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Re: Comments on behalf of the Washington Green Hydrogen Alliance, the Renewable Hydrogen Alliance, the Bonneville Environmental Foundation, and Douglas County Public Utility District

The Washington Green Hydrogen Alliance (WGHA) and the Renewable Hydrogen Alliance (RHA) appreciate the opportunity to provide comments on the Chapter 173-424 WAC draft rules that the Department of Ecology has been developing through a series of stakeholder meetings and webinars since October, 2021.

WGHA and RHA together comprise more than 80 public and private sector members involved in producing, distributing and offering into the low carbon fuel market hydrogen produced from non-fossil feedstocks. Our members are developing a renewable hydrogen sector that includes the first renewable hydrogen electrolyzer facility in Washington and in the US, as well as a network of Washington state’s first hydrogen fueling stations that will dispense either renewable hydrogen or green electrolytic hydrogen produced in state.

General Comments

Central to the comments that we offer below is the fact that hydrogen is treated interchangeably under HB 1091 as both a molecular battery/energy carrier and as a gaseous transportation fuel (including it’s derivatives).

For instance, the following language:

RCW 70A.030.(1)(b)(ii) Measure greenhouse gas emissions associated with electricity and hydrogen based on a mix of generation resources specific to each electric utility participating in the clean fuels program.

implicitly refers to both hydrogen produced/charged electrolytically and to the electricity used to charge lithium batteries, and treats both equally when directing the rules to calculate the emissions and thus the CI from each utility whether charging hydrogen or other battery molecule (lithium) on an equal basis. In addition:

RCW 70A.535.050(c) The fueling of battery or fuel cell electric vehicles by a commercial, nonprofit, or public entity that is not an electric utility . . .

uses the term “fueling” for both the electricity that charges a battery to power a battery electric vehicle, and the electricity to “produce”(or charge) hydrogen (for non-fossil feedstock hydrogen) that powers a fuel cell

Commented [DW1]: The word “produce” is often used to describe hydrogen in these contexts. In actuality, typically the hydrogen molecule is separated from its carrier molecule and charged with energy, either from electricity, methane or other source. We will use “produce” or “produced” in these comments for consistency.

electric vehicle. Both vehicles are zero emission electric vehicles, both molecules in this instance are charged by electricity and both power an electric motor.

We request the following clarifications and treatment of hydrogen under the Clean Fuels Program rules:

1. Draw a clear distinction both in definition and in context between hydrogen produced/charged from fossil feedstocks and hydrogen produced from non-fossil feedstocks. The latter refers to renewable hydrogen and green electrolytic hydrogen as both are defined in state law, and the former is hydrogen produced using fossil feedstock hydrogen from natural gas using steam methane reformation, or produced from coal or other fossil fuels.
2. Treat non-fossil hydrogen in a technology neutral, non-discriminatory manner relative to other molecular batteries charged with electricity such as lithium-ion batteries.

We will provide specific examples throughout our comments where treatment of different battery/fuels seems unequal and/or without distinction between non-fossil and fossil hydrogen, and language where these requested clarifications and treatments could be addressed.

Specific Comments

The following suggested changes to the draft rule include additions (in underline) and deletions (strikethrough) format. Suggested changes are highlighted in yellow for easy reference.

WAC 424-110 Definitions [pg 2]

Add definitions of “renewable hydrogen” and “green electrolytic hydrogen” as defined in SB 5910 from the 2022 legislative session; and definitions of

“Non-fossil hydrogen” means renewable hydrogen and green electrolytic hydrogen.

“Fossil hydrogen” means hydrogen sourced from a fossil fuel feedstock.

WAC 173-424-130(2) [pg2]

(f) Compressed or liquified renewable or green electrolytic hydrogen (“non-fossil hydrogen”)

(g) Compressed or liquified hydrogen from fossil feedstocks (“fossil hydrogen”)

WAC 173-424-130(3)(b) [pg3]

Non-fossil hydrogen is certainly an alternative non-fossil fuel equivalent to the other fuels listed in the section that are allowed to opt-in. Non-fossil hydrogen should have equal treatment and is clearly qualified to meet the presumed carbon intensity standards in WAC 173-424-910(a) through (c) through December 2038.

