imported imported in the priorlater prior quarter.
- (5) Alternative jet fuel. Alternative jet fuel may be reported by the producer or importer of the fuel and any registered parties that hold title to it, so long as the fuel is loaded into airplanes in Oregon. If a gallon of alternative jet fuel that has been reported to the Clean Fuels Program as imported or produced is later exported, lost, or otherwise not used for transportation it must be reported as such.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020 DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019 DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017 DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16 DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15 DEQ 8-2012, f. & cert. ef. 12-11-12

#### 340-253-1020 Calculating Credits and Deficits

- (1) Except as provided in sections (2) and (3), credit and deficit generation must be calculated for all fuels included in OAR 340-253-1010:
- (a) Using credit and deficit basics as directed in OAR 340-253-1000;
- (b) Calculating energy in megajoules by multiplying the amount of fuel by the energy density of the fuel in Table 6 under OAR 340-253-8010;
- (c) Calculating the adjusted energy in megajoules by multiplying the energy in megajoules from section (2) by the energy economy ratio of the fuel listed in Table 7 or 8 under OAR 340-253-8010 or as approved by DEQ under OAR 340-253-0460, as applicable;
- (d) Calculating the carbon intensity difference by subtracting the fuel's carbon intensity as approved under OAR 340-253-0400 through -0470, adjusted for the fuel application's energy economy ratio as listed in Table 7 under OAR 340-253-8010 or as approved under OAR 340-253-0460 as applicable, from the clean fuel standard for gasoline or gasoline substitutes listed in Table 1 under OAR 340-253-8010 or diesel fuel and diesel substitutes listed in Table 2 under OAR 340-253-8010, as applicable;
- (e) Calculating the grams of carbon dioxide equivalent by multiplying the adjusted energy in megajoules in section (3) by the carbon intensity difference in section (4);
- (f) Calculating the metric tons of carbon dioxide equivalent by dividing the grams of carbon dioxide equivalent calculated in section (5) by 1,000,000; and
- (g) Determining under OAR 340-253-1000(5) whether credits or deficits are generated.
- (2) For electricity used to power fixed guideway vehicles on track placed in service prior to 2012 and forklifts from model year 2015 and earlier, credit and deficit generation must be calculated by:
- (a) Using credit and deficit basics as directed in OAR 340-253-1000;
- (b) Calculating energy in megajoules by multiplying the amount of fuel by the energy density of the fuel in Table 6 under OAR 340-253-8010;

- (c) Calculating the carbon intensity difference by subtracting the fuel's carbon intensity as approved under OAR 340-253-0400 through -0470, adjusted for the fuel application's energy economy ratio listed in Table 7 under OAR 340-253-8010 as applicable, from the clean fuel standard for gasoline or gasoline substitutes listed in Table 1 under OAR 340-253-8010 or diesel fuel and diesel substitutes listed in Table 2 under OAR 340-253-8010, as applicable;
- (d) Calculating the grams of carbon dioxide equivalent by multiplying the adjusted energy in megajoules in section (3) by the carbon intensity difference in section (4);
- (e) Calculating the metric tons of carbon dioxide equivalent by dividing the grams of carbon dioxide equivalent calculated in section (5) by 1,000,000; and
- (f) Determining under OAR 340-253-1000(5) whether credits or deficits are generated.
- (3) For electricity used in residential charging of electric vehicles, credit calculations must be based on the total electricity dispensed (in kilowatt hours) to vehicles, measured by:
- (a) The use of direct metering (either sub-metering or separate metering) to measure the electricity directly dispensed to all vehicles at each residence; or
- (b) For residences where direct metering has not been installed, DEQ annually will calculate the total electricity dispensed as a transportation fuel based on analysis of the total number of BEVs and PHEVs in a utility's service territory based on Oregon Department of Motor Vehicles records. DEQ will perform this analysis at least twice a year and issue credits based on it. DEQ will select one of the following methods for estimating the amount of electricity charged based on its analysis of which is more accurate and feasible at the time it is performing the analysis:
- (A) An average amount of electricity consumed by BEVs and PHEVs at residential chargers, based on regional or national data; or
- (B) An analysis of the average electric vehicles miles traveled by vehicle type or make and model, which compares the total amount of estimated charging for those electric vehicle miles travelled with the total reported charging in those territories in order to determine the amount of unreported charging that can be attributed to residential charging. The analysis may be done on a utility territory specific or statewide basis.
- (c) If DEQ determines after the issuance of residential electric vehicle credits that the estimate under (b) contained a significant error that led to one or more credits being incorrectly generated, the error will be corrected by withholding an equal number of credits to the erroneous amount from the next year's generation of residential electric vehicle credits.
- (d) A credit generator or aggregator may propose an alternative method, subject to the approval of DEQ upon its determination that the alternative method is more accurate than either of the methods described in subsection (b).
- (e) Credits generated under this subsection will be calculated by DEQ under section 1 of this rule using the estimated amount of electricity under subsection (3)(b) and issued once at least

