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## California Hydrogen Car Owners Association (CHCOA) Proton Monthly – August 2024

August 31, 2024

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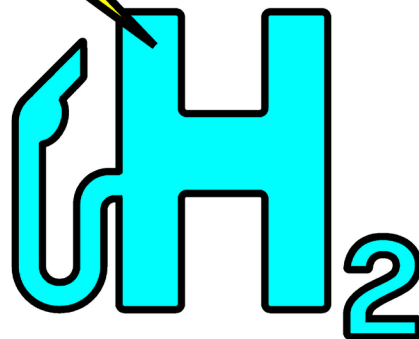
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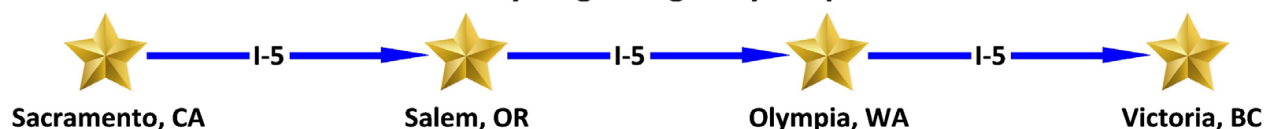
# Hydropower To Hydrogen

California is not the only State on the Hydrogen Highway active in the production of H<sub>2</sub>. With the passage of WA Senate Bill 5588 in 2019, Public Utility Districts (PUDs) in Washington State were permitted to produce and sell hydrogen.

Situated alongside apple orchards, by the Columbia River in Eastern Washington, Douglas PUD will be using surplus energy from their Wells Dam Hydropower Project to produce H<sub>2</sub>. And, they are building a hydrogen refueling station nearby at their headquarters. Read all about it on Page 2.



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## From Water, to Water

(Hydropower to Hydrogen to Water)

### Looking forward to a side-trip along the Hydrogen Highway

By: Bobbie Cane

Every summer, Greg and I take a trip to Washington State to visit family. This year, along with our eldest grandson in tow, we were lucky to be able to include in our trip a visit to the Douglas County Public Utility District (DCPUD) Baker Flats Hydrogen Production Plant.

The Baker Flats facility is located on the Columbia River in Eastern Washington, and is powered with green energy from the Wells

Hydroelectric Dam. Our tour guides were Todd Vibbert, Facilities Manager, and Scott Moon, Hydrogen Operations and Maintenance Specialist.

The plant, which broke ground in 2021, is the first of its kind in the United States and, when Phase 1 is complete later this year, will produce 2 tons/day of renewable hydrogen. One primary goal of this plant is to dampen hydroelectric generation swings that generally happen between 2 p.m. and 9 p.m. on most days. The surplus electricity will be used to produce hydrogen.



*Moon explains the operation of the facility's Phase 1 electrolyzer.*

had to be navigated along the way. Work began in

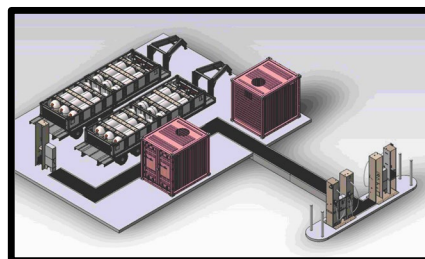


*Left to Right; Cane, Moon and Vibbert in front of hydrogen production facility.*

Moon, who had previously worked for 20 years in a hydrogen production plant in Kalama, WA, described the numerous challenges that

earned in 2019 with the passage of (Washington) Senate Bill 5588. Prior to the Bill's adoption, PUDs were not allowed to produce and distribute hydrogen.

In the first phase, this plant will fill mobile tube trailers. These trailers will take the hydrogen to other parts of Washington for industrial uses and, later this



*Artist's Rendering – HRS: Tube trailers; compression/chilling; dispensers*

year, to the PUD's new light-duty hydrogen fueling station (HRS) 5 miles south at the PUD headquarters. In future phases, as the plant ramps up capacity, multiple heavy-duty trucks will additionally be able to fuel simultaneously at the Baker Flats facility.

Since CHCOA is planning to take a trip on the [Hydrogen Highway](#) in September of next year, they welcomed us to take a side trip to fuel at the new HRS. We are looking forward to doing just that!