(vii) non-fossil hydrogen. or alternatively: renewable and green electrolytic hydrogen

WAC 173-424-150(2)(c) [pg 5]

The following sections of this chapter designate persons eligible to generate credits:

(i) WAC 173-424-210 for fossil or bio-based compressed natural gas, liquefied natural gas, liquefied compressed natural gas, liquefied petroleum gas, and **fossil and non-fossil** hydrogen

WAC 173-424-210 Fuel Reporting Entities for Gaseous Fuels [pg10]

(1) Applicability

This section applies to providers of both fossil and bio-based compressed natural gas, liquefied natural gas, liquefied compressed natural gas, and liquefied petroleum gas (or propane), and **fossil and non-fossil** hydrogen used as transportation fuels in Washington.

(2) Designation of first fuel reporting entities for gaseous fuels. The first fuel reporting entity for different gaseous fuels is identified below:

(a) Bio-CNG. For bio-CNG, including the bio-CNG portion of a blend with fossil CNG, the first fuel reporting entity is the producer or importer of the biomethane.

(b) Bio-LNG and Bio-L-CNG. For bio-LNG and bio-L-CNG, including the biomethane portion of any blend with fossil LNG and L-CNG, the first fuel reporting entity is the producer or importer of the biomethane.

(c) Renewable Propane. For renewable propane, including the renewable propane portion of a blend with fossil propane, the first fuel reporting entity is the producer or importer of the renewable propane.

(d) Non-fossil hydrogen. For non-fossil hydrogen, including the non-fossil hydrogen portion of a blend with fossil hydrogen, the first fuel reporting entity is the producer or importer of the non-fossil hydrogen.

~~(d)~~ Fossil CNG, LNG, and L-CNG, **Hydrogen**, and Propane.

(i) For fossil CNG, LNG, L-CNG, **hydrogen**, and propane, including the fossil portion of any blend with a renewable fuel component, the first fuel reporting entity is the entity that owns the fueling equipment through which the fossil fuel is dispensed to motor vehicles for transportation use.

(ii) Forklift: The first fuel reporting entity for fossil propane used in forklifts is the forklift fleet owner.

(e) **Fossil Hydrogen**

(i) Motor vehicles. The first fuel reporting entity for hydrogen is the entity that owns the fueling supply equipment through which hydrogen fuel is dispensed to motor vehicles for transportation use.

(ii) Forklift. The first fuel reporting entity for **fossil** hydrogen used in fuel cell forklifts is the forklift fleet owner

WAC 173-424-210 Fuel Reporting Entities for Gaseous Fuels [pg11]

(3)(a) states:

The original first fuel reporting entity per **subsections (1)(A) through (1)(E)** above will not generate credits or deficits in the LCFS, and will instead provide the amount of fuel dispensed . . .

However, there does not seem to be a (1)(A) through (1)(E) in this section.

WAC 173-424-SRR (Specific Reporting Requirements)

Reviewers: I present two options here to arrive at a non-discriminatory treatment of reporting of electricity used for charging H2 and non-H2 batteries that are subsequently used as a transportation fuel – Option Amend sub (3) to include H2 and delete (4); Option 2 – Amend (4) to reflect consistency with (3) – Please advise

Option 1:

(3) Specific reporting parameters for electricity used **to charge either a non-hydrogen based battery or to charge non-fossil hydrogen for use in a hydrogen-fuel cell battery for use** as a transportation fuel. For electricity, any registered party must report the following as applicable:

- (a) To claim a carbon intensity other than a statewide or utility-specific mix, or directly connected renewable power under the Lookup Table in WAC 173-424-TBLS, a registered party must:
 - (i) Submit documentation that qualifying RECs were retired in the WREGIS or a recognized renewable electricity tracking system for the unique purpose of covering that specific charging at the same time as the submittal of the quarterly report; or
 - (ii) Submit proof of completion of final verification or a validation statement from the Green-e Program[DD(33) for the RECs used in (2)(a)(i) of this section to generate incremental credits. Failure to submit such proof is grounds for Ecology to invalidate any incremental credits issued to the entity under the procedures of WAC 173-424-ASRM; and
 - (iii) Submit documentation at least annually that the electric vehicle chargers **or hydrogen electrolyzer** are covered by a Utility Renewable Electricity Product [DD(34)] or a power purchase agreement that has been approved by Ecology for a carbon intensity. The carbon intensity assigned to the product or agreement can only be used for reporting if the electric vehicle chargers **or hydrogen electrolyzer** are covered by that same product or agreement for the time period which is being reported;
- (b) For non-metered residential EV charging.
 - (i) Within the first 45 days after the end of the quarter, the electric utility must provide to Ecology the Daily Average EV Electricity Use data for the calculation of credits for non-metered charging from the prior quarter. Ecology shall use the method established in WAC 173-424-CCDFP to calculate any credits generated for the quarter and place them into the electric utility's [DD(35)]account in WA-FRS; and

Commented [DW2]: RCW 70A.535 treats electricity used to charge both hydrogen for use in a hydrogen/fuel cell battery equivalent and equal to the electricity used to charge non-hydrogen/fuel cell batteries. For instance RCW 70A.535(1)(d) states: ***(d) If the department determines that it is necessary for purposes of accurately measuring greenhouse gas emissions associated with electricity supplied to retail customers or hydrogen production facilities by an electric utility, the department may require electric utilities participating in the clean fuels program to submit data or information to be used for purposes of calculating greenhouse gas emissions that is different from or additional to the fuel mix disclosure information submitted under chapter 19.29A RCW.***

(ii) The electric utility must provide rate options [DD(36)] that encourage off-peak charging and minimize adverse impacts to the electrical grid;

(iii) For claiming incremental credit for non-metered residential charging, the electric utility must be able to provide, upon Ecology's request: the VIN for each electric vehicle claimed and evidence of EV vehicle registration and low-carbon electricity supply at the same location.

(iv) A non-utility credit generator [DD(37)] must use credit proceeds to benefit EV drivers and their customers, and educate them about the benefits of EV transportation (including environmental benefits and costs of EV charging, or total cost of ownership, as compared to gasoline). The credit generator must include, in their Annual Compliance Report, an itemized summary of efforts and costs associated with meeting these requirements.

(c) For metered residential EV charging.

(i) For generating base credits, the amount of electricity (in kWh) used for residential EV charging per FSE.

(ii) For generating incremental credits [DD(38)] for low-CI electricity, the amount of electricity (in kWh) used for residential EV charging per FSE using a certified FPC, and the following requirement must be met:

(A) Upon Ecology's request, records must be provided that demonstrate an EV is owned or leased by an individual dwelling at the claimed residence; and

(B) Only a single entity can generate incremental credits using a low-CI pathway for the same FSE. If two or more entities report for the same FSE to generate incremental credits, no incremental credits will be issued for that FSE.

(d) For non-residential EV charging. For each public access charging facility, fleet charging facility, workplace private access charging facility, or multi-family dwelling, the amount of electricity dispensed in kilowatt hours to vehicles per FSE;

(e) For each public transit agency, the amount of electricity dispensed to or consumed by vehicles used for public transportation in kilowatt-hours per FSE. The report must be:

(i) Separated by use for light rail, streetcars, aerial trams, or electric transit buses; and

(ii) Separated by electricity used in portions of their fixed guideway system placed in service before and after January 1, 2012 [DD(39)];

(f) For entities reporting forklift charging, the amount of electricity dispensed to or consumed by forklifts per FSE. The report must be separated by electricity used to charge forklifts built in or before model year 2015 [DD(40)] and electricity used to charge forklifts built in model year 2016 and after. The reporting entity must provide the number of electric forklifts in the above model year groups (in and pre-2015 versus post-2015).

