State of Oregon Department of Environmental Quality

Comments

Clean Fuels Program 2024, Advisory Committee Meeting 1

This document is a compilation of written comments received in response to the Clean Fuels Program 2024 Rulemaking Advisory Committee meeting held Aug. 14, 2024.

Comments

August 28, 2024

Rulemaking Lead Bill Peters and CFP Team
Oregon Department of Environmental Quality
700 NE Multnomah St
Portland, OR 97232

Re: Third Party Verification of Electricity Reports Under the Oregon Clean Fuels Program (CFP)

CFP rulemaking team,

Thank you for the opportunity to comment on DEQ's 2024 CFP Rulemaking. ChargePoint appreciates the ongoing work of the DEQ staff to manage and amend the CFP to help advance investment in low carbon fuels and infrastructure in Oregon. The main goal of our comments today is to flag for DEQ that much of the electric vehicle (EV) charging industry is currently engaged with the California Air Resources Board (CARB) on the issue of third-party verification of on-road electricity reporting under California's Low Carbon Fuel Standard (LCFS) rulemaking and how there are critical differences between EV charging and conventional fueling networks that must be considered when designing a verification framework. Our industry has put together a proposal for how we believe verification could look that would ensure accurate reporting while not levying redundant and excessive cost on the industry which we will generally outline in comments today but will follow up with DEQ staff during the formal rulemaking this fall.

About ChargePoint

Since 2007, ChargePoint has been committed to making it easy for businesses and drivers to go electric with one of the largest electric vehicle (EV) charging networks and a comprehensive portfolio of charging solutions. ChargePoint's cloud subscription platform and software defined charging hardware is designed internally and includes options for every charging scenario from home and multifamily to workplace, parking, hospitality, retail, corridor, and fleets of all kinds.

Proposal for verification of on-road electricity reports under the CFP

(1) Establish charging station meter accuracy via existing, robust third-party certifications.

The EV charging network is fundamentally different than the traditional point-source liquid fuel supply network: whereas liquid fuels originate from fewer and larger sources (refineries), EV charging stations are significantly more disaggregated, where each point, or charger, in the network represents a small amount of potential fuel supply which renders physical site visits across the whole network impractical and costly. For meter accuracy assurance, DEQ should instead lean on accuracy thresholds that already exist in the industry, such as those within the National Type Evaluation Program (NTEP), which require that level 2 (L2) EV charging meters meet an accuracy threshold of ±1% upon manufacturing and calibration and ±2% over its useful life, while level 3 (L3) meters must meet a ±2.5% accuracy upon manufacturing and calibration and ±5% over its useful life. The NTEP standard is already widely adopted in the EV charging industry and being utilized today by the California Division of Measurement Standards (DMS), the entity tasked with ensuring the accuracy of commercial devices, including EV charging stations in California. California DMS sets standards to promote fair competition and ensure consumer protection and points to the CTEP[1] as the metrological accuracy standard that chargers installed after a certain date must meet to be used for commercial purposes. We generally recommend that for charging station meter accuracy purposes, DEQ leverage this widely adopted existing standard (NTEP) and pre-approve chargers with NTEP certification for reporting in the CFP. Pre-approval would mean exempting NTEP-certified charging station models from site visits and third-party meter testing. Charging station models not NTEP-certified (or an equivalent standard) would be able to demonstrate accuracy via independent testing.

Regarding re-calibration requirements, embedded electricity meters within EV chargers are fundamentally different devices than flow meters and are not subject to the same wear, corrosion, and accumulation of residue that can cause inaccuracy or drift in liquid or gaseous meters. Many EV charging stations, including ChargePoint's devices, are calibrated in the factory, sealed, and unalterable in a manner that makes recalibration impossible specifically to preserve the meter's accuracy and guard against tampering. Taken together, this means that applying requirements to re-calibrate could necessitate a complete device replacement and add immense cost of compliance for program participants without reducing the risk of misreporting. Some charging operators/providers may drop out of the CFP altogether rather than replacing devices.

(2) Allow remote, desktop reviews to validate the data coming out of the charging network matches what is being reported in the CFP.

With assurances around charging station meter accuracy ensured by the accuracy standards embedded in CTEP, the final step to verification would be a "desktop" review of the data in the reports. The scope of the desktop review would be to ensure that the data in the quarterly reports submitted through the CFP matches the data that was output from the charging network. EV charging networks are underpinned by extremely accurate (down to the watt-hour), real-time data

[1] California DMS has made some modifications of the NTEP standard for use in California (called the California Type Evaluation Program, or CTEP) but the meter accuracy standards are the same.

in a way that traditional liquid fuel networks are not. Networked EV charging provides a near constant stream of data that can be verified against reported charging activity.

There are a number of standards, practices, technologies and processes charging network operators adhere to to ensure the accuracy of data. For example, ChargePoint complies with several standards to ensure that the data reported by the station maintains its accuracy as it is transferred from the station to the cloud, and that any data anomalies are detected and removed before being reported. Many network operators also maintain compliance with Payment Card Industry Data Security Standards (PCI DSS) to ensure an accurate and secure environment for network transaction data. In addition to cross referencing raw reports from the charging networks with quarterly CFP reports, verifiers could look to these best standards, practices, and certifications to have confidence in the data.

Our recommendations for the less intensive verification pathway are not necessarily meant to be prescriptive, but rather to point out how existing technologies, best practices, and standards already widely adopted in the industry should be incorporated into the pathway. This will greatly minimize administrative costs for an industry that is still scaling. This is also the general approach taken under Canada's national program. We urge CARB to not try and reinvent the wheel re: on-road electricity verification. Reporting entities that do not meet the requirements for less intensive verification would still be able to undergo full verification.

Note on site visits:

Site visits are intended to provide verifiers with an opportunity to see a fuel production facility, assess its metering, and determine if there is reasonable risk that the facility is not accurately or truthfully reporting fuel quantities. This makes sense when a reporting entity is reporting fuel that comes from a small handful of facilities, or even one facility, and a verifier can travel to a few locations and verify large fuel quantities reported by the entity. However, for EV charging, there is not one or even a small handful of facilities – there are tens of thousands. Given the number of locations, a site visit to EV charging "facilities" is impractical, as it would require verifiers to travel to specific EV charging stations dispersed across the state. Aside from being an added cost on a nascent industry, which may even erase all value earned under the program for some smaller reporting entities, visiting a handful of EV charging sites is not an effective way to assess the material risks of misreporting.