twice per year into the Oregon Fuels Reporting System account of the utility, its designated aggregator, or the backstop aggregator within three months of the close of that year.

- (f) Registered parties eligible to generate credits for the 2018 year also will generate credits for 2016 and 2017 residential electric vehicle charging.
- (4) Incremental Credits. In calculating incremental credits for actions that lower the carbon intensity of electricity, the credit calculations must be performed based on section (1) of this rule, except that the carbon intensity difference is calculated based on the carbon intensity of the renewable power and the carbon intensity used to calculate the base credits for that electric vehicle or charging equipment, and consistent with following requirements, as applicable:-
- (a) Incremental credits for non-residential charging are generated upon the retirement of RECs that qualify under OAR 340-253-0470(5) by the credit generator, its aggregator, or the incremental aggregator, or by another entity on their behalf. For credit generators and their aggregators, RECs must be retired prior to or at the same time as the submittal as the quarterly report where the charging is being reported and REC retirement records must be submitted with the quarterly report as supplemental documentation. RECs may be retired by another entity on behalf of the credit generator or aggregator for their electric vehicle charging so long as it is clearly documented and that documentation is submitted with the quarterly report.
- (b) For incremental credits generated using a Utility Renewable Electricity Product or Power Purchase Agreement, evidence that the chargers were covered by such a product must be submitted at least annually along with a quarterly report. Upon request by DEQ, any entity using a Power Purchase Agreement or a Utility Renewable Electricity Product must produce evidence that the charging equipment was covered by that agreement or product for all time periods when the entity was claiming incremental credits.
- (c) For the incremental aggregator, incremental credits are generated when it retires RECs on behalf of non-residential electric vehicle charging.
- (d) Incremental credits for residential charging are generated by a utility or, its aggregator when RECs are retired on behalf of that charging, or when a utility demonstrates to DEQ that EVs are being charged by customers enrolled in its Utility Renewable Electricity Products.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020 DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019 DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017 DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16 DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15

DEQ 8-2012, f. & cert. ef. 12-11-12

#### 340-253-1055 Public Disclosure

- (1) List of DEQ-approved registered parties. DEQ will maintain a current list of DEQ-approved registered parties and will make that list publicly available on its website. The list will include, at a minimum, the name of the party and whether the registered party is an importer of blendstocks, a large importer of finished fuels, a small importer of finished fuels, a producer, a credit generator, or an aggregator.
- (2) Monthly credit trading activity report. DEQ must post on its webpage, by no later than the last day of the month immediately following the month for which the calculation is completed, a credit trading activity report that:
- (a) Summarizes the aggregate credit transfer information for the:
- (A) Most recent month,
- (B) Previous three months,
- (C) Previous three quarters, and
- (D) Previous compliance periods;
- (b) Includes, at a minimum
- (A) The total number of credits transferred,
- (B) The number of transfers,
- (C) The number of parties making transfers, and
- (D) The formula used by DEQ to calculate the volume-weighted average price of that month's transfers, exclusive of transactions that fall two standard deviations outside of the mean credit price for the month or that are transferred without a price;
- (c) Is based on the information submitted into the CFP Online System; and
- (d) Presents aggregated information on all fuel transacted within the state and does not disclose individual parties' transactions.
- (3) Quarterly data summary. DEQ must post on its webpage at least quarterly:
- (a) An aggregate data summary of credit and deficit generation for the most recent quarter and all prior quarters; and
- (b) Information on the contribution of credit generation by different fuel types.
- (4) Clean Fuels Program Annual Report. DEQ must post on its webpage by April 15th of each year, the following information from the previous year:

Attachment A: Redline rules March 25-26, 2021, EQC meeting Page 60 of 80

- (a) The average cost or cost-savings per gallon of gasoline, per gallon of diesel, or any other fuel types, and the formulas used to calculate such costs or cost-savings; and
- (b) The total greenhouse gas emissions reductions.
- (5) Utility Reports. DEQ will post the utility reports it receives under OAR 340-253-0640(9) to its website.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277

**History:** 

DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019 DEQ 27-2017, adopt filed 11/17/2017, effective 11/17/2017

340-253-1100 Advance Crediting

- (1) General Provisions.
- (a) Advance Credits are used to advance the state's transportation electrification goals.
- (b) All advance credits represent actual reductions of greenhouse gas emissions against the clean fuel standards.
- (c) Vehicles must be registered in the State of Oregon to be eligible to earn advanced credits.
- (2) Eligibility to generate Advance Credits.
- (a) The following entities may apply for advance credits:
- (A) Public Transit Agencies;
- (B) Political subdivisions of the State of Oregon;
- (C) Tribes;
- (D) School Districts; and
- (E) Companies under contract to provide services to a political subdivision of the State of Oregon or an Oregon School District may apply if the political subdivision endorses the application, and the vehicles covered by the application are intended to provide contracted services to the public.
- (b) The entities identified in subsection (a) may apply to earn advance credits for the purchase and use of the following vehicle types:
- (A) Medium and Heavy Duty vehicles; and

- (B) Light-duty vehicles if they are part of an organization's plan to fully electrify its <u>light-duty</u> fleet within a 15-year time period.
- (3) Applications for Advance Credits. All of the following requirements apply to applications for advance credits:
- (a) Applications for advance crediting will be accepted by DEQ at least once per year from entities eligible to apply under section (2). DEQ will notify stakeholders when applications will be accepted and will provide application materials and guidance about how it will process and consider applications.
- (b) Applicants must supply the following information to DEQ:
- (A) A letter describing the activities or purchases that they want to receive advance crediting for, including the number of vehicles, charging equipment, and estimated timeframes for when those vehicles and equipment will be put into useful service;
- (B) A detailed estimate of the potential credit generation from the electric vehicles and charging equipment that they want to receive advance crediting for. In the case of electric vehicles, that detailed estimate must at least include the number of miles each vehicle will travel within Oregon annually and an estimated amount of charging for each vehicle;
- (C) If covered electric vehicles will mainly use existing charging equipment, details on the ownership of that charging equipment, and how the applicant will ensure that another entity will not generate credits, and will not attempt to general credits, from that vehicle until it has exited the payback period;
- (D) Information on where the electric vehicles will be charged, if they will be charged using grid or renewable electricity, and, if applicable, the utility-specific CI for where the charging equipment will be located;
- (E) A proposed number of credits to be advanced for each vehicle; and
- (F) An attestation that the applicant will remain the owner or lessee of the vehicle or charging equipment until the vehicle has paid back the advanced credits, or that, if the vehicle is sold prior to the end of the payback period, that the applicant will buy and retire credits against the remaining unearned amount.
- (c) If the applicant is a company under contract to provide school bus services to an Oregon School District, it must also provide:
- (A) A contract with the Oregon School District that the school buses will be serving that shows they will be the provider of school bus services to that district for at least three years following their purchase or lease of the school buses covered by the Advance Crediting Agreement; and
- (B) A letter from the school district that is endorsing their application for advance crediting.