(g) For entities reporting fuel cell electric forklift, marine vessel, airplane, or rail fueling, the amount of electrolytic hydrogen dispensed to or consumed by forklifts, marine vessel, airplane or

locomotive per FSE. The reporting entity must provide the number of fuel cell electric forklifts, marine vessels, airplanes or locomotives.

(gh) For eTRU, eCHE, or eOGV, the amount of electricity dispensed to or consumed by the equipment per FSE.

(hi) For other fuel cell and non-fuel cell electric transportation applications, the amount of electricity or electrolytic hydrogen dispensed to or consumed by the equipment per FSE with transaction type approved by Ecology, as Tier-2 FPW.

(4) Specific reporting parameters for hydrogen used as a transportation fuel.

(a) The quantity (in kg) of hydrogen fuel dispensed per FSE, as required in WA RFS, and by vehicle weight category: LDV & MDV and HDV.

(b) For hydrogen fuel cell forklifts, the amount of hydrogen fuel dispensed (in kg) per FSE.

(c) For hydrogen reported with a pathway that claims carbon intensity reductions for shifts in time of electricity use for electrolytic hydrogen production, the quantity of electricity (in kWh) used to produce hydrogen for each hourly window must be reported with transaction type "FCV Fueling - Smart Electrolysis" and the following requirements must be met:

(i) The quantity of electricity used for each hourly window and carbon intensity values using the hourly carbon intensity value of electricity provided in table (hourly CI value of electricity per quarter) under WAC 173-424-LTFP must be reported; and

(ii) Upon Ecology's request, the reporting entity must provide documentation showing the quantity of electricity used during a reporting period broken down by hourly windows.

Commented [DW3]: This language is expanded to include marine vessels, aircraft, and rail. While these types of transportation are currently exempt from the CFP, they may choose to opt-into the program as there is considerable interest in the using hydrogen powered fuel cell electric technology to reduce GHG emission in these transportation sectors.

Commented [DW4]: This entire section requiring hourly reporting is virtually impossible to report by the providing utility. For instance, BPA, the provider of electricity to the majority of utilities in the state, does not provide hourly electricity portfolio data. Utilities do not or only very rarely and/or only in special circumstances, purchase electricity on an hourly basis.

Table 1, Pg 39

Table 1 has a separate category for generic "hydrogen", which would include both fossil and non-fossil hydrogen. These two types of hydrogen should be separated, similar to other fossil and non-fossil fuel types. In maintaining consistency with treatments of other fossil and non-fossil fuels and maintaining technology neutrality with the electricity used to charge non-hydrogen based batteries, Table 1 amendments should **Option 1:** amend the column heading "electricity" to "electricity used to charge hydrogen based and non-hydrogen based batteries" **(or Option 2:** include adding non-fossil hydrogen into the alt fuel column, and label in the last column as "fossil hydrogen" or add fossil hydrogen to the natural gas and propane column, and revise the reporting requirements accordingly.

WAC 173-424-CI (beginning pg 50)

(3) Statewide/Established carbon intensities.

(a) Regulated parties, credit generators and aggregators must use the statewide average carbon intensities listed in Table 4 under WAC 173-424-TBLE for the following fuels:

- (i) Clear gasoline or the gasoline blendstock of a blended gasoline fuel;
- (ii) Clear diesel or the diesel blendstock of a blended diesel fuel;
- (iii) Fossil CNG;
- (iv) Fossil LNG; and
- (v) Fossil LPG; and
- (vi) Fossil Hydrogen

(b) A biomethane hydrogen supplier may use the applicable CI value in Table 4 under WAC 173-424-TBLE, or apply for a specific carbon intensity under WAC 173-424-OCI.

(c) For electricity suppliers for non-hydrogen based and green electrolytic hydrogen based batteries,

(i) The utility-specific and statewide average electricity carbon intensity is calculated annually under WAC 173-424-DCIE and posted on Ecology website.

