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Attn: Adam Saul
Climate Pollution Reduction Program
Department of Ecology
PO Box 47709
Olympia, WA 98504-7709

RE: RHA Public Comments on Proposed Amendments to Clean Fuels Program Rule

Dear Mr. Saul:

The Renewable Hydrogen Alliance (RHA) appreciates the opportunity to comment on the Department of Ecology's (the Department) proposed amendments to Washington Administrative Code Chapter 173-424, which governs the Clean Fuels Program (CFP). RHA is a regional non-profit trade association enabling access to safe, affordable, and renewable hydrogen for communities across the Pacific Northwest. Our 80+ members represent the full value chain of the hydrogen ecosystem – hydrogen technology and service providers, equipment manufacturers, project developers, public transit agencies, labor unions, utilities, and many others with an interest in the clean and renewable hydrogen sector.

The Clean Fuels Standard is an essential program to reduce greenhouse gas (GHG) emissions from the transportation sector by incentivizing the supply of low-carbon and renewable transportation alternatives. Appropriate inclusion of new clean transportation solutions is critical to encourage the formation of the fuel markets that support and enable this market-based policy mechanism.

Renewable and clean hydrogen are expected to play a critical role in the supply of clean fuels across the economy. Hydrogen fuel cell electric vehicles (FCEVs) are an alternative to battery electric vehicles (BEVs) that achieve the same zero-emission performance at the tailpipe, while allowing for the performance and range flexibility enabled by a stored clean fuel. Moreover, hydrogen remains an essential input for the production of clean derivative fuels, including renewable diesel, alternative jet fuel, methanol, and ammonia. Total demand across these direct and derivative end uses is expected to represent a significant portion of overall transportation sector fuel usage. A recent report[1] by the WA Department of Commerce estimates that to meet state climate goals, over 25 percent of all energy consumed in the state

[1] Washington State Department of Commerce. (January 2024). "Green Electrolytic Hydrogen and Renewable Fuels: Recommendations for Deployment in Washington."
https://deptofcommerce.app.box.com/s/widfnmxbo8ijt3uozpoq91jzapu4dhae

of Washington will be provided by hydrogen. Establishing a viable market for clean and renewable hydrogen will be an essential component of achieving the state's clean energy goals.

As the Department considers CFS program updates to better reflect hydrogen policy and technology advancements, RHA strongly encourages staff to incorporate the following principles to guide the inclusion of hydrogen as a transportation sector fuel into the existing CFS.

Focus on Outcomes. Fuel suppliers and vehicle end users need the ability to pursue use cases that best meet their needs, while reducing their carbon intensity. The longer usage cycle offered by hydrogen vehicles can support a variety of use cases, including heavy-duty vehicles, longer operational duty cycles, long routes, or light-duty vehicles whose duty cycles require higher resilience and uptime (e.g., police cars), all of which should be considered valid applications for hydrogen to reduce transportation sector emissions. By focusing on the GHG emissions reduction outcomes instead of specific vehicle classes and use cases, Washingtonians are free to choose the solutions that best meet their needs. Recent examples of deployed hydrogen vehicles that showcase the diverse applications for hydrogen FCEVs include: use of a Toyota Mirai as a police vehicle in rural areas; use of hydrogen fuel cell buses for long routes and rural service; use of hydrogen forklifts for long duty cycle applications; use of hydrogen ferries.

Expect Innovation. While Washington has confirmed that hydrogen FCEVs will be an essential part of the state's transportation decarbonization strategy for heavy-duty freight, there are a variety of additional viable applications under development today and expected to emerge in the near future. Transportation solutions are continuing to surface and mature, with hydrogen-powered vehicles expected as a near-term solution for many applications that are challenging to address with BEVs. As the hydrogen industry works to rapidly mature transportation solutions across land, maritime, and aviation sectors, any eligibility requirements established through the CFS should offer flexibility for emerging and maturing technologies.

While the CFS program makes intentional design choices to direct program funds towards the end-use applications that have the greatest need for financial support, we urge the Department to apply an inclusive and expansive lens to the types of hydrogen-powered vehicles that may be necessary to achieve Washington's clean transportation goals and prioritize enabling investments accordingly.