- (d) If the applicant is a company under a multi-year contract with a political subdivision of the State of Oregon, it must also provide:
- (A) A contract with the political subdivision showing how the electric vehicles will be used and that they will be used in state for at least three years following their purchase or lease; and
- (B) A letter endorsing the application from the political subdivision.
- (e) In considering applications under this rule, DEQ will prioritize applications where the vehicles or charging equipment will reduce emissions in vulnerable communities disproportionately impacted by climate change, air toxics, and criteria air pollution.
- (f) DEQ may request additional documentation from an applicant prior to making a decision on the application. If the applicant does not provide the requested documentation, then DEQ may deny the application without prejudice.
- (4) Approval of Advance Credits. If DEQ determines that an application for advance credits meets the requirements of sections (2) and (3), then DEQ will negotiate an agreement with the applicant to issue advance credits consistent with this rule and based on all of the following considerations and requirements:
- (a) A clear and objective milestone for issuing advance credits that represents when the vehicles and equipment covered by the application are placed into useful service;
- (b) The number of credits being advanced in total or per vehicle;
- (c) The length of the payback period, which must be one year longer than the number of years of credits that will be advanced;
- (d) An attestation from the applicant that it understands that the advanced credits must represent real reductions and that if the activity covered by the agreement does not generate sufficient credits within the payback period that it is responsible for retiring a sufficient number of credits to make up the difference. The attestation must also include a statement that the applicant understands that it is responsible for making up the difference in credits if it sells or relocates covered vehicles outside of Oregon; and-
- (e) An attestation from the applicant that it will ensure that actual credits are not generated from charging equipment serving these vehicles until the credits have been paid back.
- (5) Issuance of Advance Credits. If DEQ approves an application and has executed an agreement with the applicant under section (4), then:
- (a) DEQ will issue advance credits to the applicant only after the vehicles or equipment are placed into useful service as agreed to under section (4) of this rule;
- (b) Credits will only be issued to the applicant named in the agreement; and-

- (c) DEQ may advance no more than six years of credits for any single vehicle or piece of infrastructure.
- (6) Payback Period. Advanced credits issued under this rule are subject to the following requirements:
- (a) The payback period for a vehicle or charging equipment will be specified in the agreement between DEQ and the applicant, except that the payback period may not exceed nine years. The payback period must be at least one year longer than the number of years of credits advanced to the applicant.
- (b) In the event that the number of advanced credits was not realized during the payback period, the recipient is responsible for acquiring and retiring sufficient credits to ensure the environmental integrity of the program.
- (c) If a vehicle or charging equipment is sold to another entity prior to the close of the payback period, the applicant is responsible for purchasing and retiring credits against the volume of advanced credits that has not yet been covered by actual credit generation.
- (7) Reporting Requirements. An applicant that has received advance credits under this rule must:
- (a) File quarterly reports to DEQ showing the amount of charging going into the individual electric vehicles covered by the agreement; and-
- (b) May not generate additional credits for such charging until the advanced credits are paid back. DEQ and the applicant will monitor the amount of charging and credits that would have been generated to determine when an equal number of credits has been generated to the number of credits advanced.
- (8) Overall limitation on advance credits. DEQ may not issue more advance credits in any one calendar year than an amount equal to five percent of the number of deficits generated in the prior compliance year. DEQ will process applications, negotiate and issue advance credits on a first-come, first served basis, and will stop working on any pending applications when it has issued advance credits equal to five percent of the number of deficits generated in the prior compliance year.

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277

#### 340-253-8010 Tables

- (1) Table 1 Oregon Clean Fuel Standard for Gasoline and Gasoline Substitutes
- (2) Table 2 Oregon Clean Fuel Standard for Diesel Fuel and Diesel Substitutes
- (3) Table 3 Oregon Clean Fuel Standard for Alternative Jet Fuel

- (4) Table 4 Oregon Carbon Intensity Lookup Table
- (5) Table 5 Summary Checklist of Quarterly Progress and Annual Compliance Reporting Requirements
- (6) Table 6 Oregon Energy Densities of Fuels
- (7) Table 7 Oregon Energy Economy Ratio Values
- (8) Table 8 Oregon Substitute Fuel Pathway Codes
- (9) Table 9 Oregon Temporary Fuel Pathway Codes
- (10) Table 10 Indirect Land-Use Change Values

[ED. NOTE: To view attachments referenced in rule text, click here to view rule.]

