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California Hydrogen Car Owners Association (CHCOA) Proton Monthly – September 2023

September 30, 2023



Big Rigs / Small Rigs, a “Symbiotic Relationship”



It’s a little strange to think that some of the largest, and some of the smallest vehicles on the road need one another in this emerging hydrogen market. As described in the April UC Davis [study](#), “*There appears to be significant value in having FCEVs in both light-duty and medium/heavy-duty applications, from the point of view that both types of vehicles are capable of helping to build large hydrogen markets.*” One aspect of this mutually beneficial – symbiotic – relationship is that light-duty (LD) FCEVs can provide near-term scalable demand for hydrogen while, in the long term, the large volume of hydrogen required to fuel future trucking fleets will bring down costs for everyone.

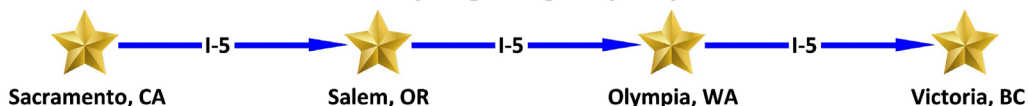
At CHCOA, we believe that it is undeniable that the lack of a reliable hydrogen fueling infrastructure in California is single handedly thwarting the success of these cars in the U.S. We look forward to working with the trucking interests as they construct the requisite hydrogen refueling stations. Numerous entities, including Chevron, Air Products, City of Lancaster, First Element, Hyzon and Nikola have stated their intent to build multi-use stations for heavy/medium duty and LD FCEVs alike.

I think you will agree that this issue of the Proton Monthly newsletter is well worth reading. Included herein:

- We traveled to Fullerton last week and had a productive meeting with State Senator Josh Newman and his District Director, Erica Lucia.
- On Sept. 18, we sat down with Mik Skvarla, H₂ lobbyist for the California Hydrogen Coalition (CHC) and the CA Hydrogen Business Council and his wife, Teresa Cooke, CEO of CHC, at Mik’s office at The Gualco Group. Together, these two make quite a team, possessing a storehouse of knowledge about the hydrogen industry in CA. We asked Teresa to provide a summary of the impact on FCEV drivers of the passage of Assembly Bill 126 (see below). We could write an entire article on what we learned from these two... and we will. Watch for it in next month’s newsletter.
- Our Intrepid Protoner of the Month is Cory Shumaker of Hyzon Industries. Cory has had some very interesting times in his FCEV. Additionally, he offers keen insights into the need for a close working relationship between the light-duty and heavy-duty FCEV interests.
- And, we welcome our Nordic sister association.

- Greg and Bobbie Cane
greg@h2tonps.org or bobbie@h2tonps.org

Join us on the Hydrogen Highway - September 2025



Steps Toward a Positive Future for FCEV's...



This past week, we had the honor of meeting with District 29 Senator (and fellow FCEV driver) Josh Newman, and Erica Lucia, his District Director. As many of you know, Newman is the most enthusiastic advocate of hydrogen cars in the CA Legislature.

We had previously met with Erica last month. At that meeting, she provided us with great insight into the many legislative bills related to hydrogen and why some have passed, and why some have failed. In addition, she outlined the difficulty of getting the message across that light duty FCEVs are a viable alternative to gasoline powered cars, and the obstacles that sometimes get in the way of that message.

The purpose of this recent visit was to brainstorm on ways to provide hope to FCEV drivers in these times of incredible refueling challenges. One of the ideas explored was the possibility of setting up an advisory committee made up of FCEV drivers. This committee could provide the feedback loop that has been missing as it will highlight the perspective of the FCEV "person on the street". Newman is very supportive of the idea of such a committee and thinks it should be fully funded. He will direct his staff to research what authority is needed in order to establish the committee. Additionally, he will coordinate with the Governor's Office of Business and Economic Development (Go-Biz) as a part of the process.

In the meantime, along with CHCOA, Newman's office will co-sponsor an FCEV virtual town hall meeting this November. Representatives from CEC and CARB will be invited to attend. As soon as we know the date, we'll publish the information in this newsletter, and on our website. In order to follow-up on the take-aways of the town hall, he will set up a meeting of the Senate Select Committee on Transitioning to a Zero-Emission Future in the Jan/Feb timeframe.

We FCEV drivers have always known that we are pioneers in this technology. Our hats go off to Senator Newman and to all of you who are still able to hang in there until improvement happens!