Any altering of data from a particular charging station is likely to occur once the data has been transmitted electronically, not at the site of the charging station, and would thus seemingly be addressed by a visit to a "central records location." However, the central records location for most EV charging network operators is likely to be interpreted as their primary office space, which will likely lack any physical fueling records. The records for EV charging networks are all maintained electronically, mostly in cloud-based storage where the closest thing to a records location would likely be a data center with little connection to the operations of the EV company.

Rather than require site visits to facilities (chargers) or records locations (offices), verifiers can conduct interviews with key personnel, review IT schematics, quality control protocols, network-level certifications, trace raw metered data from inception to reporting, and gain a reasonable degree of confidence in reported charging data all via a desktop review.

Thank you for the opportunity to comment today on the 2024 CFP Rulemaking. The more widespread adoption of EV charging verification – which we support for integrity purposes – is not a small lift and must be done thoughtfully to ensure it is feasible for the industry and does not result in decreased participation under the CFP program. Some of this work to galvanize the EV charging industry around accuracy certifications (like NTEP), as well as the work of charging providers and network operators to bring rigor and security to network data, may be new information for regulators and as such we urge DEQ staff to consult industry when designing the framework for verification. We look forward to participating in the CFP rulemaking this fall and further engagement with DEQ on this important issue.

Thank you,

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August 28, 2024

VIA ELECTRONIC FILING

Bill Peters
Oregon Department of Environmental Quality
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Re: Advisory Committee Comments Meeting 2

The Coalition for Renewable Natural Gas (RNG Coalition) submits these comments to the Oregon Department of Environmental Quality (DEQ) in response to the OR GREET 4.0 Model Updates to the Clean Fuels Program (CFP). The RNG Coalition represents and advocates on behalf of the renewable gas industry.

Our organization supports the development and use of renewable natural gas (RNG; also known as biomethane), biogas, clean hydrogen, and renewable CO_2 as decarbonization solutions for various sectors of the economy. We comprise 404 members—cities, counties, airports, ports, municipalities, colleges, universities, and leading companies operating in each sector of the industry—including those who capture, clean and condition more than 95% of all RNG in North America.

Continued Conformity with California Rulemaking

As RNG Coalition has emphasized in other comments relating to the Clean Fuel Program (CFP), it is important for states within a state to synergize their clean fuels programs, including items such as aligning GREET model updates, among other alignments. Given that DEQ is seeking to follow this path while California is updating its Low Carbon Fuel Standard (LCFS), we continue to generally recommend that Oregon follows California's model, where suited.

Regional alignment will maximize the ability for RNG producers to swiftly respond to the joint signal sent by multiple clean fuel programs. Significant attention should be placed on retaining cross-jurisdictional alignment of CI tools and scoring. Continued dialog between California, Oregon, and other active clean fuel jurisdictions—such as Washington, New Mexico, British Columbia, and Canada—on these topics will lead to the best outcomes for GHG reductions.

Carbon Capture and Sequestration

Allowing for fuel projects that in part use carbon capture and sequestration (CCS) projects will have a positive impact on not only to the projects but would also have a positive emissions outcome. The use of technologies such as geologic storage or biochar will produce negative-GHG outcomes when paired with RNG and hydrogen derived from waste biomass. These technologies will provide a

necessary pathway to *remove* emissions from the atmosphere,[1] creating an important pathway to carbon neutrality and, ultimately, carbon negativity.

Environmental Justice Communities

As DEQ acknowledges in its request for comments, communities that are located near transportation corridors or other similar locations, are disproportionately affected by transportation emissions. These environmental justice communities stand to benefit the most from the use of alternatives fuels.

RNG vehicles continue to provide benefits in this area as a fungible substitute for natural gas vehicles. RNG-fueled medium- and heavy-duty trucks have 98% less emissions than diesel engines, which contribute the most to transportation related emissions. Continued technological advancements, such as Cummins' new engine, makes fuel switching even more efficient and emissions friendly.

Additionally, environmental communities are also often found around airports, which contribute greatly to poor local air quality. Continuing to support the adoption of sustainable aviation fuel (SAF) such as through this rulemaking will contribute to air quality improvements for these specific environmental justice communities as well.

Conclusion

RNG Coalition appreciates the opportunity for continued engagement on these topics. This rulemaking will provide critical leadership that will allow other jurisdictions to follow the West Coast's example and adopt LCFS-style programs. We thank DEQ staff for your continued hard work on these topics and look forward to a robust and effective CFP rulemaking.

Sincerely,

/S/

Sam Wade
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[1] Sequestration of the biogenic carbon contained in waste feedstocks from RNG and biomass-derived renewable hydrogen can be a carbon-negative process that removes carbon from the atmosphere. This benefit is separate from the methane destruction potential of RNG, which can lead to additional carbon-negative outcomes on a lifecycle basis relative to existing environmental control baselines.

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August 28, 2024

Mr. Bill Peters
Oregon Department of Environmental Quality
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Submitted electronically via email to: CFP.2024@deq.oregon.gov.

RE: POET COMMENTS ON DEQ'S CLEAN FUEL PROGRAM 2024 RULEMAKING

Dear Mr. Peters:

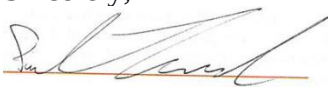
POET appreciates the continued opportunity to participate in Oregon's Department of Environmental Quality's ("DEQ") Clean Fuel Program 2024 Rulemaking and supports DEQ's dedication to decarbonizing the transportation sector. POET understands DEQ is still reviewing comments relating to the July 9 workshop discussing the OR-GREET4.0 model and, as such, POET focuses the following comments on the August 14 workshop.