**Statutory/Other Authority:** ORS 468.020, 468A.266, 468A.268 & 468A.277 **Statutes/Other Implemented:** ORS 468.020 & ORS 468A.265 through 468A.277 **History:** 

DEQ 14-2020, amend filed 05/07/2020, effective 05/07/2020

DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019

DEQ 199-2018, amend filed 11/16/2018, effective 01/01/2019

DEQ 27-2017, amend filed 11/17/2017, effective 11/17/2017

DEQ 8-2016, f. & cert. ef. 8-18-16

DEQ 5-2016(Temp), f. & cert. ef. 4-22-16 thru 9-1-16

DEQ 13-2015, f. 12-10-15, cert. ef. 1-1-16

DEQ 3-2015, f. 1-8-15, cert. ef. 2-1-15



#### **Oregon Clean Fuel Standard for Gasoline and Gasoline Substitutes**

Calendar Year	Oregon Clean Fuel Standard (gCO2e per MJ)	Percent Reduction
2015	None (Gasoline Baseline is 98.62 fo 98.06 for 2019	
2016*	98.37	0.25 percent
2017	98.13	0.50 percent
2018	97.66	1.00 percent
2019	96.59	1.50 percent
2020	95.61	2.50 percent
2021	94.63	3.50 percent
2022	93.15	5.00 percent
2023	91.68	6.50 percent
2024	90.21	8.00 percent
2025 and beyond	88.25	<u>10.00</u> percent
*Initial compliance pe	eriod is a two-year period for 2016 and	2017.



# Oregon Clean Fuel Standard for Diesel Fuel and Diesel Substitutes

073.4-39.					
Calendar Year	Oregon Clean Fuel Standard (gCO2e per MJ)	Percent Reduction			
2015	None (Diesel Baseline is 99.64 for 98.74 for 2019				
2016*	99.39	0.25 percent			
2017	99.14	0.50 percent			
2018	98.61	1.00 percent			
2019	97.26	1.50 percent			
2020	96.27	2.50 percent			
2021	95.29	3.50 percent			
2022	93.81	5.00 percent			
2023	92.32	6.50 percent			
2024	90.84	8.00 percent			
2025 and beyond	88.87	10.00 percent			
*Initial compliance period is a two-year period for 2016 and 2017.					



#### Oregon Clean Fuel Standard for Alternative Jet Fuel

Crimity	
Calendar Year	Oregon Clean Fuel Standard (gCO2e per MJ)
2015	None (Diesel Baseline is 99.64 for 2016-2017, 99.61 for 2018, and 98.74 for 2019 and beyond. The fossil jet baseline is 90.97.)
2019	90.80
2020	90.80
2021	90.80
2022	90.80
2023	90.80
2024	90.80
2025 and beyond	88.87



# **Oregon Carbon Intensity Lookup Table**

Fuel	Pathway Identifier	Pathway Description	Carbon Intensity Values (gCO2e/MJ)  Total Lifecycle Emissions
	ORGAS001	Clear gasoline - based on a weighted average of gasoline supplied to Oregon	100.14
Gasoline	ORGAS002	Imported blended gasoline (E10) – 90% clear gasoline & 10% corn ethanol based on Midwest average. Cannot be used to report exports except when the specific gallon was also imported under this fuel pathway code.	98.06
	ORULSD001	Clear diesel, based on a weighted average of diesel fuel supplied to Oregon	100.74
Diesel	ORULSD002	Imported blended diesel (B5) – 95% clear diesel & 5% soybean biodiesel. Cannot be used to report exports except when the specific gallon was also imported under this fuel pathway code.	98.74
	ORULSD003  Imported blended diesel (B20 80% clear diesel & 20% soyb biodiesel. Cannot be used to re exports except when the spec gallon was also imported under fuel pathway code.		92.68
Compressed Natural Gas	ORCNG001	North American NG delivered via pipeline; compressed in OR	79.98
Liquefied Natural Gas	ORLNG001	North American NG delivered via pipeline; liquefied in OR using liquefaction with 80% efficiency	86.88
Liquefied Petroleum Gas	ORLPG001	Liquefied petroleum gas	80.88
Electricity	ORELEC100	Solar power, produced at or directly connected to the site of the	0



