Hydrogen Fuel Cell Partnership (David Park)

Please see the letter and accompanying California Hydrogen Mobility Vision and Roadmap from the Hydrogen Fuel Cell Partnership as feedback to the Clean Fuel Standard Rulemaking.

August 1, 2025

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RE: Comments on Proposed Revisions to Chapter 173-424 WAC (Clean Fuels Program Rule)

Dear Mr. Saul,

On behalf of the Hydrogen Fuel Cell Partnership (H2FCP), thank you for the opportunity to provide input on Washington's proposed revisions to the Clean Fuels Program Rule. This rulemaking represents an exciting step in Washington's journey toward a cleaner, more resilient transportation future. We appreciate the leadership your team continues to bring to this important effort.

Founded in 1999 as the California Fuel Cell Partnership, H2FCP is a unique public-private collaboration committed to expanding the market for fuel cell-electric vehicles (FCEVs) powered by hydrogen. Together with our members, we work to advance zero-emission mobility through real-world deployments, public education, and practical tools to accelerate market readiness. While we are rooted in California, our work increasingly spans the western United States. We view the Pacific Northwest as a critical region in building a seamless, hydrogen-powered corridor that connects communities, economies, and clean air goals across the I-5 spine and into Canada.

We are encouraged to see hydrogen refueling infrastructure recognized in Washington's Clean Fuel Standard, and we commend the Department for this inclusion. Given our history of hydrogen transportation in California, we submit that infrastructure serving **light-, medium-, and heavy-duty (L/MD/HD)** FCEVs should all be eligible for credit under the rule. Station developers have indicated that their business models increasingly depend on designing sites that include at least one fueling island for light- and medium-duty vehicles alongside heavy-duty service. Limiting credits to HD-only configurations

risks undercutting this integrated approach, especially as Washington lays the groundwork for broader ZEV adoption across multiple sectors.

California's Low Carbon Fuel Standard (LCFS) may offer a helpful precedent here. There, the program supports hydrogen infrastructure serving all vehicle classes, which has helped encourage private investment, accelerate early station development, and unlock economies of scale. California also hosts the only current open market for light-duty FCEVs, and we're seeing growing public and private interest in expanding this market up the I-5 corridor into Oregon, Washington, and beyond. Your leadership now can help enable that continuity.

To support this vision, we've included with this letter our *California Hydrogen Mobility Vision & Roadmap*. This white paper outlines deployment targets across four market development phases: Demonstration, Launch, Scale, and ZEV Success and is being leveraged to guide stakeholders along the path to a 100% ZEV transition. The roadmap reflects years of real-world learning, agency collaboration, and cross-sector dialogue, including alignment with federal hydrogen hub planning and broader ZEV transition initiatives. It's intended as a resource within California and for partners like Washington who are designing future-ready programs rooted in practical experience.

As we look ahead, we'd welcome the opportunity to collaborate with you on our shared goals of decarbonization, clean air, and economic opportunity. H2FCP is committed to supporting efforts beyond California by sharing knowledge, lessons learned, and technical guidance to help make the hydrogen transition faster, smarter, and more successful for everyone.

Thank you again for your leadership, and for the chance to be part of this important moment in Washington's clean transportation journey.

Warm regards,

David Park
Director of Industry Affairs

California Hydrogen Mobility Vision & Roadmap

Draft – July 2025

Prepared by the Hydrogen Fuel Cell Partnership

Purpose & Methodology

California continues to demonstrate global leadership in reducing air pollution while expanding economic prosperity, despite having fewer tools than ever before.

Hydrogen technologies represent one of the few scalable options for achieving near-term emission reductions, including delivering real-world NOx and PM reductions to support California's SIP obligations, while simultaneously enabling the long-term success of a 100% zero-emission vehicle (ZEV) transition and fostering new economic growth.

This white paper builds upon California ARCHES Hydrogen Hub and other ZEV transition activities to provide a 'north star' vision and roadmap with clear deployment targets to accelerate hydrogen mobility, as identified in the Hydrogen Market Development Strategy.

It was developed through decades of real-world experience, existing state agencies, and other publicly available analyses, and extensive discussions among public and private participants to 1) inform stakeholders, 2) guide future policy and investment decisions, and 3) support the achievement of California's ZEV and air quality regulations.