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DCPUD has produced some great video-tours of the project! Take a look here:

<https://douglaspud.org/about-us/hydrogen-facility/>

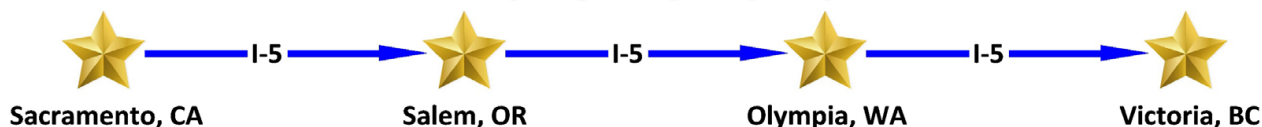
and here:

[https://www.ncwlife.com/news/douglas-county-pud-shares-update-on-hydrogen-fueling-station/article\\_6ad808a0-60b3-11ef-8054-2f479087d958.html](https://www.ncwlife.com/news/douglas-county-pud-shares-update-on-hydrogen-fueling-station/article_6ad808a0-60b3-11ef-8054-2f479087d958.html)



*Douglas County PUD is "All-In" on light-duty FCEVs. Pictured is one of eight Toyota Mirais already on site for their future hydrogen fleet.*

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## An Agonizingly Slow Turnaround But a Turnaround Nonetheless

- August 30, 2024 -

Yesterday, August 30, showcased two events where the turnaround of hydrogen in transportation (including for LD FCEVs!) was on display. Hydrogen car drivers have waited a long time for this agonizingly slow change in our luck but, more and more, the evidence points to a better future.

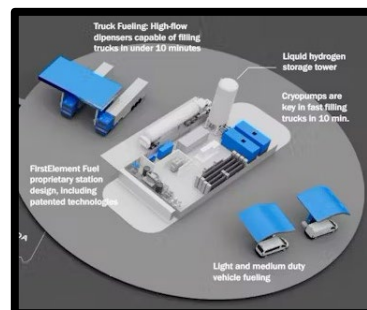
The [first event](#), the official launch of the ARCHES hydrogen hub at an in-person celebration, showcased hydrogen-powered transportation. Speakers included Governor Gavin Newsom, Senator Alex Padilla, ARCHES CEO Angelina Galiteva and US DOE Under Secretary for Infrastructure David Crane. Featured were heavy-duty hydrogen truck models from Cummins, Hyundai, Toyota/Kenworth, Nikola, Hyzon and others. Perhaps most encouraging was that light-duty FCEVs were also on prominent display. As reported from the event by Keith Malone, Program Director for Hydrogen at [RE+ Events](#), LD FCEVs were amply represented; Honda had their new Fuel Cell CR-V displayed, there were numerous Mirais on display and the [Hydrogen Fuel Cell Partnership](#), “made sure that everyone knew to include (H2) cars.”

For us, the most heartening remarks came from David Crane: *“As an old person, I’ll tell you, you sometimes don’t recognize when you are at a pivotal moment in history; at an inflection point. In the world of energy, this is a pivotal moment. Hydrogen can be one of the pillars of the 21<sup>st</sup> century...”*



ARCHES inaugural event at the Port of Oakland/  
FirstElement HRS. Photo Credit – Keith Malone

The **second** event was the announcement of two selected projects to advance the US Department of Energy’s National Clean Hydrogen Strategy. Both projects were in what is called Topic 2. Topic 2 undertakings are described, as follows: “Selected projects will develop and demonstrate a low-cost, standardized, and replicable advanced hydrogen fueling station of the future that can meet the needs of commercial scale medium- and heavy-duty truck fueling.”



FirstElement Port of Oakland  
mixed-use station. The Fresno  
Next-Gen will be similar.

FirstElement Fuel (FEF) was selected with a proposed federal funding amount of \$10M for a mixed-use station in Fresno. Matt Miyasato, Chief Public Policy and Programs Officer at FEF confirmed, via email, that the station would include light-duty dispensers.