Regional competitiveness. The CFS program design should support market stability and transactability while reinforcing Washington as a competitive state for clean energy investment by offering competitive levels and types of incentives. The recent Pacific Northwest Low-Carbon Hydrogen Analysis [2] looked at the opportunities to foster a cross-border hydrogen ecosystem

[2] Pacific NorthWest Economic Region (PNWER), Morrison, M., Deloitte Canada, & Hamberg, K. (2025). *Pacific Northwest Low-Carbon hydrogen analysis*.

between British Columbia and Washington State, including a review of the low-carbon fuel standards in British Columbia, Washington, and Oregon. The report recommends that these three markets seek to achieve a stable regulatory environment coupled with complementary incentives to fully realize the ability to drive GHG reductions in the transportation sector. The proposed exclusion of capacity crediting for light-duty and medium-duty hydrogen refueling could reduce the attractiveness of marketing hydrogen fuel in Washington over other western clean fuels markets. Washington's attractiveness as a clean fuels market is also based on right-sized regulation that can reduce barriers to entry relative to larger markets like California.

Re-interpret and adjust policy. Washington can build upon the existing policy work from states like California and deploy innovative approaches that avoid known pitfalls and incorporate emerging best practices. As the hydrogen market matures, Washington should be cautious about wholesale adoption of California policies that could create additional regulatory or administrative burdens and unintentionally disincentivize participation. While California's hydrogen regulation is grounded in over 20 years of industry collaboration and policy development for hydrogen specifically, some of these policies were developed to add on to existing policies appropriate for the fourth-largest economy in the world. Washington should look to adjust and amend regulations it adopts from other jurisdictions as appropriate to be fit for purpose for its own policy environment.

Technology neutrality. New fuel production pathways and end-use applications will continue to emerge in the coming years, and the CFP should include a wide range of pathways to ensure that the transportation sector has a robust portfolio of tools to meet emissions reduction targets. Especially for hydrogen fuel production, the CFP should retain optionality across feedstocks and production pathways, as material constraints on the electric sector are likely to encourage continued innovation elsewhere. Eligibility based on feedstock or technology type, rather than carbon intensity, limits innovation and opportunities for new technologies.

RHA reflects below opportunities to incorporate these principles into specific elements of program design.

Station Eligibility for Capacity Crediting for Hydrogen Fueling Stations

RHA applauds the Department for including hydrogen fueling station capacity crediting in the CFS. Hydrogen fueling station capacity crediting is already in place in California and has been an essential tool to support station owners and operators as the hydrogen fuel market reaches commercial scale. RHA would encourage the Department to undertake the following adjustments to the proposed station eligibility criteria to ensure that this credit generation opportunity appropriately encourages participation from hydrogen stations.

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https://www.pnwer.org/uploads/2/3/2/9/23295822/pnwer_pacific_northwest_low-carbon_hydrogen_analysis.pdf

All hydrogen fueling stations, not just heavy-duty, should be eligible for crediting. Exclusive focus on heavy-duty trucks creates implementation challenges, stifles market development, and encourages customer discrimination. The proposed rule language, "built to primarily service heavy-duty FCEVs," is vague and does not align with the reality of hydrogen refueling station development. Many developers of hydrogen refueling stations are focusing on the ability to fuel more than one class of vehicle by installing separate islands and fueling infrastructure for light-, medium-, and heavy-duty vehicles. Medium- and heavy-duty vehicles may be able to fuel at the same station islands using the same infrastructure, so for station owners offering fueling for different classes of vehicles, the exclusion of light-duty and medium-duty crediting will create unnecessary complexities in accounting and reporting for station capacity and vehicle types served.

The Hydrogen Fuel Cell Partnership (H2FCP), in their soon-to-be-released *California Hydrogen Mobility Vision & Roadmap,*[3] has consensus deployment targets to accelerate hydrogen mobility in four distinct market development phases for all vehicle classes (light-, medium-, and heavy-duty): 'Demonstration, Launch, Scale, and ZEV Success.' This document is a result of decades of real-world experience and one that Washington should utilize as a valuable resource.

Finally, as has been seen in the California ZEV market, different vehicle classes as well as different vehicle technologies (i.e., BEV, FCEV, etc.) have interdependent synergies and will play complementary roles in the transportation sector, and all are necessary to build the market needed to meet Washington's GHG emissions reduction goals.

Station capacity credit pathways should be available on Day 1. Public and shared fleet hydrogen fueling stations are already online and under development in Washington. Station capacity credits represent an essential revenue stream for these stations, and station owners and operators should have the ability to fulfill any regulatory eligibility requirements at the launch of the program, proposed for October 2025.

RHA specifically recommends that Washington adopt the existing Station Operational Status System (SOSS) developed and maintained by H2FCP, formerly known as the California Hydrogen Fuel Cell Partnership. H2FCP has already developed a standardized and industry-approved process for listing stations and reporting station availability. Use of an alternate system would create unhelpful and unnecessary redundancy that will segregate the PNW market from the over 55 fueling stations already listed in SOSS.