During the August 14 workshop, DEQ provided further detail on the transition from OR-GREET3.0 to 4.0. As mentioned by a commentor during the workshop, it is unclear whether DEQ's current transition proposal would require using the OR-GREET3.0 and OR-GREET4.0 models for just the 2025 reporting period or both the 2025 and 2026 annual reports. While POET understands the potential benefits of using both models in one reporting cycle during the transition period, requiring both models to be used for two reporting cycles creates unnecessary administrative burdens for both the reporting party and DEQ. POET requests DEQ clarify the reporting requirements during the transition from OR-GREET3.0 to OR-GREET4.0 and encourages DEQ to require only one reporting period where both models would be used.

CONCLUSION

POET appreciates the opportunity to comment and looks forward to continuing its work with DEQ to make the Clean Fuel Program a continued success for Oregon. If you have any questions, please contact me at Paul.Townsend@POET.com or (605) 756-5612.

Sincerely,



Paul W. Townsend
Associate Regulatory Counsel

1157 Valley Park Drive, Ste. 100
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August 28, 2024

Bill Peters, Interim CFP Manager
Oregon Department of Environmental Quality

Re: CFP Rulemaking comments

Submitted electronically at cfp.2024@deq.oregon.gov

Dear Bill,

RPMG Inc. (RPMG) appreciates the opportunity to comment on the Oregon Clean Fuels Program regulatory update. RPMG is a biofuel marketing company representing our owner and marketing partner ethanol facilities located throughout the Midwest. Our member facilities provide both ethanol and distillers corn oil (DCO) as essential inputs to Oregon's clean-fuels market in substantial quantities. Since the Program's inception, RPMG has supported Oregon's clean transportation fuel policy, and worked diligently with DEQ to improve the administration of the Program.

RPMG has two areas of comment that are detailed below. The first relates to the issue of deregistering facilities for inactivity, and the second focuses on the newly drafted CCS language. These comments are in addition to our earlier CCS T2 pathway and OR-GREET 4.0 comments previously submitted (attached for ease of reference).

OFRS Deregistering Trigger

The current CFP has inactivity provisions requiring deregistration of an entity from its OFRS account. RPMG understands this provision is intended to prevent market manipulation from entities that are not active in the CFP. However, as we have seen over the past year, entities with active pathways who haven't imported fuel in a calendar year are getting caught up in this provision. The deregistering of an entity has material and practical impacts, especially when the entity has credit balances in the system or pending verification requirements.

RPMG recommends updating section 340-253-0100 (14) to address this concern. This language is intended to provide DEQ with a path to exclude certain OFRS accounts from deactivation resulting from zero activity but there is pending verification, or they are a known related entity:

(14) Inactivity. If a registered party, that is not a related entity, does not have any fuel transactions reported in a calendar year, or pending activities within the current verification cycle, the party will:

(a) Be deregistered from the program, after notice from DEQ;

(b) Have its account in OFRS deactivated within 30 days of deregistering;

(c) Be able to re-register and have its account reactivated after having qualifying fuel transactions in Oregon; and

(d) Give up any credits remaining in its OFRS account to the Incremental Aggregator.

Carbon Capture Reserve Account

DEQ has been a leader in the effort to certify and promote the use of CCS in the clean fuels space with the certification of the RedTrail Energy Tier 2 pathway. With this rulemaking, it is important to continue that positive leadership. RPMG notes

a more conservative tone in the proposed language and suggests the following edits to keep the intent of the provisions without memorializing any undercurrent of doubt as to the validity of sequestered carbon when done correctly.

340-253-1060
Reserve Account

(1) DEQ shall establish a reserve account for credits that is under its control. The purpose of this reserve account is to hold credits to ensure the environmental integrity of the Clean Fuels Program. This mechanism covers cases where the carbon reductions being awarded credits may be released ~~pose real risks of that reduction being reversed~~ in the future~~, such as the risk that a carbon capture and sequestration operation is found to be ineffective (i.e., releases carbon)~~. DEQ will permanently hold credits in the reserve account, unless otherwise determined as appropriate by DEQ to be returned to the credit generator, or ~~and~~ until they are ~~invalidated~~ retired under section (4).

…

(4) ~~Invalidating~~ Retirement of credits in the Reserve Account.

(a) Credits in the reserve account may be ~~invalidated~~ retired by DEQ when if finds the following:

(A) Carbon dioxide or another stored greenhouse gas has been released from a sequestration project associated with a fuel producer that had or has an approved fuel pathway; and

(B) The release was not intentionally caused by the fuel producer or sequestration project operator, or an entity related to either of them. If the release was intentionally caused by the fuel producer, then the fuel producer or CCS project operator is responsible for retiring the number of credits necessary to offset the release of carbon dioxide from the CCS project.

(b) The number of credits ~~invalidated~~ retired as described in subsection (a) will be the amount necessary to offset the release of carbon dioxide from the CCS project.

In Closing

RPMG looks forward to continuing these conversations and is available to clarify any suggestion provided in this letter. Please contact me with any questions or comments at (952) 465-3220 or jwhoffmann@rpmgllc.com.

Thank you,

/s/ Jessica W. Hoffmann
Chief Compliance Officer
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February 16, 2024

Bill Peters
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Electronic submittal only via: CFP.2024@deq.oregon.gov

Re: RPMG Comments on Clean Fuels Program Initial Public Kick-Off Workshop January 2024

Dear Bill;
RPMG Inc. (RPMG) appreciates the opportunity to comment on this important rulemaking effort. The scope of this rulemaking package is impactful for both the fuel market near-term and well into the future.

RPMG is a biofuel marketing company representing our owner and marketing partner ethanol facilities located throughout the Midwest. Our member facilities provide both ethanol and distillers corn oil (DCO) as essential inputs to Oregon's clean-fuels market in substantial quantities. Since the Program's inception, RPMG has supported Oregon's clean transportation fuel policy, and worked diligently with DEQ staff to improve the administration of the Program.

We are supportive of DEQ's efforts to develop a scientifically robust and sustainable program that promotes and rewards innovation in the transportation fuel industry. RPMG is appreciative of the initial discussion that kicked-off this more limited, but important rulemaking to continue promoting a fuel-diverse approach to meeting the state's transportation fuel GHG reduction targets.