(ii) Credit generators or aggregators may use a carbon intensity different from the utility-specific average under (c)(i) if the party generates lower carbon electricity or green electrolytic hydrogen at the same location as it is dispensed into a motor vehicle consistent with the conditions of the approved fuel pathway code under WAC 173-424-DCIE(3)

(4) Carbon intensities for established fuel pathways. Except as provided in subsection (3), regulated parties, credit generators, and aggregators can use a carbon intensity that CARB or OR-DEQ certified for use in the California LCFS or Oregon CFP programs provided that:

(a) The carbon intensity value for the fuel pathway is adjusted for consistency with WA- GREET 3.0 including the adjustment for fuel transportation distances and indirect land use change, as applicable. The adjusted carbon intensity for the established fuel pathway can be used after Ecology has reviewed and approved it for consistency with WA-GREET; or

(b) Matches the description of a fuel pathway listed in Table 4 under WAC 173-424-TBLE. For hydrogen produced using biomethane or renewable power, the producer of the hydrogen must:

(i) Demonstrate to Ecology that the carbon intensity value in Table 4 is appropriate for its production facility, and

(ii) Submit attestations on an annual basis that the renewable power and biomethane attributes, as applicable, were not claimed in any other program except for the federal RFS. Any such claims under the federal RFS must be made for the same use and volume of biomethane or its derivatives as it is being claimed for in the CFP, or the claim under the CFP is invalid.

(5) Primary alternative fuel pathway classifications. If it is not possible to identify an applicable carbon intensity under either section (3) or (4), then the regulated party, credit generator, or aggregator has the option to develop its own fuel pathway and apply for it to be certified under WAC 173-424-OCI. Fuel pathway applications fall into one of two tiers:

Commented [DW5]: WA has definitions of green electrolytic hydrogen in law in multiple locations, and consistent with our request to maintain technology neutrality, the CI for electrolytic hydrogen will be established through the electricity CI used for charging both hydrogen based and non-hydrogen based batteries. For instance Subsection (9)(g)(iii)(D) of this section, treats the electricity used for a transportation fuel (though a non-hydrogen based battery) equally with hydrogen production using renewable electricity.

(a) Tier 1. Conventionally-produced alternative fuels of a type that have been well-evaluated. Tier 1 fuels include:

- (i) Starch- and sugar-based ethanol;
- (ii) Biodiesel produced from conventional feedstocks (plant oils, tallow and related animal wastes and used cooking oil);
- (iii) Renewable diesel produced from conventional feedstocks (plant oils, tallow and related animal wastes and used cooking oil);
- (iv) Natural Gas; ~~and~~
- (v) Biomethane from landfills; anaerobic digestion of dairy and swine manure or wastewater sludge; and food, vegetative or other organic waste; and
- (vi) Alternative Jet Fuel.

(b) Tier 2. Ecology will start accepting Tier 2 applications on July 1st, 2025. Tier 2 includes all fuels not included in Tier 1, including but not limited to:

- (i) Cellulosic alcohols;
- (ii) Biomethane from other sources;
- (iii) Fossil Hydrogen;
- (iv) Renewable hydrocarbons other than renewable diesel produced from conventional feedstocks;
- (v) Biogenic feedstocks co-processed at a petroleum refinery
- (vi) Alternative Jet Fuel;
- (vii) Renewable propane; and
- (viii) Tier 1 fuels using innovative methods, including but not limited to carbon capture and sequestration or a process that cannot be accurately modeled using the simplified calculators.

(6) Applicants seeking a provisional carbon intensity. If a fuel production facility has been in full commercial production for at least 90 days but less than 24 months, it can apply for a provisional carbon intensity.