As the agency with regulatory oversight over the compliance and verification process for stations to be eligible for CFS credits, the Department should work with H2FCP and local industry, including RHA, to ensure that SOSS is prepared for participation from Washington

[3] H2FCP is attaching this white paper to the comments they are submitting to the Department on this rulemaking. The white paper has also been submitted as part of H2FCP's public comments to CARB on the ZEV Forward Dialogue Sessions.

stations and that a standardized, state-managed verification process is available to Washington station operators.

Similarly, the Department should establish a standardized, state-managed process for securing verification from vehicle OEMs and should ensure that process is right-sized to the local hydrogen economy and vehicle OEMs active in the state. Toyota has confirmed their availability and interest to support station validation and acceptance in Washington; the Department should ensure that, at a minimum, two other vehicle OEMs are prepared to issue station acceptance and should establish a standardized process for convening the relevant agency and industry staff to review and approve station performance.

Given their statutory authorities, at minimum, Washington Department of Agriculture[4] Weights and Measures and the Washington Department of Commerce, Office of Renewable Fuels[5] should be involved in the development of a state process for station acceptance on SOSS in coordination with H2FCP. To ensure that these processes are aligned with industry standards and best practices for customer protection and safety, RHA encourages the Department or another appropriate state entity to convene a workgroup including representatives from industry and impacted agencies. This workgroup should also assess whether agencies have appropriate statutory authority to ensure the safe and standardized deployment of hydrogen fueling infrastructure, or if legislative action is needed to enable agencies to undertake these regulatory responsibilities to ensure consumer protection and public safety.

The capacity crediting application deadline of December 2030 must be extended.
Organizations that have developed or are planning to develop hydrogen fueling stations have shared that it can take between two to five years to get a station up and running and ready for crediting, especially with Washington's nascent regulatory framework for fueling station standards. This timeline also assumes that the necessary processes would already be put in place by the Department for station verification. Limiting the application period to December 31, 2030, would severely constrain the pool of participating stations and thus the growth of the hydrogen fueling market. The Transportation Electrification Strategy[6] developed by the Washington Department of Commerce states that the role of FCEVs in the state will start to become clearer through 2035 as the hydrogen market begins to mature. Additionally, the core modeling case in Commerce's 2023 hydrogen report to the state legislature[7] assumes FCEV adoption to begin in earnest after 2030. Limiting access to capacity crediting to only the earliest

[4] Washington State Department of Agriculture has statutory authority for motor fuels quality and weights and measures through the Motor Fuel Quality Act (RCW 19.112) and the Weights and Measures Act (RCW 19.94).
[5] Washington Department of Commerce Office of Renewable Fuels was established by RCW 43.330.565 to work closely and collaborate with other state agencies to drive the deployment of renewable fuels.
[6] Washington State Department of Commerce. (February 2024). "Transportation Electrification Strategy (TES)." https://www.commerce.wa.gov/growing-the-economy/energy/clean-transportation/ev-coordinating-council/transportation-electrification-strategy/
[7] Washington State Department of Commerce. (January 2024). "Green Electrolytic Hydrogen and Renewable Fuels: Recommendations for Deployment in Washington." https://deptofcommerce.app.box.com/s/widfnmxbo8ijt3uozpoq91jzapu4dhae

of early adopters undermines the rationale of the capacity crediting program, which is to support the build-out of the necessary ZEV fueling network by providing financial incentives to station developers to build stations before the demand can fully support them. RHA recommends that the Department extend this deadline until December 31, 2035, and monitor hydrogen market conditions through the late 2020s to understand if additional extensions are required.

Public access provisions must be designed to encourage participation from public fleet operators, especially transit agencies. Transit agencies are currently leading regional adoption of hydrogen FCEVs, with nearly a dozen agencies piloting or evaluating hydrogen and multiple transit agencies advancing plans for local fueling stations to support their fleets. Participation by transit agencies in the HRI program will be an essential component to increasing regional access to hydrogen fuel.

Transit agencies within RHA membership have indicated that the point-of-sale requirements could be challenging and/or inappropriate for their expected fuel transactions if they do not offer a publicly available fueling option. Specifically, some transits are considering shared facility options that would allow other municipal fleet vehicles to fuel at their stations. Under the existing inter-agency agreements, those costs are tracked and invoiced on a weekly, monthly, or quarterly basis, rather than paid at the station. A similar system is expected to be used for hydrogen vehicle fueling.