It is necessary to stress the importance of maintaining a fuel and technology neutral program. Let the market place sort out the best energy source to meet consumer demand, at the best price and lowest achievable (including negative) lifecycle carbon emitting fuel supply. We thank the agency for their acknowledgement and support for biofuels as a highly effective credit contributor to the current and future success of this program.

The CI scores of Midwest ethanol is on a downward trajectory. Facilities are employing carbon reducing and energy efficiency technologies of all varieties at an escalating rate, including Carbon Capture and Storage (CCS). DEQ's approval of the Red Trail Energy Tier 2 CCS pathway late last year was a significant step forward, and showed the commitment of the agency to recognize investment and innovation while ensuring environmental integrity. RPMG is fully supportive of the idea presented that the Clean Fuels Program regulatory text be updated to reflect the advancing state of policy and technology on the CCS front.

The Kick Off workshop highlighted the following two topics as being in scope for this upcoming rulemaking that impact RPMG. Our comments are limited to these topics.

1. Scope of OR-GREET updates
2. Carbon Capture and Sequestration: Verification and Reserve Account

RPMG appreciates the stability of the DEQ CFP program. The changes being suggested are fully appropriate for where the Program is on its compliance curve, and do not introduce market uncertainty. Additionally, the DEQ structure of appointing and working with a stakeholder Rulemaking Advisory Committee, or RAC, continues to be a positive process component.

OR-GREET Updates

DEQ is proposing in this rulemaking to align the OR-GREET with the updated CA-GREET model, which is currently being updated in California with a formal LCFS rulemaking underway. RPMG understands that the OR-GREET 'update' is really the compilation of several embedded model updates, including OPGEE, EMFAC, and eGRID. We are currently working with CARB on their CA-GREET update to ensure the documentation assumptions and model inputs accurately reflect the reality associated with domestic starch and fiber ethanol production. We anticipate engaging with DEQ on a similarly detailed level as you move forward in this rulemaking effort.

CCS Verification and Reserve Account Provisions

RPMG supports DEQ's efforts to issue CCS Tier 2 pathways with reasonable operating conditions, including robust monitoring, reporting, data collection, and permanence modeling. A temporary accumulation of CFP credits into a "Reserve Account" is an appropriate mechanism for ensuring credits are readily available in the unlikely event that a subsurface leak did occur. It is also a positive acknowledgement that circumstances change, and therefore the percentage of credits accrued in reserve can be modified on a going forward basis and there can be a return of the credits to the pathway holder at an appropriate period when risk has been mitigated.

The specific feedback requested is on the following topics:

- Credits set aside: Annual evaluation and flexibility of the system to adapt to changing circumstances.
- Adjustments: Timeliness of adjustments becoming effective by January of the following year.
- Remittance: Operational impact of the credit retainment timeframe.
- Other procedural changes, adjustments to timeframes, or any other recommendations.

Given RPMG's experience with the first CCS pathway, we will address each of these requested feedback topics directly.

Credit Set Aside - The mirroring of the calculation framework in CARB's Carbon Capture and Sequestration Protocol under the Low Carbon Fuel Standard[1] as a template for the determination of the amount of Reserve Account credits to contribute is appropriate. This approach is easy to understand, and provides a flexible mechanism if any one parameter with in the framework changes. RPMG would be supportive of incorporating this calculation framework into the Oregon CFP regulation. RPMG also supports DEQ's approach which acknowledges in the Tier 2 pathway review that a CCS project which has been permitted by the applicable regional authority, operating under that regulatory approval, and has been reviewed independently is eligible for T2 Pathway consideration under the CFP.

[1] Appendix G.Determination of a CCS Project's Risk Rating for Determining its Contribution to the LCFS Buffer Account

Adjustments – No more frequent than annual adjustments should be pursued. Having annual adjustments is reasonable and appropriate. The factors that go into the Reserve Account calculation are, for the most part, very stable and so changes on a frequency greater than annual is unnecessary. Likewise, annual reporting is required and it makes sense to coordinate the calculation of contrib uted Reserve Account credits to this reporting and verification timeline. This rate of contribution directly impacts Certified Carbon Intensity (gCO2e/MJ), including CCS Reserve Account Contribution scores. Therefor, RPMG recommends that any adjustment be prospective and occur with Verified Operational CI Score changes or at the beginning of the next compliance period for Quarterly Fuel Transaction Reporting.

Remittance – RPMG seeks to ensure both environmental protection and CCS project capital expenditure risk both be recognized and considered concerning Remittance.

RPMG recommends that there be a limit to the amount of credits taken from a project and deposited in the Reserve Account. The exact amount should be the focus of additional discussions, but it is clear that collecting Reserve Account credits indefinitely will eventually result in overcollection above the potential leakage risk. Therefore, the rulemaking should clearly state when credits will no longer be needed to be consigned.

Additionally, the concept that after a set timeframe of proven sequestration, the risk of leakage can be shown to have been reduced. At such time, it is appropriate for DEQ to release back to the pathway holder an amount of credits that allow for the deemed risk to be covered with remaining Reserve Account credits. RPMG looks forward to having those more detailed discussions with DEQ.

In Closing

RPMG looks forward to continuing to work with agency staff to improve the adoption and implementation of this important regulation.

Thank you,

/s/

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May 14, 2024

Bill Peters
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Electronic submittal only via: CFP.2024@deq.oregon.gov

Re: RPMG Comments on Clean Fuels Program April 2024 RAC Meeting #1

Dear Bill;
RPMG Inc. (RPMG) appreciates the opportunity to comment on DEQ's next Clean Fuels Program rulemaking effort. The scope of this rulemaking package is impactful for both the fuel market near-term and well into the future.

RPMG is a biofuel marketing company representing our owner and marketing partner ethanol facilities located throughout the Midwest. Our member facilities provide both ethanol and distillers corn oil (DCO) as essential inputs to Oregon's clean-fuels market in substantial quantities. Since the Program's inception, RPMG has supported Oregon's clean transportation fuel policy, and worked diligently with DEQ staff to improve the administration of the Program. We are supportive of DEQ's efforts to develop a scientifically robust and sustainable program that promotes and rewards innovation in the transportation fuel industry.