## **Oregon Carbon Intensity Lookup Table**

Fuel	Pathway	Pathway Description	Carbon Intensity Values (gCO2e/MJ)
	Identifier Tallway Description		Total Lifecycle Emissions
		charging station in Oregon, subject to OAR 340-253-0470 (3).	
	ORELEC101	Wind power, produced at or directly connected to the site of the charging station in Oregon, subject to OAR 340-253-0470 (3).	0
	ORELEC200	Renewable power deemed to have a carbon intensity of zero under OAR 340-253-0470 and meeting the provisions of (5).	<u>0</u>
	ORHYF	Compressed H2 produced in Oregon from central steam methane reformation of North American fossil-based NG	120.68
	ORHYFL	Liquefied H2 produced in Oregon from central steam methane reformation of North American fossil-based NG	157.29
ORHYB Hydrogen		Compressed H2 produced in Oregon from central steam methane reformation of biomethane (renewable feedstock) from North American landfills	116.76
	ORHYBL	Liquefied H2 produced in Oregon from central steam methane reformation of biomethane (renewable feedstock) from North American landfills	149.70
	ORHYEG	Compressed H2 produced in Oregon from electrolysis using Oregon average grid electricity	205.38
	ORHYEB	Compressed H2 produced in Oregon from electrolysis using BPA average grid electricity	31.65

OAR 340-253-8010  Table 4  State of Oregon Department of Environmental Quality  Oregon Carbon Intensity Lookup Table				
Fuel	Pathway	Pathway Description	Carbon Intensity Values (gCO2e/MJ)	
	Identifier	Tammay 2000 phon	Total Lifecycle Emissions	
		Compressed H2 produced in		
	ORHYER	Oregon from electrolysis using	13.11	
		solar- or wind-generated electricity		



Summary Checklist of Quarterly Progress and Annual Compliance Reporting Requirements

Parameters to Report	Gasoline & Diesel Fuel	Ethanol, Biodiesel & Renewable Diesel	CNG, LNG & LPG	Electricity	Hydrogen & Hydrogen Blends
Company or organization name	X	x	x	x	x
Reporting period	X	X	X	X	X
Fuel pathway code	X	X	X	X	X
Transaction type	X	X	X	X	X
Transaction date	X	X	X	X	X
Business Partner	X	X	X	X	X
Production Company ID and Facility ID	n/a	x	n/a	n/a	х
Physical transport mode code	X	х	X	X	Х
Aggregation	Х	X	X	X	х



# Summary Checklist of Quarterly Progress and Annual Compliance Reporting Requirements

Parameters to Report	Gasoline & Diesel Fuel	Ethanol, Biodiesel & Renewable Diesel	CNG, LNG & LPG	Electricity	Hydrogen & Hydrogen Blends		
Application / EER	X	X	x	X	х		
Amount of each fuel used as gasoline replacement	X	x	x	x	X		
Amount of each fuel used as diesel fuel replacement	X	x	X	X	X		
*Credits/deficits generated per quarter (MT)	X	x	x	X	x		
For Ann	For Annual Compliance Reporting (in addition to the items above)						
*Credits and Deficits generated per year (MT)	X	х	X	X	x		
*Credits/deficits carried over from the previous year (MT), if any	x	х	X	X	X		
*Credits acquired from another party (MT), if any	X	х	X	X	x		
*Credits sold to another party (MT), if any	X	х	X	X	x		
*Credits retired within LCFS (MT) to meet compliance obligation, if any	х	Х	X	X	х		



# OAR 340-253-8010 Table 6 Oregon Energy Densities of Fuels

and the second s	
Fuel (unit)	MJ/unit
Gasoline (gallon)	122.48 (MJ/gallon)
Diesel fuel (gallon)	134.48 (MJ/gallon)
Compressed natural gas (therm)	105.5 (MJ/therms)
Electricity (kilowatt hour)	3.60 (MJ/kilowatt hour)
Denatured ethanol (gallon)	81.51 (MJ/gallon)
Clear biodiesel (gallon)	126.13 (MJ/gallon)
Liquefied natural gas (gallon)	78.83 (MJ/gallon)
Hydrogen (kilogram)	120.00 (MJ/kilogram)
Liquefied petroleum gas (gallon)	89.63 (MJ/gallon)
Renewable hydrocarbon diesel (gallon)	129.65 (MJ/gallon)
Undenatured anhydrous ethanol (gallon)	80.53 (MJ/gallon)
Alternative Jet Fuel (gallon)	126.37 (MJ/gallon)
Renewable naphthalene (gallon)	117.66 (MJ/gallon)