Accordingly, the Department should amend station eligibility requirements to permit alternative payment schemes for stations that are applying as shared facilities, rather than public facilities.

Focus on glide-path carbon-intensity targets, rather than feedstock or technology, for a stable and transactable marketplace. The use of feedstock and/or technology-based targets is inconsistent with the carbon-intensity (CI) based targets established for other fuel types and has the potential to financially harm station operators and fuel users by creating supply "cliffs" in an already tight market. An objective, verifiable CI-based standard is consistent with the Clean Fuels Program's original design, better reflects the actual climate impact of different production pathways, and adheres to international standards and best practices identified by Washington and British Columbia in their recent cross-border hydrogen study.[8] Further, CI-based standards support a technology-neutral approach and pave the way for continued innovation in hydrogen supply and other energy sector technologies.

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[8] Pacific NorthWest Economic Region (PNWER), Morrison, M., Deloitte Canada, & Hamberg, K. (2025). *Pacific Northwest Low-Carbon hydrogen analysis*. https://www.pnwer.org/uploads/2/3/2/9/23295822/pnwer_pacific_northwest_low-carbon_hydrogen_analysis.pdf

Specifically, the categorical ban on all fossil-derived hydrogen by 2030 will likely present significant challenges to industry maturation, especially as new hydrogen production methods, including pyrolysis, as a co-product of clean refining, and ethanol-based production continue to mature and leverage increasingly complex blending of fossil and non-fossil feedstocks.

We respectfully recommend that the Department adopt a lifecycle-based CI threshold as the primary basis for hydrogen credit eligibility and establish CI targets in line with state climate goals, rather than implementing a categorical ban on hydrogen produced from fossil feedstocks.

<u>Biomethane Book-and-Claim</u>

While RHA appreciates the impetus to restrict eligible biomethane to a more limited geography, restricting book-and-claim eligibility will significantly increase frictions for out-of-region suppliers. In order to ensure availability of sufficient local supply to meet compliance obligations, Washington State must consider additional policy support for the emerging local biomethane sector to ensure adequate local supply to meet expected demand. The hydrogen industry in particular is facing challenges in securing clean, local energy supplies given electric sector bottlenecks, and increased availability of biomethane resources represents an important feedstock flexibility to support the production of renewable hydrogen.

Additionally, limiting the ability to source and claim the environmental attributes of biomethane to three quarters of a year after injection while also circumscribing eligible supply by geography presents an unreasonable barrier for an emerging clean fuel sector. Initial regulatory standards for use of renewable electricity credits (RECs) for compliance with state renewable portfolio standards usually allowed for banking of RECs for a period of time before they would "expire" and this was only tightened up once the market had appreciably matured. RHA proposes that the Department allow for a period of at least two years between sourcing and claiming biomethane environmental attributes for the CFS while this market further develops.

RHA also supports the specific biomethane book-and-claim exemption for AJF production. Production of alternative jet fuel and other derivative clean fuels products is a technically and financially complex process; while Washington has already taken intentional steps to support the development of a local AJF industry, additional financial and compliance support is needed to enable maturation of the industry. Creating additional flexibility on compliance pathways for AJF producers is a constructive and appropriate way to encourage developers to pursue local projects.

<u>Utility-Specific Carbon Intensities for Production of Precursor Hydrogen for AJF</u>

RHA strongly supports the ability of producers of alternative jet fuel (AJF) to use a utility-specific CI for the electrolytic hydrogen that is used in this production. The CI of the hydrogen input is a major component of the overall CI for a supply of AJF, and this allowance supports the hydrogen producers who are going to great lengths to source the lowest-CI electricity available for hydrogen production to ensure appropriate CI scores for their AJF and RD products. However, sunsetting this provision in 2033 does not allow adequate time for the AJF industry to develop and RHA recommends that the Department harmonize the sunset date for utility-specific CIs to the 2046 sunset date for allowing biomethane for AJF to be sourced anywhere in North America. These utility-specific CIs represent greater accuracy in accounting for lifecycle carbon emissions and tracking the reductions therein.

RHA appreciates the hard work by the Department staff to develop a Clean Fuels Standard that supports maturing technologies like hydrogen-fueled vehicles and alternative fuels production pathways. The proposed rules lay a framework that can create material incentives for in-state fuel and infrastructure suppliers, and we encourage the Department to ensure that compliance pathways discussed in these comments are appropriately adjusted to allow widespread participation from this rapidly growing and essential clean energy industry.

Sincerely,

RSmith

Rebecca Smith
Senior Director, Policy and Education