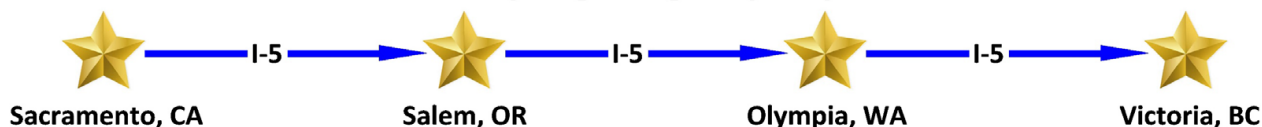


ZEV Station California, LLC was also selected for a proposed \$10M funding amount. Although not confirmed, it appears that the ZEV Station H2 project will be constructed along the I-10 corridor, near Palm Springs.

ZEV Station California could not be contacted before press time to confirm station details.



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## Alternative Fuel Takes Time

In the August 15<sup>th</sup> issue of the LA times, there appeared this article, titled: "Left high and dry, owners of hydrogen vehicles are suing":

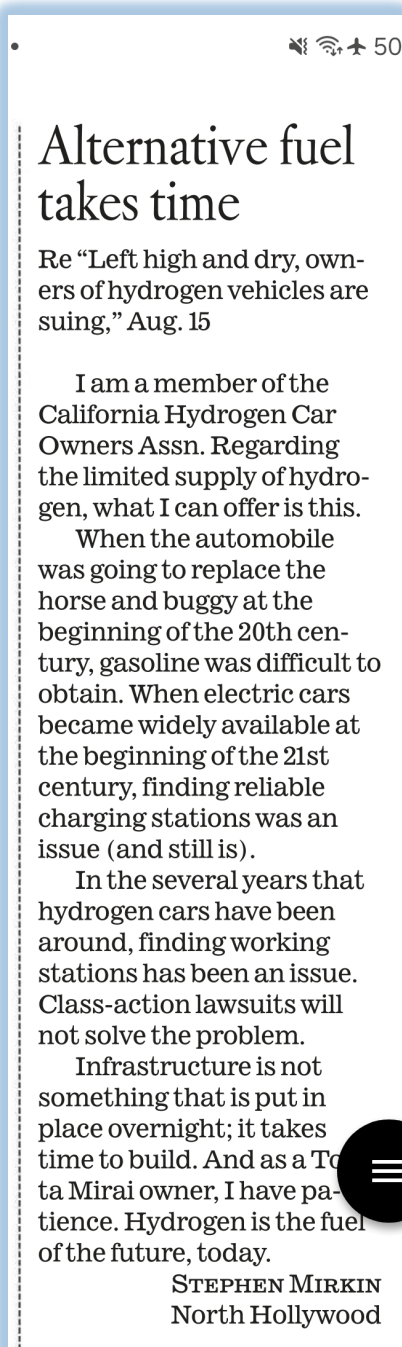
[https://edition.pagesuite.com/popovers/dynamic\\_article\\_popover.aspx?guid=811b2ad1-b844-486c-967d-6f6e146f71a6&v=sdk](https://edition.pagesuite.com/popovers/dynamic_article_popover.aspx?guid=811b2ad1-b844-486c-967d-6f6e146f71a6&v=sdk)

The reporter, Russ Mitchell, did credible and extensive research into the very issues that are plaguing most of the FCEV drivers today; high prices and unreliable/non-existent stations. He fairly highlights the upsides of FCEVs – no emissions, quick refueling, a longer range than an EV, and the fact that drivers really like their cars, but also goes into detail about a lawsuit against Toyota. The lawsuit claims that the car company misled buyers of the cars about the ease of obtaining hydrogen fuel. Along with details about the history of the hydrogen car industry and some of the reasons why the hydrogen refueling infrastructure is in such trouble that it led to a lawsuit against a car maker, he quoted Sen. Josh Newman who, while not disputing accounts of the class-action litigants, said that the California Energy Commission "did not follow through on levels of funding ...I think Toyota has been mistreated as badly as anybody".