Why Hydrogen & Why Now?

Hydrogen and fuel cell electric vehicles (FCEVs) are essential for California's comprehensive decarbonization strategy.

Emissions benefits from the initial market launch for hydrogen cars and trucks can eliminate over 600,000 metric tons of GHG, nearly 1,500 metric tons of NOx emissions, and over 730 million gallons of petroleum. The initial infrastructure launch can also provide nearly 4,000 new jobs in the California economy. These benefits grow exponentially as the market transitions to 100% ZEVs[1].

FCEVs provide rapid refueling, long range, and operational performance that meets the needs of both consumers and commercial fleets. With battery electric vehicles already advancing in many light-duty and last-mile applications, hydrogen technology offers a scalable, complementary path for light-, medium-, and heavy-duty transportation, where duty cycles demand high energy density and flexible refueling.

Hydrogen in mobility applications will also complement and enhance the state's energy sector by providing increased diversity, resilience, and expanded renewable integration. California's leadership is critical to transition the market from pilots to full commercialization and enable national and international market expansion. With SIP submittals due and federal funding windows closing, the next 18 months are make-or-break.

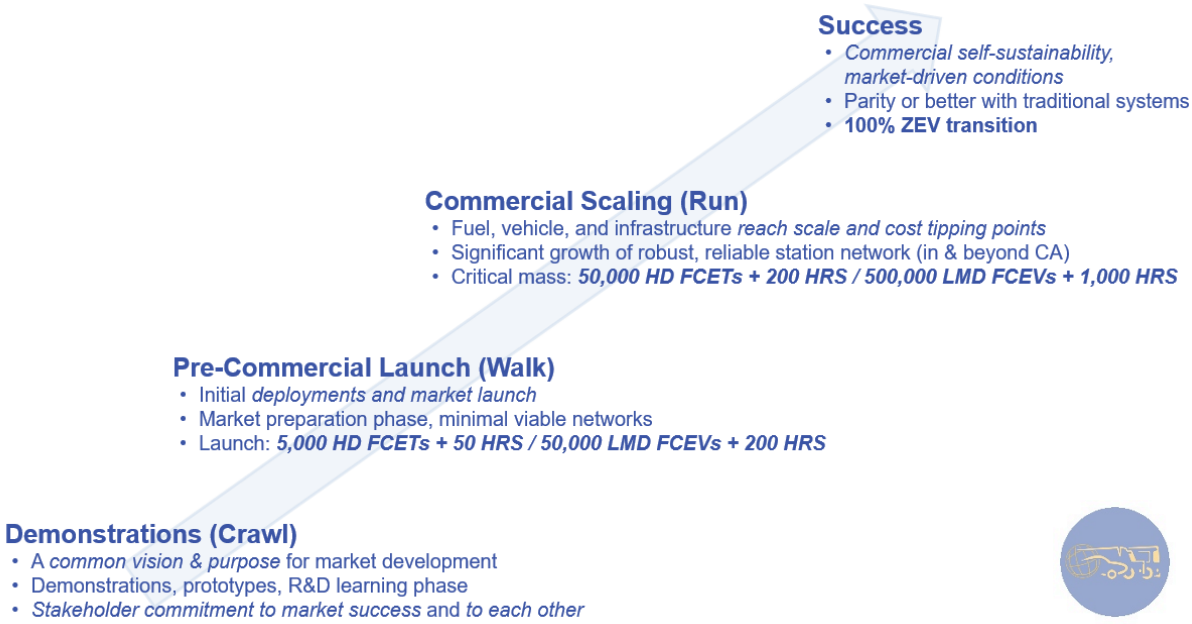
[1] Extrapolated from H2FCP's Vision for Freight Movement in California-and Beyond, California Fuel Cell Revolution and Workforce Projections to Support Hydrogen FCEV Fueling Infrastructure documents

California must act decisively to scale hydrogen infrastructure before investment and regulatory cycles move on.

Vision & Market Development Phases

The California Hydrogen Mobility Vision and Roadmap charts a clear path through four distinct market development phases — **Demonstration, Launch, Scale, and ZEV Success** (i.e., Crawl, Walk, Run, and 100% ZEV Success) — ultimately achieving a self-sustaining, zero-emission transportation market supported by a reliable, widespread hydrogen refueling network.

