



# Compilation of Comments Received

## Clean Fuels Program Electricity 2021 Rulemaking

This document is a compilation of written comments received during the public comment period that was open from Dec. 22, 2020 until 4 p.m. on Jan. 29, 2021.

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January 29, 2021

Oregon Department of Environmental Quality (DEQ)  
Attn: Cory-Ann Wind  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232-4100  
Submitted electronically via [CFPE2021@deq.state.or.us](mailto:CFPE2021@deq.state.or.us)

**RE: 3DEGREES COMMENTS TO DEQ IN RESPONSE TO CLEAN FUELS PROGRAM ELECTRICITY 2021 RULEMAKING AND DECEMBER 22, 2020 NOTICE OF PROPOSED RULEMAKING**

Dear Ms. Cory Ann Wind,

3Degrees appreciates this opportunity to submit comments in the Clean Fuels Program (CFP) Electricity 2021 Rulemaking on the Notice of Proposed Rulemaking (“Proposed Rules”) published December 22, 2020.

**About 3Degrees**

3Degrees is a leading provider of comprehensive clean energy and carbon reduction solutions that enable organizations and individuals to accelerate the transition towards a low-carbon economy. To this end, 3Degrees works with businesses across the country on developing and implementing strategies to decarbonize transportation activities, many of which are enabled by the opportunities presented by low carbon fuel standards in California and Oregon. Specifically, 3Degrees is one of the largest participants in California’s Low Carbon Fuel Standard by registered facilities and we are pioneering new vehicle-fuel applications in Oregon.

**Comments**

3Degrees commends DEQ’s proposals to further support transportation electrification, and its speed in implementing the directives from Governor Brown’s March 2020 Executive Order through a well-managed and inclusive pre-rulemaking process. The Proposed Rules support Oregon’s objective of further reducing greenhouse gas (GHG) emissions in the transportation sector by accelerating and streamlining credit generation from transportation electrification.

In particular, 3Degrees supports the following provisions in the Proposed Rules:

- **Creation of incremental credits for electricity with a CI lower than grid or utility average.** 3Degrees is supportive of the ability for credit generators to generate “incremental credits” for EV charging using non-contiguous renewable electricity. This decision will increase credit generation from transportation electrification and accelerate decarbonization of electricity used as a transportation fuel. We are also supportive of the decision to allow the default credit generator to designate another entity to generate these incremental credits if it chooses.

- **Book-and-claim accounting approach to verify electricity usage from non-contiguous renewable electricity generators.** 3Degrees is supportive of the proposal to allow non-contiguous renewable electricity resources to be matched with EV charging via a book-and-claim accounting methodology. Renewable energy credits (“RECs”) are recognized across the country and within other Oregon policies, including its renewable portfolio standard and its nationally recognized utility voluntary renewable electricity programs, as the mechanism used to track, transact, and consume renewable electricity on the shared North American grid.

We are supportive of the eligibility rules DEQ has proposed for off-site renewable or low-carbon electricity used as a transportation fuel. In particular, we are supportive of tying geographic eligibility to a reasonable area within which electricity is delivered, putting in place vintage requirements, and assigning a default carbon intensity to electricity from zero-carbon renewable resources (i.e. solar, wind, geothermal, hydropower, and ocean power). These provisions will increase GHG reductions associated with the CFP and ensure associated investments in renewable electricity are tied to the regional grid.

If DEQ chooses to further restrict geographic eligibility beyond the definition in the Proposed Rules, we urge DEQ to limit geographic eligibility based on where the electricity is *delivered*, not simply based on where a facility is located. We recommend limiting *no further* than the following definition of geographic eligibility: “The facility is located in the BPA service area or the electricity from the facility is delivered to a balancing authority located within the BPA service area on a real-time basis without shaping, storage, or integration services.”

3Degrees also recommends that DEQ update 340-253-0470(5)(a) to state that RECs “[...]must be certified by Green-e® under the current version of their Renewable Energy Standard for Canada and the United States, or by a certification system[...].” The Green-e® standard undergoes periodic stakeholder consultation and associated revisions. Communicating in the regulation that the CFP will require compliance with the current version of the Green-e® standard will provide clarity to the market.

- **Proposed revisions to energy economy ratios (EERs).** 3Degrees is supportive of including EERs for Electric Ocean-Going Vessels and Electric Cargo Handling Equipment in the rule. We are also supportive of the revision to allow new forklifts to generate displacement credits. This will result in additional credits being generated by newer forklifts, reflecting the efficiency of these forklifts. This will also ensure credit calculations are consistent among all off-road applications. These provisions will also lead to air quality and working conditions improvements.

3Degrees recommends the following revisions to the Proposed Rules:

**1- 3Degrees believes there is a rationale to create unique eligibility rules for livestock biogas electricity generators, and recommends that DEQ remove the in-service requirement for**

**biomass and biogas projects so as not to disadvantage those that have chosen to generate electricity rather than deliver renewable natural gas (“RNG”).**

3Degrees is supportive of the proposal to revise the in-service requirement for biogas projects in the Proposed Rules, but recommends that DEQ further revise requirements on these projects such that they align with the requirements for projects that deliver renewable natural gas (“RNG”). Structuring the CFP such that it disincentivizes these projects from continuing to generate electricity is not a desirable environmental outcome. It does not recognize the avoided methane emissions benefit that many waste-derived energy projects provide (and which is recognized when the projects deliver RNG) and may cause projects on small farms far from pipelines (and therefore unable to economically convert to RNG) to stop operating -- something we have seen when historic power purchase agreements expire and new power prices do not justify operating costs. This outcome would result in the digester no longer running and no longer avoiding potent methane emissions.

We encourage DEQ to consider the rationale for differential treatment of projects that use biogas to generate electricity versus upgrading to RNG for use as a transportation fuel. RNG projects use a long-standing performance standard test (originally established in the [Livestock Offset Protocol](#)) for additionality to credit avoided methane emissions, and we recommend the same standard should be applied to electric projects. There does not seem to be a logical reason why waste-derived RNG projects can receive credit for avoided methane emissions from manure management for up to three 10-year crediting periods when RNG is used as a transportation fuel ([California Credit Generation for Reduction of Methane Emissions from Manure Management Operations](#)), but only projects that are less than fifteen years old could receive that benefit if delivering electricity to vehicles in Oregon.

The CFP should support both biogas-derived electricity and RNG used as a transportation fuel, not favor one end-use over the other when both are seen as having climate benefits. It is true that RNG is an important climate-friendly solution for hard-to-electrify vehicle applications, such as large trucks and buses, but as a fuel for passenger vehicles, biogas may have the greatest greenhouse gas reduction potential when used to power electric vehicles (see World Resources Institute’s [The Production and Use of Renewable Natural Gas as a Climate Strategy in the United States](#), p.15, Box 2). Oregon’s CFP should create an equal playing field for both fuel types, allowing technology and markets to decide the most appropriate use for waste-derived biogas.

**2- We recommend that DEQ investigate the interaction between treatment of zero-CI electricity under California’s Cap-and-Trade and REC eligibility under the OR CFP, and consider not allowing RECs associated with power that has been or will be imported into California as specified power.**

In the Rulemaking Advisory Committee #1: Discussion Paper, DEQ outlined the following considerations regarding Additional Credit Generation Opportunities in the CFP:

*“DEQ’s interpretation of ORS 468A.265(4)4 is that the agency and EQC do not have the authority to issue credits that do not represent real carbon emissions reductions under the*

*CFP.[...]The agency values the environmental integrity of the program and that actual reductions in emissions were clearly envisioned when the program was established and throughout its statutory revisions.” (p.10)*

In the discussion paper Rulemaking Advisory Committee #3: Adjustments to the Carbon Intensity of Electricity, DEQ references that the renewable electricity eligible for CFP should be related to “actual additional reductions” (p.4). The associated October 22, 2020 meeting clarified that “‘Incremental’ credits cover additional actions that further lower the carbon intensity of the electricity” (Slide 24).

To maintain the integrity of the program, 3Degrees recommends that DEQ investigate interactions with California’s cap-and-trade program. California’s cap-and-trade program incorporates emissions associated with imported electricity. The program attributes GHG emissions to California based on whether electricity is delivered to serve load located inside the state of California, but does not require REC retirement in California to substantiate this claim. This creates a risk of double-counting zero emissions electricity that is imported to California and reported under the Mandatory Reporting Regulation (MRR). Where the RECs associated with this generation are used for the CFP, the same zero-emission generation would be counted as delivered to California load and be claimed as delivered to a vehicle in Oregon. 3Degrees encourages DEQ to work with Green-e® to ensure there is no double counting of GHG emissions across state programs.

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Thank you for this opportunity to submit comments. We look forward to continued participation and discussion in upcoming workshops.

Sincerely,

/s/ Maya Kelty

Maya Kelty  
Director, Regulatory Affairs

# Commentary on Oregon's CFP Electrification

29 January 2021

By ACT Commodities

## Introduction

As a member of IETA (International Emission Trading Association), ACT Commodities (ACT) is a global leader in trading energy and environmental commodities. We provide solutions to over 5,000 clients worldwide helping them meet environmental compliance requirements or voluntary sustainability goals. In North America, ACT is a leader in renewable energy certificates and renewable fuels credit markets. ACT is active in the Oregon RPS and CFS as well as California's RPS and LCFS and the Federal Renewable Fuels Standard.

ACT would like to take this opportunity to make comments to the **DEQ's Clean Fuels Program Electricity 2021 Draft Rule**. Please see below.

## Topic 1: Changes to the Statewide Mix and Utility Specific Carbon Intensity Calculations

ACT supports DEQ Staff's proposal. We agree that this amendment represents the most accurate and balanced accounting of emissions available at this time.

## Topic 2: What Qualifies as Renewable Electricity for the Clean Fuels Program?

ACT is agreeable to the Draft Rule's inclusion of RECs generated from facilities located in WECC. ACT however does not support placed-in-service date or Green-e certification limitations. ACT does not see the CFP as the place to redefine renewable in Oregon. Since 2007 the State's Renewable Portfolio Standard (RPS) has acted as a guideline and market signal for renewable electricity generation in the State. The current draft amendment following the 21-month Green-e claim is partial to MWh dispensed in the latter half of the year permitting more vintage flexibility than MWh in the front of the year. Keeping in mind the basic goal of the rulemaking per the Executive Order to "accelerate the generation and aggregation of clean fuel credits," ACT instead recommends adopting the RPS' stance on commercial operation date and vintage eligibility.

## Topic 3: Who is Eligible to Claim the Incremental Credits?

ACT strongly supports the inclusion of incremental crediting provisions. It is a direct pathway to promote the low carbon fuel transition and transportation electrification. ACT is supportive of DEQ's proposed permission for credit generators to designate third-party aggregators. This designation provision will allow smaller entities and/or entities that would prefer to focus business resources elsewhere the opportunity to contract out reporting, REC sourcing/retirement, and OCFP credit sales.

## Topic 4 Changes to the Frequency of Residential Base Credit Generation

ACT supports increasing credit issuances to at least the proposed bi-annual increment suggested in the Draft Rule.

## Topic 5: Spending Requirements on Revenue Generated from Residential Charging Credits

ACT supports the Draft Rule which outlines spending requirements for utility credit revenue only.

Thank you for your consideration of these recommendations. We are glad to answer any questions, discuss further, or provide any further assistance, if needed.



January 29, 2021

Submitted via email to: [CFPE2021@deq.state.or.us](mailto:CFPE2021@deq.state.or.us)

Oregon DEQ  
Attn: Cory-Ann Wind  
700 NE Multnomah St., Room 600  
Portland, OR 97232-4100

Re: Airlines for America® Comments on the Clean Fuels Program Electricity Notice of Proposed Rulemaking

Dear Ms. Wind:

Airlines for America® (A4A), the principal trade and service organization of the U.S. airline industry,<sup>1</sup> appreciates the opportunity to comment on the Oregon Department of Environmental Quality's (ODEQ) December 22, 2020, Notice of Proposed Rulemaking (Notice) to amend the Clean Fuels Program (CFP) regulations in accordance with paragraph 4(B) of Executive Order 20-04 "to enable further greenhouse gas emissions reductions by advancing methods to accelerate the generation and aggregation of clean fuel credits . . . to advance transportation electrification."<sup>2</sup>

The proposed rule would, among other things, enable CFP credits to be generated for the electricity used to charge electric cargo handling equipment (proposed OAR 340-253-0100(7)) and simultaneously establish in Table 7 of OAR 340-252-8010 an energy economy ratio (EER) of 2.7 for such equipment. A4A observes that this proposed EER value is identical to the value that exists for electric cargo handling equipment under the California Air Resources Board's (CARB) Low Carbon Fuel Standard regulations.<sup>3</sup> Unlike CARB, though, ODEQ has not proposed to add to OAR 340-253-0040, the definitional section of the CFP regulations, definitions of the terms "cargo handling equipment" and "electric cargo handling equipment."

During the Rulemaking Advisory Committee stage of this proceeding, ODEQ indicated that it interpreted the electric cargo handling equipment category to include some airport ground support equipment (GSE).<sup>4</sup> A4A writes today to express our strong support for ODEQ

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<sup>1</sup> A4A's members are: Alaska Airlines, Inc.; American Airlines Group Inc.; Atlas Air, Inc.; Delta Air Lines, Inc.; Federal Express Corporation; Hawaiian Airlines, Inc.; JetBlue Airways Corp.; Southwest Airlines Co.; United Airlines Holdings, Inc.; and United Parcel Service Co. Air Canada, Inc. is an associate member.

<sup>2</sup> Notice at 3.

<sup>3</sup> 13 CCR § 95486.1, Table 5.

<sup>4</sup> See ODEQ, "Rulemaking Advisory Committee #2: Adopting New Energy Economy Ratio (EER) Values," at 2, available at <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/CFPE2021m2DiscussionPaper.pdf>.

interpreting the term electric cargo handling equipment broadly so as to include electric GSE, at least until such time as ODEQ establishes “a separate categorical EER” for electric GSE.<sup>5</sup>

Such a broad interpretation would incentivize the installation of electric GSE by enabling CFP credits to be earned for the electricity used in the electric airport equipment. In A4A’s view, there is absolutely no reason why this should not be the case. Like virtually every other sector of the economy, the aviation industry has been called upon to reduce its greenhouse gas (GHG) emissions, and as the record of the A4A member carriers demonstrates, we take our role in environmental stewardship and reducing GHG emissions seriously.<sup>6</sup> Our commitment to GHG emissions savings extends to our activities on the ground, with A4A members increasingly replacing their conventional, petroleum-fueled GSE with electric GSE. Particularly now, given the devastating impact the COVID-19 pandemic has had on the aviation sector, A4A maintains that a CFP incentive for the acquisition and use of electric GSE is entirely appropriate.

Thank you for your consideration of our comments. Please do not hesitate to contact me if you have any questions.

Sincerely yours,

A handwritten signature in black ink that reads "Ira Dassa". The signature is written in a cursive, flowing style.

Ira Dassa  
Director, Environmental Affairs

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<sup>5</sup> ODEQ, “Meeting Summary – Rulemaking Advisory Committee Meeting #2,” at 2, available at <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/cfpe2021M2Summary.pdf>.

<sup>6</sup> See A4A, “A4A’s Climate Change Commitment,” available at <https://www.airlines.org/a4as-climate-change-commitment/>; A4A, “Airlines Fly Green,” available at <https://www.airlines.org/airlines-fly-green/>.



January 29, 2021

Cory-Ann Wind  
Oregon Clean Fuels Program Manager  
Oregon Department of Environmental Quality  
800 NE Oregon Street  
Portland, OR 97232  
Comment Submitted via email to [cfpe2021@deq.state.or.us](mailto:cfpe2021@deq.state.or.us)

RE: Comments on Clean Fuels Program 2021 Electricity Rulemaking and Proposed Requirements on Biogas to Electricity Pathways

Dear Ms. Wind,

### ***Overview***

The American Biogas Council (“ABC”) appreciates the vision and mission of the Oregon Clean Fuels Program (“CFP”) and has reviewed the Draft Rules for the CFP 2021 Electricity Rulemaking (“Electricity Rulemaking”). Upon review, ABC respectfully submits the following written comments as part of the Notice. Specifically, ABC recommends that the Department of Environmental Quality (“DEQ”) adjust the proposed Electricity Rulemaking in two ways that can further assist in levelling the playing field regarding the beneficial use of biogas. ***First***, by not imposing an efficiency standard on biogas power generation that cannot be achieved by commercially available technology and ***second***, by not penalizing early adopter biogas facilities that were established prior to the proposed Green-e rolling New Date. Through these two modifications of the Electricity Rulemaking, DEQ will better achieve its target objective of rapid and cost-effective carbon intensity (“CI”) reductions in the zero-emission vehicle (“ZEV”) sector.

### ***The American Biogas Council***

Since our founding in 2010, the American Biogas Council’s (“ABC”) mission has been to create jobs, environmental sustainability, and energy independence by growing the U.S. biogas industry. We represent biogas businesses in the US—230 organizations from across the renewable energy, agricultural, waste and wastewater management, recycling, and transportation industries, including facility owners /operators, manufacturers of tanks, engines, and other equipment, engineering firms, project developers, legal and accounting firms, educational organizations and institutions, utilities, financiers and lenders, and local and regional governments. One of the ABC’s primary goals is to ensure that renewable energy receives the same favourable treatment under federal and state laws as fossil energy, and that all forms of renewable energy are treated equitably.

### ***Discussion***

This letter brings to DEQ’s attention the resulting decrease in both credit generation and revenues for ZEV applications that would result from implementation of a subset of the draft rules. Decreased credit generation increases the cost of operating ZEVs and, consequently, decreased credit generation also increases the cost of reducing GHG emissions and makes it more difficult to meet aggressive GHG

emission reduction targets. ABC would like to emphasize that the draft rules discussed in this comment letter run counter to Executive Order 20-04<sup>1</sup> in several important respects:

- Regarding the General Directives to State Agencies, Agency Decisions, the Executive Order provides that agencies are directed to “Prioritize actions that reduce GHG emissions in a cost-effective manner (...)”
- Regarding the Directives to the Environmental Quality Commission and the Department of Environmental Quality, EQC and DEQ are directed to amend the low carbon fuel standards, “with the goal of reducing the average amount of GHG emissions per unit of fuel energy by 20 percent below 2015 levels by 2030, and 25 percent below 2015 levels by 2035.”

To better follow the directives of the Executive Order, ABC recommends that DEQ make the following changes to the draft rules:

1. Eliminate the efficiency adjustment factor for biogas to electricity pathways, and
2. Establish eligibility for qualifying biogas projects with in-service dates after 2000.

**Recommendation #1: Eliminate the efficiency adjustment factor for biogas to electricity pathways.**

*DEQ proposal: “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.”*

The efficiency adjustment factor as proposed holds potential for penalizing biogas-to-electricity pathways, and therefore impedes instead of advances the transportation electrification goals set forth in SB 1044. Disincentivizing biogas-to-electricity pathways will eventually impede E.O. 20-04 directives to other agencies as well, including (8)(C) “GHG Reduction Goals and Electrification Goals” for the Department of Administrative Services, and (10)(A) further directing support of electrification under SB 1044 for the Oregon Department of Transportation. From an ABC perspective, we desire multiple end-uses for our low CI renewable biogas that make sense for the nation, state, project and of course the climate and environment. We recognize that some projects might opt for pipeline injection of renewable natural gas (“RNG”) for medium/large scale trucks, direct on-site fuelling of RNG for local fleets, production of electricity for zero-emission vehicles, RNG use for voluntary thermal markets, production of electricity for residential power use, use of power/thermal for local needs, and/or emerging opportunities in hydrogen. By potentially penalizing biogas-to-electricity pathways for zero-emission vehicles and therefore potentially impeding their development, existing conversions and future projects might now come to fruition as existing project realities (i.e., availability to gas pipeline infrastructure, declining power purchase agreement pricing, etc.) do not allow for other options for some projects.

In addition, the proposed language is written in a vague manner, i.e., “DEQ may adopt an efficiency adjustment factor for biogas to electricity pathways (...).” This indication of DEQ’s possible intention to discount crediting in the future sends *a negative signal* to the market regarding the availability of credit revenues to the support the economics of the project. This type of uncertainty can severely undercut the feasibility of financing a biogas electricity project by introducing significant uncertainty from a project finance perspective.

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<sup>1</sup> [https://www.oregon.gov/gov/Documents/executive\\_orders/eo\\_20-04.pdf](https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf)

Because of these factors, ABC recommends DEQ not impose an efficiency adjustment factor for biogas to electricity pathways. If DEQ remains convinced that an efficiency adjustment factor is a necessary program component, then ABC recommends that DEQ undertake an independent evaluation of whether there is commercially available and financially feasible technology to meet the standard that underlies the adjustment factor. If there is not a commercially feasible technology available in the marketplace to meet the efficiency standard, then the efficiency adjustment factor will not effectively incentivize a transition to advanced technologies and will serve only as a penalty.

This technical issue was addressed in comment letters submitted in response to CARB's LCFS Guidance 19-06 with informed commenters submitting real world evidence demonstrating that a 50% benchmark efficiency standard is an unrealistic level.<sup>2</sup> The evidence submitted to CARB established that:

- Combined cycle natural gas plants do not provide any foreseeable feasible use for biomethane from small biogas projects and therefore do not provide a relevant point of reference for this efficiency standard,
- Solid oxide fuel cells are not commercially available for use at smaller biogas projects and are cost-prohibitive and therefore will not provide a relevant reference point for an efficiency standard for at least five years.

In addition, a simple 50% electrical conversion benchmark for biogas-related reciprocating engine/generator sets does not allow for the factoring of the combined heat and power ("CHP") role within biogas projects, whereby a considerable fraction of non-electrical energy, in the form of thermal energy is captured and utilized for maintenance of digester temperature, thereby greatly increasing the overall, not just electrical, utilization. A fact that is particularly interesting regarding aforementioned combined cycle natural gas plants in fact utilizing waste thermal energy, albeit for ultimate production of electricity. From an ABC and hopefully DEQ perspective, it is important to recognize the overall fossil fuel reductions realized from this CHP approach.

To summarize, ABC recommends no efficiency adjustment factor be established at this time in the CFP. In the event that DEQ does set a standard or an independent review, it should establish a starting efficiency adjustment factor at 37% for biogas generators, which presently is the typical electrical efficiency for engine/generator sets commonly available and utilized within the industry. Oregon's efficiency standard should not exceed 37% until such time as a California or Oregon biogas facility has *demonstrated higher* real-world efficiencies, with comparable up-time, for a 24-month period necessary for a certified LCFS or CFP Tier 2 pathway. Once that occurs, DEQ should consider making the demonstrated efficiency the new standard thereafter, perhaps with a phase-in period or small-project exemption.

**Recommendation #2: Remove Green-e new date requirement and/or recommend that all biogas generators placed in service after 2000 be eligible for participation in the Clean Fuels Program.**

*DEQ proposal: "(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."*

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<sup>2</sup> LCFS Guidance 19-06, available at [https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/guidance/lcfsguidance\\_19-06.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/guidance/lcfsguidance_19-06.pdf)

There are 21 biogas renewable electricity facilities within the State of Oregon, all of which came into service prior to 2015 and would therefore be considered ineligible under the Oregon CFP's currently proposed rules.<sup>3</sup> The new date requirement from Green-e is a rolling 15-year period which adjusts on a calendar year basis such that existing biogas generators become ineligible. Participation in the CFP by biogas generators provides incremental revenue which improves the economics of these facilities by offsetting recurring operations and maintenance costs. These existing facilities should not lose eligibility as these renewable electricity projects serve as critical components in sustainable and secure agricultural, industrial, and municipal waste management ecosystems by reducing nutrient runoff, enhancing soil quality, and most importantly capturing, destroying, and thereby avoiding fugitive methane emissions in a beneficial manner to produce electricity. It is in DEQ's and the State of Oregon's interest to protect and support these biogas producers that are providing a climate benefit from methane destruction and were early pioneers in developing beneficial uses for biogas.