Though there were several topics discussed at the April 17th workshop, our comments are limited in scope to just the two issues listed:

1) Eligibility for Carbon Capture and Storage, and
2) Consistency with California's proposed biofuel feedstock Sustainability Certifications.

Carbon Capture and Storage

In addition to our letter submitted for the January 30th workshop, RPMG wishes to again express appreciation for DEQ's leadership on the issue of carbon capture utilization and sequestration (CCUS) and the approval of Red Trail Energy LLC's Tier 2 application including CCUS last year. We encourage DEQ to continue broad allowance for credit generation, using the flexibility provided under the current rule language. Both recertification of T2 CCUS pathways approved in other jurisdictions and Oregon direct T2 pathway applications should remain eligible.

The *Memo for Rulemaking Advisory Committee Meeting #1* that accompanied the workshop, states DEQ will "*limit the eligibility for Fuel Pathway Applications that employ carbon capture and sequestration to just those that are geologically sequestering CO2 in a form that meets the permit requirements for a Class VI underground injection control well as defined by US EPA.*"

RPMG supports DEQ's desire to ensure any CCUS project coming before the agency under the Clean Fuels Program meets the applicable standards set through Class VI permit requirements.

What was left unclear was if DEQ was suggesting that the injection well must be physically located 'on-site' at the production facility, i.e. pipeline CCS projects would somehow be outside of expressed eligibility for DEQ CFP Tier 2 Pathway consideration. RPMG recommends that DEQ clarify this position. Further RPMG believes so long as the injection well itself meets the rigorous standards set by US EPA for Class VI CO2 injection and overseen by an authorized regulatory body, it should be eligible for a CFP T2 pathway, regardless if there is pipeline transport or joint applicants. CI accounting, reserve account contribution and enforcement liability can, and should be worked out with the applicant(s) prior to the issuance of any pathway, and the eligibility of such a project should not be impacted.

Sustainability Certifications

During the meeting, DEQ acknowledged CARB has proposed to require sustainability certifications for crop-based feedstocks for the California LCFS. DEQ further presented a question to stakeholders, "*DEQ is not currently proposing to add this, but would like feedback on if we should in order to stay in alignment with California or if any other guardrails should be considered*?" RPMG is opposed to the addition of sustainability certifications without a full and robust stakeholder process. As expressed during the RAC meeting, this topic cannot be adequately addressed in the timeframe DEQ has structured for this limited scope rulemaking. We have attached our California LCFS comment letters for reference so that DEQ can see the myriad of issues that still remain unresolved, and will potentially remain unresolved for the next few years.

In Closing

RPMG looks forward to continuing to work with agency staff to improve the adoption and implementation of this important regulation.

Thank you,

/s/

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July 31, 2024

Bill Peters, Interim CFP Manager
Oregon Department of Environmental Quality

Re: OR-GREET 4.0 Model

Submitted electronically at CFP.2024@deq.oregon.gov.

Dear Bill,

RPMG Inc. (RPMG) is a biofuel marketing company representing our owner and marketing partner ethanol facilities located throughout the Midwest. Our member facilities provide both ethanol and distillers corn oil (DCO) as essential inputs to Oregon's clean-fuels market in substantial quantities. Since the Program's inception, RPMG has supported Oregon's clean transportation fuel policy, and worked diligently with DEQ to improve the administration of the Program.

Our member facilities are continually investing in lower-carbon technologies, innovative production methodologies, and ways to reduce greenhouse gas emissions to the atmosphere. These technologies include corn kernel fiber ethanol, wholistic facility efficiency upgrades, waste heat recovery, lower-carbon agricultural practices and Carbon Capture and Storage (CCS).

RPMG appreciates the opportunity to comment on the release of the new OR-GREET 4.0 model. We understand the OR-GREET 'update' is the compilation of several embedded model updates, including OPGEE, EMFAC, and eGRID. Similarly, to working with CARB on their CA-GREET update, RPMG wants to ensure the documentation, assumptions and model inputs accurately reflect the reality associated with domestic starch and fiber ethanol production. Outlined below are suggestions to the OR-GREET model to ensure model inputs are accurate and representative of the on-the-ground facts that are the basis for CFP pathways.

Tier 1 Fiber Ethanol Calculator:

In reviewing the proposed OR-GREET 4.0 Starch and Fiber Ethanol T1 Calculator, RPMG encourages DEQ to refine or provide further explanation of the following sections of the calculator:

1. A summary line should be added to the Site-Specific Input tab to aid in user reconciliation of aggregated monthly entries and Verifier reference in summarization detail.
2. Provide documentation and rationale for the new Barge emission factor, which has doubled from the previous version of OR-GREET. On the previous model, the barge EF was 0.07 and in the proposed model the EF jumped to 0.140.
3. It is recommended to remove "US Average" as an option to select under 3.2 Grid Electricity Region. Removing the "US Average" option will prevent pathway applicants from submitting

incorrect data, and because the CA-GREET simplified calculator does not include this drop-down option it will further prevent any issues for applicants recertifying a CA pathway application in OR.