- (a) The applicant shall submit operating records covering all periods of full commercial operation in accordance with subsections (2) through (5).
- (b) Ecology may approve the provisional carbon intensity under subsection (9).
- (c) At any time before the plant reaches a full 24 months of full commercial production, Ecology may revise as appropriate the operational carbon intensity based on the required ongoing submittals or other information it learns.
- (d) If, after a plant has been in full commercial production for more than 24 months of full commercial production, the facility's operational carbon intensity is higher or lower than the provisionally-certified carbon intensity, Ecology will replace the certified carbon intensity with the operational carbon intensity in the Oregon Fuels Reporting System and adjust the credit balance accordingly.
- (e) If the facility's operational carbon intensity appears to be lower than the certified carbon intensity, Ecology will take no action. The applicant may, however, petition Ecology for a new carbon intensity that reflects the operational data. In support of such a petition, the applicant must submit

Commented [DW6]: Multiple parties have announced and are establishing projects or exploring establishing production and testing facilities for zero emission aircraft. Moving Alternative Jet Fuel and all forms of non-fossil hydrogen (used in some forms of alternative jet fuel as well as other transportation fuels) into Tier 1 supports the recognition and incentives provided by the Legislature for producing and deploying non-fossil hydrogen in these zero-emission aviation projects. Additionally, the production of alternative jet fuel that Twelve's process will be producing for credit under the CFP, includes the binding of CO with renewable hydrogen or hydrogen produced electrolytically, both utilizing hydrogen from non-fossil feedstocks. In reviewing the text of the draft rule, we request clarification for what appears to be an overlapping or possibly conflicting treatment of hydrogen in calculation of its pathway in what seems to be both Tier 1 or Tier 2 pathway classifications.

Additionally Hydrogen is listed as a Tier 2 fuel on page 52 in WAC 173-424-CI(5)(b)(iii), while in the Tier 1 section on pg 51 in WAC 173-424-CI(3)(b), it states: *A hydrogen supplier may use the applicable CI value in Table 4 under WAC 173-424-TBLE, or apply for a specific carbon intensity under WAC 173-424-OC.*

In neither Tier 1 or Tier 2 treatment of hydrogen is a distinction drawn between fossil feedstock and non-fossil feedstock hydrogen. To allow both components of alternative jet fuel production processes that may include combining non-fossil hydrogen, we request that at a minimum, to provide the correct alignment of incentive for production of low or no carbon fuel, non-fossil feedstock hydrogen be called out specifically for Tier 1 treatment.

a revised application packet that fully documents the requested reduction. **If the lower CI is supported by the documentation, Ecology will adjust the credit balance accordingly.**

Commented [DW7]: Adding this language will provide incentives for a facility to run as efficiently as possible and provide financial incentives to operate under a continual improvement model.

WAC 173-424-DCIE Determining the Carbon Intensity of Electricity

Commented [DW8]: Comments and suggested amendments to this section are to reflect technology neutrality in determining the CI of electricity used to charge non hydrogen and hydrogen (green electrolytic) hydrogen based batteries

(1) **Utility-Specific electricity mix.** The carbon intensity of the electricity used in a utility service **area for charging of a non-hydrogen based battery or hydrogen electrolysis** is calculated based on the mix of resources **the electricity** used to generate the electricity used using the most recent year fuel-mix report published by the Washington Department of Commerce under RCW 19.29A.140. No later than December 31 of each year, except that Ecology may revise the carbon intensity of electricity for 2023 no later than June 15, 2023, Ecology will

- (a) Post the updated utility-specific electricity carbon intensity for the next year on the Ecology webpage;
- (b) Post the updated utility-specific carbon intensities for the next year on the Ecology webpage; and
- (c) Add the new fuel pathway codes to the Ecology Fuels Reporting System effective for Q1 reporting for the next year.

(2) **Statewide electricity mix.** The carbon intensity for the statewide electricity mix will reflect the average carbon intensity of electricity served in Washington and be calculated by using the carbon-intensity of electricity from the most recent year as published by Department of Commerce under RCW 19.29A.140.

(3) **Unspecified electricity.** The emissions associated with electricity generated from unspecified electricity is considered as generated using natural **gas**.

Commented [DW9]: This is too vague - gas generation can generate electricity from a range of generators that would produce widely disparate numbers. Commerce calculates a default emissions number for unspecified electricity.