The proposed rule may be based on the concept of additionality which is often a requirement for carbon offset programs. However, the CFP is not a carbon offset program, and does not impose additionality as a requirement for credit generation. For instance, biodiesel and ethanol facilities that produced and supplied fuels into Oregon prior to 2015 are not prohibited from generating credits under the CFP and do not generate credits based on exceeding a baseline established based on the quantity of fuels supplied into the state in 2015. Instead, the CFP is focused on reducing the carbon intensity of transportation fuels used in the state. Fleets that utilize electricity and that obtain the environmental attributes of very low or negative CI biogas power should similarly be authorized to utilize the low CI electricity as a transportation fuel.

The rule as written could result in some projects ceasing to operate once their PPAs run out, and/or encouraging these projects to shift away from electricity generation to instead deliver RNG for use in combustion vehicles. Again, these outcomes are contradictory to goals of increasing credit generation in ZEVs and decreasing GHG emissions quickly and cost-effectively.

### ***Conclusion***

ABC recommends that DEQ make the following changes to the draft rules:

1. That DEQ not impose an efficiency adjustment factor for biogas to electricity pathways. If DEQ remains convinced that an efficiency adjustment factor is a necessary program component, then ABC recommends that DEQ undertake an independent evaluation of whether there is commercially available and financially feasible technology to meet the standard that underlies the adjustment factor. If there is not a commercially feasible technology available in the marketplace to meet the efficiency standard, then the efficiency adjustment factor will not effectively incentivize a transition to advanced technologies and will serve only as a penalty. In the event that DEQ does set a standard or undertakes an independent evaluation, it should establish a starting efficiency adjustment factor at 37% for biogas generators, which presently is the typical electrical efficiency for engine/generator sets commonly available and utilized within the industry. Oregon's efficiency standard should not exceed 37% until such time as a California or Oregon biogas facility or the independent evaluation has *demonstrated higher* real-world efficiencies, with comparable up-time, for a 24-month period necessary for a certified LCFS or CFP Tier 2 pathway. Once that occurs, DEQ should consider making the demonstrated efficiency the new standard thereafter, perhaps with a phase-in period or small-project exemption.

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<sup>3</sup> Oregon Department of Energy Comments HB2449:  
<https://olis.leg.state.or.us/liz/2015R1/Downloads/CommitteeMeetingDocument/68985>

2. Remove Green-e new date requirement and/or recommend that all biogas generators placed in service after 2000 be eligible for participation in the Clean Fuels Program.

Thank you for your consideration of these comments. Please advise if any further input on these issues would be constructive.

Sincerely,



Bernie Sheff, PE  
Chair, ABC Board of Directors  
Montrose Environmental Services



Patrick Serfass  
Executive Director  
ABC Staff

**From:** [Bill and Karen Farmer](#)  
**To:** [CFPE2021](#)  
**Subject:** Clean Fuels Program Electricity 2021 Rulemaking Comment  
**Date:** Wednesday, December 23, 2020 10:56:17 AM

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We just wanted our voices to be heard. We (my wife and I) believe that the time should be 12 months not 24 months between electric cars. And we support both programs and the amounts they pay out.

Bill and Karen Farmer



**BTR Energy**

Bridge to Renewables, Benefit LLC  
1015 15th Street NW, Suite 1025  
Washington, DC 20005

January 22, 2021

Department of Environmental Quality  
Attn: Cory-Ann Wind, Oregon Clean Fuels Program  
700 NE Multnomah Street, Room 600  
Portland, OR 97232-4100

(Submitted Electronically)

**RE: BTR Energy Comments on the Proposed Rules, Clean Fuels Program Electricity  
2021 Rulemaking**

Dear Ms. Wind:

On behalf of Bridge to Renewables, Benefit LLC (dba "BTR Energy"), we provide herein public comments on the Proposed Rules dated December 22, 2020, for the Clean Fuels Program Electricity 2021 Rulemaking.

#### Residential Incremental Credits

For residential charging, DEQ is proposing to allow utilities to generate residential incremental credits for electric vehicle charging. If utilities opt not to retire RECs to generate incremental credits, that opportunity would be available to an incremental aggregator. Under this proposal, automakers are not eligible to generate residential incremental credits.

#### Recommendation

BTR Energy proposes DEQ consider revising the Proposed Rules to allow automakers to generate residential incremental credits for electric vehicle charging that is metered with on-board telematics systems. Alternatively, BTR Energy proposes DEQ consider adding language to the Proposed Rules to require a periodic review to determine if the introduction of additional credit generators, such as automakers, or a hierarchy of credit generators would better support the goals of the CFP. Such an assessment could be included in the Clean Fuels Program Annual Report published by DEQ by April 15 of each year.



**BTR Energy**

Bridge to Renewables, Benefit LLC  
1015 15th Street NW, Suite 1025  
Washington, DC 20005

Conclusion

We appreciate this opportunity to provide public comment and the efforts by DEQ staff to engage stakeholder input throughout the rulemaking process. Please let us know if we can be of assistance to your efforts in the future.

Respectfully,

Ashley P. Beaty  
Vice President, Partnerships & Public Policy  
BTR Energy



January 29, 2021

Cory Ann Wind  
Oregon Department of Environmental Quality (DEQ)  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232-4100

**RE: COMMENTS OF CENTER FOR RESOURCE SOLUTIONS (CRS) ON THE CLEAN FUELS PROGRAM ELECTRICITY 2021 NOTICE OF PROPOSED RULEMAKING AND DRAFT RULES**

Dear Ms. Wind:

CRS appreciates this opportunity to submit comments on the Clean Fuels Program (CFP) Electricity 2021 Notice of Proposed Rulemaking (NOPR) and Draft Rules dated December 22, 2020 ("Draft Rules"). Our comments pertain to proposed requirements for renewable energy certificates (RECs) and use of offsite renewable electricity in Sec. 340-253-0470(5), proposed requirements for utility renewable electricity products in Sec. 340-253-0470(7), proposed reporting and documentation requirements for RECs in Sec. 340-253-0640(2)(d), and proposed rules for calculating incremental credits in Sec. 340-253-1020(4) in the Draft Rules.

**BACKGROUND ON CRS AND GREEN-E®**

CRS is a 501(c)(3) nonprofit organization that creates policy and market solutions to advance sustainable energy. CRS provides technical guidance to policymakers and regulators at different levels on renewable energy policy design, accounting, tracking and verification, market interactions, and consumer protection. CRS also administers the Green-e® programs. For over 20 years, Green-e® has been the leading independent certification for voluntary renewable electricity products in North America. In 2019, Green-e® certified retail sales of over 69 million megawatt-hours (MWh), serving over 1.6 million retail purchasers of Green-e® certified renewable energy, including over 113,000 businesses.<sup>1</sup>

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<sup>1</sup> See the 2020 (2019 Data) Green-e® Verification Report here for more information: <https://resource-solutions.org/g2020/>.

## COMMENTS INCORPORATED BY REFERENCE

We incorporate into these comments CRS's November 5, 2020 comments on the Rulemaking Advisory Committee #3 Discussion Paper as a part of the Clean Fuels Program Electricity 2021 Rulemaking ("Nov. 5 Comments")<sup>2</sup>, which include *inter alia*:

- General information about the Green-e® certification program;
- Information regarding the circumstances under which CFP credit generating entities would need to join the Green-e® program (e.g. execute the Green-e® Certification and Logo Use Agreement, pay certification fees, and undergo the Verification Audit) in order to demonstrate Green-e® certification of RECs used for the CFP; and
- Differences between the Western Renewable Energy Generation Information System (WREGIS) and the Green-e® program.

## COMMENTS ON DECEMBER 22, 2020 DRAFT RULES

### **Sec. 340-253-0040(60)**

- 1. Please make the following changes to Sec. 340-253-0040(60): "Green-e® Program" means the certification program run by ~~the~~ Center for Resource Solutions."**

### **Sec. 340-253-0470(5)**

- 2. Please make the following changes to subsection 340-253-0470(5)(a): "[...] must be certified by ~~the~~ Green-e® Program, under ~~their~~the Green-e® Renewable Energy Standard for Canada and the United States version 3.45 or later [...]."**
- 3. Please clarify whether subsection 340-253-0470(5)(a) refers to Green-e® certification at the retail or wholesale level, or either.**

An entity generating CFP credits using RECs as proposed by DEQ (e.g. an electric vehicle [EV] charging station owner, utility, backstop aggregator, or automaker) can choose Green-e® certification of RECs at the wholesale or retail level.

For certification at the wholesale level, the Green-e® Program does not verify retirement of the REC. Consequently, DEQ would need to do that, and DEQ should set specific requirements for how RECs used for CFP must be tracked and retired in WREGIS, e.g. using a specific CFP retirement reason and identifying a CFP retirement year. For certification at the retail level, the Green-e® Program verifies end-

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<sup>2</sup> Available at: <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/cfpe2021m3comments.pdf> Pg. 4-11.

use retirement of the RECs. It requires that RECs be retired for Green-e® certified sales using a specific retirement protocol in WREGIS. In addition, the Green-e® Program may provide additional information to customers buying RECs that are used for the CFP, e.g. indicating that certified RECs used for the CFP are not surplus to regulations for greenhouse gases (GHGs) in the transportation sector and they are supporting compliance with state programs rather than voluntarily going above and beyond what is required.

**4. CFP credit generating entities must join the Green-e® Program as participating sellers in order to sell Green-e® certified RECs or where RECs are included as a part of a residential product.**

In our Nov. 5 Comments, we explained that CFP credit generating entities would not necessarily need to join the Green-e® Program in order to *buy* Green-e® certified RECs and use them for the CFP. However, some credit generating entities that aggregate EV loads and buy RECs to match with those loads for clean transportation programs in other states (e.g. California's Low Carbon Fuel Standard [LCFS]) have also *sold* RECs (e.g. excess RECs), particularly where the program's REC vintage requirements are narrow. In order to sell Green-e® certified RECs, entities must join the program as a participant, and pay certification fees, for example. Therefore, under the Draft Rules, if aggregators or other entities want the flexibility to buy RECs in excess and later sell them as Green-e® certified RECs, they would need to join as a Green-e® Program participant and incur the associated costs. Otherwise, these entities will need to be more certain about the RECs that they need and purchase RECs more carefully, and/or they may end up with RECs that they cannot resell at the same price. On the other hand, the Green-e® Program's 21-month vintage window for certified sales (incorporated into the CFP by the proposed requirement for Green-e® certification) may be wide enough to provide these aggregators with sufficient flexibility and alleviate some of the pressure.

**5. The Green-e® Program can be used to verify proposed requirements at subsections 340-253-0470(5)(b) and (c).**

In general, the Green-e® Program can be used to verify requirements and provide information to DEQ regarding the "placed into service" date and location of facilities generating RECs, as proposed in subsections (b) and (c), respectively. The Green-e® Program could potentially add verification procedures to do so where needed.

**6. Please make the following changes to subsection 340-253-0470(5)(b): "[...] the Green-e® Standard."**

**7. Regarding subsections 340-253-0470(5)(a) and (b), in 2031, projects placed into service in 2016 (after 2015) will not meet the Green-e® Program's 15-year rolling new date**

**requirement.<sup>3</sup> After 2031, DEQ is effectively proposing to require the Green-e® Program's new date for all projects generating RECs used for CFP.**

**8. We strongly recommend that DEQ explicitly disallow RECs associated with power that has been or will be imported to California, either directly or through the Western Energy Imbalance Market (EIM), for use in the CFP.**

California's cap-and-trade program includes emissions associated with imported electricity. It defines imported electricity as: "electricity generated outside the state of California and delivered to serve load located inside the state of California."<sup>4</sup> In addition, GHG attribution to California in EIM, "determines if [a] resource is serving load in [the] California GHG compliance area,"<sup>5</sup> as opposed to load in Oregon, for example. Like the CFP, California is accounting for generation attributes delivered to load in California under this part of the cap-and-trade program. As such, it affects other load-based policies and RECs.

However, that program does not require REC retirement in California for renewable imports, to calculate emissions or determine compliance obligations.<sup>6</sup> It does not use RECs to track imported renewable energy, and the California Independent System Operator (CAISO) has created a GHG attribution mechanism in the EIM for California that also does not involve RECs. As we have described previously at the EIM Regional Issues Forum (RIF),<sup>7</sup> that has created a risk of double counting zero-emissions electricity that is imported to California and reported under the Mandatory Reporting Regulation (MRR). Where the RECs associated with this generation are used for the CFP, or in RPS and other programs outside of California, the same zero-emission generation may be delivered to two different states.<sup>8</sup>

The Green-e® Program's verification software asks participants whether RECs used outside of California are associated with generation that was imported to California for all the facilities that are located in WREGIS footprint. The program can potentially add additional verification requirements, including additional documentation or attestation around this issue. However, we have requested additional data

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<sup>3</sup> See Sec. II.E of the Green-e® Renewable Energy Standard for Canada and the United States v3.5.

<sup>4</sup> Sec. 95802(a) California's Cap-and-trade Regulation.

<sup>5</sup> Slide 5 of the California Independent System Operator's (CAISO's) July 15, 2020 presentation to the state of Washington's Clean Energy Transformation Act (CETA) Carbon and Electricity Markets Stakeholder Workgroup (MWG). Available here: <https://www.utc.wa.gov/layouts/15/CasesPublicWebsite/GetDocument.ashx?docID=140&year=2019&docketNumber=190760>.

<sup>6</sup> See Sec. 94511(a)(4) of the Mandatory Reporting Regulation (MRR): "Imported Electricity from Specified Facilities or Units. The electric power entity must report all direct delivery of electricity as from a specified source for facilities or units in which they are a generation providing entity (GPE) or have a written power contract to procure electricity."

<sup>7</sup> See recording of the June 18, 2019 EIM RIF: <https://www.youtube.com/watch?v=KhZ-OP0AluU&feature=youtu.be>, min 1:05-1:14:47.

<sup>8</sup> Further explanation is provided in two letters from CRS to the California Independent Emissions Market Advisory Committee (IEMAC) dated Oct 5, 2018 and Aug 22, 2019. Available at: <https://resource-solutions.org/wp-content/uploads/2018/10/CRS-Comments-for-IEMAC-10-5-2018.pdf> and <https://resource-solutions.org/wp-content/uploads/2019/12/CRS-Letter-to-IEMAC-8-22-2019.pdf>, respectively. In these letters, CRS uses Washington's programs as an example, but the concern is equally as applicable to CFP and programs using RECs to verify delivery of renewable energy to load in Oregon.

from the California Air Resources Board (CARB) to improve Green-e® Program verification that these RECs are not double counted.

**Sec. 340-253-0470(7)**

- 9. We recommend better identifying which rules in Sec. 340-253-0470(7) apply to utilities using their renewable electricity products to generate CFP credits for residential EV charging with low-carbon intensity (low-CI) electricity, non-residential utility customers participating in these programs and earning credits for non-residential EV charging with low-CI electricity, or both.**
  
- 10. Subsection 340-253-0470(7)(b) does not require that the renewable electricity and RECs associated with utility products meet the same criteria as stand-alone RECs per Sec. 340-253-0470(5). As such, there are no REC retirement, REC vintage, project location, project new date, or other requirements for utility renewable electricity programs used for the CFP. The proposed review of pathway applications by DEQ “to determine if they result in a substantially similar environmental outcome” is generally opaque and may not provide equivalent assurances for CFP credits from this EV charging. At a minimum, we recommend including an explicit requirement to retire RECs associated with utility products and power purchase agreements used for the CFP per this section.**

Utility renewable electricity products and power purchase agreements can also be Green-e® certified, in which case Green-e® certification may be used to demonstrate compliance or equivalency with the criteria in Sec. 340-253-0470(5) and DEQ may consider making Green-e® certified utility products exempt from subsection 340-253-0470(7)(b).

- 11. It is highly likely that the Green-e® Program will adopt new rules affecting certified utility renewable electricity products used to generate incremental residential EV credits that are awarded to the utility.**

While DEQ is not proposing to require that utility renewable electricity programs must be Green-e® certified in the Draft Rules, many nevertheless are or may be, and investor-owned utility (IOU) voluntary green pricing programs have included provisions for the programs to be Green-e® certified since around 2012,<sup>9</sup> per the recommendations of the Portfolio Options Committee (POC) and as approved by the Oregon Public Utility Commission (OPUC).<sup>10</sup>

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<sup>9</sup> See docket UM 1020, at: <https://www.oregon.gov/puc/edockets/Pages/default.aspx>.

<sup>10</sup> The most recent approval was Order 18-183 (<https://apps.puc.state.or.us/orders/2018ords/18-183.pdf>). In March 2020, the OPUC suspended the POC per Order 20-063 (<https://apps.puc.state.or.us/orders/2020ords/20-063.pdf>). As part of this and a subsequent order (<https://apps.puc.state.or.us/orders/2020ords/20-183.pdf>), POC recommendation requirements were also suspended, and the programs were given a continuance through December 31, 2021.

The Green-e® Program cannot certify *sales* used for a state regulatory compliance program. It makes a distinction between these and RECs or renewable electricity that is used by the purchasing entity for a compliance program, such as the CFP. Sec. 340-253-0470(5) pertains to RECs that are sold to a CFP credit generating entity as a stand-alone REC product or simply retired on behalf of customers' EV charging. Alternatively, under Sec. 340-253-0470(7), credit generating entities that are the customers of a utility with a renewable electricity program or product offering may use that product (i.e. enroll in that program) in order to receive non-residential incremental EV CFP credits. They are non-residential buyers of renewable electricity (e.g. a charging station owner or EV fleet owner). In general, the Green-e® program can certify RECs and utility renewable electricity products where the buyer may be using the RECs for the CFP (even if this is a utility retiring RECs on behalf of residential EV charging) provided that it is not selling certified RECs to customers for which it receives CFP credit.<sup>11</sup>

However, the Green-e® Program would treat certified renewable electricity products that are used for CFP differently if the *selling* utility or electricity supplier is the entity generating the CFP credits (e.g. the utility for residential EV charging). The program has existing rules for certified utility products that are being used for California's Low-carbon Fuel Standard (LCFS) program. These same rules will likely be applied to certified utility products used for the CFP. These rules would allow the utility to allocate a portion of product sales to the CFP, based on EV usage, provided that 1) it is a 100% renewable energy product, 2) 25% of product sales remain purely voluntary (e.g. not used for the CFP), and 3) the utility must provide additional disclosure language.<sup>12</sup>

### **Sec. 340-253-0640(2)**

#### **12. Regarding subsection 340-253-0640(2)(d)(A), we recommend that DEQ provide additional details specifying the protocol for REC retirement in WREGIS, i.e. what REC retirement for the CFP must look like in the tracking system.**

This will depend in part on whether Green-e® certification at the wholesale or retail level is required. See comment no. 3 above. For example, RECs can be retired in WREGIS for Green-e® certified sales, i.e. meeting the Green-e® program's retirement requirements for retail certification. Otherwise, they can be retired for the CFP, i.e. meeting different DEQ retirement requirements. This would only be possible if Green-e® certification at the wholesale level is permitted. Both cases would meet the requirement at subsection (A), as currently written.

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<sup>11</sup> The Green-e® program does not allow this for California's Low-carbon Fuel Standard (LCFS) program since RECs used for the LCFS cannot meet other requirements in the Green-e® program, namely, to use the Voluntary Renewable Energy Program (VREP) under cap-and-trade. See additional details here: <https://www.green-e.org/news/062019>.

<sup>12</sup> See. Sec. IV.C1.9 (pg. 16) of the *Green-e® Energy Code of Conduct for Canada and the United States v2.2*. Available: <https://www.green-e.org/docs/energy/Green-e%20Energy%20Code%20of%20Conduct.pdf>.

**13. At this time, we do not anticipate significant issues associated with the requirement for quarterly reporting and REC retirement per subsection 340-253-0640(2)(d)(A) and Green-e® certification.**

CFP credit generating entities may retire RECs for Green-e® certified sales and submit WREGIS reports and other supporting documentation that they have purchased and retired Green-e® certified RECs quarterly (and in advance of our annual verification) to DEQ. Credit generating entities that are participating sellers of Green-e® certified renewable energy (e.g. to residential customers) may also retire RECs on behalf of Green-e® certified sales at any time and produce tracking system documentation, while Green-e® Program verification of these sales does not occur until June 1 of the following year.

Due to the time lag between renewable electricity generation and REC issuance in WREGIS, RECs associated with renewable energy generated in the last month of a quarter will not be able to be used in the next quarter's CFP report, based on the quarterly reporting deadlines in Sec. 340-253-0630. For example, if renewable electricity is generated in September, the REC will be issued in January. The Green-e® Program requires that all sales in a given calendar year fall within a 21-month vintage window of eligibility. At this point, we do not foresee significant issues related to the Green-e® Program's annual vintage requirements and DEQ's proposed requirement for quarterly REC retirement. That is, we do not believe there are any RECs that are issued that would get "stranded"—i.e. would not fit within a quarterly reporting period and also meet our vintage requirements. However, where issues do arise, the Green-e® Program could potentially create new verification requirements to accommodate the CFP.

**14. Similar to comment no. 9 above, please clarify if subsection 340-253-0640(2)(d)(B) applies to utilities using their renewable electricity products to generate CFP credits for residential EV charging with low-CI electricity, non-residential utility customers participating in these programs and earning credits for non-residential EV charging with low-CI electricity, or both.**

**15. Similar to comment no. 10 above, the requirements in subsection 340-253-0640(2)(d)(B) for EV chargers covered by an approved Utility Renewable Electricity Product or a power purchase agreement do not include documentation of REC retirement or any details about what REC retirement must look like in the tracking system. We recommend including an explicit requirement to retire RECs associated with utility products and power purchase agreements used for the CFP. We also recommend that DEQ provide additional details specifying what REC retirement for non-Green-e® certified programs that are used for the CFP must look like in the tracking system.**

The Green-e® Program has its own requirements for Green-e® certified utility products.

**16. Please make the following changes to subsection (e): “[...] from the Green-e® Program [...].”**

**17. In subsection 340-253-0640(2)(e), “verification report” is not a term that is used in the Green-e® Program (except to refer to CRS’s annual public report of aggregated Green-e® certification data, which would not serve the intended purpose). We interpret this to mean proof or a statement from the Green-e® Program that RECs used for the CFP were Green-e® certified, and we recommend that DEQ be more specific. We describe what the Green-e® Program can provide to DEQ annually by April 30 below.**

Annually by April 30, the Green-e® Program can provide the following to DEQ for compliance with subsection (e).

1. Proof of completion of final verification for a list of certified transactions to entities using RECs for the CFP, including information regarding the generator, the quarter of generation, and the customer.

Per Sec. 340-253-0650, the annual reporting deadline for CFP is April 30 for the compliance period ending on December 31 of the previous year. Whereas the Green-e® Program’s annual verification deadline is June 1 of the year following the year of the renewable energy sale. CRS releases verification documents in January and opens its verification reporting software typically in the first week of March. This leaves less than two months for participating sellers to complete the Green-e® Program’s verification audit in time to submit a report to DEQ by April 30, and they would need to do so about a month before the Green-e® Program’s deadline.

In our experience, this is a manageable timeframe within which to complete verification, though there may be other constraints for auditors in March due to tax season. The Green-e® Program can provide notification to participants selling to CFP credit generating entities of DEQ’s reporting deadline and try to encourage them to complete verification as soon as possible once the software is available in order to meet DEQ’s April 30 deadline. Otherwise, we recommend that DEQ adjust the annual reporting deadline for incremental credit generating entities (e.g. to align with Green-e, June 1) in order to provide Green-e® Program participants with customers that are CFP credit generating entities and participants that are also credit generating entities with more time, if possible.

This would require that the Green-e® Program is able to identify which participating sellers are selling to customers using certified RECs for the CRP, and that we receive the participating seller’s permission to release customer-specific data to DEQ.

But in this case, the Green-e® Program can create a new reporting worksheet for participating sellers to list sales being used for CFP compliance. With the seller's permission, we could provide this to DEQ as confirmation of customers that were provided with Green-e® certified RECs for the CFP. It would not be necessary to identify the participating seller.