4. RPMG could not identify where fiber ethanol enzyme normalization was incorporated into the modeling. Will enzyme normalization be factored into the OR-GREET 4.0 model, or will the enzyme normalization have a standalone document?
5. The OR-GREET 4.0 SFE T1 Calculator applies an emission factor for "Evaporative Emissions." It is not clearly identified in the material what this emission factor represents. It is presumed the emission factor is meant to consider emissions of Volatile Organic Compound (VOCs) in the production profile of ethanol plants. However, all U.S. domestic ethanol production facilities are obliged to implement and comply with Leak Detection and Repair (LDAR) mandates overseen by USEPA. Adherence to LDAR makes the presence of this additional assumed emission factor unnecessary and results in an arbitrary inflation of the CI score result. This emission factor should be removed from the OR-GREET 4.0 SFE T1 Calculator.
6. This iteration of the OR-GREET 4.0 T1 calculator should consider secondary and alternative energy directed to and allocated for co-product processing energy. For example, if an alternative energy source is consumed to operate only the drum dryer to bake Dried Distiller's Grain with Soluble, the entry field for co-products should be broadened to capture this alternative energy source emission factor for the relevant allocated proportion and not simply default to the assumed primary process energy emission factor as the only option for calculation.
7. We noted the Emission Factor for Fiber Enzymes has been modified transitioning from 1,207 grams CO2e per pound in OR-GREET 3.0 to 525 grams CO2e per pound in OR-GREET 4.0. When previously proposed to CARB staff for an explanation, they explained this change is attributable to assuming a 50% moisture content of Enzymes received and used, and that the EF now compensates for this rate of moisture inclusion. RPMG recommends documenting the rational and basis for this change.
8. The default value option for feedstock transport should be expanded to include more regions of biofuel production in addition to the present 9 state region identified. Identifying and producing records for harvest sites and collection sites is labor intensive. Without the option of a default value, certain applicants may choose simply not to participate due to this impediment. At the very least, the demonstration of feedstock transport mileage where a default value is not an option should be limited to a one-time Validation and not an on-going data collection exercise

In addition to the comments and suggestions noted above, RPMG addressed another comment to CARB during their rulemaking and believe it is worth mentioning to OR DEQ. Previously, RPMG proposed all CA-GREET 3.0 Standard Methods and CARB designated Protocols, used by pathway holders since the last amended regulation effective for 2019, be provided to the public in an accessible online library or website. This will help all applicants to be able to access the same information and provide awareness of existing Standard Methods and Protocols developed after the adoption and issuance of T1 Calculator materials.

Instruction Manual:

RPMG notes that it can be challenging to review the proposed GREET modeling without an instruction manual. RPMG suggests DEQ release an instruction manual prior to the release of the final OR-GREET 4.0. This will ensure pathway applicants have a comprehensive resource with clear understanding of the model inputs.

Verification Participation:

RPMG recommends allowing verifiers to gather Oregon calculators from the AFP portal for California recertified pathways. Allowing verifiers to review all reports and calculators for recertified pathways verified for the California LCFS will ensure the reporting is true and accurate. This process will confirm facilities are accurately reporting numbers and generating eligible credits for pathways recertified in Oregon.

In Closing

RPMG looks forward to continuing these conversations and is available to clarify any suggestion provided in this letter. Please contact me with any questions or comments at (952) 465-3255 or jnowicki@rpmgllc.com

Thank you,

Jesse Nowicki
Regulatory and Compliance Specialist
RPMG Inc.

twelve

August 27, 2024

Submitted electronically to CFP.2024@DEQ.oregon.gov

Mr. Bill Peters
Oregon Department of Environmental Quality
Office of Greenhouse Gas Programs
700 NE Multnomah St., Suite 600
Portland, OR 97232-4100

Re: Comments on the 2024 Clean Fuels Program Rulemaking and Rulemaking Advisory Committee Meeting #2

Dear Mr. Peters:

Twelve Benefit Corporation (Twelve) appreciates the opportunity to comment on the Department of Environmental Quality's (DEQ) forthcoming proposal to update the Clean Fuels Program (CFP) regulations (i.e., Division 253 of Chapter 340 of the Oregon Administrative Rules), and in particular on the draft rules that DEQ posted for the August 14, 2024, Rulemaking Advisory Committee meeting.[1]

By way of background, Twelve is the carbon transformation™ company. Based in Berkeley, California, our proprietary electrochemical technology takes captured carbon dioxide (CO_2) and, using only water and renewable electricity, transforms it into synthesis gas (syngas), a combination of carbon monoxide and hydrogen. Once formed, the syngas is routed through an integrated Fischer-Tropsch reactor and then upgraded, ultimately resulting in our E-Jet® fuel – Power-to-Liquid Sustainable Aviation Fuel (PtL SAF) that meets the specifications in Annex A1 of ASTM International's D7566 Standard (*Standard Specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons*) – as well as our E-Naphtha™.[2] We expect our E-Jet, which has been tested and validated under a grant from the U.S. Air Force,[3] to reduce lifecycle greenhouse gas (GHG) emissions by up to 90% in comparison to conventional, petroleum-based jet fuel.

Last summer, we began constructing our first facility, a demonstration-scale plant in Moses Lake, Washington. Located approximately 100 miles north of the Oregon-Washington border, the Moses Lake AirPlant™ will utilize locally sourced hydropower to transform CO_2 captured and transported from an ethanol facility in Oregon. The AirPlant will have a water electrolyzer operating alongside our proprietary CO_2 electrolyzer. We are on schedule to begin regularly

[1] Available at https://ormswd2.synergydcs.com/HPRMWebDrawer/Record/6798711/File/document.

[2] For more on Twelve and carbon transformation, please visit our website at https://www.twelve.co/. Further information on PtL SAF, including how it compares to other types of SAF, can be found in the *Know Your SAF* report posted at https://www.twelve.co/post/know-your-saf.

[3] *See* https://www.af.mil/News/Article-Display/Article/2819999/the-air-force-partners-with-twelve-proves-its-possible-to-make-jet-fuel-out-of/.

producing E-Jet (and E-Naphtha) at the plant by mid-2025, and note that the E-Jet should qualify as "alternative jet fuel" for purposes of the CFP (i.e., under OAR 340-253-0040(7)). Given the plant's location, we hope to be able to arrange for the uplift in Oregon of at least some of the jet fuel we will be producing in Moses Lake.[4] Our ability to generate CFP credits for our ultra-low carbon PtL SAF will, of course, be a key factor in whether this happens.

With the above background in mind, we take this opportunity to strongly encourage DEQ to include in its forthcoming proposed rule an amendment to section (5) of OAR 340-253-0470 ("Determining the Carbon Intensity of Electricity") that would enable off-site renewable electricity (e.g., solar, wind, hydropower) used in the production of PtL fuels like Twelve's E-Jet to be sourced through book-and-claim accounting, specifically via the Renewable Energy Certificate (REC) mechanism. Attached is the precise language that we encourage DEQ to include in the proposed rule. The text is simple, straightforward, and narrowly tailored. We also recommend that a corresponding definition of the term "Power-to-Liquid Fuel" be added to the CFP's definitional rule, OAR 340-253-0040, as follows: "'Power-to-Liquid Fuel' means alternative jet fuel or transportation fuel produced from captured CO_2, water, and renewable electricity."

