

# FIRSTELEMENT FUEL

FirstElement Fuel Inc. | 5281 California Ave, Suite 260, Irvine, CA 92617 | 949-205-5553

August 31, 2022

Ms. Rachel Assink  
Department of Ecology  
Air Quality Program  
P.O. Box 47600  
Olympia, WA 98504-7600

Subject: Proposed changes to Chapter 173-424 WAC Clean Fuels Program Rule

Ms. Assink and Ecology Staff,

Thank you for the opportunity to comment on the changes identified in the July 18, 2022 proposed rule. FirstElement Fuel (FEF) is the largest retail hydrogen provider in California, the United States and the world. Our success is a direct result of the proactive climate policies that have been established in California under their Low Carbon Fuel Standard (LCFS) as well as their forward-looking grant programs for hydrogen infrastructure. Since 2016, we have fought alongside the California Air Resources Board (CARB) and the California Energy Commission (CEC) to deliver reliable, cost-effective, business and environmentally sustainable hydrogen fueling stations, and have learned some hard earned and costly lessons with the state of California. We are heartened to see the Washington rule mirroring much of the good work established in California, specifically the Hydrogen Refueling Infrastructure (HRI) crediting strategy. However, we believe the proposed light-duty station capacity crediting cap of 250 kg/day and medium and heavy-duty station crediting cap of 1,150 kg/d are much too small to incentivize and support the buildout of appropriately sized, commercial-ready hydrogen fueling stations. Furthermore, we believe it is essential that each program have it's own 2.5% deficit pathway to ensure adequate infrastructure buildout.

## Light-Duty HRI

Using state of California grants, FEF in 2015 initially deployed hydrogen refueling stations with maximum capacities of 250 kg/day based the conventional wisdom at the time that smaller, single hose stations would be less expensive to deploy and sufficient to support the early fuel cell vehicle market. However, these small-capacity stations proved to be prohibitively expensive to operate, which means they cannot sustain themselves economically in the long-term while offering a competitive price of fuel. They were also quickly overwhelmed by demand, leading to a poor customer experience and constraining fuel cell electric vehicle adoption. Learning and advancing from these early, small-capacity stations, we now deploy stations with capacities greater than 1,200 kg/d and four simultaneous hoses, which provide a similar refueling experience for customers switching from gasoline vehicles and minimize customers' wait times. This larger capacity station also enables a business model where the sale of hydrogen can economically support station operation and maintenance, which means the station can sustain itself economically once utilization reaches commercial levels. These larger capacity stations

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depend on the California HRI program and the LCFS credits, which enable FEF to secure the capital to build a larger-capacity station today that will be economically self-reliant when fuel cell electric vehicle adoption reaches commercial levels. We urge the staff to reconsider the small size capacity cap on light-duty stations of 500 kg/d with a 50% capacity credit limit, and mimic the limits set in the CARB HRI program of 1,200 kg/d with no capacity credit limit.

## Medium and Heavy-Duty HRI

Staff proposes to limit the station capacity to 2,300 kd/d with a 50% capacity credit limit (1,150 kg/d). Similarly to the arguments above, these limits are much too low. As part of the California Hydrogen Coalition (CHC), the hydrogen station providers have all reached consensus that even the recent California Air Resources Board (CARB) medium and heavy-duty HRI proposal of 3,000 kg/d capacity cap with a 50% credit limit is too low to (1) fuel a reasonable number of trucks per day, (2) sustain a business case over the long-term, and (3) remove investment uncertainty to allow station deployment. FEF and the CHC recommend that the program be designed to incentive at least a 6,000 kg/d station capacity with three options for limiting the capacity credit as described below.

### Capacity Re-Certification

Rather than imposing a low station capacity cap, one methodology could be to limit credit generation with the opportunity to expand, or re-certify, to a larger, full station capacity once a threshold of 50% hydrogen sales is reached. This is similar to the pathway allowed in the current California light-duty HRI program.

### 50% Derate

As recommended by staff, a simple methodology to limit over-credit generation would be to limit the capacity credit to 50% of the station capacity. Although simple in concept, the implementation at a station that has both light-duty and medium-duty vehicles refueling at the same dispenser will likely be a challenge for accurate reporting. However, FEF believes this reporting challenge can be overcome and would support this option as long as the station capacity is raised to 6,000 kg/d with the credit generation limit at 50% (3,000 kg/d).

### Crediting Band

The third option to limit over-crediting is to establish a band of 2,000 kg/d credits that remains constant until the hydrogen sales reach 4,000 kg/d (i.e., credit + sales < capacity cap). This approach provides a stable HRI credit during the initial station deployment thereby enabling market confidence and investment to deploy stations. The credit “self-sunsets” when the hydrogen sales and capacity credits reach the station capacity limit of 6,000 kg/d.

## Summary

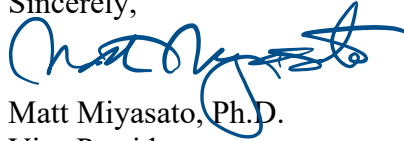
FEF appreciates the opportunity to comment on the proposed changes to the Clean Fuels Program and applaud the framework included in the staff proposal. However, specifically with respect to the HRI, we urge staff to take advantage of the lessons learned in California by allowing larger stations with sufficient credit generation to ensure private investment and

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sustainable operations. We also highly recommend 2.5% deficits for both the light-duty HRI and the MHD HRI each under their own separate pathway (i.e., 5% combined for both programs) as is proposed in California. We look forward to the opportunity to explain these recommendations in more detail and working with you to make the Clean Fuels Program a success.

Sincerely,



Matt Miyasato, Ph.D.

Vice President

Strategic Growth & Government Affairs