2. A validation statement from the Green-e® Program's expedited Customer Procurement Review.

The Green-e® Program has created a new expedited Certified Procurement Review option to provide pre-verification data in advance of full annual verification for individual transactions of a Green-e® certified product. While it does not replace the annual verification process for program participants, it does let those participants assure their customers that individual transactions are Green-e® certified without having to wait for the results of the annual verification. Customer Procurement Review may be helpful in assisting to get DEQ necessary information on an expedited timeline. Currently, there is a small additional administrative fee for participating sellers associated with this option. There is also a transaction size threshold of 25,000 MWh, which could potentially be waived for the CFP program.

DEQ should not accept the following for compliance with subsection (e).

1. Tracking system reports showing RECs retired for the Green-e® Program or Green-e® certified sales (e.g. with a "Green-e®" retirement reason).

For RECs certified at the retail level, a Green-e® retirement reason is necessary but not sufficient and not equivalent to Green-e® certification. For RECs certified at the wholesale level, if permitted, the Green-e® Program does not require REC retirement, and DEQ would verify retirement and would need documentation from CRS that RECs were certified at the wholesale level.

2. The Green-e® Program participant's Green-e® Program Verification Audit (or Agreed-upon Procedures) Report.

Providing the auditor's report to DEQ or making that report public is also not equivalent to Green-e® certification. Green-e® Program Staff must review and accept an auditor's report and may require additional action. The auditor's report does not show any post-audit activities, and the program regularly identifies issues with auditor reports.

#### **Sec. 340-253-1020(4)**

**18. In subsection 340-253-1020(4)(a), we recommend that DEQ allow for RECs to be retired by or on behalf of credit generators and aggregators and not necessarily in retirement**

**subaccounts that are named for the specific credit generator or aggregator, but which otherwise indicate exclusive retirement by or on their behalf. For example, DEQ should permit RECs to be retired by a REC seller on behalf of or for the credit generator or aggregator, e.g. in the REC seller's retirement account for Green-e® certified sales.**

The first sentence of subsection (a) reads, "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." It is unclear whether this means incremental credits are generated by these entities upon retirement of RECs (i.e. these are the entities that may earn or claim incremental credits or to which they are awarded), or incremental credits are generated upon retirement of RECs by these entities, or both.

In general, per comment no. 12 above, DEQ should specify what REC retirement looks like in the tracking system (e.g. retirement by whom, in which accounts, and for what purpose or reason).

**19. We recommend that DEQ compare the verification statement from the Green-e® Program per Sec 340-253-0640(2)(e) to the quarterly report and proof of REC retirement required under subsection 340-253-1020(4)(a).**

There are often exceptions identified through the Green-e® Program Verification Audit that require additional REC retirements and/or other actions. In this case, the participating seller can notify the customer (CFP credit generating entity), who can in turn notify DEQ. Or, the Green-e® Program can notify DEQ, with the seller's permission. The Green-e® Program will always ensure that customers are made whole, though again, additional supply may sometimes need to be provided, which may differ from the quarterly reports submitted to DEQ.

DEQ may consider adding a provision similar to 340-253-1100(6)(b) requiring that in the event that the REC retirements reported for CFP was not verified by the Green-e® Program, the recipient of the incremental credits is responsible for acquiring and retiring sufficient RECs to ensure the environmental integrity of the program.

See comment no. 13 above regarding quarterly REC retirement and the Green-e® Program.

**20. Similar to comment nos. 10 and 15 above, subsection 340-253-1020(4)(a) does not require REC retirement for incremental credits generated using Utility Renewable Electricity Product or a power purchase agreement. We recommend that DEQ include an explicit requirement for retirement of RECs associated with utility products and power purchase agreements used for the CFP, and provide additional details specifying what REC**

**retirement for non-Green-e® certified programs that are used for the CFP must look like in the tracking system.**

The Green-e® Program has its own requirements for Green-e® certified utility products, including REC retirement. In addition, for Green-e® certified utility products used for the CFP, the Green-e® Program Verification Audit may identify exceptions and the Green-e® Program can potentially notify DEQ of these instances.

**21. Similar to comment no. 20 above (as well as comment nos. 10 and 15), subsection 340-253-1020(4)(b) allows incremental credits for residential charging to be generated by a utility, its aggregator, or the incremental aggregator without REC retirement on behalf of that charging where the utility demonstrates to DEQ that EVs are being charged by customers enrolled in its Utility Renewable Electricity Products. We recommend including an explicit requirement for retirement of RECs associated with utility renewable electricity products and power purchase agreements used for the CFP.**

Again, the Green-e® Program has its own requirements for Green-e® certified utility products, including REC retirement.

Please let me know if we can provide any further information or answer any other questions.

Sincerely,

\_\_\_\_\_/s/\_\_\_\_

Todd Jones

Director, Policy



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January 28, 2021

Oregon Department of Environmental Quality  
700 NE Molnomah St, Suite 600  
Portland, OR 97232

## **Comments in Response to Dec 22, 2020 Notice of Proposed Rulemaking: Clean Fuels Program (CFP) Electricity 2021 Rulemaking**

### Adjustments to the Carbon Intensity of Electricity

ChargePoint supports DEQ's move to a single year calculation of the statewide average electric grid carbon intensity (CI), and the removal of utility-specific CIs from the statewide average. These design changes strengthen the incentives of the program and should accelerate investment in renewable energy in Oregon. While we recognize that smart charging pathways are now out of the scope of this rulemaking, we urge DEQ staff to prioritize this in future rulemakings to encourage charging behavior that will lead to less emissions and often times lower overall system costs. As vehicles in Oregon continue to electrify, encouraging and enabling smart charging will become an important tool in grid manager's toolkits to manage load. ChargePoint would welcome the opportunity to work with staff on this issue.

We also support the use of eligible renewable energy certificates (RECs) under the program as a means to expand support for renewable energy and further reduce the carbon intensity of electric vehicle (EV) charging. This will be particularly important given the increase to the statewide electric grid CI due to the removal of utility-specific CIs from the statewide average. We do however continue to have concerns with the Green-e certification requirement due to unreconciled programmatic requirements between Green-e's auditing schedule and the Clean Fuels Program's quarterly and annual reporting schedule, which staff has yet to address. First off, in order for a REC to be Green-e certified, the REC must be retired in a tracking system by a Green-e certified retailer. To become a certified Green-e energy retailer, one must pay dues to the Center for Resource Solutions (CRS) of approximately \$5,000 per year, which will be cost prohibitive for many small EV credit creators under the CFP. Credit creators will have the option of purchasing eligible RECs from a third-party certified retailer, however, Green-e's annual audit does not take place until June of the following calendar year, therefore certification cannot be guaranteed until well after incremental credits have been issued and potentially sold (assuming incremental credits will be reported and issued quarterly). This creates a liability conflict between the CFP credit creator and the Green-e certified retailer, as well as the potential for retroactive credit invalidation. While we support restricting the eligible REC supply based on resource type, commercial online date, and geography, or balancing authority interconnection, to incent additional clean generation delivered to Oregon, the challenges associated with Green-e certification as it stands today seem to outweigh the benefits. It is also not clear that REC double claims are a problem in clean fuels markets.

On the parties eligible to generate incremental credits, we urge staff to maintain the language in OAR 340-253-0330 regarding generation of incremental credits and not prevent EV charging station service providers from participating in the incremental crediting provisions, in addition to charging station owners. Electric vehicle supply equipment (EVSE) providers will play a vital role in growing the EV charging infrastructure base in Oregon and should not be indirectly penalized from these provisions. Contractual agreements regarding credit generation are often agreed to between charging station providers and owners and it can often be more efficient for EVSE providers to act as the credit generator because of economies of scale. Current language in the Notice of Proposed Rulemaking (Dec 22, 2020) risks penalizing EVSE suppliers.



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### Advanced Credit Opportunities

We support staff's advanced credit proposal and appreciate the innovating thinking on this front. Fronting credits to qualified projects more closely aligns financing and costs associated with transportation electrification (TE) and will no doubt lead to accelerated TE in Oregon. As proposed in earlier comments, we again urge staff to extend these provisions to eligible public charging infrastructure to help address one of the main barriers to light duty passenger EV adoption: driver uncertainty over range anxiety. Publicly accessible charging infrastructure serves the Oregon public, and because charging stations are immobile, the benefits of advancing credits to public infrastructure will be sure to be realized by the Oregon general public; there will be no risk that a vehicle for which credits were advanced leaves the state. This type of infrastructure crediting provision would be particularly effective in accelerating TE in rural areas, or along major corridors, where vehicle miles travelled are typically higher on a per capita basis.

### Use of Electric Utility Credit Proceeds and the Equity Advisory Committee

ChargePoint supports electric utility credit proceed reinvestment in line with the EO 20-04 to advance the transportation electrification goals set forth in Senate Bill 1044.

ChargePoint supports the formation of an advisory committee to inform targeted reinvestment of certain credit proceeds in a way that benefits impacted communities. Determining reinvestment goals and priorities via stakeholder input and committee consensus may be preferable to overprescribing reinvestment criteria under a fixed criteria approach. It will be important that any such committee include industry stakeholders, in addition to equity stakeholders, to provide input regarding real technical feasibility, sustainability, and overall cost effectiveness.

ChargePoint is one the world's largest EV charging network and solution providers and has more than 125,000 stations on the ChargePoint network. ChargePoint's customers include employers, municipalities, universities, utilities, fleet operators, government agencies, and individual EV drivers, and supports the advancement of electrification across all of transportation.

Thank you for considering our comments, and for your continued work on this rulemaking process.

Sincerely,

A handwritten signature in black ink that reads "Evan Neyland".

Evan Neyland  
Manager, Clean Fuels Programs



# CITY OF PORTLAND ENVIRONMENTAL SERVICES



1120 SW Fifth Avenue, Suite 613, Portland, Oregon 97204 ■ Mingus Mapps, Commissioner ■ Michael Jordan, Director

January 29<sup>th</sup>, 2021

Cory Ann Wind  
Oregon Department of Environmental Quality  
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Portland, OR 97232  
Submitted electronically via [CFPE2021@deq.state.or.us](mailto:CFPE2021@deq.state.or.us)

Dear Ms. Wind,

The City of Portland's Bureau of Environmental Services (BES) appreciates the opportunity to submit our comments in response to the Department of Environmental Quality (DEQ) draft Notice Proposed on Dec. 22, 2020, for the Clean Fuels Program Electricity 2021 Rulemaking.

BES is committed to the state's and city's goals of stepping up to our climate crisis and decarbonizing our energy sources. The wastewater process contains a significant amount of embodied energy that can be recovered to locally produce renewable energy. We urge DEQ to set rules that move Oregon forward on a carbon-free path without constraining innovation in a rapidly developing marketplace.

BES manages Portland, Oregon's wastewater and stormwater infrastructure to protect public health and the environment, leading the City in preserving and restoring the health of Portland's watersheds. BES works to protect the quantity and quality of surface water and groundwater within the City and to conduct activities that plan and promote healthy ecosystems in our watersheds. BES's Columbia Boulevard Wastewater Treatment Plant (CBWTP) is the largest in the state and serves Portland's residents and businesses. The CBWTP's anaerobic digesters are an important part of the infrastructure necessary to convert waste organics produced in Portland, including wastewater solids, food waste, and fats, oils and grease (FOG), into renewable energy. Unlike some other renewable energy technologies, our biogas generation facilities operate continuously regardless of the weather, providing consistency and resilience to the energy mix.

BES supports DEQ's efforts to codify the electricity pathway under the Clean Fuel Program (CFP) to advance the deployment of electric vehicles and electric charging infrastructure as outlined in Section 4 of the Governor's Executive Order 20-04 and as envisioned under 2019's Senate Bill 1044. However, we believe the proposed application of the Green-e<sup>®</sup> Standard in-service date requirement for biogas generation facilities is in conflict with the goals that DEQ has summarized in the notice, which are to "accelerate the generation and aggregation of clean fuels credits by utilities and others to advance transportation electrification" and to "further incent the generation and aggregation of electricity credits to a broader range of stakeholders including both public and private sector fleets."

We further oppose allowing DEQ to adopt an efficiency adjustment factor for biogas to electricity pathways that include emissions reduction credits as a mechanism to maintain the program's incentive for

energy efficiency. We believe that this would arbitrarily penalize biogas generation and therefore is at odds with a technology-neutral approach to meeting the objectives of the program. These concerns are described in greater detail below.

### **The Green-e® new date requirement would constrain innovative uses of existing public assets**

In three years, BES plans to begin co-digestion of landfill-diverted food waste and FOG in our existing anaerobic digesters and we are investing now in the design and construction of the organic waste receiving facilities. This new use of our existing digesters will benefit the Portland community and all Oregonians by providing the state with a new source of low carbon renewable energy (RE). We believe this innovative investment in an existing public asset, and similar investments elsewhere, should be rewarded under the CFP, not constrained.

A fundamental and primary goal of the CFP is to encourage low carbon intensity (CI) resources to be used as a transportation fuel in order to reduce emissions from transportation. Its primary purpose is not to drive new RE development, although it is anticipated that such will be a secondary benefit of the CFP electric pathway, which we applaud. Rather than the CFP, the existing Oregon Renewable Portfolio Standard (RPS) guidelines serve as the appropriate and intended framework to drive additional renewable electricity generation. For this reason, BES generally disagrees with the use of in-service dates as an eligibility requirement for renewable energy generation under the CFP in principal. Specifically, BES considers the proposed Green-e® in-service date requirement for biogas generation unreasonable as it would supplant, rather than compliment, the existing RPS guidance. In practice, BES believes that the Green-e® in-service date requirement on biogas generation facilities under the CFP would not only constrain innovative uses of existing public assets but also lead to uneven distribution of CFP benefits geographically, and across sectors and technologies. As one example, the proposed rules allow utilities with utility-specific CI scores to include the CI benefits from hydropower generation facilities that have no in-service date requirements placed upon them under the CFP.

In addition, disqualifying biogas generation based on in-service date neither supports current biogas generation nor discourages biogas flaring and rather could contribute to the opposite occurring. A consequence of equipment downtime is increased biogas flaring. Cogeneration equipment uptime is influenced by a determined level-of-service (LOS) value that is based on process criticality and costs. Put differently, the LOS assumption is a statement of the value of keeping the equipment running. The LOS value for biogas cogeneration facilities is heavily based on the value of the avoided utility costs and environmental credit value. Accordingly, disqualification of biogas generation facilities for CFP incremental credits will do nothing to tip the scale in favor of less biogas flaring each year, resulting in less production of renewable electricity. For the CFP to reach greenhouse gas (GHG) emission reduction targets, existing infrastructure must be utilized in addition to new investment. The in-service date requirement removes a low GHG emission source of existing renewable energy that could otherwise supply electric vehicles (EVs) with fuel. Finally, wastewater service providers can be both biogas generators and public fleet owners/operators. As such, they are well positioned to invest CFP incremental credits into fleet electrification. Denying CFP benefits to these organizations based on the Green-e® in service date requirement would dampen rather than support such investment.

### **Allowing an efficiency adjustment factor for the biogas to electricity pathway creates an additional barrier for biogas**

BES opposes allowing DEQ to impose an efficiency adjustment factor for biogas to electricity pathways. Generation efficiency is already intrinsic to the Tier 2 pathway process of estimating and assigning the carbon intensity for incremental credits on a site-specific basis, which BES considers to be the appropriate mechanism within the CFP electric pathway rule to account for efficiency. Additional efficiency adjustments would amount to an arbitrary additional constraint on biogas generated projects and would inappropriately discriminate against conventional biogas cogeneration technology. In addition, neither the method nor certainty of how or when DEQ would impose such adjustments are provided in the proposed rule language. This approach would make it impossible for entities to understand what is being proposed and to plan accordingly for its implementation.

We appreciate the opportunity to provide our comments. If you have any questions, please contact Josh Newman, Biogas Utilization Program Manager, at 503-823-2438 or [joshua.newman@portlandoregon.gov](mailto:joshua.newman@portlandoregon.gov)

**Sincerely,**

**Michael Jordan**  
**Director**

**CleanFuture, Inc.**  
P.O. Box 23813  
Portland, OR 97281-3813  
office: +1 503 427-1968

January 28, 2021

Cory-Ann Wind  
Oregon Clean Fuels Program Manager  
Oregon Department of Environmental Quality  
800 NE Oregon Street  
Portland, OR 97232  
Comment Submitted via email to [cfpe2021@deq.state.or.us](mailto:cfpe2021@deq.state.or.us)

RE: Comments on Clean Fuels Program 2021 Electricity Rulemaking and Proposed Requirements on Biogas to Electricity Pathways

Dear Ms. Wind,

CleanFuture appreciates the opportunity to provide written comments to the Notice of Proposed Rulemaking and Draft Rules for the Clean Fuels Program (“CFP”) 2021 Electricity Rulemaking (“Electricity Rulemaking”). This letter provides comments highlighting the resulting decrease in both credit generation and revenues for electric vehicle (EV) applications that would result from implementation of a subset of the draft rules. Decreased credit generation increases the cost of operating electric vehicles and as a consequence, decreased credit generation also increases the cost of reducing GHG emissions and makes it more difficult to meet aggressive GHG emission reduction targets. As a result of these foreseeable outcomes, CleanFuture would like to emphasize that the draft rules discussed in this comment letter run counter to Executive Order 20-04<sup>1</sup> in several important respects:

- Regarding the General Directives to State Agencies, Agency Decisions, the Executive Order provides that agencies are directed to “Prioritize actions that reduce GHG emissions in a cost-effective manner (...)”
- Regarding the Directives to the Environmental Quality Commission and the Department of Environmental Quality, EQC and DEQ are directed to amend the low carbon fuel standards, “with the goal of reducing the average amount of GHG emissions per unit of fuel energy by 20 percent below 2015 levels by 2030, and 25 percent below 2015 levels by 2035.”

To better follow the directives of the Executive Order, CleanFuture recommends that DEQ make the following changes to the draft rules:

1. Eliminate the efficiency adjustment factor for biogas to electricity pathways, and

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<sup>1</sup> [https://www.oregon.gov/gov/Documents/executive\\_orders/eo\\_20-04.pdf](https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf)

2. Establish eligibility for qualifying biogas projects with in-service dates after 2000.

**Recommendation #1: Eliminate the efficiency adjustment factor for biogas to electricity pathways.**

**DEQ proposal:** “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.”

Besides increasing the cost of reducing GHG emissions and making it more difficult to meet aggressive GHG emission reduction targets, this draft rule will decrease credit generation from transportation electrifications which runs counter to E.O. 20-04(4)(B):

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

The efficiency adjustment factor as proposed penalizes biogas-to-electricity pathways relative to biogas-direct pathways, and therefore impedes instead of advances the transportation electrification goals set forth in SB 1044. Disincentivizing biogas-to-electricity pathways will eventually impede E.O. 20-04 directives to other agencies as well, including (8)(C) “GHG Reduction Goals and Electrification Goals” for the Department of Administrative Services, and (10)(A) further directing support of electrification under SB 1044 for the Oregon Department of Transportation.

Biogas-direct and biogas-to-electricity both offer an important avoided methane emissions benefit; this benefit should be equally realized for both pathway types. By deliberately discounting credits and revenues to biogas-to-electricity, DEQ’s proposed efficiency adjustment factor as written could lead to the unintended consequence of Low-CI Electricity projects ceasing to operate once their power purchase agreements (PPAs) run out, and/or encouraging these projects to shift away from electricity generation to instead deliver RNG to be used in combustion vehicles. Again, this is contradictory to goals of increasing credit generation in electric vehicles and decreasing GHG emissions quickly and cost-effectively.

In addition, the proposed language is written in a vague manner, i.e., “DEQ may adopt an efficiency adjustment factor for biogas to electricity pathways (...).” This indication of DEQ’s possible intention to discount crediting in the future sends **a negative signal** to the market regarding the availability of credit revenues to the support the economics of the project. This type of **uncertainty can severely undercut the feasibility of financing a biogas electricity project** by introducing significant uncertainty from a project finance perspective.

Because of these factors, we recommend DEQ not impose an efficiency adjustment factor for biogas to electricity pathways. If DEQ remains convinced that an efficiency adjustment factor is a necessary program component, then CleanFuture recommends that DEQ undertake an independent evaluation of whether there is commercially available and financially feasible

technology to meet the standard that underlies the adjustment factor. If there is not a commercially feasible technology available in the marketplace to meet the efficiency standard, then the efficiency adjustment factor will not effectively incentivize a transition to advanced technologies and will serve only as a penalty.

This technical issue was addressed in comment letters submitted in response to CARB's LCFS Guidance 19-06 with informed commenters submitting real world evidence demonstrating that a 50% benchmark efficiency standard is an unrealistic level.<sup>2</sup> In particular, the attached Exhibit 1 comment by Maas Energy Works provides a comprehensive analysis of the technologies referenced to establish the efficiency standard, and the current state of commercially available technologies for smaller dairies. The salient points from the Maas Energy Works comment regarding technological feasibility, and cost-effectiveness are:

- Combined cycle natural gas plants do not provide any foreseeable feasible use for biomethane from small biogas projects and therefore do not provide a relevant point of reference for this efficiency standard,
- Solid oxide fuel cells are not commercially available for use at smaller biogas projects and are cost-prohibitive and therefore will not provide a relevant reference point for an efficiency standard for at least five years.

To summarize, CleanFuture recommends no efficiency adjustment factor be established at this time in the CFP. In the event that DEQ does set a standard, it should establish an efficiency adjustment factor at 37% for biogas generators. Oregon's efficiency standard should not exceed 37% until such time as a California or Oregon biogas facility has *demonstrated higher* real-world efficiencies, with comparable up-time, for a 24-month period necessary for a certified LCFS or CFP Tier 2 pathway. Once that occurs, DEQ should consider making the demonstrated efficiency the new standard thereafter, perhaps with a phase-in period or small-project exemption.

### **Recommendation #2: Remove Green-e new date requirement.**

**DEQ proposal:** “(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.”

**Response:** We recommend that all biogas generators placed in service after 2000 be eligible for participation in the Clean Fuels Program.

There are 21 biogas renewable electricity facilities within the State of Oregon, all of which came into service prior to 2015 and would therefore be considered ineligible under the Oregon CFP's currently proposed rules.<sup>3</sup> The new date requirement from Green-e is a rolling 15-year period which adjusts on a calendar year basis such that existing biogas generators become

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<sup>2</sup> LCFS Guidance 19-06, available at [https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/guidance/lcfsguidance\\_19-06.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/guidance/lcfsguidance_19-06.pdf)

<sup>3</sup> Oregon Department of Energy Comments HB2449: <https://olis.leg.state.or.us/liz/2015R1/Downloads/CommitteeMeetingDocument/68985>

ineligible. Participation in the CFP by biogas generators provides incremental revenue which improves the economics of these facilities by offsetting recurring operations and maintenance costs. These existing facilities should not lose eligibility as these renewable electricity projects serve as critical components in sustainable and secure agricultural, industrial, and municipal waste management ecosystems by reducing nutrient runoff, enhancing soil quality, and most importantly capturing, destroying, and thereby avoiding fugitive methane emissions in a beneficial manner to produce electricity. It is in the State of Oregon's interest to protect and support these biogas producers that are providing a climate benefit from methane destruction and were early pioneers in developing beneficial uses for biogas. Furthermore, the proposed rules for biogas facilities are inconsistent with the utility-specific carbon intensities that have no in-service date requirements for hydroelectric generating resources.

The proposed rule may be based on the concept of additionality which is often a requirement for carbon offset programs. However, the CFP is not a carbon offset program, and does not impose additionality as a requirement for credit generation. For instance, biodiesel and ethanol facilities that produced and supplied fuels into Oregon prior to 2015 are not prohibited from generating credits under the CFP and do not generate credits based on exceeding a baseline established based on the quantity of fuels supplied into the state in 2015. Instead, the CFP is focused on reducing the carbon intensity of transportation fuels used in the state. Fleets that utilize electricity and that obtain the environmental attributes of very low or negative CI biogas power should similarly be authorized to utilize the low CI electricity as a transportation fuel.