PtL fuels are widely regarded as one of the most promising pathways, if not the most promising pathway to decarbonization of the aviation and broader heavy-duty transportation sector. The national blueprint for transportation decarbonization, a multi-agency effort released by the federal government early last year, points out that PtL fuels, sometimes referred to as electrofuels, e-fuels, or synthetic fuels, represent "a viable pathway" to sustainable, low-carbon transportation fuels,[5] while the International Energy Agency (IEA) has asserted that e-fuels "made from biogenic or air-captured CO_2 can potentially provide full emissions reduction, making them the primary production pathway that is consistent with achieving net zero [aviation, marine, and on-road transport sector] emissions mid-century."[6] In its report, the IEA emphasized that "[g]overnments need to take bolder action to stimulate demand for low-emission e-fuels."[7]

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[4] In this regard, we note that Alaska Airlines, which has numerous flights that depart each day from Portland International Airport (PDX), will be uplifting virtually all of the E-Jet we will be producing during the first year of the plant's operation. We note, too, that earlier this month, the Federal Aviation Administration (FAA) awarded over $11 million in grant funding to Phillips 66 for "SAF blending and storage" at its Portland Terminal, including the "outbound transfer of up to 180,000 barrels per month of blended SAF to [PDX]." *See* FAA, "FAST Grants – FAST Awards," available at https://www.faa.gov/general/fueling-aviations-sustainable-transition-fast-grants.

[5] *The U.S. National Blueprint for Transportation Decarbonization: A Joint Strategy to Transform Transportation*, at 55 (Jan. 2023), available at https://www.energy.gov/sites/default/files/2023-01/the-us-national-blueprint-for-transportation-decarbonization.pdf.

[6] IEA, *The Role of E-Fuels in Decarbonising Transport*, at 10, 24 (Jan. 2024), available at https://iea.blob.core.windows.net/assets/a24ed363-523f-421b-b34f-0df6a58b2e12/TheRoleofE-fuelsinDecarbonisingTransport.pdf.

[7] *Id.* at 9.

Specifically in the context of the hard to electrify/hard to decarbonize aviation sector,[8] PtL SAF, besides providing deep carbon intensity reductions, does not present the indirect land use change impacts or feedstock constraints that other types of alternative jet fuel (e.g., crop-based SAF and waste oil- or animal fat-based SAF) do. Indeed, PtL SAF has been cited as "the only SAF technology that has the potential for unbounded production,"[9] an apt description given the ever-increasing amount of CO_2 in the Earth's atmosphere.

By proposing to amend section (5) of OAR 340-253-0470 in the manner we are recommending, DEQ would be taking an essential first step towards significantly incentivizing the production and in-state uplift of innovative, ultra-low carbon PtL SAF, as well as the development and utilization of renewable energy sources like solar, wind, and hydropower. As the name implies, PtL SAF (like all other PtL fuels) is electricity intensive, and for that reason Twelve and other companies in the PtL space rely on renewable sources of electricity. Co-locating a PtL fuel production facility with, or otherwise ensuring it has a direct, behind-the-meter connection to, a renewable power source, however, is often infeasible and impractical (and in the case of hydropower, difficult or physically impossible to accomplish). Affording PtL fuel producers like Twelve the flexibility to source zero-carbon intensity electricity via RECs would promote fuel production and enable the generation of credits under the CFP, which in turn would incentivize PtL fuel uplift/use in Oregon. That, of course, would yield tremendous GHG reduction benefits for the state.

Importantly, this allowance would also ensure consistency with the federal government's approach to renewable electricity sourcing for SAF production facilities as reflected in the U.S. Department of Energy's (DOE) 40BSAF-GREET 2024 Model, which the U.S. Department of the Treasury adopted for purposes of the SAF blender's tax credit (i.e., section 40B of the federal tax code) earlier this year.[10] While the "specified source option" described in the DOE Guidelines technically only applies to lifecycle GHG emissions calculations for so-called HEFA SAF and ATJ SAF, there is no reason to think the federal government's approval of book-and-claim accounting for electricity will not also apply to other SAF production pathways (e.g., PtL SAF) under the Clean Fuel Production Credit in section 45Z of the federal tax code. Consistency between the federal and DEQ approaches to book-and-claim accounting in the hard-to-decarbonize aviation sector is, in our view, highly warranted and necessary.

* * *

[8] As the FAA puts it, "decarbonization of the aviation sector is extremely challenging." *See* FAA, *United States 2021 Aviation Climate Action Plan*, at 3 (Nov. 2021), available at https://www.faa.gov/sites/faa.gov/files/2021-11/Aviation_Climate_Action_Plan.pdf.

[9] Rhodium Group, "Sustainable Aviation Fuels: The Key to Decarbonizing Aviation" (Dec. 7, 2022), available at https://rhg.com/research/sustainable-aviation-fuels/; *see also* World Economic Forum, *Clean Skies for Tomorrow: Delivering on the Global Power-to-Liquid Ambition*, at 10 (May 2022) (referring to PtL SAF's "high GHG reduction potential" compared to other types of SAF and indicating that the feedstocks "are theoretically unlimited"), available at https://www3.weforum.org/docs/WEF_Clean_Skies_for_Tomorrow_Power_to_Liquid_Deep_Dive_2022.pdf.

[10] *See* U.S. Department of Energy, *Guidelines to Determine Life Cycle Greenhouse Gas Emissions of Sustainable Aviation Fuel Production Pathways using 40BSAF-GREET 2023*, at 13-14 (April 2024), available at https://www.energy.gov/sites/default/files/2024-04/40bsaf-greet_user-manual.pdf.