(4) **On-site renewable electricity generation.** For on-site generation of electricity using renewable generation systems such as solar or wind, applicants must document that:

- (a) The renewable generation system is on-site or directly connected to the electric vehicle chargers **or hydrogen electrolyzers**;
- (b) The fuel pathway codes listed in Table 4 under WAC 173-424-TBLS for solar-generated or wind-generated electricity can only be used for the portion of the electricity dispensed from the charger, **or used for hydrogen electrolysis**, that is generated by that dedicated renewable energy system;
- (c) Any grid electricity dispensed from the charger **or used for hydrogen electrolysis** must be reported separately under the statewide electricity mix or utility-specific fuel pathway codes; and
- (d) RECs are not generated from the renewable generation system or, if they are, then an equal number of RECs generated from that facility to the number of MWh reported in the Washington Fuels Reporting System 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 **or green electrolytic hydrogen** claimed as a vehicle fuel in the Clean Fuels Program, credit generators and aggregators may retire renewable electricity certificates that meet the following qualifications:

(a) Renewable Energy Certificates (RECs) retired in order to claim a carbon intensity other than the statewide mix or utility-specific mix must be certified by the Green-e Program under the Green-e Renewable Energy Standard for Canada and the United States version 3.5, or by a certification system approved by Ecology as being substantially equivalent. Unbundled RECs being used to claim low-carbon electricity through book and claim accounting must be certified at the wholesale level, while RECs used in a power purchase agreement or Utility Renewable Electricity Product may be certified at the retail level.;

(b) RECs must be generated by an electric generator that was placed into service after 2023, or in the case of biogas generators they must meet the new date requirements of the Green-e Standard;

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

(d) RECs must be recorded and retired in a recognized REC tracking system. In addition to recognizing the Western Renewable Energy Generation Information System, Ecology may recognize additional REC tracking systems upon a request from a registered party. In reviewing those requests, Ecology will consider whether the tracking system is comparable to WREGIS and if it has systems in place to ensure accurate issuance and tracking of RECs.

(6) **Carbon intensity of renewable electricity.** The carbon intensity of solar, wind, geothermal, hydropower, **renewable hydrogen produced through electrolysis** and ocean power renewable electricity is deemed to be zero. For renewable electricity generated from biomass, biogas, **and** biodiesel, and **hydrogen produced from biomass or biogas**, the generator must file a Tier 1 or Tier 2 fuel Pathway application to determine the carbon intensity of its electricity. Ecology may adopt an efficiency adjustment factor for biogas to electricity **and biogas to hydrogen** pathways that include emissions reduction credits in order to maintain the program's incentive for energy efficiency.

(7) **Utility Renewable Electricity Products and Power Purchase Agreements.** Electric utilities and Electric Service Suppliers may apply via a **Tier 1 or** Tier 2 fuel pathway application for Ecology to assign a carbon intensity to one or more of their renewable electricity products or a specific power purchase agreement, which may then be used to generate credits from charging electric vehicles **or producing green electrolytic hydrogen** attributable to the use of such products or agreements. All of the following requirements apply to such applications

(a) Notwithstanding WAC 173-424-OCI, Tier 2 applications made under this section must include:

(i) A letter describing the power purchase agreement or Utility Renewable Electricity Product, the existing or planned source, or sources, of electricity and environmental attributes, and the terms by which it is being offered to customers;

Commented [DW10]: We do not understand the rationale for this in-service date.

Commented [DW11]: Hydrogen is not a primary fuel, it is an energy carrier/battery, thus its CI will be calculated from the electricity used for its original "charging". In addition, renewable hydrogen is defined throughout state law. Renewable electricity cannot be generated from hydrogen that is not already established as renewable hydrogen according to state law and physics.