The rule as written could result in some projects ceasing to operate once their PPAs run out, and/or encouraging these projects to shift away from electricity generation to instead deliver RNG for use in combustion vehicles. Again, these outcomes are contradictory to goals of increasing credit generation in electric vehicles and decreasing GHG emissions quickly and cost-effectively.

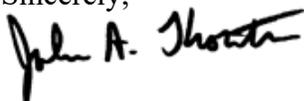
#### Conclusion

CleanFuture recommends that DEQ make the following changes to the draft rules:

1. Eliminate the efficiency adjustment factor for biogas to electricity pathways,
2. Expand eligibility to qualifying biogas projects with in-service dates after 2000.

Thank you for your consideration of these comments. Please advise if any further input on these issues would be constructive.

Sincerely,



John A. Thornton, President  
CleanFuture, Inc.

Encl. Exhibit 1

**Exhibit 1: Comment in Response to Implementation of Low Carbon Fuel Standard (LCFS) Guidance 19-06:  
Efficiency Standard for Dairy Biogas to Electricity Pathways**



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Suite 100  
Redding, CA 96003  
[www.maasenergy.com](http://www.maasenergy.com)

November 5, 2020

Daryl Maas, CEO  
Maas Energy Works, Inc.  
3711 Meadow View Dr. Ste 100  
Redding, CA 96002

California Air Resources Board  
Attn: Rajinder Sahota & Jim Duffy  
1001 I Street  
Sacramento, CA 95812

RE: Comment in Response to Implementation of Low Carbon Fuel Standard (LCFS) Guidance 19-06:  
Efficiency Standard for Dairy Biogas to Electricity Pathways

Dear Ms. Sahota and Mr. Duffy,

Maas Energy Works, Inc. (“Maas”) appreciates the opportunity to provide written comments in response to the public LCFS workshop held by CARB Staff on 10/14/2020. Maas is an owner and developer of dairy biogas to electricity and renewable natural gas projects in California. We are thankful for Staff’s efforts enabling carbon-negative electricity from dairy digesters to be used for electric vehicle charging under the Low Carbon Fuel Standard. Our comments herein are in reference to the May 2019 Low Carbon Fuel Standard (LCFS) Guidance 19-06: Determining Carbon Intensity of Dairy and Swine Manure Biogas to Electricity Pathways, specifically the implementation of a CI adjustment factor for project specific electrical efficiency. Maas operates dairy digester generators with nearly every digester type in seven separate jurisdictional air authorities in multiple states. We have experimented with a variety of technologies, and this letter provides suggestions based on that experience.

Per conversations with CARB Staff, we support the adoption of a “benchmark efficiency” standard, or similar incentive, to encourage the industry to employ the cleanest, most efficient technologies available to beneficially use dairy methane emissions. We continue to be surprised, however, at CARB Staff’s selection of a 50% efficiency standard for implementation into the LCFS Regulation since this level has not been achieved by any existing biogas technologies. We worry that placing too high of an efficiency standard will result in substantially reduced LCFS credits to most or all dairies that participate, and thus fewer projects built—especially on smaller dairies.

The 19-06 guidance document states the 50% efficiency standard is reasonable based on the “average efficiency of NG-derived electricity at California Power Plants...”. However the document referenced, a California Energy Commission (CEC) staff paper “Thermal Efficiency of Natural Gas-Fired Generation in California, 2017 Update” demonstrates that the California average efficiency is not 50%, but rather is just 44% (see Table 3 from the CEC report below: (3,412 BTU/kwh divided by State Total heat rate of 7,761 BTU equals 44%).

**Exhibit 1: Comment in Response to Implementation of Low Carbon Fuel Standard (LCFS) Guidance 19-06: Efficiency Standard for Dairy Biogas to Electricity Pathways**

**Table 3: California Natural Gas-Fired Power Plant Summary Statistics for 2016**

Category	Capacity (MW)	Share of Capacity	Energy (GWh)	Share of Energy	Capacity Factor	Heat Rate (Btu/KWh)
<b>State Total (All Types)</b>	44,224	100.0%	105,820	100.0%	25.4%	8,680
<b>State Total (w/o Cogeneration)</b>	38,388	N/A	80,659	N/A	22.3%	7,761
<b>Combined-Cycle</b>	20,026	45.3%	71,172	67.2%	40.5%	7,338
<b>Aging</b>	8,636	19.5%	3,892	3.7%	3.9%	12,312
<b>Peaking</b>	8,898	20.1%	3,898	3.7%	5.0%	10,269
<b>Cogeneration</b>	5,836	13.2%	25,161	23.8%	48.7%	11,627
<b>Miscellaneous</b>	828	1.9%	1,697	1.6%	23.3%	9,296

Source: QFER CEC-1304 Power Plant Data Reporting.

The most efficient technology on in the CEC report was Combined Cycle Gas Turbine, or “CCGT.” This technology achieved only 46.5% efficiency. Putting aside the fact that 46.5% is less than 50%, it is highly questionable whether performance achieved by a CCGT is therefore achievable by any dairy digester. As page 6 of the referenced CEC report makes clear, the average size of a California CCGT is 571 MW (the report says California has 35 CCGT’s, with a combined 20,000+ MW). In comparison, the average digester engine installed in California is about 0.8 MW. In addition to being about 700 times larger than a digester generator unit, a CCGT runs on pipeline natural gas that is already purified, cleaned, dried, compressed, and delivered on a steady and continuously available basis. None of these factors apply to a dairy digester generator, and thus the “theoretical maximum” conversion to electricity from a digester biogas generator is much less than a pipeline-fed, utility-scale CCGT.

Other than the CCGT technology, all remaining natural gas generation technologies listed on the CEC report are in fact quite similar to digesters in size and employment, such as Peaking systems. These technologies have efficiencies that range from 27.7% to 36.7% (see again Table 3 from CEC report, above). Consequently, a benchmark efficiency standard of just 37% would exceed the efficiency of every installed NG technology category in the state, other than CCGT. Thus, a 37% benchmark efficiency standard would already meet CARB’s goal in providing an incentive to increase efficiencies of all categories of biogas generation equipment above the industry average for natural gas.

The 19-06 guidance also states that solid oxide fuel cells can achieve 50%+ efficiency. To document this statement, 19-06 quotes two scholarly articles from Sciencedirect.com. Both articles are pure research into theoretical performance of systems to produce mathematic models showing high efficiency. They are not case studies of any deployed technology and they do not include any field data or even bench-scale tests of experimental equipment. The references are replete with warnings about the challenges faced in actually deploying these future, theoretical systems. It is telling that no real-world biogas fuel cells examples are available to be cited by 19-06. In practical experience, fuel cells have been tried unsuccessfully at two major California biogas sites: City of Tulare Wastewater Treatment Plant and Inland Empire Utilities District digester. Both were built at great cost and later abandoned. No dairy digester is known anywhere in the country to have successfully deployed commercial fuel cells. The 19-06 cites these studies to say 50% efficiency is achievable, but the introduction to the second article conversely states:

*“Although the SOFC-gas turbine cycle was first proposed over 30 years ago, the*

## **Exhibit 1: Comment in Response to Implementation of Low Carbon Fuel Standard (LCFS) Guidance 19-06: Efficiency Standard for Dairy Biogas to Electricity Pathways**

*technology has not yet left the demonstration phase [12,29,30]. Moreover, no system has demonstrated the record level efficiencies predicted from system calculations...”*

Just so. CARB and Air District benchmarks are traditionally based on technologies that meet demonstration standards such as “Achieved in Practice” or “Best Available Control” or result in some recognized technology demonstration, often overseen by CEC or other agencies to show real world data. Biogas fuel cells have met none of these tests, even in highly controlled environments, and 19-06 does not even claim otherwise.

Farmers’ willingness to install digesters depends on their confidence that the associated technologies are proven and can be reliably maintained in a farm setting. The vast majority of small and medium sized farms cannot afford a fuel cell, which in many cases costs more than the dairy facilities themselves. American dairies, almost without exception, have used lean burn internal combustion engines with air-district compliant emission catalysts, which operate at 30-35% efficiency under the best possible real-world circumstances. Thus the 50% benchmark efficiency standard results in a 30-40% penalty on LCFS credits received per cow on dairies in the LCFS program—unless those dairies can locate and install fuel cells that actually achieve this unprecedented level of efficiency. Effectively, the 50% requirement is a penalty on all dairies except the largest and most well-funded dairies. The result will be an incentive to experiment with expensive systems on just a few large dairies that can install and maintain highly complex, unproven equipment—likely with large state grants to subsidize the capital cost.

The recent history of digester development already confirms this trend of digesters biased heavily towards large dairies. Other than a some of our company’s own clients, 100% of digesters installed since 2014 have been on dairies over 3,000 cows. The 50% efficiency benchmark will exacerbate, not reverse this trend. Four fuel cell digesters were proposed on the 2019 CDFA dairy digester grants, all by the same developer, all with the same fuel cell vendor, on some of the largest dairies in the state. The requested sizes were 3.5 MW, 2.0 MW, and 1.2 MW and 3.5 MW, each needing the maximum \$3,000,000 in state grants to proceed. Only a tiny fraction of California dairy herds are large enough support digesters of this scale (and even these appear to need very large grants).

EV charging (without the 19-06 benchmark efficiency reduction in credits) offers the first profitable opportunity for smaller dairies to the enter the digester market—especially those dairies not near a dairy pipeline “cluster,” and especially for dairies that have not been able to secure the state grants that so far have tended to fund large, clustered dairies. We should not miss this opportunity to encourage farmers to invest in technology to mitigate manure emissions. We propose the following alternatives tools to modify the proposed 50% benchmark efficiency standard.

1. Use a benchmark efficiency standard of 37% for digester generators below 1 MW capacity, and 50% for larger generators.
2. Set the benchmark efficiency standard for all sites to 37%, until such time as a California dairy has demonstrated higher real-world efficiencies, with comparable up-time, for a 24-month period necessary for a certified LCFS pathway. Make the demonstrated efficiency the new standard thereafter, perhaps with a phase-in period or small-digester exemption. CARB Staff has enough data now through certified dairy biogas to electricity pathways to determine a realistic and accurate efficiency benchmark.

**Exhibit 1: Comment in Response to Implementation of Low Carbon Fuel Standard (LCFS) Guidance 19-06:  
Efficiency Standard for Dairy Biogas to Electricity Pathways**

Each of these approaches may have various attributes for CARB Staff to consider, and the ultimate plan may involve a combination of these and other elements. To achieve the various goals of the state, we suggest that the best program will consider what is technologically possible for California dairies to achieve.

We look forward to collaborating with CARB Staff to implement an appropriate solution.

Sincerely,

A handwritten signature in black ink, appearing to read 'Daryl Maas', with a long horizontal flourish extending to the right.

Daryl Maas  
Chief Executive Officer

Clean Fuels Program Staff  
Oregon Department of Environmental Quality (DEQ)  
VIA Email

28 January 2021

Clean Fuels Program Proposed Rules - Comment Letter

Dear Clean Fuels Program Staff,

Thank you for your work on the Clean Fuels Program Electricity 2021 Rulemaking and for the opportunity to provide comments on the Proposed Rules.

In reference to the Equity Advisory Committee in section J (iii) of the Proposed Rules, it states that, "Committee members will serve as volunteers, and will not be compensated for their service on the committee." In a joint-comment letter submitted in October 2020, Climate Solutions along with others recommended that, "The Equity Advisory Committee members should be reasonably resourced for their time spent serving as representatives of the Committee and reimbursed for travel expenses incurred." Given that the Equity Advisory Committee is expected to help DEQ, "design projects and programs for the incremental aggregator", as well as "advise DEQ in its review of reports on utility spending", among other tasks, we do not need to note that these tasks take a lot of time and capacity and therefore must be compensated appropriately.

Oregon agencies have been stating that they value equity and community voices and leadership. However, agencies have not carved out and prioritized funding to bring this expertise to the table. While it is the norm to pay consultants to bring in their skills and expertise to a project, it is not the norm to pay community members to bring their skills, expertise and valuable time. This must change. Agencies including DEQ, requesting the participation of members for committees especially regarding equity, must be equitable and just and compensate members appropriately for their time and expertise.

We recommend DEQ to consider other options including the list below to ensure that the Equity Advisory Committee is properly resourced:

- Requiring that utilities claiming incremental credits, carve out a portion of their administration fees to fund the Equity Advisory Committee
- Requiring that all parties claiming incremental credits (utilities and incremental aggregator) carve out a portion of their administration fee to fund the Equity Advisory Committee
- Applying a 1 percent holdback credit similar to California's Low-Carbon Fuels Program which allows for the remaining base credit revenue generated from residential EV charging, to be used for funding the Equity Advisory Committee

We also recommend a change to the wording of the written proposed rule, “Committee members will serve as volunteers, and will not be compensated for their service on the committee.” As written, it doesn’t seem that compensating the Equity Advisory Committee will be allowed even if funding for compensation is secured. To ensure that the Equity Advisory Committee is compensated with future funding, we recommend at a minimum that DEQ change it’s language in the Proposed Rules to clarify that it is not prohibiting compensation of the Equity Advisory Committee.

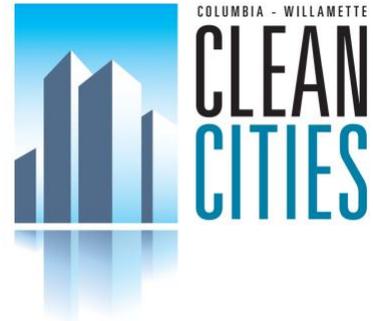
Lastly, we would like to recommend stronger REC requirements in the proposed rules. Strong REC requirements will help ensure benefits accrue to Oregon residents, further support additionality, and drive new renewable energy investments as well as help maintain the integrity of the REC and avoid double counting. The draft rule currently requires RECs to be generated from facilities located in the Western Electricity Coordinating Council. This is a significant change from what was proposed in the [RAC process](#) and will not result in meaningful benefits to Oregon. We strongly recommend incorporating the initial proposal requiring the electricity associated with the REC be delivered to a balancing authority that has a footprint in Oregon.

We recommend that 340-253-0470(5)(c) should be amended to: RECs must be associated with electricity that is generated within a balancing authority area that includes a portion of the state of Oregon, as recognized by the North American Electric Reliability Corporation, or that the electricity from the generating facility is delivered to one of those balancing authorities on a real-time basis without shaping, storage, or integration services, or in the Pacificorp-East balancing authority area.

Thank you again to the DEQ Clean Fuels Program Staff for your time and work on the Clean Fuels Program Electricity 2021 Rulemaking.

Thank you,

Victoria Paykar  
Climate Solutions  
Oregon Transportation Policy Manager



January 29, 2020

Cory-Ann Wind  
Oregon Clean Fuels Program Manager  
Oregon Department of Environmental Quality  
800 NE Oregon Street  
Portland, OR 97232

RE: Comments on the 2021 Clean Fuels Program Electricity Rulemaking

Dear Ms. Wind and Mr. Peters,

The Columbia-Willamette Clean Cities Coalition (CWCC) recognizes the hard spent time, energy, and patience invested on your end in the current 2021 Clean Fuels Program Electricity Rulemaking. We are appreciative of your leadership and passion for advancing low carbon alternative fuels. It should be noted that the Oregon Clean Fuels Program is the single best tool the state has for advancing clean fuels and the CWCC, with its below comments, intends to further support the program by refining and adding specific aspects which catalyze credit generation and reduce greenhouse gases in the State of Oregon.

### **Continued Points of Concern**

**1. Advanced crediting requirement for light-duty applicants to attest to full fleet electrification within 15 years.**

We strongly advise DEQ to remove the stipulation that fleets participating in advanced crediting for light duty vehicles must fully electrify this segment of their operations within 15-years. This is not feasible in many county fleets, and likely a nonstarter in rural segments of the state. Many of these fleets may be looking for an opportunity to procure their first EV, whether due to financial considerations, political reasons in positions of leadership, or other rationales. The 15-year full electrification stipulation is a barrier to rural electrification initiatives and should be removed to reduce barriers to accessing this funding mechanism for county and rural fleets, thus helping encourage participation in the electrification movement for the entire State of Oregon.

**2. Allowing private fleets access to the advanced crediting option.**

We feel that private fleets should be considered eligible for advanced crediting if certain criteria are met to assuage DEQ's operational, financial, and other concerns related to advanced crediting participation by private fleets. Private fleets can play a large role in stimulating the medium- and heavy-duty (MD/HD) electric vehicle and equipment segment, but must see an ROI to participate. In light of the State's lacking MD-HD policy incentives to spur private sector participation in the MD/HD electric vehicle market, the advanced crediting mechanism is the only financial incentive available to help buy down the upfront cost of MD/HD electric vehicles and equipment, and therefore help show an ROI for private fleets.

### **3. In-service date for renewable energy resources eligibility under the Clean Fuels Program.**

We feel the in-service date for renewable energy resources in the draft rules penalizes early adopters who made investments in low-carbon, renewable energy generation. DEQ should remove the 2015 in-service date for renewable generators and instead follow the new requirements of the Green-e Standard. Biogas and biomass generators often contribute to jobs and economic developing in Oregon's rural communities while producing renewable electricity, therefore these assets should be allowed to follow eligibility for Oregon's renewable portfolio standard (RPS). Several fleets have onsite generation that would be disqualified under the proposed rule as currently written and not reward their early action (and risk-taking) to reduce climate-warming emissions. We recommend the following text for OAR340-253-0470 (5)(b)

*(b) RECs must be generated by an electric generator that meet the new date requirements of the Green-e Standard ~~was placed into service after 2015, or in the case of biogas and biomass generators they must meet the new date requirements of the Green-e Standard~~ be placed in service after 1995;*

### **4. Green-e certification requirement to renewable energy resources to be eligible under the Clean Fuels Program.**

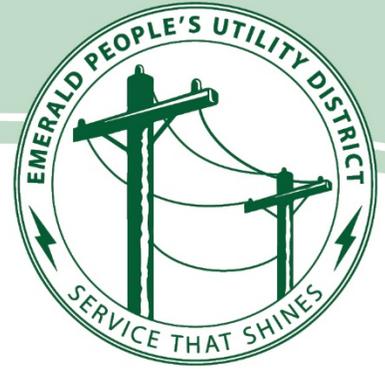
We are concerned that the Green-e certification requirement for renewable energy resources is not well understood, including its advantages, disadvantages, and compatibility with the Clean Fuels Program and complexity imposed on credit generators. This stipulation seems to add complexity and be a barrier to our members that opt-in to self-perform in the program and realize full value. We request DEQ to remove this requirement for non-residential EVs until additional details can be provided on the mechanics Green-e certification and the costs and complexity imposed on credit generators participating in the Clean Fuels Program. We believe removing this stipulation will help guarantee greater participation from fleets across all corners of the State.

We appreciate your time and consideration of our recommendations and look forward to continued participation under the Oregon CFP rulemaking process. Thank you for considering us for this effort, your continued leadership in advancing greenhouse gas reductions and alternative fuel use under the Oregon CFP, and your time, energy and patience invested in the Oregon CFP. We look forward to continued collaboration.

Yours Very Truly,



**Michael S. Graham, Director of Policy & Communications**  
Columbia-Willamette Clean Cities Coalition



Cory-Ann Wind  
 Oregon Clean Fuels Program  
 700 NE Multnomah St.  
 Portland, OR 97232

RE: CFP Electricity 2021 Rulemaking - EPUD Comments

Dear Ms. Wind,

Emerald People’s Utility District (Emerald) is proud of our participation in the Oregon Clean Fuels Program (CFP) and our partnership with Oregon Department of Environmental Quality (DEQ). Credit proceeds generated through CFP has helped Emerald launch a variety of education, incentive, and infrastructure programs intended to benefit all of Emerald’s customers. We believe these programs, in which has Emerald has led the way, have also gone a long way in contributing to the State’s ambitious transportation electrification plans which Emerald fully supports.

Emerald applauds the comprehensive effort undertaken by Oregon DEQ to expand and improve upon the existing program. Thank you for the opportunity to provide the following comments and questions meant to add to the process and improve the overall end result for Emerald customers.

TOPIC	EMERALD COMMENTS/QUESTIONS
<p>Allow new forklifts to generate displacement credits</p>	<ul style="list-style-type: none"> <li>• Work with existing electric forklift manufacturers and state industrial sector representatives to identify new electric forklift adoption opportunities. Leverage existing customer relationships between electric utilities and some of their customers to find potential industrial sites. Utilities can help customers evaluate capacity questions before procuring new electric forklifts.</li> <li>• Can Advanced Credits help with the upfront cost hurdle for some of these end-user’s applications? Recent investigations of the cost of electric forklifts for use at Emerald led us to delay investment until the costs were more acceptable. Additional support from Advanced Credits.</li> <li>• What will the process be to grant “displacement credits”?</li> <li>• New electric forklifts should displace an existing standard forklift.</li> <li>• Will forklift fleet owners have to sub-meter their charging infrastructure to track forklift fleet energy usage? It may prove easier for infrastructure and reporting to allow reporting from on-board charging software in the vehicle or the charger, if available.</li> </ul>

Update the methodology to calculate the CI of electricity	<ul style="list-style-type: none"> <li>• EPUD welcomes the change from a 5-year rolling average to a single-year value as it allows faster reflection of changing contractual conditions in a utility's power supply.</li> </ul>
Allow for the retirement of REC's to claim zero carbon electricity	<ul style="list-style-type: none"> <li>• RECs eligible for use in the new Incremental Credit program should have the same qualifying standards as required by the state's rules governing utility green power pricing programs in the context of Oregon's current Renewable Portfolio Standard. Reference ORS469A.135 that defines Renewable Energy Certificates that may be used to comply with these standards.</li> </ul>
Establish parties eligible to generate incremental credits	<ul style="list-style-type: none"> <li>• In addition to Incremental Aggregators, electric utilities can register as an Incremental Credit Generator. Do not require existing registered parties to re-register in the new system. To the extent possible, port the existing registrations into the new system.</li> </ul>
Equity Advisory Committee	<ul style="list-style-type: none"> <li>• The prioritization work done by the new Equity Advisory Committee should be informed by the makeup of the source of the Incremental Credits. For example, if the incremental credit source largely comes from rural areas, then the Equity Advisory Committee makeup and the projects the committee prioritizes should reflect that.</li> <li>• Some work should go into defining rural in the context of the Equity Advisory Committee. It's important that the committee is representative of the different needs of rural communities in Oregon. What's good for western Oregon rural communities is different than central or eastern Oregon rural communities.</li> <li>• The Equity Advisory Committee should not have explicit authority to approve or disapprove projects funded with Incremental Credits when the utility is the generator. Unless a utility agrees to distribute those credits to a third party, the spending of those funds within a utility's service area is best determined by the utility, not a third party.</li> </ul>
Determining the Carbon Intensity of Electricity	<ul style="list-style-type: none"> <li>• It's my understanding that Green-e certification is not required for RECs that are a part of green power pricing programs at Oregon utilities. Draft Rule 340-253-0470 (5a) should only require what is currently in place for Oregon's REC standards.</li> </ul>
Records	<ul style="list-style-type: none"> <li>• Record retention requirements are becoming more robust which is a good thing for all registered parties.</li> </ul>

	<ul style="list-style-type: none"> <li>• Oregon DEQ should consider offering a standard, minimum credit transaction agreement that incorporates the requirements of the current Rules. Many smaller utilities and other registered parties could benefit from having an off-the-shelf option.</li> </ul>
Specific Requirements for Reporting	<ul style="list-style-type: none"> <li>• Starting in 2021, all electric utilities must track and report administrative costs as a percentage of the total revenue reported. Emerald doesn't feel this is necessary unless utilities are able to ask for additional reimbursement for their time implementing the CFP. Otherwise, this is internal business of the utility and the state shouldn't get involved in tracking utility administrative expenses. For many utilities, there are not systems currently in place to track these expenses and it would be a burden to set up.</li> <li>• Separate tracking of spending of incremental credit revenue should be fine to track, but it's important for utilities and others acting as incremental credit generators to understand any additional reporting requirements that may be a part of that new program.</li> </ul>
Calculating Credits and Deficits	<ul style="list-style-type: none"> <li>• If DEQ determines errors in the generation of residential electric vehicle credits, DEQ should consider past investments of the credits incorrectly generated before withholding any future credits. The Clean Fuels Program should consider if past credits were invested in support of the state's objectives to reduce lifecycle emissions of transportation related greenhouse gases.</li> </ul>

Thank you again for the opportunity to submit comments on behalf of Emerald PUD and I am available to answer any questions.