#### **Oregon Energy Economy Ratio Values for Fuels**

Applications (Fu	Light/Medium Duty plications (Fuels used as gasoline replacements)		Heavy-Duty/Off-Road Applications (Fuels used as diesel replacements)		applications ed as jet fuel ements)
Fuel/Vehicle Combination	EER Value Relative to Gasoline	Fuel/Vehicle Combination	EER Value Relative to Diesel	Fuel/Vehicle Combination	EER Value Rrelative to conventional jet
Gasoline (including E10) or any other gasoline-ethanol blend	1	Diesel fuel (including B5) or any other blend of diesel and biodiesel or renewable hydrocarbon diesel	1	Alternative Jet Fuel	1
CNG Internal Combustion Engine Vehicle (ICEV)	1	CNG, LNG, or LPG (Spark-Ignition Engines)	0.9		
Electricity/Battery Electric Vehicle or Plug-In Hybrid Electric Vehicle	3.4	CNG,LNG, or LPG(Compression- Ignition Engines)	1		
Electricity/On-Road Electric Motorcycle	4.4	Electricity/Battery Electric Vehicle or Plug-In Hybrid Electric Vehicle	5	_	
Propane/Propane Forklift	0.9	Electricity/Battery Electric or Plug-in Hybrid Transit Bus	5		
Hydrogen/Fuel Cell Vehicle	2.5	Electricity/Fixed Guideway Light Rail	3.3		
		Electricity/Fixed Guideway Streetcar	2.1		
		Electricity/Fixed Guideway Aerial Tram	2.6		
		Electricity/Electric Forklift	3.8		



#### **Oregon Energy Economy Ratio Values for Fuels**

Light/Medium Duty Applications (Fuels used as gasoline replacements)		Heavy-Duty/Off-Road Applications (Fuels used as diesel replacements)		Aviation Applications (Fuels used as jet fuel replacements)	
Fuel/Vehicle Combination	EER Value Relative to Gasoline	Fuel/Vehicle Combination EER Value Relative to Diesel		Fuel/Vehicle Combination	EER Value Rrelative to conventional jet
		Electricity/Electric TRU (eTRU)	3.4		
		Hydrogen/Fuel Cell Vehicle	1.9		
		Hydrogen/Fuel Cell Forklift	2.1		
		Electricity/Cargo Handling Equipment	2.7		
		Electricity/Ocean Going Vessels	2.6		



# OAR 340-253-8010 Table 8 Oregon Substitute Fuel Pathway Codes

Fuel	Fuel Pathway code	CI (gCO2e/MJ)	
Substitute CI for Ethanol. This pathway may only be used to report transactions that are sales or purchases without obligation, exports, loss of inventory, not for transportation use, and exempt fuel use.	ETH0116	40	
Substitute CI for Biodiesel. This pathway may only be used to report transactions that are sales or purchases without obligation, exports, loss of inventory, not for transportation use, and exempt fuel use.	BIOD0116	15	
Substitute CI for Renewable Diesel. This pathway may only be used to report transactions that are sales or purchases without obligation, exports, loss of inventory, not for transportation use, and exempt fuel use.	RNWD0116	15	
Substitute CI for E10 Gasoline. This pathway may only be used to report transactions that are sales or purchases without obligation, exports, loss of inventory, not for transportation use, and exempt fuel use.	ORGAS0116	For 2019: 96.59 For 2020 and beyond: 96.00	
Substitute CI for B5 Diesel. This pathway may only be used to report transactions that are sales or purchases without obligation, exports, loss of inventory, not	ORULSD01165	For 2019: 97.26 For 2020 and beyond: 96.71	



# OAR 340-253-8010 Table 8 Oregon Substitute Fuel Pathway Codes

Fuel	Fuel Pathway code	CI (gCO2e/MJ)
for transportation use, and exempt fuel use.		
Substitute CI for B20 Diesel. This pathway may only be used to report transactions that are sales or purchases without obligation, exports, loss of inventory, not for transportation use, and exempt fuel use.	ORULSD011620	84.45



