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POLICY INSTITUTE FOR ENERGY, ENVIRONMENT, AND THE ECONOMY

31 August, 2022

State of Washington, Department of Ecology
Regarding: Rulemaking - Clean Fuels Program Rule (Chapter 173-424 WAC) and Air Quality Fee Rule (173-455 WAC)

Dear Clean Fuels Program Team:

Thank you for the opportunity to comment on the ideas and materials related to the Clean Fuels Program and Air Quality Fee rulemaking in Washington State. We appreciate the open stakeholder process that the Department of Ecology (Ecology) has undertaken to date, for this public comment period leading up to the proposed rules. The University of California, Davis Institute of Transportation Studies, along with the Policy Institute for Energy, Environment, and the Economy has been engaged in research, policy analysis, and technical assistance relating to alternative fuel policy for well over a decade. This letter provides comments on the proposed rules. Neither the Policy Institute, nor UC Davis take any formal positions in favor or opposing any part of this rulemaking, these comments are offered as guidance and suggestions to Ecology and interested stakeholders.

The proposed rule establishes carbon intensity (CI) standards for transportation fuels used in Washington from 2023 to 2028, and a market mechanism such that compliance obligations assigned to fuels with CIs that exceed the standard must be offset via credits, assigned principally to fuels with CIs below the standard. In general, the rule closely aligns with those already in effect along the Pacific Coast, especially in California and Oregon, though with some adaptations by the state. This structure reflects the close collaboration among California, Oregon, British Columbia, and Washington under the rubric of the Pacific Coast Collaborative. The alignment stems in part from the use of CI scores for fuel pathways already certified in the existing programs with appropriate adjustment for Washington end use of the fuel, and of 3rd-party verification/validation bodies already approved in California or Oregon. Leveraging existing expertise and analysis should lower costs and streamline implementation of the program. The Washington proposed rule incorporates many lessons and changes made in the other programs over their first decade of implementation. Overall, its addition should help expand the overall market signal incentivizing greater volumes of low carbon fuels, even as it adds to the demand for existing low carbon fuels.

While the CI reduction requirements early in its program will lag those in the neighboring jurisdictions, Washington is setting a target of 10% CI reduction from 2017 levels by 2030 (more ambitious in percentage reduction in period of time than earlier programs in California and Oregon), and 20% by 2034, which also brings the magnitude of the CI reduction requirements closer to those in neighboring programs. Washington's modeling indicates that this level of

ambition relies on effective implementation of the state's EV adoption programs, making it key to review progress towards those goals prior to 2030. Part of the compliance portfolio for this program is intended to come from provisions to allow advancing of credits and hydrogen and electricity fueling capacity credits, as laid out in statute, similar to the Hydrogen Refueling Infrastructure (HRI) and Fast Charging Infrastructure (FCI) provisions in California's LCFS. Under the current proposal, credits like these can generate credits in an amount up to 10% of a prior quarter's deficits. The HRI and FCI provisions in California have not yet seen these opportunities fully used, so close attention is warranted to understand how this level of crediting could impact the overall credit market. Additionally, offering infrastructure capacity credits weakens the link between actual GHG reductions and incentive level. This link supports the efficacy of programs like the LCFS and it is unknown whether weakening it could reduce the program's primary function to lower transport fuels' rated CI.

The proposed rule includes several cost containment mechanisms, similar to those seen in California's LCFS, and especially Oregon's CFP programs, respectively. A credit clearance market playing a clearinghouse function in a compliance period without full compliance helps ensure that counterparty identification challenges, or limited market access do not result in systematic non-compliance. This helps limit the potential cost of the program. In addition, several deferral mechanisms, coupled with the flexibility for Ecology to directly respond in the event of unforeseen or projected circumstances that challenge compliance, plus small deficit rollover provisions, jointly send a market signal about the intention for the program to stay within the bounds of feasibility.

Washington is the first CI standard jurisdiction to institute an air quality fee to cover program costs, which should make administrative costs more transparent and ensure a predictable source of funding to support this program's administration, as well as assist others in understanding the administrative requirements and costs of implementing such a policy.

Please find more detailed comments below, largely in chronological order per topics arising in the proposed rule.