Sincerely,



Rob Currier  
Energy Services Coordinator  
Emerald PUD



January 7, 2021

Cory-Ann Wind  
Oregon Department of Environmental Quality  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232

Submitted electronically via [cfpe2021@deq.state.or.us](mailto:cfpe2021@deq.state.or.us)

RE: Comments on the Clean Fuels Program Electricity 2021 Rulemaking

Energy Mission Control, Inc. (e-Mission Control) appreciates the opportunity to comment on the proposed Clean Fuels Program Electricity 2021 Rulemaking. e-Mission Control is a Sacramento-based technology company that helps facilitate participation in the LCFS and CFP for many small-to-medium sized businesses operating electric material handling equipment, primarily eCHE and electric forklifts. We have developed a comprehensive and streamlined software set that eliminates many of the administrative roadblocks that traditionally preclude small fleets from opting into these programs and allows them to take clear, affirmative, and immediate steps to reinvest in the electrification of their goods movement and material handling operations.

We offer additional background on typical MHE industry practice, information on the current state of affairs on electric forklift fleet participation, and request the following adjustments to the proposed amendments:

- 1. We suggest the first reporting entity and credit generator for electric forklifts be the entity that makes facility and equipment use decisions, operates the equipment, and pays utility costs, i.e. the "Fleet Operator".**

Background: Unlike eOGV, cargo handling equipment, or transportation refrigeration units, businesses utilizing propane and electric forklifts often utilize long-term lease agreements with forklift suppliers/dealers, typically in the three to five-year leases. These lease agreements are almost always packaged with associated chargers and batteries. The mix of owned vs. leased equipment within any specific fleet varies substantially from business to business, however it is always the case that the fleet operator make the use decision on the equipment type, quantity, charging/fueling systems utilized, and ultimately foots the bill for fuel and operational costs. In the case where additional infrastructure is required to support new equipment, it is the fleet operator that must manage the project and build in the associated installation costs into their bottom line. Additionally, it is almost always the case that the fleet operator or business owner who is developing and managing internal company greening initiatives, which frequently includes decisions on use of more efficient and less carbon-intense vehicle types.

In Port ecosystems (for eCHE) and on-road trucking logistics ecosystems (for eTRU<sup>1</sup>), the terms “Fleet Owner” and “Fleet Operator” may typically be used interchangeably<sup>2</sup>, however in warehousing, cold storage, food and beverage, or the myriad of other industries utilizing electric forklifts, the definition of “Fleet Owner,” and by extension, the right of claim to first fuel reporting entity is less clear. Importantly, this has led to current in-use practices where leasing companies (in partnership with consultants) have opted-in their leased equipment (having claimed title of “Fleet Owner”), retained credit ownership, and have seen financial returns, while not disclosing as much to the actual operator of the equipment. In our experience with such situations, we’ve found that no financial net benefit is returned to the fleet operator to help them advance their own business operations in a “greener” direction through the terms of the lease agreement. Often, the only time a fleet operator become aware of this situation is when they try to opt-in their owned equipment at the same facility, but, due to the mechanics of the FSE registration process, are rejected due to facility coordinate conflicts. Or worse, during the FSE registration process, if serial numbers are not accurately compared between submissions, a duplicate registration occurs, resulting in double counting of the leased equipment. As discussed later in this letter, a portion, potentially large, of the newer electric forklift LCFS participation can be attributed to this practice.

Additionally, the CFP currently permits the use of the CA LCFS Regulatory Guidance 17-02 (which references “fleet operators” not “fleet owners”), which, because of the difficulty in accessing metered data in material handling fleet facilities, permits the estimation of kWh values based on a variety of equipment and shift operation variables. As is currently practiced, leasing companies laying claim to credit generation at a particular facility where their equipment is leased, **regularly do not disclose this to the fleet operator**, and therefore do not have an accurate method of collecting necessary operational variables **required** by Guidance 17-02 (i.e. shifts per day, days per quarter, charge cycles per shift, etc.). Even if extremely conservative values are assumed, this short-changes the CFP with under-generation.

Importantly, e-Mission Control sees the intent of the LCFS regulation to help facilitate increased market penetration of low-carbon fuels. In the most-granular sense, helping offset increased fuel costs, electricity in this case (especially increased zero-carbon electricity costs), is a fundamental underpinning of the program. Redirecting these funds to “fleet operators” who are in the most direct need and in the best position to advance electric forklift adoption should be the first fuel reporting entities.

While some industry stakeholders argue that manufacturers should retain the ability to generate credits to advance their marketing/advertising capabilities and offer cost rebates, we believe this is one step removed from the direct incentive that should be attributed to the end consumer. The availability and general specifications of electric forklifts are already very well

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<sup>1</sup> e-Mission Control has additional comments on shipping-containerized eTRU’s typically owned by large shipping conglomerates.

<sup>2</sup> e-Mission Control understands and can expand greatly on the relationship between Port’s and Terminal Operators and how CHE/eCHE equity, operational costs, and utility costs reflect FSE ownership, if requested.

known to the industry and cost rebates are never or very rarely offered in direct relation to the CFP facility credit value generation.

Specific changes are suggested as follows:

*340-253-0330 Credit Generators: Providers of Electricity*

*(5) Forklifts. For electricity used to power forklifts, the forklift fleet ~~owner or fleet~~ operator may generate the credits. ~~Only one entity may generate credits from each piece of equipment. The fleet owner has precedence to generate credits or designate an aggregator.~~*

- 2. We suggest the first reporting entity and credit generator for eTRU's be the entity that makes facility and equipment use decisions, operates the equipment, and pays utility costs, i.e. the "Fleet Operator".**

As the current regulation is written, the "fleet owner" is the credit generator with precedence over the "fleet operator". This is applicable to both over-the-road dry-box style containers as well as the "shipping container" style units.

In practice, shipping container eTRU's are often moved from the ship then plugged in on-site akin to shore-powering a vessel before they are unloaded/loaded and sailed out again. Operationally, these eTRU's are moved at the same frequency and with the same global footprint as typical dry-box shipping containers. They are exclusively owned by shipping lines and leasing companies but plugged in by distribution facilities and terminal operators. As a container arrives, it is plugged in, then may never see that same facility again after it leaves. Any single container is typically only on site for no more than seven days. These facilities have the capability to independently meter electricity consumption to just the eTRU's, but can't track to which eTRU, on a per-serial-number basis.

Importantly, there are many facilities state-wide that have no or very little infrastructure in place to directly plug-in eTRU's on-site. These facilities must rely on diesel gensets to power the electrical componentry of the eTRU's. Facilities that have opted to green their operations by installing associated electrical infrastructure have spent millions of dollars to do so and are also the entities paying utility costs. This industry example is the perfect candidate for the LCFS program to lessen the use of diesel fuel in thousands of gensets and increase penetration of grid-connected eTRU's.

As with electric forklifts, we suggest that the first fuel reporting entity to be the "fleet operator" and to redefine the FSE as the meter monitoring energy consumption to the eTRU.

Specific changes are suggested as follows:

*340-253-0330 Credit Generators: Providers of Electricity*



*(6) Transportation Refrigeration Units. The fleet-owner or fleet-operator of the electric transportation refrigeration unit may generate credits 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.*

Thank you for the consideration of this material. e-Mission Control is a strong supporter of the hard work of the CFP team and greatly appreciates the opportunity to provide these comments. We look forward to continued discussions.

Sincerely,

Todd Trauman  
CEO  
Energy Mission Control, Inc.

CC: Shawn Garvey  
Colby Green  
Matthew Hart

## Farm Power

**Farm Power Northwest LLC  
Farm Power Tillamook LLC  
Farm Power Misty Meadow LLC  
P.O. Box 1228  
Mount Vernon, WA 98273**

Cory-Ann Wind  
Oregon Clean Fuels Program Manager  
Oregon Department of Environmental Quality  
800 NE Oregon Street  
Portland, OR 97232

January 29, 2021

### **RE: Comments in Response to Clean Fuels Program 2021 Electricity Rulemaking**

Dear Ms. Wind:

Farm Power Northwest LLC (“Farm Power”) appreciates the opportunity to submit comments for the Notice of Proposed Rulemaking and Draft Rules for the Clean Fuels Program (“CFP”) 2021 Electricity Rulemaking (“Electricity Rulemaking”). Farm Power is a full-scale developer of biogas-to-energy projects in the Pacific Northwest utilizing anaerobic digestion technology to convert methane derived from dairy manure to useful energy. Farm Power uses dairy biogas to power on-site generator sets producing renewable electricity for sale to local utilities. Two of these Farm Power biogas projects are in Tillamook, OR and have been operating since 2012.

We are supportive of Oregon’s efforts to accelerate electrification by adopting electricity-specific provisions through the CFP, and we support DEQ’s recent recommendation to change the previously proposed 2015 in-service date eligibility requirement for biogas electricity projects. However, we do not support the proposal requiring biogas electricity projects to register and certify under the Green-e Renewable Energy Standard for Canada and the United States version 3.4. We believe requiring Green-e certification is unnecessary for RECs generated from biogas electricity given the fact that certified biogas-to-electricity projects in the CFP are already required to undergo annual verification. Furthermore, we believe implementing a Green-e certification for biogas electricity introduces undue complexity for biogas electricity generators with respect to registration, reporting, credit generator status, timing of REC retirement, and vintage eligibility (akin to book-and-claim eligibility). Consistent with our previous comment letter dated November 16, 2020, we respectfully request DEQ allow CFP eligibility of RECs from generators placed in service after 2000 and not require Green-e certification.

Although we are generally supportive of an adoption of a benchmark efficiency standard as an incentive to promote energy efficiency, we urge DEQ—if necessary—to implement a standard that is achievable by existing biogas technologies. Setting an unattainable benchmark efficiency, as has been done in the California LCFS through guidance document 19-06<sup>1</sup>, will result in significantly less CFP credits to most or all dairies that participate, and thus fewer projects built—especially on smaller dairies. The key to our farm-based industry is reliability. Requiring unproven, experimental technology in order to hit unattainable efficiency targets will only prevent many projects from ever coming to fruition. Any efficiency benchmark should be achievable but proven in good practice.

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<sup>1</sup> [LCFS Guidance 19-06](#) (Revised October 2019): Determining Carbon Intensity of Dairy and Swine Manure Biogas to Electricity Pathways

The following paragraphs take each of these two topics in detail:

Implementing a requirement for biogas to electricity generators to register and certify RECs with Green-e is overly burdensome and will add complexity to the overall reporting and compliance process within the CFP for little-to-no benefit. Green-e is an independent and voluntary REC certification program with certification and reporting guidelines that do not fit within the scope of a mandatory compliance program such as the CFP. Biogas-to-electricity projects are already subject to registration and compliance through WREGIS, in addition to a rigorous Tier 2 pathway approval process before any biogas project creates CFP credits. On top of that, any biogas-to-electricity projects are subject to annual pathway verification confirming the validity of methane destruction through power generation activities every year per the CFP regulation. Green-e doesn't provide any additional value to the above requirements but rather adds more complexity through their unique voluntary program registration and reporting process. Considering biogas to electricity projects are already subject to ongoing annual pathway verification it is unnecessary to implement Green-e's certification and reporting requirements under their current Renewable Energy Standard for Canada and the United States Version 3.4. Instead, DEQ should simply implement an in-service eligibility date of 2000 for biogas to electricity projects and confirm validity of renewable electricity generation and carbon intensity calculation through the established verification process.

With respect to setting a benchmark efficiency standard, DEQ should not follow California's example. The 19-06 guidance document from the California LCFS states the 50% efficiency standard is reasonable based on the "average efficiency of NG-derived electricity at California Power Plants...". However, the source referenced, a California Energy Commission (CEC) staff paper "Thermal Efficiency of Natural Gas-Fired Generation in California, 2017 Update" demonstrates that the California average efficiency is not 50%, but rather is just 44% (see Table 3 from the CEC report below: (3,412 BTU/kwh divided by State Total heat rate of 7,761 BTU equals 44%).

**Table 3: California Natural Gas-Fired Power Plant Summary Statistics for 2016**

Category	Capacity (MW)	Share of Capacity	Energy (GWh)	Share of Energy	Capacity Factor	Heat Rate (Btu/KWh)
<b>State Total (All Types)</b>	44,224	100.0%	105,820	100.0%	25.4%	8,680
<b>State Total (w/o Cogeneration)</b>	38,388	N/A	80,659	N/A	22.3%	7,761
<b>Combined-Cycle</b>	20,026	45.3%	71,172	67.2%	40.5%	7,338
<b>Aging</b>	8,636	19.5%	3,892	3.7%	3.9%	12,312
<b>Peaking</b>	8,898	20.1%	3,898	3.7%	5.0%	10,269
<b>Cogeneration</b>	5,836	13.2%	25,161	23.8%	48.7%	11,627
<b>Miscellaneous</b>	828	1.9%	1,697	1.6%	23.3%	9,296

Source: QFER CEC-1304 Power Plant Data Reporting.

The most efficient technology in the CEC report was Combined Cycle Gas Turbine, or "CCGT." This technology achieved only 46.5% efficiency. Putting aside the fact that 46.5% is less than 50%, it is highly questionable whether performance achieved by a CCGT is therefore achievable by any dairy digester. As page 6 of the referenced CEC report makes clear, the average size of a California CCGT is 571 MW (the report says California has 35 CCGTs, with a combined 20,000+ MW). In comparison, the average digester engine installed in California is about 0.8 MW. In addition to being about 700 times larger than a digester generator unit, a CCGT runs on pipeline natural gas that is already purified, cleaned, dried, compressed, and delivered on a steady and continuously available basis. None of these factors apply to a dairy digester generator, and thus the "theoretical maximum" conversion to electricity from a digester biogas generator is much less than a pipeline-fed, utility-scale CCGT.

Other than the CCGT technology, all remaining natural gas generation technologies listed on the CEC report are in fact quite similar to digesters in size and employment, such as Peaking systems. These technologies have efficiencies that range from 27.7% to 36.7% (see again Table 3 from CEC report, above). Consequently, a benchmark efficiency standard of just 37% would exceed the efficiency of every installed NG technology category in California, other than CCGT. Oregon utilities also operate a number of natural-gas-fired peaking plants with similar efficiencies to

those in California. We thus propose that a 37% benchmark efficiency standard for the CFP would meet the Oregon's goal of providing an incentive to increase efficiencies of all categories of biogas generation equipment above the industry average for natural gas.

The 19-06 guidance also states that solid oxide fuel cells can achieve 50%+ efficiency. To document this statement, 19-06 quotes two scholarly articles from Sciencedirect.com. Both articles are pure research into theoretical performance of systems to produce mathematic models showing high efficiency. They are not case studies of any deployed technology and they do not include any field data or even bench-scale tests of experimental equipment. The references are replete with warnings about the challenges faced in actually deploying these future, theoretical systems. It is telling that no real-world biogas fuel cells examples are available to be cited by 19-06. No dairy digester is known anywhere in the country to have successfully deployed commercial fuel cells. Oregon should not follow California in using aspirational fuel cell numbers to set efficiency standards.

Farmers' willingness to install digesters depends on their confidence that the associated technologies are proven and can be reliably maintained in a farm setting. The vast majority of small and medium sized farms cannot afford a fuel cell, which in many cases costs more than the dairy facilities themselves. American dairies, almost without exception, have used lean burn internal combustion engines with air-district compliant emission catalysts, which operate at 30-35% efficiency under the best possible real-world circumstances. Thus the 50% benchmark efficiency standard results in a 30-40% penalty on LCFS credits received per cow on dairies in the LCFS program. If Oregon's CFP adopts California's efficiency requirement, the result will be an incentive to experiment with expensive systems—such as solid oxide fuel cells--on just a few large dairies that can install and maintain highly complex, unproven equipment. The recent history of digester development already confirms this trend of digesters biased heavily towards large dairies. Most digesters installed nationwide since 2014 have been on dairies over 3,000 cows; Oregon has few dairies of this size. A 50% efficiency benchmark will exacerbate, not reverse, this trend toward only installing digesters at large farms.

EV charging (with a reasonable benchmark efficiency reduction in credits, rather than California's) offers the first profitable opportunity in years for smaller Oregon dairies to enter the digester market. We should not miss this chance to encourage farmers to invest in technology to mitigate manure emissions. If a benchmark efficiency were to be implemented in Oregon, we would propose that DEQ set a reasonable efficiency number [such as 37%] derived from a range of actual heat rates at various sizes of natural gas generating plants in Oregon. This benchmark efficiency could be subsequently updated with higher actual generation efficiencies from dairies certified in the CFP program if data indicates efficiencies exceed the benchmark.

At this time, we recommend that DEQ allow CFP eligibility of RECs from biogas to electricity generators placed in-service after 2000 with no requirement to register and certify with Green-e. Furthermore, we recommend that DEQ not implement an energy efficiency benchmark that is unattainable through current biogas engine technologies. We believe this is the most inclusive and sensible approach to incentivizing dairy project development and participation in the CFP, which will provide significant overall benefit to the state of Oregon.

We look forward to collaborating with DEQ Staff on the best path forward.

Sincerely,



Kevin Maas  
President – Farm Power Northwest LLC, Farm Power Tillamook LLC, and Farm Power Misty Meadow LLC



January 29, 2021

Oregon DEQ  
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Portland, OR 97232-4100

Submitted via Email to [CFPE2021@deq.state.or.us](mailto:CFPE2021@deq.state.or.us)

RE: Clean Fuels Program Electricity 2021 Rulemaking Comment

Dear DEQ Staff,

Thanks for your hard work in the rulemaking process regarding the expansion of transportation electrification in the Clean Fuels Program. It has been an enlightening experience to be a part of the rulemaking advisory committee and we commend DEQ for the way it has conducted that process. Forth is pleased to submit some brief comments on your proposed rule.

We have previously submitted joint comments with other partners during the rulemaking in November 2020. As we noted there, we believe the residential incremental credit pathway provides an excellent opportunity for Oregon residents to benefit from efforts to reduce the remaining carbon intensity of electricity. And for all of the reasons laid out in our previous joint comment letter, Forth continues to believe that an **aggregator-first model** - granting an aggregator priority claim to the residential incremental credits - would provide the best opportunity to both accomplish the aims of Governor Brown's Executive Order 20-04 and distribute the proceeds of the clean fuels credits to maximize transportation electrification statewide in an equitable manner.

However, DEQ has instead landed on the **utilities-first approach** to the incremental credit program previously indicated in the draft rule. Under this scenario, Forth would prefer that the proposed rule explicitly acknowledge the proposal from PGE and Pacific Power to dedicate 50% of their credits toward "transportation electrification programs that specifically benefit communities of color, communities experiencing lower incomes, tribal communities, rural communities, frontier communities, coastal communities and other communities adversely harmed by environmental and health hazards." Indeed, ideally Forth would like to see such a model extended to the clean fuels spending for all utilities in Oregon - not just PGE and Pacific Power - but we recognize that such an approach would be difficult for DEQ to administer and enforce.

Regardless, assuming the proposal ends up applying only to the large IOUs who have put it forward, we hope those utilities will ensure that their program plans both advance transportation electrification and do so in as equitable a manner as possible. Furthermore, we would hope that, to the extent that such a program would run through existing UM 1826 processes, utilities could help provide capacity (through grants or the like) to potential equity stakeholders to increase their participation in those processes. We would also want to be sure that the utilities will collaborate with the proposed equity advisory committee and that the equity advisory committee has some authority over the proposed programs.

We are disappointed to see the language in the proposed rule indicating that the **equity advisory committee** is strictly volunteer and that there will be no compensation available for members' participation. We recognize that DEQ's budget is extremely constrained and the agency likely cannot directly provide subsidies to committee

members. But given that the lack of compensation will certainly limit the ability of many equity-focused community-based organizations to participate, we would encourage the agency to investigate other funding sources to provide those the needed resources. One possibility might be a “holdback” of a portion of a percentage of all credit generators’ proceeds to fund that engagement.

With regard to the utilities-first model DEQ has proposed, Forth is supportive of the **backstop incremental aggregator** to administer the unclaimed credits, as Forth has done successfully for the base credits program for a number of years. Similar to the operation of base credit program, we support the rule’s provisions that the incremental aggregator work with DEQ and the equity advisory committee to come up with work plans for programs to promote transportation electrification statewide, including programs that provide incentives to purchase electric vehicles or install electric vehicle chargers, and opportunities to educate the public about electric vehicles. Increasing awareness of and access to electric vehicles remains a crucial strategy to EV adoption and maximizing transportation electrification statewide.

Lastly, though DEQ had initially floated a model in which **automakers** might have priority claim for the incremental credits, it has now moved away from such an approach in the proposed rule. While Forth’s preference is for a statewide aggregator, we are aware that automakers generate incremental credits under California’s Low Carbon Fuel Standard and we do not see this as being in conflict with the goals of the program. Indeed, California’s regulation requires that any proceeds from incremental credits must be used to benefit EV drivers and support transportation electrification. Forth believes that automakers could serve as a key partner in accelerating electrification in Oregon as a direct participant in the program.

To fully realize the benefits of Oregon’s clean fuels program, DEQ should continue to aim for a program that leads to high-impact investments that grow the EV market as quickly as possible while broadening the benefits of transportation electrification through equity-focused investments. As the manufacturers and marketers of EVs, automakers offer a unique ability to improve public awareness and education, which Forth has consistently emphasized as critical to realizing electrification goals. Accelerated EV market growth will increase electricity credit generation opportunities under the program, creating a positive feedback loop that can benefit all stakeholders. Forth would thus suggest that DEQ consider a greater role for automakers as you further develop the clean fuels program. And even now, we also recommend that DEQ consider an advisory role for automakers as deemed appropriate by the agency to help advance the goals of the program now and into the future.

Forth appreciates DEQ’s work and consideration of these comments and we are encouraged by the opportunity to further integrate equity into Oregon’s efforts to reduce air pollution and maximize transportation electrification. Please let us know if we can be of further assistance as you move forward with the implementation of the rule.

Sincerely,

A handwritten signature in black ink, appearing to read "Rhett Lawrence", with a long horizontal line extending to the right.

Rhett Lawrence  
Pacific Northwest Policy Manager

**From:** [Holly Hansen](#)  
**To:** [CFPE2021](#)  
**Subject:** i just hope that the new regulations will result in cleaner air for all and just not be a free pass for corporations to pollute our air  
**Date:** Tuesday, December 22, 2020 10:59:45 AM

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i live downtown and am most interested in cleaning up the air

or air is so polluted THAT THEY ONLY MONITOR AIR POLLUTION MILES AWAY FROM DOWNTOWN

airnow.gov and aqicn only monitor air miles a way from downtown

probably bc it would never pass

wanting clean air for those living downtown

thank you

**From:** [John](#)  
**To:** [CFPE2021](#)  
**Subject:** Clean Fuels Program Electricity 2021 Rulemaking Comment  
**Date:** Tuesday, December 22, 2020 11:10:30 AM

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I am not an authority on the matter, however I do have a point of view. My point of view is that your decisions need to be based on scientific evidence and you need to listen carefully to the people around you people like me and people who have more information than I do. I think the most important thing right now is not to worry about how much money may be in somebody's pocket on a projected basis but that if we destroy natural habitat it is not in the benefit of most people four of the environment upon which we depend for our lives. This decisions need to be made after reviewing all of the evidence and in a thoughtful manner to protect as much Wilderness as possible.