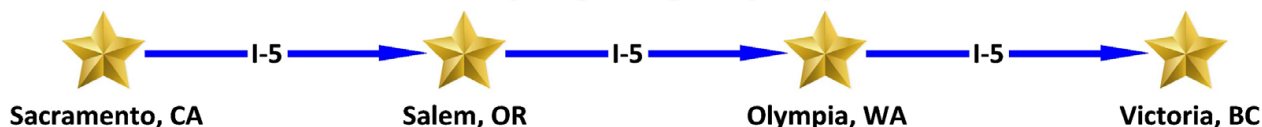


Hydrogen cars fuel up at TrueZero in Fountain Valley in 2023. (Allen J. Schaben / Los Angeles Times)

CHCOA member Steve Mirkin responded to this article, and it was printed on the editorial page. Here is a screenshot of his letter:



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## Concept 5 Boring Name, Big Opportunity

A recent meeting, hosted by the California Energy Commission (CEC), offered potential good news for LD FCEVs. On July 16, as a part of the **MD/HD Infrastructure Solicitation Concepts Staff Workshop**, Mark Johnson, CEC Air Pollution Specialist, introduced "Concept 5: LD Vehicle H2 Refueling Infrastructure".

The purpose of this Concept is to provide additional funding for LD or Mixed Use HRS specifically in San Francisco and Sacramento Counties. The concept has two funding proposals.

**PowerPoint presentation and event recording:**  
<https://www.energy.ca.gov/event/workshop/2024-07/staff-workshop-medium-and-heavy-duty-zero-emission-vehicle-infrastructure>

"Funding Lane 1" would provide \$10 Million (total) for new station construction; it would be LD focused but would also be able to support Mixed-Use. Included in this is a provision for \$500,000/station for Operations and Maintenance (O&M) for the new stations. Funding Lane 2 would provide \$5 Million in O&M funds for planned or operating stations where progress has been stalled due to cost constraints.

Thanks to all of you who submitted comments to the docket after the Workshop! Of particular note was the letter from Air Products and Chemicals, Inc.

(<https://efiling.energy.ca.gov/GetDocument.aspx?tn=258564&DocumentContentId=94596>) wherein they write,

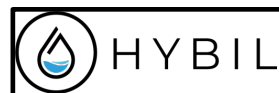
... "Air Products believes access to hydrogen and hydrogen fueling stations is the most significant obstacle to the rapid adoption of hydrogen in both the light-duty and the emerging medium- and heavy-duty transportation market sectors throughout the state. This obstacle can be solved through appropriate funding opportunities like the five solicitation concepts presented by the CEC."

If the Concept 5 funding proposal is approved, it will still take some time for the HRS situation to improve, but this shows that the CEC is acknowledging the dire situation for refueling H2 vehicles in the Sacramento and San Francisco Counties, and for that we are grateful.

## Hydrogen Snippets



### Sister Association Trek



Hybil, CHCOA's Sister Association in Norway, will take a trip to the new [Hellesylt Hydrogen Hub](#) for the opening ceremony in mid-September. The Hub, on the Geiranger Fjord, is a distance of about 330 miles from the trip's start in Oslo. The new Hub uses an onsite electrolyzer and receives its electricity from surplus hydropower. During their visit, Association members will fuel at the new station for about \$10/kg.

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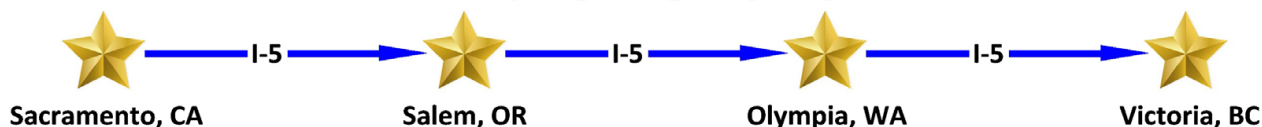
*If we hadn't earned our stripes before, we certainly have now...our second tow.*

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### LCFS Under Review

Proposed changes to the California Air Resources Board's [Low Carbon Fuel Standard \(LCFS\)](#) rules had a 15-day public comment period earlier this month. Station proponents have indicated that current LCFS credit levels have made the construction of new stations difficult and additionally, have been part of the cause of the high H2 prices. See CHCOA comments to these proposed changes [here](#). The public hearing to consider the low carbon fuel standard amendments is scheduled for November 8, 2024.

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**Status of the California Bills that CHCOA is currently tracking:**

The Legislative Update will be slightly delayed this month. The Legislature is still in session today (August 31), so the decision was made to delay the Update until it was clear which hydrogen-related bills were headed to the Governor's desk. The good folks at the California Hydrogen Coalition, who track all things hydrogen in California on a daily basis, have agreed to provide an update during the first part of September, along with a recommendation on how CHCOA members should advocate for the Governor's signature on H2 bills. Stay tuned.

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