- p. 17. In the proposal, alternative jet fuel is presumed to meet all benchmarks through 2038. While producers deciding to opt in under this option would surely have fuels that generate credits in a given year, the statement seems unnecessarily sweeping (implying for example, that alternative jet fuel from palm oil might meet the benchmarks). Regarding alternative jet fuel, we also note that the use of the diesel standard in this case aligns with the California LCFS regulation, which prior to 2023 has a jet standard matching the diesel standard; Oregon's jet standard remains below that of diesel until 2025. Note that in California and Oregon, the assessed CI of conventional jet fuel was below that of diesel, so that the lower nominal standard in early years reflected less of a

CI reduction requirement for earning credits (than for diesel and gasoline fuels and their substitutes in the same year), to offer additional incentive for this fuel.[1]

- Regarding alternative jet fuel, we also note that its use as an opt-in fuel may have the potential to lead to equity and market balance challenges over the long run. In all jurisdictions that have adopted a similar policy to date, the majority of deficits are generated by the sale of petroleum gasoline. Under a program like Washington's proposed CFP, revenue flows from consumers of deficit generating fuels to fuels that generate credits. Without a compliance obligation on conventional jet fuel, this means the flow of revenue is entirely from deficit-generating on-road fuels, to alternative aviation fuels. The presence of a compliance obligation on conventional jet fuel would ensure that aviation fuel consumers bear part of the cost of supporting sustainable aviation fuels, and also that any market conditions that would affect the consumption of conventional and/or sustainable aviation fuel are likely to result in correlating changes in both credit and deficit generation.
- p. 24 (10)(a)(iii). Electric vehicle manufacturer. Is this eligibility for base credits only available if the backstop aggregator doesn't register for incremental credits ("under (b)," as is currently)? Or under "(a)(i)" (base credits)?f This language should be clarified.
- p. 24 (11). Backstop aggregator description. Ecology might consider a requirement by the entity or other party to collect sufficient data to assess effectiveness of variable investments, to improve effectiveness of revenue use over time.
- p. 41 (4). Small deficits. The last sentence employs a double negative ("not...not") that doesn't appear to be intentional.
- p. 47. Residential EV charging estimation. Ecology would ideally make public what method for EV charging estimation is being used, for feedback and potential improvement. It wasn't clear if the potential for proposing another method would apply broadly or on a case-by-case basis. If the latter, Ecology should explore how to guard against the potential for implementing a patchwork of inconsistent methods, or assess its collective impact on the estimate. Regarding residential EV charging credit quantification, the accuracy and feasibility criteria mentioned in the rule, and ex post remedies mentioned in case of estimation error, help strengthen program integrity. Since the initial adoption of the LCFS in California, more sources of data including in-vehicle telematics and sometimes grid-connected charging infrastructure, offer more precise quantification of actual charging than estimation, which was an adaptation to the limited charging data available when the LCFS was developed. Ecology should seek to switch away from estimation based methods in favor of direct measurement where possible.
- p. 48 (4). Incremental credits. The term "renewable power" is ambiguous (and not in the definition list). For example, is all biomass-based power sourcing considered renewable

[1] We did not see a reference that includes the CI score of jet fuel on the regulatory rulemaking page. By implication in Table 2, it matches the assessed CI score of diesel fuel. If this is not the case, information on the actual CI score of jet fuel is important for gauging the rated improvements from the use of alternative jet fuel.

(and, relatedly, does it fit under the "deemed to be 0" electricity category in Table 6)? Referencing existing definitions of “renewable power” can resolve this ambiguity; alternatively specifying a zero, or near-zero life cycle GHG impact could achieve similar results.

- p. 48. Advance credits. While the provision is clear that the credits must represent real GHG reductions, less clear is how or whether the calculation of proposed credits accounts for the changing standard over the period for which credits are being advanced. This could be handled in a guidance document (vs. the regulation) but the intent to account for a changing standard in advancing credits is important to the environmental impact of the program. Advance credits can provide valuable support for early actions or novel technological applications, however, care must be taken to ensure that the credits are backed by sound life cycle analysis methodology. In particular, Ecology will need to develop a standard for assessing additionality with regards to advance credits, and ensure that all projects supported in this way produce GHG reductions that would not have occurred absent the program’s support.
- p. 49 (3)(b)(iii). Applications for advance credits. The meaning of "retired the payback period" isn’t completely clear. Does this mean completed the payback? Or that the full originally scheduled payback period is over (even if repayment was early)?
- p. 49 (4)(c). Approval of advance credits. This subsection states that the payback period must be one year longer than years of credits advanced. Should this be, as discussed further below in the proposed rule (p.50(6)), that it should be at least one year longer? This seems to be a place where information is duplicated (that might be streamlined).
- p. 50 (7)(b). Reporting requirements. This subsection could clarify whether the provision against additional credit generation pre-payback applies company-wide (e.g., in the case of an applicant entity with other alternative fuels earning credits in the system).
- p. 51. HRI crediting. Like California’s regulation, the Washington proposal will issue credits for hydrogen refueling capacity (in Washington’s case, by legal statute). These credits are not directly associated with flows of fuels that reduce GHG emissions (although they are meant to further future GHG reductions); clarity on this distinction for environmental impact accounting is needed for accuracy.
- p. 51. HRI crediting (1)(b)(vi). The crediting can apply to light-duty and medium- or heavy-duty stations. Is there provision for stations that service both types of vehicles (where a priori determination of use may be difficult)?
- p. 54-55. (viii)(A),(B),(D). These subsections in the HRI section refer to FCI credits. Should these be HRI?
- p. 55. Estimated HRI credits. The equation assumes displacement of gasoline, more likely in the light-duty space; is the same equation meant to apply to medium- and heavy-duty uses, that are more likely to displace diesel fuel? The relevant standard and applicable EER would both vary by duty sector. Ecology may have reasons for using only the gasoline-displacing information for the purpose of this provision; if so, that could be made clearer.