Sent from Xfinity Connect Application



3711 Meadow View Drive  
Suite 100  
Redding, CA 96003  
[www.maasenergy.com](http://www.maasenergy.com)

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January 29, 2021

Brandon Price, Director of Environmental Commodities  
Maas Energy Works, Inc.  
3711 Meadow View Dr. Ste 100  
Redding, CA 96002

Cory Ann Wind  
Oregon Clean Fuels Program Manager  
Oregon Department of Environmental Quality  
800 NE Oregon Street  
Portland, OR 97232  
Comment Submitted via email to [cfpe2021@deq.state.or.us](mailto:cfpe2021@deq.state.or.us)

**RE: Comments in Response to Clean Fuels Program 2021 Electricity Rulemaking**

Dear Ms. Wind:

Maas Energy Works, Inc. ("Maas") appreciates the opportunity to submit comments to the Notice of Proposed Rulemaking and Draft Rules for the Clean Fuels Program ("CFP") 2021 Electricity Rulemaking ("Electricity Rulemaking"). Maas is a full-cycle owner and developer of biogas-to-energy projects throughout the Western United States utilizing anaerobic digestion technology to convert methane derived from dairy manure to useful energy. Maas uses dairy biogas to power on-site generator sets producing renewable electricity for sale to local utilities. Although most of our dairy biogas-to-electricity projects are located in California where they participate in the Low Carbon Fuels Standard Program, we are actively seeking development opportunities to bring dairy biogas-to-electricity projects to the CFP market. We are supportive of Oregon's efforts to accelerate electrification by adopting electricity specific provisions through the CFP and we support DEQ's recent recommendation to change the previously proposed 2015 in-service date eligibility requirement for renewable electricity projects.

However, we do not support the proposal requiring biogas-to-electricity projects to register and certify under the Green-e Renewable Energy Standard for Canada and the United States version 3.4. We believe requiring Green-e certification is unnecessary for RECs generated from biogas electricity given the fact that certified biogas-to-electricity projects in the CFP are already required to undergo annual verification. Furthermore, we believe implementing a Green-e certification for biogas electricity introduces undue complexity for biogas electricity generators with respect to registration, reporting, credit generator status, timing of REC retirement, and vintage eligibility (akin to book-and-claim eligibility). Instead, we respectfully request DEQ allow CFP eligibility of RECs from biogas to electricity generators placed in service after 2000 with no Green-e certification requirement. Also, although we are generally supportive of an adoption of a benchmark efficiency standard as an incentive to promote energy efficiency, we urge DEQ to implement a standard that is achievable by existing biogas-fired technologies.

Setting an unattainable benchmark efficiency, as has been done in the California LCFS through guidance document 19-06<sup>1</sup>, will result in significantly less CFP credits to most or all dairies that participate, and thus fewer projects built—especially on smaller dairies. The key to our farm-based industry is reliability. Requiring unproven, experimental technology in order to hit unattainable efficiency targets will only prevent many projects from ever coming to fruition. Any efficiency benchmark should be achievable but proven in good practice.

The following paragraphs take each of these two topics in detail:

Implementing a requirement for biogas-to-electricity generators to register and certify RECs with Green-e is overly burdensome and will add considerable complexity to the overall reporting and compliance process within the CFP for little to no benefit. Green-e is an independent and voluntary REC certification program with certification and reporting guidelines that do not fit within the scope of a mandatory compliance program such as the CFP. CFP biogas-to-electricity projects are already subject to registration and compliance through WREGIS in addition to a rigorous Tier 2 pathway approval process and ongoing compliance with CFP rules. On top of that, biogas-to-electricity projects are subject to annual verification confirming the validity of power generation activities every year. Green-e does not provide any additional value to this process but rather adds more complexity through their unique voluntary program registration, reporting, REC retirement processes, and eligibility standards that do not align with the current provisions in the CFP. Furthermore, implementing Green-e eligibility requirements for biogas-to-electricity RECs will create a conflict with existing book-and-claim eligibility standards for similar biomethane projects which will result in a significant divergence of value between these similar products and a preference for development of biomethane projects. Considering biogas-to-electricity projects are also already subject to ongoing verification through CFP it is unnecessary to implement Green-e's certification and reporting requirements under their current Renewable Energy Standard for Canada and the United States Version 3.4. Instead, DEQ should simply rely on the current requirements for annual verification and implement an in-service eligibility date of 2000 for biogas-to-electricity projects and confirm validity of renewable electricity generation and carbon intensity calculation through the established verification process. If DEQ wishes to move forward with a Green-e standard, DEQ must propose specific rules, vetted and approved through stakeholder workshops, for how the Green-e standard would be implemented within the scope of all aspects of the CFP.

With respect to setting a benchmark efficiency standard, the 19-06 guidance document from the California LCFS states the 50% efficiency standard is reasonable based on the “average efficiency of NG-derived electricity at California Power Plants...”. However, the document referenced, a California Energy Commission (CEC) staff paper “Thermal Efficiency of Natural Gas-Fired Generation in California, 2017 Update” demonstrates that the California average efficiency is not 50%, but rather is just 44% (see Table 3 from the CEC report below: (3,412 BTU/kwh divided by State Total heat rate of 7,761 BTU equals 44%).

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<sup>1</sup> [LCFS Guidance 19-06](#) (Revised October 2019): Determining Carbon Intensity of Dairy and Swine Manure Biogas to Electricity Pathways

**Table 3: California Natural Gas-Fired Power Plant Summary Statistics for 2016**

Category	Capacity (MW)	Share of Capacity	Energy (GWh)	Share of Energy	Capacity Factor	Heat Rate (Btu/KWh)
<b>State Total (All Types)</b>	44,224	100.0%	105,820	100.0%	25.4%	8,680
<b>State Total (w/o Cogeneration)</b>	38,388	N/A	80,659	N/A	22.3%	7,761
<b>Combined-Cycle</b>	20,026	45.3%	71,172	67.2%	40.5%	7,338
<b>Aging</b>	8,636	19.5%	3,892	3.7%	3.9%	12,312
<b>Peaking</b>	8,898	20.1%	3,898	3.7%	5.0%	10,269
<b>Cogeneration</b>	5,836	13.2%	25,161	23.8%	48.7%	11,627
<b>Miscellaneous</b>	828	1.9%	1,697	1.6%	23.3%	9,296

Source: QFER CEC-1304 Power Plant Data Reporting.

The most efficient technology in the CEC report was Combined Cycle Gas Turbine, or “CCGT.” This technology achieved only 46.5% efficiency. Putting aside the fact that 46.5% is less than 50%, it is highly questionable whether performance achieved by a CCGT is therefore achievable by any dairy digester. As page 6 of the referenced CEC report makes clear, the average size of a California CCGT is 571 MW (the report says California has 35 CCGT’s, with a combined 20,000+ MW). In comparison, the average digester engine installed in California is about 0.8 MW. In addition to being about 700 times larger than a digester generator unit, a CCGT runs on pipeline natural gas that is already purified, cleaned, dried, compressed, and delivered on a steady and continuously available basis. None of these factors apply to a dairy digester generator, and thus the “theoretical maximum” conversion to electricity from a digester biogas generator is much less than a pipeline-fed, utility-scale CCGT.

Other than the CCGT technology, all remaining natural gas generation technologies listed on the CEC report are in fact quite similar to digesters in size and employment, such as Peaking systems. These technologies have efficiencies that range from 27.7% to 36.7% (see again Table 3 from CEC report, above). Consequently, a benchmark efficiency standard of just 37% would exceed the efficiency of every installed NG technology category in the state, other than CCGT. Thus, a 37% benchmark efficiency standard would already meet the goal in providing an incentive to increase efficiencies of all categories of biogas generation equipment above the industry average for natural gas.

The 19-06 guidance also states that solid oxide fuel cells can achieve 50%+ efficiency. To document this statement, 19-06 quotes two scholarly articles from Sciencedirect.com. Both articles are pure research into theoretical performance of systems to produce mathematic models showing high efficiency. They are not case studies of any deployed technology and they do not include any field data or even bench-scale tests of experimental equipment. The references are replete with warnings about the challenges faced in actually deploying these future, theoretical systems. It is telling that no real-world biogas fuel cells examples are available to be cited by 19-06. In practical experience, fuel cells have been tried unsuccessfully at two major California biogas sites: City of Tulare Wastewater Treatment Plant and Inland Empire Utilities District digester. Both were built at great cost and later abandoned. No dairy digester is known anywhere in the country to have successfully deployed commercial fuel cells. The 19-06 cites these studies to say 50% efficiency is achievable, but the introduction to the second article conversely states:

“Although the SOFC-gas turbine cycle was first proposed over 30 years ago, the technology has not yet left the demonstration phase [12,29,30]. Moreover, no system has

demonstrated the record level efficiencies predicted from system calculations...”

Just so. CARB and Air District benchmarks are traditionally based on technologies that meet demonstration standards such as “Achieved in Practice” or “Best Available Control” or result in some recognized technology demonstration, often overseen by CEC or other agencies to show real world data. Biogas fuel cells have met none of these tests, even in highly controlled environments, and 19-06 does not even claim otherwise.

Farmers’ willingness to install digesters depends on their confidence that the associated technologies are proven and can be reliably maintained in a farm setting. The vast majority of small and medium sized farms cannot afford a fuel cell, which in many cases costs more than the dairy facilities themselves. American dairies, almost without exception, have used lean burn internal combustion engines with air-district compliant emission catalysts, which operate at 30-35% efficiency under the best possible real-world circumstances. Thus the 50% benchmark efficiency standard results in a 30-40% penalty on LCFS credits received per cow on dairies in the LCFS program—unless those dairies can locate and install fuel cells that actually achieve this unprecedented level of efficiency. Effectively, the 50% requirement is a penalty on all dairies except the largest and most well-funded dairies. The result will be an incentive to experiment with expensive systems on just a few large dairies that can install and maintain highly complex, unproven equipment—likely with large state grants to subsidize the capital cost.

The recent history of digester development already confirms this trend of digesters biased heavily towards large dairies. Other than a some of our company’s own clients, 100% of digesters installed since 2014 have been on dairies over 3,000 cows. The 50% efficiency benchmark will exacerbate, not reverse this trend. Four fuel cell digesters were proposed on the 2019 CDFA dairy digester grants, all by the same developer, all with the same fuel cell vendor, on some of the largest dairies in the state. The requested sizes were 3.5 MW, 2.0 MW, and 1.2 MW and 3.5 MW, each needing the maximum \$3,000,000 in state grants to proceed. Only a tiny fraction of California dairy herds are large enough support digesters of this scale (and even these appear to need very large grants). Fewer Oregon dairies have such herd sizes and Oregon lacks funding mechanisms such as the CDFA grants.

EV charging (without unreachable benchmark efficiency reductions in credits) offers the first profitable opportunity for smaller dairies to the enter the digester market—especially those dairies not near a dairy pipeline “cluster,” and especially for dairies that have not been able to secure the state grants that so far have tended to fund large, clustered dairies. We should not miss this opportunity to encourage farmers to invest in technology to mitigate manure emissions. For Oregon, we propose the following alternatives tools to modify the California 50% benchmark efficiency standard.

1. Use a benchmark efficiency standard of 37% for digester generators.
2. Set the benchmark efficiency standard for all sites to 37%, until such time as an Oregon or California dairy has demonstrated higher real-world efficiencies, with comparable up-time, for a 24-month period necessary for a certified CFP or LCFS pathway. Make the demonstrated efficiency the new standard thereafter, perhaps with a phase-in period or small-digester exemption. CARB Staff has enough data now through certified dairy biogas to electricity pathways to determine a realistic and accurate efficiency benchmark, we encourage DEQ staff to confer with CARB staff.

If such a benchmark efficiency were to be implemented in Oregon, we would similarly propose that DEQ set a reasonable benchmark efficiency derived from a range of actual efficiencies from natural gas

generation technologies in Oregon. This benchmark efficiency could be subsequently updated with higher actual generation efficiencies from dairies certified in the CFP program if data indicates efficiencies exceed the benchmark.

Each of these approaches may have various attributes for DEQ Staff to consider, and the ultimate plan may involve a combination of these and other elements. To achieve the various goals of the state, we suggest that the best program will consider what is technologically possible for dairies to achieve.

At this time, we recommend that DEQ allow CFP eligibility of RECs from biogas to electricity generators placed in-service after 2000 with no requirement to register and certify with Green-e. It is unclear how the Green-e certification will be specifically implemented into the CFP and work in conjunction with established verification requirements. With such uncertainty, we feel DEQ cannot move forward with Green-e. Furthermore, we recommend that DEQ not implement an energy efficiency benchmark that is unattainable through current biogas engine technologies. We believe this is the most inclusive and sensible approach to incentivizing dairy project development and participation in the CFP which will provide significant overall benefit to the state of Oregon.

We look forward to collaborating with DEQ Staff on the best path forward.

Sincerely,

*Brandon Price*

Brandon Price  
Director of Environmental Commodities  
Maas Energy Works, Inc.



Clean Fuels Program Staff  
Oregon Department of Environmental Quality (DEQ)  
VIA Email

January 29, 2021

*RE: NW Energy Coalition's comments regarding the Clean Fuels Program Electricity 2021 draft rules.*

The NW Energy Coalition (NWECC) appreciates the opportunity to comment on the Clean Fuels Program Electricity 2021 rulemaking. These comments are in response to the notice of proposed rulemaking and draft rules released on December 22, 2020.

**340-253-0470**  
**Determining the Carbon Intensity of Electricity**

340-253-0470(1)

NWECC supports adjusting the statewide mix to remove emissions and energy associated with utilities that have opted in for a utility-specific mix. We support this change to the Clean Fuels Program to ensure the carbon intensity (CI) accurately represents the grid-mix associated with the EV charging.

340-253-0470(5)

Strong REC requirements will help ensure benefits accrue to Oregon residents, further support additionality, maintain the integrity of the REC and avoid double counting. The draft rule allows for the purchase and retirement of RECs as one pathway to demonstrate a lower CI. This is separate from the use of RECs in Utility Renewable Electricity Products. Currently, the draft rule requires RECs, specifically used to demonstrate a lower CI, to be generated from facilities located in the Western Electricity Coordinating Council. This is a significant change from what was proposed in the Rulemaking Advisory Committee meeting on November 19, 2020.

NWECC is concerned that this will not result in meaningful greenhouse gas emissions reductions in Oregon and we strongly recommend incorporating the initial proposal requiring the electricity associated with the REC be delivered to a balancing authority that has a footprint in Oregon. Specifically, 340-253-0470(5)(c) should be amended to:

RECs must be associated with electricity that is generated within a balancing authority area that includes a portion of the state of Oregon, as recognized by the North American Electric Reliability Corporation, or that the electricity from the generating facility is delivered to one of those balancing authorities on a real-time basis without shaping, storage, or integration services, or in the PacifiCorp-East balancing authority area. ~~RECs must be generated from facilities located in the Western Electricity Coordinating Council; and.~~

In addition to the recommend change above, NWECC supports the REC conditions requiring:

- RECs to be certified by Green-e. This will minimize risks of double counting and reduce the administrative burden on DEQ;
- RECs to be generated by an electric generator that was placed into service after 2015. This is consistent with other areas of the program and further encourages additionality.

### *Monitoring the Use of RECs*

The CFP is scheduled to operate through 2035 and there are certain outcomes that are difficult to predict as it relates to the use of RECs. While this does not proscribe the use of RECs, DEQ should monitor and report on the use of RECs in the CFP to support alignment with Oregon’s clean electricity and GHG emissions reductions policies including, but not limited to:

- The number of RECs retired annually for incremental credit generation.
- The average cost of RECs retired annually for incremental credit generation.
- The use of RECs in comparison to other compliance obligations or voluntary efforts that rely on RECs.
- Occurrences of potential double counting and whether or not electricity and REC markets have adapted to address potential double counting occurrences.

### **340-253-0330**

#### **Credit Generators: Providers of Electricity**

#### *340-253-0330(11)*

NWEC supports aspects of the draft rule allowing utilities and/or a non-profit incremental aggregator to claim the residential incremental credits. We recommend that automakers not be eligible to claim incremental credits as they are not an entity that can reasonably act on behalf of Oregon residents and they do not have a history of working in the public interest in Oregon.

#### *340-253-0330(11)(c)(J)*

Equity advisory committee members should be reasonably resourced for their time spent serving as representatives on the committee and reimbursed for travel expenses incurred. In the absence of a designated funding source to support members and help ensure the success of the equity advisory committee, we recommend, at a minimum, 340-253-0330(11)(c)(J)(iii) be amended to remove the language prohibiting compensation:

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. ~~Committee members will serve as volunteers, and will not be compensated for their service on the committee.~~

We encourage DEQ to consider other options including the list below to ensure that the equity advisory committee is properly resourced:

- Requiring that utilities claiming incremental credits, carve out a portion of their administration fees to fund the equity advisory committee; or,
- Requiring that all parties claiming incremental credits (utilities and incremental aggregator) carve out a portion of their administration fee to fund the equity advisory committee; or,
- Applying a 1 percent holdback credit similar to California’s Low-Carbon Fuels Program which would allow for a small portion of base credit revenue, generated from residential EV charging, to fund the equity advisory committee.

Lastly, complementary processes to meaningfully integrate environmental justice and frontline community voices should be leveraged and considered to maximize benefits and minimize burdens. Duplicative tasks should be avoided and members should be supported in their work.

### *Credit Generator Eligibility*

EO 20-04, Section 4(B), directs DEQ “to advance methods accelerating the generation and aggregation of clean fuels credits by utilities that can advance the transportation electrification goals set forth in Senate Bill 1044 (2019),” yet nothing in the draft rule requires electric utilities to reinvest credit revenue in transportation electrification. To align with the directives of EO 20-04 and promote a virtuous cycle of electricity credit generation, we recommend DEQ require electric utilities reinvest all base and incremental electricity credits in transportation electrification.

### **Conclusion**

We appreciate DEQ’s work and commitment to a strong Clean Fuels Program. We look forward to the continued success of the Clean Fuels Program and thank you for your consideration of NW Energy Coalition’s comments.

Respectfully submitted,

Annabel Drayton  
Policy Associate  
NW Energy Coalition



250 SW Taylor Street  
Portland, OR 97204

503-226-4211  
nwnatural.com

Mary Moerlins  
Environmental Policy & Corporate Responsibility Director  
NW Natural  
250 SW Taylor Street  
Portland, OR 97204

January 28, 2021

Oregon DEQ  
Attn: Cory-Ann Wind  
700 NE Multnomah St., Room 600  
Portland, OR 97232-4100

Dear Cory-Ann,

Thank you for the opportunity to comment on the proposed Clean Fuels Program rulemaking focused on increasing generation and aggregation of credits, specifically for electric vehicles.

NW Natural is a natural gas utility headquartered in Portland, Oregon and serves over 2.1 million customers. Given the current climate imperative, NW Natural is committed to reducing the carbon footprint of our product, as well as helping fleets reduce emissions through the use of renewable natural gas and hydrogen.

The Oregon Clean Fuels Program has been instrumental in helping customers reduce their greenhouse gas emissions. We have found that barriers remain with incremental purchase costs of alternative fuel vehicles and additional capital required for fueling infrastructure. The advance credit mechanism being proposed in the rule making is a much-needed tool to increase alternative fuel adoption. We believe this advance credit mechanism should be applied equally to all alternative vehicles, however; we understand that Oregon DEQ is prioritizing electric vehicles first. Unfortunately, it appears that all electric vehicles are not being considered.

Hydrogen fuel cell vehicles are electric vehicles, and have equal or greater environmental benefits to battery electric vehicles; hydrogen can be obtained from renewable natural gas at negative carbon intensities, which is not true of electric vehicles charged from the grid. This hydrogen pathway can also be lower in cost than many others, including electrolysis. Therefore, we suggest that the proposed advance credit scheme be applied to hydrogen vehicles as well as hydrogen fueling infrastructure in this rulemaking to help remove adoption barriers for fleets looking to transition to hydrogen fuel cell electric vehicles.

Sincerely,

Mary Moerlins

# OAK LEA DAIRY

January 29, 2021

Cory-Ann Wind  
Oregon Clean Fuels Program Manager  
Oregon Department of Environmental Quality  
800 NE Oregon Street  
Portland, OR 97232

Comment Submitted via email to [cfpe2021@deq.state.or.us](mailto:cfpe2021@deq.state.or.us)

RE: Comments on Clean Fuels Program 2021 Electricity Rulemaking

Dear Ms. Wind,

Oak Lea Dairy appreciates the opportunity to provide written comments for the Notice of Proposed Rulemaking and Draft Rules for the Clean Fuels Program ("CFP") 2021 Electricity Rulemaking ("Electricity Rulemaking"). Oak Lea's comments request that the Department of Environmental Quality ("DEQ") modify draft rules to enable small rural businesses such as ours to continue producing renewable electricity by 1) Establishing in-service dates for biogas generators from 2000 instead of a rolling date which will eventually exclude our facility CFP participation, 2) By not establishing an efficiency standard on biogas power generation that cannot be achieved by commercially available technology. Through these two modifications of the Electricity Rulemaking, DEQ will better achieve its target objective of rapid and cost-effective carbon intensity ("CI") reduction for electric vehicles and enable small biogas generators to continue in operation with revenues from our participation in the Clean Fuels Program.

Oak Lea Dairy is a small dairy in Aumsville Oregon which first had its anaerobic digester installed by a third party, (RES) in 2010 and it generated renewable electricity from 2012 until the generator shut down in 2016. We purchased the equipment, spent \$250,000 in repairs and restarted generation in April 2019 as Oak Lea Digester LLC. Oak Lea's motivation for our renewable electricity project was to improve our farm's sustainability and better utilize our existing waste resources by reducing methane release. We also, have the ability to convert other organic waste streams from food processors and other local producers to make beneficial use of these streams and ensure their safe disposal on behalf of our industry partners.

Biomass electricity generators serve a vital purpose in transforming Oregon organic waste feedstocks into usable, low-carbon electricity sources; however, these operations historically have operated on thin margins. Other dairy anaerobic digesters initially developed in the 2003 – 2012 timeframe have closed due to poor project economics.

While we appreciate DEQ's recent modification in the draft rules with placed in service for biogas generators to meet the new date requirements of the Green-e Standard, we are concerned that DEQ's proposed rolling new date criteria for biogas electricity for matching with electric vehicle charging will eventually deny our farm of important revenues just as our current power purchase agreement (PPA) expires. Unfortunately, if DEQ moves forward with a requirement for REC eligibility restricted to projects commissioned according to the new date requirements of the Green-e Standard, it excludes Oak Lea Dairy of a vital revenue source as we anticipate a new PPA to have low electricity offtake prices due to low avoided cost rates. Oak Lea does not anticipate our operations and maintenance costs nor planned upgrades to meet the repower or other criteria to reset the "New Date" in the Green-e Standard. If our farm was producing another vehicle fuel form, our biogas such as renewable natural gas ("RNG") for transportation fuel there is no similar requirement for new in- service date. Therefore, we request DEQ level the playing field with no such new service date for biogas electricity.

Oak Lea Dairy • 11314 Mill Creek Rd SE • Aumsville, OR 97325

## OAK LEA DAIRY

We need our digesters to handle not only our cows' manure, but also Oregon's persistent and organic waste streams. As detailed by the Oregon Department of Energy in their 2015 comments to the House Committee on Revenue regarding HB2449<sup>1</sup>, the Bioenergy Incentive Program:

*Bioenergy systems help support key Oregon industries such as forest products manufacturing, food processing, dairy and agriculture, water treatment and the manufacturing and transportation jobs that support these industries. Biomass utilization can help reduce costs to industry, offer a beneficial use for material that would otherwise go to waste, and support natural resource objectives such as forest health restoration, greenhouse gas reduction, and reduction of nutrient runoff.*

As seen on page A2-4, the draft rules as proposed by DEQ under the Clean Fuels Program would disqualify 21 anaerobic digestion and renewable heat and power operations in the State of Oregon will face that same rolling in service date requirement and are likely to become ineligible to participate in the Clean Fuels Program.