Commented [DW12]: Only allowing this pathway in Tier 2 may delay production and use of clean fuels that should be incented under this program

(ii) Samples or examples of bills, invoices, contracts, or other documentation that an entity claiming renewable energy under this product could provide to Ecology to prove that their electric vehicle charging is covered by the product or agreement;

(iii) In the case of a Utility Renewable Electricity Product, any filings with, and orders by, the Washington Utilities and Transportation Commission, governing boards of consumer-owned utilities, or any other local governing board that approves the product; and

(iv) An estimate of the amount of electric vehicle charging **or hydrogen production** attributable to customers for the product or agreement.

(b) Ecology will review pathway applications under this section to determine if they result in a substantially similar environmental outcome to the sources of renewable energy required under section (5) of this rule. In reviewing a utility product or agreement that contains multiple sources of power, Ecology may use the estimate under paragraph (a)(iii) of this section to determine if sufficient renewable energy that is substantially similar to the requirements of section (5) is included in the product to cover transportation-related charging that may be claimed under the CFP. Ecology may revisit this determination annually using the annual fuel pathway report.

(c) Annual Fuel Pathway Report. The annual fuel pathway report for pathways covered by this section must include information to update the sources or sources of electricity or environmental attributes that were used in the prior year and are planned for use in the year in which the report is submitted. That documentation must include retirement records for any RECs used to lower the claimed carbon intensity of the electricity being used by customers of those products in the Clean Fuels Program for the prior year. If the product is certified by the Green-e Program, proof of completion of final verification of the product must be included, or a validation statement if the product is undergoing the program's Customer Procurement Review. That documentation must also update the estimate of the amount of electric vehicle charging **or non-fossil hydrogen** attributable to customers using the products or agreements. Fuel pathway reports required by this section are due by June 30[DD63], notwithstanding WAC 173-424-OC1(g)(iii)(C).

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(c) "... the error will be corrected by withholding **or increasing** an equal number of credits ..."

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(4) "... for that electric vehicle or charging equipment **or hydrogen electrolyzer**, and consistent ..."

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We oppose the deletion of 2(a)(i) – (v) Please explain why only projects funded by WS DoT remain eligible to generate advance credits.

WAC 173-424-GCCZF1 Generating and Calculating Credits for ZEV Fueling Infrastructure Pathways

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(iv)(C) At least ~~three~~ one OEMs have ~~has~~ confirmed that the station meets technical certification or from the US DOT or similar certifying agency as meeting an industry standard that is applicable to at least two other FCEV types for HRI protocols expectation, and their customers can fuel at the stations

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(B) Renewable hydrogen or green electrolytic hydrogen (or alternatively: "non-fossil hydrogen") content of 65 percent or greater.

(vii) The station must be operational within 24 months of application approval. If the applicant fails to demonstrate the operability with 24 months of approval or provides a demonstration that the delay is due to circumstances beyond the applicants control, then the application will be canceled. The applicant can reapply for the same stations eligible only for 8 years of crediting.

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(g)(iv)

"The station owner must maintain records demonstrating that any new equipment added as a result of the expansion in capacity, including storage and compression

Commented [DW13]: The WA legislature has defined both renewable and non-emitting generation as eligible to meeting our goals of carbon neutral and carbon free electric generation under the Clean Energy Transformation Act [CETA] and recognized both renewable hydrogen and green electrolytic hydrogen in multiple policies promoting the advancement of clean energy in the state. Requiring 65% "renewable content" seems arbitrary and not in alignment with the state's clean energy policies

Commented [DW14]: One only has to look at the current supply chain disruptions for many facilities of a similar type. Adding this clause will allow discretion, and avoid penalties, if similar circumstances arise in the future.

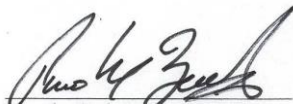
Commented [DW15]: This sentence is incomplete in the current draft. Is the assumption that compression was the intended ending?

Thank you for considering these comments. We look forward to working on this important CFP rulemaking with you.

Sincerely,



Michelle Detwiler
Executive Director, RHA



Tim Zenk
Executive Director, WGHA



Evan Ramsey
Sr. Director, Renewables,
Bonneville Environmental Foundation

s/ _____

Gary Ivory
General Manager
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