- p. 58-60. FCI credits. Similarly to the point just made for HRI, FCI credits may enable but do not reflect fuel flows that are scored in the program as reducing GHG emissions. The same point about environmental impact accounting applies. The FCI credit equation assumes the displaced fuel is gasoline (which matters for the applicable standard and EER chosen). The text is less clear than in the case with HRI whether medium- and heavy-duty sectors also be served and/or accounted for in the estimated credits.
- p. 66-67. Specified source feedstocks. Feedstocks from "waste, residues, byproducts" designated in this section may have alternative uses, the diversion from which would impact the emissions impact of their use for alternative fuels. The provision states that they may be eligible for a "reduced carbon intensity" value, but does not specify relative to what (and how the amount of the reduction will be estimated/evaluated). In general, the terms "waste," "residue," and "byproduct" are insufficiently precise to be used, by themselves, as the basis for policy, though they are common in colloquial use during discussions of these concepts. A more precise definition would help reduce ambiguity. In particular, aligning definitions with concepts used in life cycle analysis can help build a stronger conceptual understanding among stakeholders. For example, a waste in this context is typically meant as something with zero financial value, or even an implied disposal cost. Materials that could be put to some beneficial or revenue-generating use are not generally considered "wastes" in life cycle analysis.
- p. 67 (7). Certified CI value. The provision could usefully specify how the CI value is calculated from the 24 months of data, and the rationale for that choice. (E.g., is the high point used, given that fuels delivered at higher than the certified CI value trigger violations?)
- p. 69 (6)(e). Applicants seeking a provisional CI score. If actual data suggest a lower CI score than the provisional, Ecology could consider creating a buffer account into which the balance of credits can be deposited, to be drawn on/retired in the case of invalid, unrecoverable credits. While this aspect has not yet become important in any program, it might at some point in the CI reduction trajectory.
- p. 76. EER Tier 2 Applications. The provision limits applications to electricity. While this is the most likely scenario, opening up this limitation could spark innovation in a broader array of vehicle/fuel combinations. The provision also may rely on 3 months of data, raising a question of whether the period can adequately account for potential seasonal impacts on battery performance, to accurately estimate EER under "average" conditions.
- p. 78. Determining a CI value for electricity. The provision is not clear on whether this section applies only to electricity for use as an end-fuel, or also for use as a process energy in the production of other fuels or inputs to fuels. There is also ambiguity on the circumstances under which a utility-specific CI score is applied, vs. a state-wide CI score. It is not clear if this is an annual choice, as in Oregon. Note that that approach allows utilities to "cherry-pick" the most beneficial CI score in a given year. Moreover, to the extent that the grid is interconnected, the utility-specific CI score, while offering additional incentives at a more local level to decarbonize the grid, does not accurately

reflect the emissions impact of a charging event. Environmental impact analysis should account for this gap, and the state-wide mix should be adjusted to exclude utilities operating on a utility-specific basis, to avoid double counting.

- p.90 Table 6. It would be useful and informative to add the blend levels to the footnote for gasoline/ethanol and diesel/soy biodiesel that form the baseline fuels.[2]

We appreciate the opportunity to provide comments on this rulemaking, and would be happy to discuss these issues, or any others related to the upcoming Clean Fuels Program, in more depth. If you have any questions, please do not hesitate to reach out to us at jwitcover@ucdavis.edu or cwmurphy@ucdavis.edu.

Signed,

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[2] For ethanol, 10% by volume in gasoline, and for soy biodiesel, 2.5% by volume in diesel, if we are correctly interpreting data in the WA Ecology 2017 Baseline Carbon Intensities for Blended Fuels on the rulemaking website.