DEQ needs to implement provisions in the CFP that facilitates continued operation of bioenergy facilities.

We recommend that DEQ allow CFP eligibility of renewable energy certificates (RECs) from generators placed in-service after 2000 to match with EV charging through book-and-claim accounting. Unfortunately, if DEQ moves forward with a requirement for REC eligibility restricted to projects commissioned according to the New Date in the Green-e Standard, it means many bioenergy facilities will eventually be excluded from participating in the CFP. This denies the financial mechanism for early adopting renewable power generating projects to continue operating and prevent project shutdowns, which would be detrimental to Oregon's ambitious GHG reduction goals. Additionally, we are concerned about the additional complexity and cost for the Green-e Standard and recommend, not require Green-e certification. Renewable electricity tracking through the Western Renewable Energy Generation Information System ("WREGIS") meets regulatory requirements for California's Low Carbon Fuel Standard compliance by retiring renewable energy credits ("RECs") to demonstrate compliance. Further, RECs that are created and retired within WREGIS meet Oregon's and most states' renewable portfolio standard ("RPS") compliance requirements, therefore we request DEQ to drop the Green-e Standard from the CFP regulation to avoid additional complexity and cost to CFP participants. The Green-e standard is more suited for voluntary programs instead of regulatory compliance.

We further recommend DEQ not impose an efficiency adjustment factor for biogas to electricity pathways as this runs directly counter to the Executive Order 20-04 which is focused on accelerating the generation of credits for transportation electrification in the goals of SB 1044 (2019), not decelerating EV credit generation by imposing an arbitrary efficiency standard. This penalizes our electricity project by providing significantly fewer credits than a pipeline RNG project.

It is imperative to provide favorable economics to allow these sustainable energy projects to continue in operation; we want our renewable electricity project to participate in the Clean Fuels Program and to be fully recognized for its contribution of life cycle greenhouse gas reductions in electric vehicles.

Thank you for your consideration of our request.

Sincerely,



Tim Bielenberg  
Oak Lea Dairy

<sup>1</sup> Oregon Department of Energy Comments HB2449: <https://olis.leg.state.or.us/liz/2015R1/Downloads/CommitteeMeetingDocument/68985>

Founded in 1968, the Oregon Environmental Council (OEC) is a nonprofit, nonpartisan, membership-based organization. We advance innovative, collaborative and equitable solutions to Oregon's environmental challenges for today and future generations.

January 29, 2021

Re: Clean Fuels Program Electricity 2021 Rulemaking

Dear Cory Ann:

Oregon Environmental Council appreciates the opportunity to provide comment on the Clean Fuels Program draft rules to update electrification credit generation opportunities. We commend the Department of Environmental Quality (DEQ) for engaging numerous stakeholders, holding a workshop with many stakeholders, and for conducting a good rulemaking process.

Transportation electrification has many benefits. First, electric vehicles are inherently more efficient than combustion drive trains. Gasoline and diesel engines waste 2x – 4x more energy than their electric counterparts (with natural gas engines being the least efficient of all). Oregon imports 100% of petroleum-based fuels, thus exporting energy dollars. Electrification keeps more energy dollars circulating in the local economy. Electrification emits zero tailpipe pollution, creating health benefits, particularly for people who live near roadways, warehouses, distribution centers, or other areas with high traffic. Electricity can also be produced with zero-carbon resources and Oregon's grid mix is getting lower and lower carbon every year. Transportation electrification is a key strategy to meet mid- and long-term greenhouse gas reduction targets.

It should be noted that not all qualifying fuels currently in the clean fuels program carry the same low-/no-carbon potential into the future. Assessment of carbon intensity potentials of fuels should be a criteria for any future rulemakings to ensure that no perverse incentives are unintentionally built into the program over time.

### **Encouraging New Types of Electric Vehicles**

#### Expanding Electrification Sectors

We strongly support adding electric cargo electric cargo handling equipment and ocean-going vessels to the program and designating two new categories of Energy Economy Ratios (EERs) for those sectors. Not only are these good categories for greenhouse gas reductions, but they also have important human health benefits as many workers are exposed to both cargo handling and marine emissions.

### Energy Economy Ratios

We strongly support creating a process for DEQ to develop new Energy Economy Ratios (EERs) specific to entities in between formal rulemakings. This is important as it better allows the program to keep pace with innovation. More and more vehicle segments will be electrifying in the coming years.

### **Carbon Intensity of Electricity**

#### Updating CIs

We support updates to calculating the carbon intensity (CI) of electricity as proposed in the draft rule. A one-year value will allow for more immediate CI updates as fossil resources are ramped down. The grid is decarbonizing and exciting proposals for 100% clean energy are on the table now, which will further accelerate this transition. However, different utilities are currently at different places. For accuracy and to reward truly low-carbon energy, the changes being proposed are scientifically sound.

#### Renewable Energy

We appreciate the opportunity to use renewable energy and RECs for specific transportation electricity needs. We support the 2015 and newer requirement and the Green-e certification, which helps track RECs and avoids double-counting. However, we think some provisions could be strengthened to ensure stronger climate benefits. We favor the original proposal requiring the electricity associated with RECs be delivered to a balancing authority that has a footprint in Oregon. REC market dynamics and potential for double-counting should be monitored over time.

### **Additional Credit Generation**

#### Incremental Credits

The option to generate incremental credits expands transportation electrification opportunities, as directed by Executive Order 20-04. We would have liked to see a statewide incremental credit aggregator to administer the funds and believe that approach would better serve statewide TE expansion. Coupled with an Equity Advisory Committee that was resourced and supported, we believe it would have yielded critical equity benefits as well.

However, we are dedicated to partnering with utilities and the backstop incremental aggregator to make the proposed program work well. We recommend in the implementation phase that there be a single Equity Advisory Committee that DEQ convenes that also advises the utility processes. Those members should be compensated out of incremental credit revenues generated by the utilities, and additional process and technical support should be provided for those members. In addition, this Advisory Committee should have real say in how programs for underserved communities are designed and delivered.

Finally, we support the incremental backstop aggregator. This helps ensure there are not any stranded credits, which benefits regulated parties.

We strongly support the utility reporting requirements for both base and incremental credits.

### Advancing Credits

We support the opportunity for public and publicly-contracted fleets to receive advanced credits upfront, which are paid back over a specified timeframe. This should help overcome upfront costs and accelerate the number of electric vehicles in those fleets.

We look forward to watching and evaluating this part of the program with the potential to expand it to other electrifying fleets that meet criteria for risk-abatement in the future.

### **Conclusion**

The sum total of these changes enhances credit generation while supporting low-carbon and zero tailpipe emissions transportation. The enhanced credit generation is a net benefit for regulated parties. The projects funded out of clean fuels proceeds will help businesses (both large and small), households, local governments and public service organizations gain access to more electric vehicles as well as charging options. This is a substantial win for Oregon.

We applaud the benefits the Clean Fuels Program has already provided to Oregon and look forward to benefits being multiplied with the adoption of these rules.

Sincerely,

Jana Gastellum  
Deputy Director for Programs  
Oregon Environmental Council

**From:** [Jennifer Joly](#)  
**To:** [CFPE2021](#)  
**Cc:** [WIND Cory Ann; "PETERS Bill N."](#)  
**Subject:** OR Municipal Electric Utilities Assn (OMEU) Comments on Clean Fuels Program Electricity 2021 Rulemaking  
**Date:** Friday, January 29, 2021 3:19:37 PM

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Thank you for the opportunity to provide comment on the Clean Fuels Program (CFP) Electricity 2021 Rulemaking.

First, we would like to compliment DEQ staff. Despite adjustments required by the virtual format, the Rulemaking Advisory Committee (RAC) was robust and inclusive. Many of our initial questions and concerns were resolved through the RAC process and are reflected in the proposed rules.

We appreciate staff's analysis of the Bonneville Power Administration (BPA) hydro-variability data for possible shifts in CFP credit generation. Given this modelling and your explanation of how carbon intensity (CI) is calculated under the program, we are not opposed to the single-year average calculation for the CI, which will accelerate credit generation upon retirement of fossil-fired plants, like Boardman. As noted during RAC deliberations, we support DEQ's proposal to remove the utility-specific load from the statewide mix to better align with principles of carbon accounting.

We have no objection to the annual reporting related to credit revenue. This reporting will meet the agency's goal of enhanced transparency without imposing unnecessarily narrow limitations on expenditures. However, looking at the language, the timing of the first report is a bit unclear. Under the proposed language, it appears that a report may be required on April 30, 2021. Given our understanding of the proposed timeframe for adoption of the rules, it is our assumption that the first report would be required by April 30, 2022 based on the 2021 data. If this is the intent, we note the impracticality of reporting 2021 data for those months in 2021 that proceed adoption of the rule. If the first report is meant to cover data from 2021, utilities should have at least 30 days after adoption of the rule to make any necessary adjustments to current practices, which may or may not reflect all the newly requested elements. So, under this approach, if Environmental Quality Commission adopts the rules in May, the first report would cover the months July – December 2021 only. We suggest this be clarified in the final rule to ensure proper notice.

Thank you for your consideration. We are enthusiastic supporters of the Clean Fuels Program, which has been an important tool for advancing emissions reduction in the transportation sector.

Sincerely, Jennifer Joly

Jennifer Joly, Director

Oregon Municipal Electric Utilities Association  
1201 Court Street NE, Suite 102  
Salem, OR 97301

January 29, 2021

Oregon Department of Environmental Quality  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232-4100

### **PacifiCorp Comments on The Clean Fuels Program Electricity 2021 Rulemaking**

PacifiCorp, dba Pacific Power (PacifiCorp or Company) appreciates the opportunity to comment on the proposed rule changes under the Clean Fuels Program (CFP) Electricity 2021 Rulemaking. We support the directive of Executive Order 20-04 and believe the CFP should be leveraged as a tool to support and expand electric transportation in Oregon while also building on successful utility transportation electrification programming.

The company is grateful to Oregon Department of Environmental Quality (DEQ) staff, other stakeholders, and participants of the rulemaking for their thoughtful consideration and many hours of work to arrive at the current proposed rules. PacifiCorp's participation in the advisory committee and previous comments filed were guided by the intent to foster a clean fuels program that is (1) equitable, (2) maximizes credits to foster increased investments in charging infrastructure, (3) avoids policy conflicts, and (4) is simple to administer.

Throughout the rulemaking process DEQ reminded stakeholders to consider potential changes holistically. In the comments below, we highlight remaining concerns we have related to some aspects of rule changes. However, when taken holistically alongside other changes, we are satisfied that the new rules will expand the CFP and further support cleaner transportation options for all Oregonians.

#### **Encouraging New Types of Electric Vehicles**

*Proposed rule: Add new energy economy ratios*

PacifiCorp is supportive of DEQ adopting new Energy Efficiency Ratios (EERs) for vehicles with sufficient data to demonstrate an improvement over fossil-fuel powered alternatives. Given the rapidly evolving electric vehicle market, the Company is also comfortable with Environmental Quality Commission (EQC) delegating authority to DEQ to approve new EERs in a more limited fashion given that those new EERs would follow the Tier 2 fuel pathway process. Allowing new forklifts to qualify for CFP credits will help forklift fleet operators lower their total cost of ownership and choose the cleanest fuel source when purchasing new forklifts.

#### **Adjustments to the Carbon Intensity of Electricity**

*Proposed rule: Update the methodology to calculate the CI of electricity*

PacifiCorp has several remaining concerns about some of the updates DEQ proposes to the methodology to calculate the carbon intensity (CI) of electricity. However, when considered alongside other proposed changes PacifiCorp is satisfied with the rule as proposed. First, DEQ is proposing to switch to a single year value as opposed to a 5-year rolling average calculation. Given the rapid shift to cleaner electricity and overlapping policies like SB 1547, a shorter rolling average may better reflect the current CI of electricity.

Given the regions reliance on hydropower a two- or three-year averaging period may reduce potential variation in drought years.

The second proposed change in this area is the most concerning to PacifiCorp. DEQ proposes to remove the load that is allocated to a utility-specific CI from the statewide average CI. At face value this approach results in consequences counter to DEQ's directive in EO 20-04 to advance methods of accelerating the generation and aggregation of clean fuels credits by utilities that can advance transportation electrification. The need for transportation electrification in a community is not driven by the CI of the utility in that area, and customers should not be deprived of additional opportunity to earn CFP credit revenue based on their location. Keeping the current statewide mix methodology would still allow for significant incremental credit generation without reducing base residential credits or unnecessarily limiting transportation electrification for customers served by investor-owned-utilities. PacifiCorp remains concerned that this change in the statewide calculated carbon intensity will not only reduce the credits generated on behalf of residential customers but will also impact credits generated for non-residential charging in PacifiCorp service territory. This change results in fewer base credits and less revenue for utility Clean Fuels-funded EV programs, so allowing utilities to claim incremental credits and maintaining the utilities as the generator of incremental residential credits is important to maintain and build on successful utility electric transportation programs. When this change is considered alongside the guarantee that incremental credit generation will follow the same process as residential base credits, namely that utilities will have the first opportunity to generate incremental residential credits, the company is accepting of the change.

PacifiCorp is supportive of the third proposed change in this area, replacing the emissions associated with the closed Boardman coal-fired power plant with the value used for an unspecified market power purchases of 0.428 MT/MWh to calculate the 2021 and 2022 CIs until actual figures can be incorporated.

*Proposed rule: Allow for the retirement of RECs to claim zero carbon electricity*

As stated previously, the rule change allowing for generation of incremental credits through renewable energy certificate (REC) retirements is crucial to balance the decreased credit generation caused by other proposed rule changes and meet the mandate of the executive order. PacifiCorp sees the potential for incremental credits to generate significant additional funds to advance transportation electrification. However, the Company continues to be concerned by the precedent being set in this rulemaking of using RECs as a proxy for emissions reductions without consideration given to broader state policy implications and seeks assurance that DEQ views this policy direction as confined to the Clean Fuels Program. With these caveats and the program improvements we describe throughout these comments and in joint comments previously submitted with Portland General Electric, DEQ's proposal can accomplish the twin purposes of mitigating the impacts of the proposed changes to the statewide carbon intensity as well as increase funding that may be directed to the advancement of transportation electrification across the state.

Given these qualifications, we can support DEQ's proposal to allow RECs purchased on behalf of residential customers as part of existing voluntary renewable programs to be counted toward incremental credit generation— assuming there is no effect on the policies of other agency greenhouse gas programs. The purpose of voluntary green programs is to allow customers to meet individual renewable goals or contribute to renewable resource development through the purchase of RECs. The revisions to fully allow utility voluntary programs to participate will create additional transportation electrification in Oregon and

support charging station operators who may otherwise have been harmed by the change in the statewide CI methodology. Keeping this process as simple as possible for non-residential customers not resourced or experienced in renewable energy procurement is critical to equitably supporting access to electric transportation. The Company appreciates DEQ's proposal to allow utility voluntary renewable programs to be leveraged, recognizing customer's investment in RECs to support renewable energy. There is a small inconsistency in the current draft between OAR 340-253-0640 (2)(d) and OAR 340-253-1020 (4) regarding claiming incremental credits through a utility program. DEQ should require only annual submissions from nonresidential credit generators like cities, fleets, and transit districts who may be resource constrained.

To simplify incremental credit generation for both residential and non-residential charging, and preserve liquidity in the regional REC market, we agree that the language in the CFP rules should align with the governance of Oregon's Renewable Portfolio Standard and that DEQ should avoid specialized requirements for eligible RECs. This means that the geographic area from which RECs may be sourced should be across the Western Electricity Coordinating Council (WECC), as currently drafted. Additionally, RECs should not be limited to resources placed in service after 2015, and, as a state program, should otherwise be aligned with Oregon state policy and definitions regarding the types of resources it considers to be renewable. Specialized requirements significantly complicate REC purchasing for both customers and utilities, when not aligned with existing renewable energy programming, as well as potentially crease the price for which a qualifying REC can be acquired.

*Proposed rule: Establish parties eligible to generate incremental credits*

PacifiCorp supports the proposed rule of parties eligible to claim incremental credits. The approach is consistent with governance of base residential credits, where utilities have priority to claim residential incremental credits from residential charging, and a backstop aggregator generates any unclaimed incremental credits as determined by DEQ. Just as utilities have focused on using CFP-funded programs to improve electric transportation access for underserved communities, that same approach will apply to incremental credits. As part of utilizing incremental credits to the benefit of underserved communities, PacifiCorp, in coordination with PGE, has begun exploring potential models for compensating organizations representing underserved communities for their engagement in UM 1826 and biennial transportation electrification plans.

### **Additional Credit Generation Opportunities**

*Proposed rule: Allow for advance crediting for certain fleets*

PacifiCorp supports the advance crediting proposal and believe it will be a significant asset to address first cost barriers and help Oregon fleets electrify. We urge DEQ and EQC to avoid unnecessary hurdles, such as the requirement that an applicant must have a formalized 15-year plan to electrify its fleet to receive advance credits for light duty vehicles. Given the many political and financial pressures on public bodies, it is likely that some public bodies will be ready to electrify vehicles in their fleets but will not have a detailed, formally adopted fleet commitment in hand.

### **Miscellaneous Provisions**

*Proposed rule: Increase the frequency of residential EV crediting*



PacifiCorp does not have any substantial concerns regarding increasing the frequency of residential Electric Vehicle (EV) crediting to at least twice a year. Utility staff will need to work closely with DEQ staff on the process in claiming incremental credits through utility voluntary programs given that the Blue Sky program RECs are purchased based on customers annual energy consumption.

*Proposed rule: Reporting requirements for electric utilities*

As the Oregon Environmental Council, Citizens Utility Board, and others observed during the rulemaking advisory committee meetings, electric companies are already subject to Public Utility Commission (PUC) oversight regarding use of funds from the sale of the base credits generated by utilities on behalf of their residential customers that drive EVs (UM 1826). Pacific Power requests that DEQ work with the PUC to have the annual report fulfill the DEQ reporting requirement, or at least that DEQ avoid duplicative or conflicting reporting for electric companies under PUC oversight. Additionally, pushing the first compliance year to 2022 would allow for more robust reporting given the April 2021 date is too soon to understand reporting requirements. The creation of an equity advisory committee in these rules is primarily focused on the incremental aggregator but will also advise DEQ in its review of reports on utility spending and will identify priorities for utility projects and programs paid for by revenue from CFP incremental credit sales. PacifiCorp requests that DEQ operate this committee in a way that avoids duplication and aligns with the PUC's UM 1826 oversight of Clean Fuels funds and other equity-focused work at the PUC.

**Thank you for the opportunity to comment on this rulemaking. We look forward to continuing to participate in the development of these rules.**

## **PGE Comments on Proposed Amendments to Oregon Clean Fuels Program Rules**

January 29, 2021

PGE appreciates the opportunity to participate in the Clean Fuels Program Electricity Rulemaking and work with other organizations and the Department of Environmental Quality (DEQ) to design the proposed changes to the Clean Fuels Program (CFP). Taken together, the proposed Clean Fuels Program changes create significant opportunity to advance transportation electrification by addressing cost barriers to vehicles and infrastructure. With the comments and requests below, we support the adoption of the amended rules. We offer comments on the proposed rules below and refer to the proposed rules published December 22, 2020 when we refer to sections of Oregon administrative rule.

### *Greenhouse gas emissions accounting*

PGE has been concerned by the precedent set in this rulemaking by using renewable energy certificates (RECs) as a proxy for emissions reductions without consideration of broader state policy implications. We proceed in support of the proposed rulemaking with the assurance that DEQ views this policy direction as confined to the Clean Fuels Program, and that greenhouse gas reporting and compliance will not be affected by the proposed changes to the Clean Fuels Program.

### *Carbon intensity of electricity*

In the proposed rules, DEQ plans to remove all utilities that have a utility-specific carbon intensity from the calculation of the statewide average grid carbon intensity. This change will result in fewer base credits and therefore less base credit revenue for non-residential charging and for utility-administered residential Clean Fuels programs. We recognize that significant additional credit generation opportunities are proposed in these same rules through incremental credits, but those opportunities will take time to realize.

If RECs are to be used for incremental credit generation, we have recommended that the geographic area from which RECs may be sourced be across the western electric grid (WECC). Allowing WECC-wide sourcing of RECs for this program aligns more closely with utility customer voluntary renewable programs, helping make incremental credit generation straightforward for customers. We appreciate DEQ's incorporation of this change, which also better aligns with Oregon's renewable portfolio standard and provides a broad pool of eligible RECs.

### *Generating residential incremental credits*

We support allowing utilities to generate incremental residential credits and the ongoing use of residential Clean Fuels credits to advance transportation electrification. Utilities have the existing infrastructure and expertise to generate and manage incremental credits. Public Utility Commission (PUC) oversight ensures both transparency and accountability for these dollars. As Oregon's SB 1044 goals loom, we believe this approach will provide the fastest path to comprehensive deployment of dollars to support equitable transportation electrification.



*Equity considerations in use of residential incremental credits*

In our comments of November 19, 2020, we proposed dedicating a portion of the funds from residential incremental credits generated by utilities to transportation electrification programs that specifically benefit communities of color, communities experiencing lower incomes, tribal communities, rural communities, frontier communities, coastal communities and other communities disproportionately harmed by environmental and health hazards. PGE plans to partner with PacifiCorp to dedicate half of the funds from the sale of residential incremental credits to this purpose and include representatives of these communities in designing the use of these funds. We believe this approach can be implemented through the current stakeholder engagement structure within UM 1826. We believe this approach will help increase the inclusion of underserved communities in both designing and deploying residential Clean Fuels funds while minimizing additional administrative cost and complexity.

As part of utilizing incremental credits to the benefit of underserved communities, we have begun exploring potential models for compensating organizations representing underserved communities for their engagement in UM 1826 and biennial transportation electrification plans. We recognize the value of compensating representatives of underserved communities for their service and encourage DEQ to retain the flexibility to do so when appropriate.

In OAR 340-253-0330 (11), DEQ creates an equity advisory committee primarily focused on the incremental aggregator, but also to advise DEQ in its review of reports on utility spending, and identifying areas of need that should be prioritized by utility projects and programs paid for by revenue from CFP incremental credit sales. PGE supports greater involvement of communities not traditionally represented in these proceedings and has made commitments to the same. We request that DEQ operate this committee in a way that avoids duplication and aligns with the Public Utility Commission's UM1826 oversight of Clean Fuels funds and other equity-focused work at PUC. We also ask that DEQ avoid creating duplicative reporting requirements as it implements the utility reporting structure in this rule.

*Quarterly credit generation*

In OAR 340-253-0640 (2)(d)(A), DEQ requires that a nonresidential credit generator seeking incremental credits submit "documentation that qualifying RECs were retired ... at the same time as the submittal of the quarterly report for the specific purpose of covering that charging." We understand this paragraph to mean that *documentation* of REC retirement must be submitted at the same time as the quarterly report, not that the RECs must have been retired in the same quarter as the reported charging. We understand the timeline for REC retirement to be governed by the timelines under the Green-e program. We encourage DEQ to clarify this language.

*Evidence that chargers are covered by a utility renewable electricity product*

In OAR 340-253-0640 (2)(d) on page 79, DEQ requires that "to claim a carbon intensity other than a statewide or utility-specific mix ... a registered party must ...



submit documentation at least annually that the electric vehicle chargers are covered by a Utility Renewable Electricity Product.” However, in OAR 340-253-1020 (4) on page 87, DEQ requires that “for incremental credits generated using a Utility Green Power Product or Power Purchase Agreement, evidence that the chargers were covered by such a product must be submitted along with the quarterly report.” This appears contradictory and we encourage DEQ to require only annual submissions from these nonresidential credit generators like cities, fleets, and transit districts whose core business is not focused on the Clean Fuels Program.