Thank you for your consideration of our comments. With the production of E-Jet slated to commence at our Moses Lake AirPlant by mid-2025, we look forward to DEQ's impending issuance of the formal CFP 2024 notice of proposed rulemaking. In the interim, please do not hesitate to contact me or Ira Dassa (ira.dassa@twelve.co) if you have any questions.

Sincerely yours,

Andrew Stevenson

Andy Stevenson
Vice President of Commercial
Twelve Benefit Corporation
andy.stevenson@twelve.co

(a) The renewable generation system is on-site or directly connected to the electric vehicle chargers;

(b) The fuel pathway codes listed in Table 3 under OAR 340-253-8010 for solar-generated or wind-generated electricity can only be used for the portion of the electricity dispensed from the charger that is generated by that dedicated renewable energy system;

(c) Any grid electricity dispensed from the charger must be reported separately under the statewide electricity mix or utility-specific fuel pathway codes; and

(d) RECs are not generated from the renewable generation system or, if they are, then an equal number of RECs generated from that facility to the number of MWh reported from that facility must be retired in the recognized REC tracking system.

(5) Offsite renewable electricity. In order to lower the carbon intensity of electricity claimed as a fuel in the CFP or used to produce a Power-to-Liquid Fuel that is claimed as a fuel in the CFP, credit generators and aggregators may retire renewable electricity certificates that meet the following qualifications:

(a) RECs retired in order to claim a carbon intensity other than the statewide mix or utility-specific mix must be certified by the Green-e Program under the Green-e Renewable Energy Standard for Canada and the United States version 3.5, or by a certification system approved by DEQ as being substantially equivalent, and:
(A) Unbundled RECs being used to claim low-carbon electricity through book and claim accounting must be certified at the wholesale level; and

(B) RECs used in a power purchase agreement or Utility Renewable Electricity Product may be certified at the retail level;

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

(c) RECs must be generated from facilities located in the Western Electricity Coordinating Council; and

(d) RECs must be recorded and retired in a recognized REC tracking system, and:

(A) In addition to recognizing the WREGIS, DEQ may recognize additional REC tracking systems upon a request from a registered party; and

(B) In reviewing a request from a registered party referenced in paragraph (A), DEQ may consider whether the tracking system is comparable to WREGIS and whether it has systems in place to ensure accurate issuance and tracking of RECs.

WSPA
Antonio Machado
Senior Manager, Northwest Regulatory Affairs and Fuels

August 28, 2024

Sent via e-mail to: CFP.2024@DEQ.Oregon.gov.

Mr. Bill Peters
Oregon Clean Fuels Program Manager - Interim
Oregon Department of Environmental Quality
700 NE Multnomah Street
Portland, OR 97232-4100

Re: WSPA Comments Regarding August 14, 2024 DEQ CFP RAC Meeting #2

Dear Bill:

Western States Petroleum Association (WSPA) appreciates the opportunity to provide the Oregon Department of Environmental Quality (DEQ) with our feedback from the Clean Fuels Program (CFP) Rules Advisory Committee (RAC) Meeting #2, held on August 14, 2024. WSPA is a non-profit trade association representing companies that create the energy we need today and for the future of transportation. This includes renewable diesel, biofuels, innovative solar and sustainable energy projects, and carbon capture and sequestration. WSPA member companies also produce petroleum products, which remain a vital source of energy in Oregon and beyond.

Provided below are WSPA's comments on the DEQ staff slide presentation during the RAC meeting. In addition to these comments, the WSPA comment letter of May 8, 2024 pursuant to the April 17, 2024 DEQ CFP 2024 RAC Meeting #1 is included by reference.[1]

Section 340-253-0400(6)(f) Specified Sources Feedstocks - Attestations (Slide 15)

WSPA urges DEQ to avoid requiring additional attestation requirements, as specified source feedstocks are already subject to special data tracking and third-party verification requirements. Furthermore, subsection 340-253-0400(6)(f)(A) should be removed as the GREET model includes emissions for rendering which are reflected in the CI of the fuel.

Section 340-253-0450(2) Recertification and Validation/Verification (Slides 16 & 18)

WSPA supports that the following DEQ proposal:

- Fuel pathways approved by CARB can continue to be recertified by DEQ.
- Fuel pathway validation and verification performed under the CARB LCFS program are acceptable under the DEQ CFP.
- Tier 2 fuel pathways that went through public comments under the CARB LCFS program will not need to go through public comments in Oregon.

Section 340-253-0450(17) - Transition to OR-GREET 4.0 or CA-GREET 4.0 (Slides 8 & 9)

WSPA recommends that the DEQ extend the March 30, 2025, deadline to March 30, 2026, for reporting and/or submitting fuel pathways using Version 4.0 of the OR-GREET or CA-GREET models (including the annual fuel pathway reports). This extension is necessary as the new model

[1] Western States Petroleum Association. "WSPA Comments regarding April 17, 2024 DEQ CFP RAC Meeting #1", May 8, 2024

version has yet to be thoroughly tested, and it has not been approved by CARB or DEQ. Therefore, WSPA requests that Version 3.0 of OR-GREET and CA-GREET be accepted through the end of 2026 for fuel pathway applications and annual fuel pathway reports.

Section 340-253-1060 - Reserve Account (Slide 20)

If the DEQ decides to move forward with a reserve account, WSPA requests that regulatory language be added to ensure that the percentage of credits withheld is minimal, so as not to disincentivize carbon capture projects.

Section 340-253-8010 - Table 9 Temporary FPC

In this table, DEQ proposes to set temporary CI values for alternative jet fuel and renewable naphtha at significantly higher values than renewable diesel or biodiesel temporary CI scores. WSPA does not believe this is justified, as renewable naphtha, alternative jet fuel, and renewable diesel have the same CI scores when co-produced at a given facility. WSPA requests that DEQ set the temporary CI of renewable naphtha and alternative jet fuel to the temporary CI values of renewable diesel (at 45 and 65 gCO2e/MJ depending on feedstocks).

WSPA appreciates the opportunity to provide comments on this important rulemaking. We look forward to the opportunity to provide continued input during the RAC process. If you have any questions regarding this submittal, please contact me at (360) 594-1415 or via email at amachado@wspa.org.

Sincerely,