Legislative Corner

The Impact of the Passage of AB126

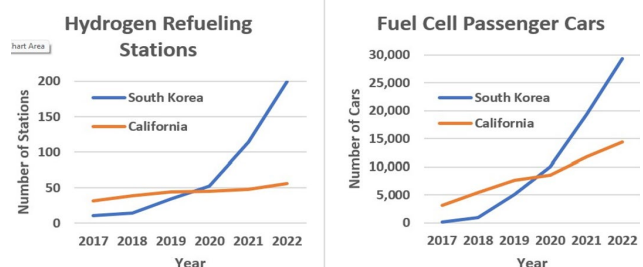
By Guest Columnist, Teresa Cooke, CA Lobby Exec. Director, CA Hydrogen Coalition

This year the legislature reauthorized the CA Energy Commission's Clean Transportation Program, the only state program that provides funding support for hydrogen fueling infrastructure. This was a years-long battle with Progressives in the legislature who wanted to eliminate the funding set-aside for hydrogen but thanks to champions like Senator Newman (Fullerton), Assemblywoman Irwin (Thousand Oaks) and Assemblyman Alvarez (San Diego) and numerous others, an agreement to continue dedicated funding for hydrogen infrastructure was struck in the last days of the 2023 legislative session. Our (CHC) deepest thanks to drivers that contacted their Assemblymember/Senator urging support for hydrogen - - it made a difference!

The agreement provides a minimum of 15% for hydrogen fueling until July 1, 2030, resulting in at least \$106,353,000. Additional funding may be available based on data from the Air Resources Board projecting greater demand for hydrogen stations. Until 2030, much of our mission will be overseeing Energy Commission spending, ensuring these stations are built to also serve medium-duty vehicles, and ensuring funds for heavy-duty hydrogen stations come from monies earmarked for heavy-duty zero emission vehicle refueling.

While this still leaves a considerable gap in spending between both technologies, it will continue to encourage private investment in hydrogen production and dispensing.

The South Korea Experience



The South Korea experience shows us what we intuitively know; that if enough H2 stations are built, LD FCEVs will succeed.



Beyond our Borders

Hydrogen is genuinely an international cause. Last month we became a sister-association to Hybil, the Norwegian Car Association. It's almost eerie how our current experiences with hydrogen in the LD FCEV space parallels theirs. In their most recent newsletter, they wrote: *The frustrations of California hydrogen car drivers "are very similar to ours, it concerns price, station availability, incentives, support schemes, free fuel card, how to dispose of cars if you get tired, etc."* Read more about this active group at <https://www.hybil.no/> and use the Google translator.



Intrepid Protoner of the Month



Cory Shumaker, Head of Business Development, Hyzon Motors

We are always pleased to find folks who not only work in the field of hydrogen, but who also drive an FCEV. We recently had a pleasant conversation with one such person: Cory Shumaker. Cory currently drives a Hyundai Nexa and has been working as the Head of Business Development for Hyzon Motors since 2020. Hyzon Motors designs and manufactures fuel cell technology for heavy duty trucks. Cory is lucky enough to live within 20 min of 7 H₂ stations in western Los Angeles, so fueling is not usually an issue for him, although he has had his moments (more on that later).

Cory's interest in hydrogen started in high school, and after getting his BA in electrical engineering, he started working in the field of hydrogen as an engineer, where he worked with a team at Vision Industries Inc. (aka Vision Motors) to create the world's first Class 8 fuel cell truck in Long Beach, California in 2011. After additionally earning an MBA, working for the California Hydrogen Business Council, and while simultaneously doing consulting work

Intrepid Protoner (cont.)

within the industry, he was recruited by Hyzon where he has been focusing on the business side of things. All told, to date his career in hydrogen has spanned 14 years.

He is adamant that the future is bright for hydrogen once the reliability and price issues get resolved. Currently, there are only 3 companies that make hydrogen for use in CA, but he thinks that within a few years, there will be more "players" and the price will drop quickly. Also, the hydrogen heavy-duty (HD) market is starting to ramp up, and that will help light duty (LD) FCEVs too. HD will bring down the price of hydrogen from large demand and LD vehicles bring down the price of all components. Heavy duty needs light duty and light duty needs heavy duty; it's a symbiotic relationship. Future H₂ truck stops will include dispensers for LD FCEVs, just like the truck stops of today. His prediction: By 2029, the problems with price and availability will only be bad memories.

He has taken many trips over the years in his FCEV, and, like the rest of us, has had to be towed a time or two (but sometimes that was on purpose 😊). He's gone to Yosemite and Joshua Tree among other places, but he had a particularly memorable trip to Pasa Robles on Christmas Day a few years ago. Everything was fine on the way there, but before starting for home, he realized that he was going to be about 30 miles short before reaching the fuel station in Santa Barbara. So, shortly after getting on the freeway, he found a large, semi-truck to get behind, and he stayed in the slipstream for 100 miles! He made it to Santa Barbara, with a bit of fuel to spare.

We look forward to the day when Cory's predictions about stress-free driving and an interdependent Big Rig/Small Rig relationship come true. Just recently we saw evidence of progress, a Hyzon liquid hydrogen-fueled truck traveled 540 miles without refueling in a [16-hour test run](#) in Texas.



Ok, so you didn't guffaw!

Why is hydrogen the smartest?

Because the rest of the elements are denser.