*Deadlines for a utility to notify DEQ that it will generate residential credits*

Under OAR 340-253-0330 (2), a utility must notify DEQ by October 1 whether it will generate residential credits, and the designation remains in effect unless the utility requests a change in writing. For incremental credits under (11), the electric utility may generate residential incremental credits “if they notify DEQ by June 15 or December 15 that they wish to begin generating incremental credits starting with the charging covered by the next period of residential electric vehicle charging.” We encourage DEQ to synchronize these deadlines to a single annual deadline.

*Advanced crediting*

We support DEQ’s advance crediting proposal and believe it will be a significant asset to address first cost barriers and help public fleets electrify. We urge DEQ to implement these rules in a fashion that provides predictability and avoids delays for public fleets seeking to utilize this tool.

We request that DEQ modify the advance crediting provisions to allow a third party working under an agreement with a public body to report charging and generate credits on behalf of the public body. As discussed throughout this rulemaking, many of the municipalities, school districts, transit operators, and other fleet operators do not have and do not plan to have staff expertise on the Clean Fuels Program. DEQ’s advance crediting rules should allow these entities to partner with a third party to report charging and generate credits, just as they currently do for base crediting. This can be allowed while maintaining the responsibility of the public body for the advance credits. The agreement required under OAR 340-253-1100 can still be between DEQ and the public body as set forth in the proposed rule text, but the rule should allow the public body a designee or aggregator. To allow this, OAR 340-253-1100 (5) and (7) should be modified to refer to an applicant *or its designee*. DEQ could require that a public body identify its designee to DEQ.

We encourage DEQ to allow durable private fleets to be eligible for advanced crediting if they are based in Oregon and will continue to operate in Oregon long term. Many of these vehicles operate in neighborhoods where their electrification provides a local air quality benefit. The proposed rules currently allow only private fleets operating under a specific government contract.

PGE thanks DEQ for its willingness to discuss policy issues collaboratively in the development of these rules. We will continue to work with DEQ in implementation of incremental credit generation that leverages utility residential voluntary programs;



forecasting of nonresidential charging; and other technical issues. We expect that these complex rules may necessitate adjustments in future rulemaking processes. Thank you for your consideration of our comments.

*Contact:*

Sunny Radcliffe

Director of Government Affairs and Environmental Policy, [sania.radcliffe@pgn.com](mailto:sania.radcliffe@pgn.com)

Greg Alderson

State Environmental Policy Manager, [gregory.alderson@pgn.com](mailto:gregory.alderson@pgn.com)



**Founding Members**

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*PERA*

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*Red Rocket Creative  
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*Renewable Hydrogen  
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*Renewable Northwest*

*Tacoma Public Utilities*

*The Warren Group*

*Toyota Motor North  
America*

*TriMet*

*Vashon Climate Action  
Group*

*Warner Hydrogen*

**To: Cory-Ann Wind, Oregon DEQ**

**RE: Clean Fuels Program Electricity 2021 Rulemaking Comment**

Dear Cory-Ann Wind,

Thank you for the opportunity to comment on the proposed Clean Fuels Program rulemaking, which would enable further greenhouse gas emissions reductions in the context of transportation electrification.

The Renewable Hydrogen Alliance (RHA) is an Oregon-based trade association whose mission is to promote using renewable electricity to produce climate-neutral fuels for replacing fossil fuels. As the power grid moves to rely more heavily on inexpensive but variable wind and solar power, increasing renewable energy power surpluses present an opportunity to make more efficient use of electricity that might otherwise be wasted, which is to create clean fuels, essential in decarbonizing hard-to-electrify transportation applications.

RHA's diverse membership includes more than 70 members: electric utilities interested in new markets for power and clean fuels for their power plants, natural gas utilities interested in reducing the carbon content of the gas system, clean energy and clean transportation advocacy organizations, local and national hydrogen equipment and hydrogen transportation manufacturers and others striving for a low carbon future.

Within the context of transportation electrification, the focus is mostly on battery electric vehicles (BEVs). However, fuel cell electric vehicles (FCEVs) based on electrolytic hydrogen are electric vehicles and should be eligible for at least the same level of incentives accorded to battery electric vehicles. FCEVs fill transportation niches that other zero-emission vehicles either do not fill, or struggle to fill.

**RHA Mission:**

*Promote using renewable electricity to produce climate-neutral hydrogen and other energy-intensive products that reduce dependence on fossil fuels.*

**Board of Directors**

*Shanna Brownstein,  
Portland General Electric*

*Jason Busch, Pacific Ocean  
Energy Trust*

*Ken Dragoon, Flink Energy  
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*Nicole Hughes, Renewable  
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*Dr. John Lynch,  
Washington State  
University*

*Don Ruff, Ruff Consulting*

The Oregon Clean Fuels Program is instrumental in helping reduce the cost per kilogram for hydrogen fuel. Similarly, in California, the same type of market-driven incentive program has gone one step further made a monumental shift in how the private sector views and invests in public hydrogen fueling stations. The result has been immense. A deluge of private capital now floods into station development thanks to a singular policy and mechanism: the Low Carbon Fuel Standard and capacity crediting. Capacity crediting helps new stations bridge what can only be viewed as the “valley of death,” or the gray period between a station’s construction and the point at which it dispenses enough hydrogen to be self-sufficient. Without capacity crediting, no private investment in hydrogen fueling stations would be possible.

We strongly urge DEQ to implement a similar capacity crediting mechanism with respect to the program’s rules and goals to help catalyze station development here in Oregon. There is a tremendous opportunity for hydrogen-fueled transportation, and the Clean Fuels Program serves as the best vehicle and platform to make that vision a reality.

Sincerely,

Martina Steinkusz  
Interim Executive Director  
Renewable Hydrogen Alliance



201 California Street, Suite 630, San Francisco, CA 94111  
www.srectrade.com | 415.763.7732

January 29, 2021

Cory Ann Wind  
Oregon Department of Environmental Quality  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232

Submitted electronically via CFPE2021@deq.state.or.us

**RE: SRECTrade Comments on Clean Fuels Program Electricity 2021 Rulemaking**

Dear Ms. Wind,

SRECTrade appreciates this opportunity to submit comments on the potential changes to the Clean Fuels Program (CFP).

[SRECTrade](#) is a technology driven platform and services provider that helps provide equitable access to complex regulatory markets. As one of the largest third-party managers of environmental commodities in the United States, our goal is to accelerate adoption of clean energy assets while minimizing the time, cost, and risk associated with achieving financial return and compliance. As the largest third-party manager of electric vehicle (EV) assets in the California Low Carbon Fuel Standard (LCFS) Program and with an actively growing portfolio in the Oregon Clean Fuels Program (CFP), we help facilitate program participation from a variety of public and private clean energy asset owners across multiple industries and sectors.

SRECTrade respectfully submits the following comments to Staff in response to the Clean Fuels Program Electricity 2021 Rulemaking Notice of Proposed Rulemaking issued December 22, 2020:

#### **DEMONSTRATING RENEWABLE ENERGY CERTIFICATE (REC) ELIGIBILITY**

SRECTrade is supportive of DEQ's efforts to efficiently ensure proposed REC eligibility requirements are being met. However, we strongly urge DEQ to affirm that retirement in a widely used REC tracking system such as the Western Renewable Energy Generation Information System (WREGIS) be specified as a substantially equivalent means of verifying that RECs meet DEQ's proposed eligibility requirements in OAR 340-253-0470(5)(a). WREGIS is an effective system and tool to track and validate the temporal, spatial, and various other properties of RECs. Asset registration in WREGIS is rigorous and requires engineering drawings and interconnection agreements to be submitted before approval. Third-party qualified reporting entities ensure ongoing reporting is validated. As has been successfully demonstrated in the California LCFS program, WREGIS retirement reports allow program staff to efficiently verify that RECs are meeting both eligibility *and* additional requirements.

Requiring Green-e certification would unnecessarily layer the Green-e program's more restrictive requirements onto those proposed by DEQ while conveying no material administrative benefit to Staff nor a substantive benefit to CFP goals. Instead, the Green-e requirement would limit REC supply that could otherwise meet DEQ's proposed eligibility requirements, diminish CFP participation-inducing economic benefit from additional credit generation with lower carbon intensity, and even mute the impact of CFP incenting future renewable energy development in the state.

## **PLACED IN-SERVICE DATE**

SRECTrade recommends against using a placed-in-service date as recent as 2015 as it will unnecessarily limit the supply of RECs eligible to lower the carbon intensity of electricity in the CFP. While SRECTrade understands and appreciates DEQ's efforts to ensure additionality within the program, this requirement might exclude projects that may not yet be accounted for by other state programs. In our experience in California, the addition of REC book-and-claim accounting has resulted in solar assets that were not previously generating RECs to be integrated into the system.

## **ADVANCE CREDITING**

SRECTrade supports the intent behind advance crediting and recommends that commercial fleets operating medium and heavy-duty vehicles be considered for eligibility. In our experience, commercial entities are at least as and often more able to make investments in electrification using incentives that lower their upfront costs, further driving EV adoption within the state. Commercial entities can be required to meet the same eligibility and ongoing reporting requirements outlined in the proposed draft amendments.

Thank you very much for your time and consideration as you review these comments. We welcome the opportunity for further clarification and discussion of our comments.

Best Regards,



Steven Eisenberg  
Chief Executive Officer  
SRECTrade, Inc.  
201 California St. #630  
San Francisco, CA 94111



Evan Rosenberg  
Senior Manager, Business Development  
SRECTrade, Inc.



Via E-mail: [CFPE2021@deg.state.or.us](mailto:CFPE2021@deg.state.or.us)

January 29, 2021

Oregon Department of Environmental Quality  
Attn: Cory Ann Wind  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232-4100

RE: Proposed Clean Fuels Program Electricity 2021 Rulemaking

Dear Ms. Wind:

Tesla's mission is to accelerate the world's transition to sustainable energy. Tesla generally supports Oregon's goal "to enable further greenhouse gas emissions reductions by advancing methods to accelerate the generation and aggregation of clean fuel credits... to advance transportation electrification."

**We find common ground in the fact that there are numerous stakeholders required to advance electrification, but suggest further consideration of the following alterations to the proposed rules:**

- 1) Provide automakers with the optional initial tier position to generate residential incremental credits based upon vehicle telematics.
- 2) Require relatively frequent, semi-annual monitoring and potential added limitations or restrictions on potential impacts on CFP credit value based upon credit advancement practices to ensure market stability.

**Reasons supporting recommendations:**

The advantages to automaker participation via incremental residential credit generation include program:

- Comprehensiveness;
- Increased accuracy;
- Regulatory streamlining; and
- Potential for program invest forwarding in electrification from anticipated future credit revenue without risk of undermining the credit market value.

Program Comprehensiveness:

Fundamentally, the most important set of factors in decarbonizing transportation is battery cell availability, manufacturing efficiency, and supply of a variety of vehicles. Leaving automakers out of the Clean Fuels Program will undoubtedly result in a less direct and slower path towards sustainable transportation.



The section on Regulated and Impacted Businesses within the proposed rules note, "...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."

Automakers, those delivering the vehicles that are the basis for electrification, are notably absent from the businesses impacted. Yet automakers are projected to invest \$185B globally by 2030 and \$11B domestically<sup>1</sup> to transition consumer offerings and fleets to electric vehicles. Undeniably, without automakers making these investments, the opportunity to lower transportation fuel related emissions through electrification would not exist. Many of our light-duty and heavy-duty competitors along with EV manufacturers of various transportation electrification types and Tesla, those making these significant investments essential to consumer demand and adoption of electric transportation, should be supported through the efforts we undertake towards the transition, particularly in light of some of the additional benefits that automakers are capable of providing the program. This should come in the form of the ability to generate incremental residential credits, monetize those and reinvest revenues in support of state goals.

Broadening the pool of stakeholder credit generators would serve to place automakers in a supporting role along with other credit generating parties. It may be the sense that automakers will deliver vehicles where consumers purchase them. However, in a supply-constrained world, automakers deliver electric vehicles where it makes economic sense. The ability to monetize credit revenue and reinvest it, offsetting costs it may otherwise incur in meeting state goals, provides an economic incentive that can be reinvested in a variety of ways, such as supporting charging build-outs, consumer and sales agent education and supplemental incentives to name a few.

Potentially importantly to DEQ and other stakeholders, if every automaker were to opt-in to generate credits via vehicle telematics, the incremental credit pathway in early years of the program would likely result in no more than about 1/3<sup>rd</sup> of the total program credit generation going to automakers. As the years go by and the transition to cleaner generation resources advances, the incremental pathway will decline. As noted, creating a more comprehensive program to incentivize automaker participation in the transitional years to greater EV model development could be critical to advancing Oregon goals.

#### Increased Program Accuracy:

While utilities largely report residential base credits using estimated kWhs delivered to vehicles, automakers are largely able to measure kWh charging via vehicle telematics. DEQ, in receiving automaker incremental reports, would have additional data points to ensure that estimated base credit generation was accurately captured and be able to refine estimate methodologies based upon automaker reports. This additional data, like the proposed changes in CI score methodology, "would allow for more accurate accounting" when calculating emissions reductions.

#### Regulatory Streamlining and Acceleration of Electrification Investment

History can sometimes be a cruel reminder and sometimes be used as a learning tool. While Oregon and California have each setup CFS programs, Tesla believes that history demonstrates a slow start to electrification efforts. In part, this is based upon the added regulatory time and processes required by regulated utilities to go through procedures with multiple agencies in order to get revenues out the door.

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<sup>1</sup> [https://www.mjbradley.com/sites/default/files/EDF\\_EV\\_Market\\_Report\\_September\\_2020\\_Update.pdf](https://www.mjbradley.com/sites/default/files/EDF_EV_Market_Report_September_2020_Update.pdf)



By providing automakers with credit generating and reinvestment capacity, DEQ avoids the regulatory lag created by a dual agency approval process, the PUC and DEQ, for that portion of credits generated through the incremental pathway, thus accelerating reinvestment potential. In sum, there will be plenty of private and utility investment in infrastructure if automakers are improving the efficiency and cost structure of the vehicles and the batteries that power them.

#### Advancing Credits versus Forwarding Investment without Risk to Credit Market Pricing

Tesla supports the acceleration of vehicle electrification. We believe it would be useful, in the context of automakers as incremental credit generators, to consider the potential that automakers have in advancing credit revenue. Additionally, if left unchecked, the noticed rules have the potential to undermine CFS credit market values.

The creation of a credit market, in some respect, is to provide credit-generating entities with both immediate and future liquidity that can be used to accelerate investment. Automakers, like some other credit generating participants, are in a position to advance credit revenues based upon credit value assumptions if given the option. However, Tesla does not believe this is an accessible financial mechanism for utilities, limiting utility investment to only those credits already monetized. With greater incentive than any other potential party to sell EV's, without an ability to generate credits altogether, automakers lack the ability to even consider advancing future credit revenues entirely. In contrast, by allowing automakers to participate in incremental residential credit generation, automakers then have the ability to advance investment based upon credit revenue projections to advance electrification.

Tesla believes that automaker potential to accelerate credit investment may not have been fully deliberated nor considered, in part due to the expedited nature of the rulemaking stakeholder process and is deserving of additional consideration prior to rule adoption.

Additionally, DEQ, in an effort to accelerate electrification and increase revenue generation, proposes ...”to allow fleets to “advance credits” to be paid back over a specified period of time. The 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.” While limiting the advancement opportunity to the areas noted above and credit advancement to 5% of the number of deficits generated in the prior compliance year, DEQ has not shared any analysis on the potential impacts on credit price nor demonstrated an understanding of the potential the limitations would ensure concerning undermining credit price. Tesla points this out as a potential risk in the draft proposal. In a credit market, oversupply will place downward pressure on credit value. Tesla requests that DEQ include periodic, semi-annual, credit value assessment on the impacts of advancing credits on credit markets to ensure the approach is not undermining the market value by creating a surplus (recommendation 2).

In summary, Tesla believes automaker participation in credit generating opportunity in the CFS program would substantively incentivize automaker interest in Oregon's Clean Fuel Program goals, accelerate and advance investment and lead to programmatic improvement.

Thank you,

Thad Kurowski  
National Credit Trading & Intermountain State Policy Lead

**From:** [T.F](#)  
**To:** [CFPE2021](#)  
**Subject:** Clean Fuels Program Electricity 2021 Rulemaking Comment"  
**Date:** Friday, December 25, 2020 2:46:36 PM

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Greetings commitee,

I'm curious.

What happens to the batteries that cannot be recycled?

Years ago, I read a story about a giant pit in the ground in China where all the dead batteries go.

The piece went on to describe the massive amounts of battery acid accumulating in that pit.

I have also read that batteries can be recycled and reused, but that some cannot.

So, I'm curious. What happens to the batteries that cannot be recycled?

Additionally, what are the waste products from both battery production,  
and battery recycling?

Thank you

Todd Fox  
Salem, Oregon

January 2021

Oregon Department of Environmental Quality (DEQ)  
Oregon Clean Fuels Program (CFP)

Re: Comments on Clean Fuels Program Amendments, 2021 (Electricity Provisions)

Dear CFP Team:

Thank you for the opportunity to comment on the proposed language for changes to the Clean Fuels Program impacting electricity provisions, as discussed in the 2020 and ongoing stakeholder process. The highly collaborative process that DEQ has conducted is greatly appreciated. Please find several comments below on the proposed rules. For any clarifications or questions, please contact Julie Witcover.

Sincerely,

Julie Witcover, Ph.D.  
Assistant Project Scientist, Policy Institute for Energy, Environment, and the Economy  
University of California, Davis, California, USA

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- *EER application.* A flexible, timely approval process to appropriately credit carbon savings from novel vehicle-fuel combinations makes sense. However, do the proposed prerequisites encompass sufficient variability for this purpose? Seasonal fluctuations might be important in some cases, for example, which would not necessarily be picked up in the proposed methods. The provisions include scope for updating these values if new data come to light. If the update is not due to a changed situation on the ground (but rather better data), program environmental impact assessments should account for such changes.
  - *REC retirement provisions.* The REC retirement provisions reduce risk of double-counting the low carbon environmental attribute. The use of RECs in this manner, however, might still impact the statewide grid or utility-specific average electricity CI value calculation. Low CI value electricity, if included in the relevant jurisdictional electricity supply mix, would get credited for supplying the vehicle, and continue to impact the relevant area CI average calculation, albeit with diluted impact due to the many other sources. Still, if the approach results in some 'more than single' counting, it would be useful to clarify this situation and try to quantify the impact for program environmental evaluation.



## POLICY INSTITUTE FOR ENERGY, ENVIRONMENT, AND THE ECONOMY

- *"Major" fossil fuel generator.* While the provision mentioning major fossil fuel generators specifies the Boardman plant, if the term is used, it might be helpful to define it, as regulatory language can provide a blueprint or precedent for handling other situations in Oregon, or elsewhere.
- *Residential EV use estimation.* The addition of new electricity provisions may well allow greater visibility into residential charging behaviors. As feasible, this data should feed into improvements of the methodology used to generate unmetered residential EV credits.
- *Revenue expenditure review.* How entities choose to spend electricity credit revenue, within the bounds of limits placed by the regulation, could have differential impacts on outcomes of interest. Upfront thinking by DEQ or credit generators about what might be gleaned about the effectiveness of different spending choices from available data might usefully allow tweaking in implementation design to improve the potential to learn lessons.



**Tiffany Roberts**

Vice President, Regulatory Affairs

January 26 2021

Department of Environmental Quality  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232-4100

**Re: Comments on Oregon Clean Fuels Program Electricity 2021 Rulemaking**

On December 22<sup>nd</sup>, 2020, the Oregon's Department of Environmental Quality (DEQ) released a notice of proposed rulemaking for the Clean Fuels Program (CFP) Electricity 2021 Rulemaking. Western States Petroleum Association (WSPA) is a non-profit trade association that represents companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in Oregon and four other western states, and has been an active participant in air quality planning issues for over 30 years. WSPA appreciates the opportunity provide comments on proposed draft rules.<sup>1</sup>

**1. WSPA believes that the Advance crediting proposal goes against the 'Guiding Principals' of the Clean Fuels Program to maintain fuel neutrality.**

The Advance Crediting concept proposed by the DEQ would clearly go against the 'Guiding Principals' of the Clean Fuels Program to maintain fuel neutrality. Special provisions should not be given to a particular fuel or technology. Rather, DEQ should incentivize all technology development to most cost-effectively decarbonize transportation fuel in Oregon.

**2. WSPA believes that the Advance crediting proposal poses a risk to the Program's integrity.**

The Advance Crediting proposal would incentivize the purchase of electric vehicles through a funding program that would circumvent the Oregon legislative and voter approval process. As stated in Section 1 of this letter, WSPA has significant concerns regarding the authority of DEQ to issue loans for public entities without legislative approval as this poses a significant risk to taxpayers if such loans are not paid back. These risks have not been fully captured or properly addressed in the Advance Crediting provision. Further, depending on scope and scale of the Advance Crediting provision, this concept could create credit generation ratability issues and price volatility, negatively impacting the program's integrity. Given these concerns to the integrity of the CFP, WSPA maintains that credits should remain generated when a fuel is produced, imported, or dispensed, consistent with ORS 468A.265(4).<sup>2</sup>

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<sup>1</sup> Oregon CFP Notice of Proposed Rulemaking. Available at: <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/CFPE2021Notice.pdf>. Accessed January 2021.

<sup>2</sup> Oregon Revised Statutes. Available at [https://www.oregonlegislature.gov/bills\\_laws/ors/ors468A.html](https://www.oregonlegislature.gov/bills_laws/ors/ors468A.html). Accessed January 2021.

**3. WSPA requests a comprehensive analysis on the fiscal impact of the proposed regulations.**

Executive Order (EO) 20-04<sup>3</sup> directs State Agencies to “prioritize actions that reduce greenhouse gas (GHG) emissions in a cost-effective manner.” As such, DEQ is obligated to conduct a comprehensive analysis with substantiated cost-effective pathways to meet the state’s climate goals well in advance of regulatory action. The DEQ Fiscal Impact Analysis in Notice of Proposed Rulemaking Package<sup>1</sup> fails to comprehensively assess whether the proposed rules would have a fiscal impact, or how significant such an impact might be. While DEQ has provided brief fiscal impact statements for each proposed amendment, those statements do not demonstrate the cost effectiveness of transportation electrification as required by EO 20-04.

**4. WSPA believes that the Advance Crediting proposal could violate state law.**

Oregon law likely prohibits the advancement of future credits in this manner. The CFP is governed by the Oregon Revised Statutes (ORS)<sup>4</sup> 468A.265 through 468A.277 and the proposal conflicts with various provisions within the ORS. In short, DEQ likely does not have the authority to advance future credits under the CFP because the proposed regulations would conflict with the CFP’s statutory provisions (i.e., the definition of credit<sup>5</sup> and the treatment of a forecast deferral<sup>6</sup>) and because the proposed regulations exceed the scope of authority granted to DEQ under the CFP<sup>7</sup>. DEQ should consider how the proposed regulations are likely to conflict with Oregon law before moving forward with adoption.

**Conclusion**

Thank you for consideration of our comments. We would welcome the opportunity to discuss these ideas in more detail. If you have any immediate questions, please feel free to contact me. We look forward to working with you on these important issues.

Sincerely,



Tiffany Roberts  
Vice President, Regulatory Affairs  
Western States Petroleum Association

<sup>3</sup> Oregon Executive Order 20-04. Available at: [https://www.oregon.gov/gov/Documents/executive\\_orders/eo\\_20-04.pdf](https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf). Accessed January 2021.

<sup>4</sup> ORS 468A. Available at [https://www.oregonlegislature.gov/bills\\_laws/ors/ors468A.html](https://www.oregonlegislature.gov/bills_laws/ors/ors468A.html). Accessed January 2021

<sup>5</sup> See ORS § 468A.265(4)

<sup>6</sup> See ORS § 468A.273(1); See also ORS § 468A.274(3)(a)

<sup>7</sup> See ORS § 468A.277(1); See also Oregon Administrative Rules 340-253-1005(c).