Each phase has distinct characteristics, needs, and expectations, and is marked by specific FCV and hydrogen refueling station (HRS) deployment targets. These *deployment targets are essential* for market transparency and to align and enable coordinated stakeholder actions and investments from early market investments to a successful transition to 100% ZEVs. These targets also augment and expand on the roadmap elements identified in the Hydrogen Market Development Strategy and recent ZEV guidance request found in the Governor's Executive Order 27-25.



These vehicle and station targets are designed to:

- Support full ZEV compliance across light-, medium-, and heavy-duty vehicle categories
- Enable cost reductions through scale, including addressing near-term pump pricing to enable faster fleet adoption
- Drive private investment by providing certainty and confidence in California's hydrogen mobility direction
- Leverage the heavy-duty station network as a structured, systematic backbone to serve both freight and urban mobility needs
- Align with and accelerate California's environmental and economic priorities

Members of the Hydrogen Fuel Cell Partnership (Partnership) and other stakeholders are actively working to further build out the components of these market phases to improve market transparency and confidence to spur market demand and trigger private investments to accelerate decarbonization and depollution through hydrogen technologies.

Strategic Imperatives

1. COORDINATED INFRASTRUCTURE ROLLOUT
    - Deploy a minimum viable public fueling network to launch (walk) HD and LD/MD markets, demonstrating progress and potential for scaling (run) market development
    - Prioritize strategic station siting to maximize utilization and redundancy
    - Implement a staged, coordinated rollout to align with vehicle deployments

2. STATE INCENTIVES & LEADERSHIP
    - Expand state financial and permitting support for station construction and hydrogen supply
    - Provide long-term regulatory clarity and fleet incentive alignment to enable cost reductions and greater OEM commitments – *strong public policy signals and support enable the market certainty needed* to drive private investment and enable both an amplifying effect of public funds and transition to private market demand pull.
    - Use SIP planning and other mechanisms to unlock state and federal support and private capital

3. TECHNOLOGY & MARKET READINESS
    - Acknowledge early-stage technology challenges while investing in station reliability, throughput, and uptime for long-term improvements and success
    - Accelerate production of low-carbon hydrogen and diversify supply chains

4. WORFORCE, SAFETY & PUBLIC READINESS
    - Integrate workforce training and job creation planning in hydrogen deployment
    - Streamline permitting and other processes via interagency coordination and Authorities Having Jurisdiction (AHJ) education
    - Advance public and fleet operator education to build market awareness and acceptance

5. COMPREHENSIVE VEHICLE STRATEGY
    - Support the build-out of the entire hydrogen mobility ecosystem – enabling light-, medium-, and heavy-duty applications to thrive – as all ZEVs and applications are needed to achieve state objectives and equitably meet user needs
    - Promote policies that recognize synergies between vehicle classes, station infrastructure, and statewide air quality goals
    - Highlight economic and environmental benefits of hydrogen, including GHG and criteria pollutant reductions

The Partnership's pending *Hydrogen Truck Market Development Guiding Principles* whitepaper recognizes that no single factor determines hydrogen's success. Instead, challenges are deeply interconnected: policy, cost, infrastructure, and technology reinforce or constrain each other in feedback loops. The analysis presents core issues that will determine hydrogen's success, highlighting that the technology itself is not limiting hydrogen mobility.

Even in their nascency, FCEVs are already operationally viable and capable of competing with incumbent technologies. The success of hydrogen mobility is more dependent on improvements in market conditions, which can be accelerated or hindered by public and private action. With scale and experience, technology will only improve and become more cost-effective.

The real need now is to create the right market conditions, business models, and policy stability to let this hydrogen technology grow and thrive.

Call to Action

Achieving this vision requires bold, coordinated action across all sectors. Stakeholders must work in coordination, from state agencies and local governments to OEMs, fuel providers, station developers, and fleets.

The time for pilot programs has passed; ***California must now lead a strategic, scaled rollout of hydrogen mobility that delivers economic opportunity, environmental justice, and climate resilience along the path to transportation decarbonization.***

This white paper expands and augments other hydrogen mobility and ZEV activities and should be integrated and referenced as part of the state's larger goals and objectives.