# Oregon Temporary Fuel Pathway Codes for Fuels with Indeterminate CIs

Fuel	Feedstock	Process Energy	FPC	CI (gCO <sub>2</sub> e/MJ)
Ethanol	Corn	Grid electricity, natural gas, and/or renewables	ORETH100T	77.8
	Sorghum	Grid electricity, natural gas, and/or renewables	ORETH101T	95
	Sugarcane and Molasses	Bagasse and straw only, no grid electricity	ORETH102T	55
	Any starch or sugar feedstock	Any	ORETH103T	100.14
	Corn Stover, Wheat Straw, or Sugarcane Straw	As specified in OR- Greet 2.0	ORETH104T	50
Biodiesel	Any feedstock derived from animal fats, corn oil, or a waste stream	Grid electricity, natural gas, and/or renewables	ORBIOD200T	45
	Any feedstock derived from plant oils except for Palm-derived oils	Grid electricity, natural gas, and/or renewables	ORBIOD201T	65
	Any feedstock	Any	ORBIOD202T	100.74
Renewable Diesel	Any feedstock derived from animal fats, corn oil, or a waste stream	Grid electricity, natural gas, and/or renewables	ORRNWD300T	45
	Any feedstock derived from plant oils except for Palm-derived oils	Grid electricity, natural gas, and/or renewables	ORRNWD301T	65
	Any feedstock	Any	ORRNWD302T	100.74



# Oregon Temporary Fuel Pathway Codes for Fuels with Indeterminate CIs

Fuel	Feedstock	Process Energy	FPC	CI (gCO₂e/MJ)
Biomethane CNG	Landfill or Digester Gas	Grid electricity, natural gas, and/or renewables	ORCNG500T	70
	Municipal Wastewater sludge, Food Waste, Green Waste, or Other Organic Waste	Grid electricity, natural gas, and/or parasitic load	ORCNG501T	45
	Landfill or Digester Gas	Grid electricity, natural gas, and/or renewables	ORLNG501T	85
Biomethane LNG	Municipal Wastewater sludge, Food Waste, Green Waste, or Other Organic Waste	Grid electricity, natural gas, and/or parasitic load	ORLNG502T	60
Biomethane L-CNG	Landfill or Digester Gas	Grid electricity, natural gas, and/or renewables	ORLCNG502T	90
	Municipal Wastewater sludge, Food Waste, Green Waste, or Other Organic Waste	Grid electricity, natural gas, and/or parasitic load	ORLCNG503T	65
Biomethane CNG, LNG, L-CNG	Dairy and Swine Manure	Grid electricity, natural gas, and/or parasitic load	ORLCNG504T	-150
Renewable LPG	Fats, Oils, and Grease residues	Grid electricity, natural gas, and/or renewables	ORRNWP400T	45
	Any feedstock derived from plant oils (excluding palm	Grid electricity, natural gas, and/or renewables	ORRNWP401T	65



# Oregon Temporary Fuel Pathway Codes for Fuels with Indeterminate CIs

Classy				
Fuel	Feedstock	Process Energy	FPC	CI (gCO <sub>2</sub> e/MJ)
	and palm derivatives)			
Electricity	Coal, Natural Gas, Hydroelectric Dams, Wind Mills, etc.	Oregon average electricity mix	ORELEC600T	135.00
Any Gasoline Substitute Feedstock- Fuel Combination Not Included Above	Any	Any	ORSG800T	100.14
Any Diesel Substitute Feedstock- Fuel Combination Not Included Above	Any	Any	ORSD801T	100.74



# Oregon Summary of Indirect Land-Use Change Values for Crop-Based Biofuels

Feedstock	ILUC Value (gCO₂e/MJ)	
Corn Ethanol	7.60	
Sorghum Ethanol	19.40	
Sugarcane Ethanol	11.80	
Soybean Biodiesel or Renewable Diesel	29.10	
Canola Biodiesel or Renewable Diesel	14.50	
Palm Biodiesel or Renewable Diesel	71.40	