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Prepared Comments for Workshop of 11-6-23

Additional submitted attachment is included below.

California Hydrogen Car Owners Association For Future

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Date: November 7, 2023

To: California Energy Commission
California Air Resources Board
Governor's Office of Business and Economic Development (GOBiz)

From: Barbara (Bobbie) and Greg Cane
California Hydrogen Car Owners Association

Subject: Prepared statement for Workshop:
Hydrogen Fuel Cell Electric Vehicle Infrastructure Opportunities and Barriers (11/6/23)

Thank you for the opportunity to take part as panelists on the subject Workshop. Our prepared statement is, as follows:

Introduction to CHCOA

We would like to thank CEC, CARB and Go-Biz for inviting us to this Workshop. We believe that great good can come from the expertise that you have assembled here.

- We have become very conscious of climate issues in the last few years, especially since we became grandparents. So, we decided to buy a zero-emissions car.
- We had not been impressed with battery-operated cars because of the "down-time" that is needed for charging, and so were drawn to the fuel cell car which we found out was very easy to fuel, taking only 5 minutes, similar to a gasoline vehicle.
- The fact that all 3 FCEV automakers were top-notch companies, was another plus.
- It seemed to us like there was a very real chance that FCEV's could coexist with Battery Electric cars in the market.
- Even though we knew that it was a new technology and that there may be glitches, as retired folks, who didn't need to be tied to a timetable, we wanted to help this promising industry get off the ground, especially since there were at the time, 3 refueling stations in the Sacramento area we didn't anticipate too many problems.
- We purchased the car two years ago and, like other FCEV drivers we have spoken to, we have been extraordinarily happy with it – it's easy to drive, it was easy to fuel, we don't need oil changes or other work, we get great driving range, and the only thing coming out of it is water.

- However, last December, after 4 hours of waiting at the West Sacramento station, we had to stay overnight at a hotel because the station closed, and we lacked enough fuel to return home. This situation was not uncommon. We have spoken to many others with similar experiences to ours, and most involved being towed. As you know, the situation in the Sacramento area has only deteriorated since then.
- This got us wondering if there was something we could do to improve the chances for success of these great cars. Long-story-short, we established the California Hydrogen Car Owners Assn. (shortened to CHCOA), a 501(c)(6) non-profit corporation.
- The main goal of the Association is to *diligently and courteously* advocate for hydrogen cars and hydrogen car drivers to make sure that light-duty fuel cell vehicles play a meaningful role in California's green energy future.
- From our own experience, and from everyone we've spoken to, from industry experts to the FCEV driver on the street, we are convinced that the lack of a reliable fueling infrastructure in California is single-handedly thwarting the success of these cars in the State.

Previous Station Development Goals

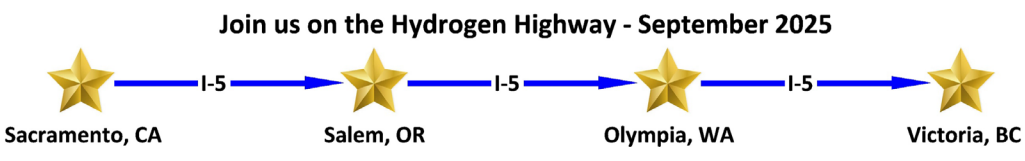
In preparation for this workshop, we read through the pertinent sections of the State's nine Annual Evaluations of FCEV and Station Deployment Goals. Although they could not say explicitly, if one reads between the lines, it becomes clear that the staff authors themselves were becoming more and more frustrated with the slow pace of station development and with the lack of hydrogen fueling reliability. In not one of the reports, from 2014 to 2022, were the future goals met for the number of hydrogen stations constructed.

Of course, hindsight is 20/20 and there is no value in assigning blame for missed goals. What is important now is that we regroup and recommit to construct the number of stations needed for these cars to succeed.

Hydrogen Station Reliability and Driver Attrition

We'd like to point out here just how difficult it is currently for hydrogen car drivers to fill their cars. Over the most recent 3 months, the average station uptime for the State has been only 51%. The highest availability occurred in mid-September and was 62%. The lowest availability occurred in mid-August at 42%.

Informally, in recent months, we've been tracking drivers' comments on Facebook related to station reliability. For us, the most telling comment was from a young woman who had just been in an accident and totaled her fuel cell vehicle. Her comment, *Happily, no one was hurt in the accident, but I'm glad that the car is totaled as I won't have to fight these fueling frustrations any longer and I can be rid of this car*.



Future Stations Needed to Succeed

As stated in multiple agency and international reports, university studies and manufacturers' white papers, station development must precede FCEV deployment. This is not a question of whether the chicken or egg comes first; station network development must lead. Fuel cell drivers innately know this, but if they forget, they are reminded each time they struggle to refuel their cars.

We see evidence of how this can work in the experiences of other countries. In South Korea, for example, in 2021 and 2022 (the most recent years for which data is available) the rate of increase in new station development was 97%, year over year. They now have more than 200 stations and have seen a concomitant increase in the number of light-duty FCEVs. They now have over 30,000 hydrogen cars on the road.

For California the number of stations has increased an average of 18%, year over year in 2021 and 2022. But, in 2023 we had 7 stations shutter their doors, a decrease of 11% to where we now have 55 stations.

California has the lowest station to FCEV ratio in the world. We must turn this around; it is time to regroup and recommit. To stay ahead of the FCEV curve, CHCOA has proposed two achievable goals.

- The first, that we open 200 stations by 2030. These stations will be required to have an average minimum uptime of 80%. The purpose of this goal is to provide hope to FCEV drivers.

- And second, we must have a steadfast and visionary additional goal of at least 1,400 stations by 2045. The purpose of this goal is to provide market confidence to manufacturers and station developers.

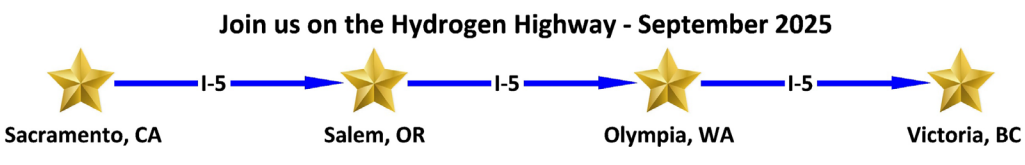
These goals will not happen without durable governmental policies along with administrative follow-up written into statute.

We should, as a group, also commit to one other essential goal. For better or worse, many in the public do not currently perceive hydrogen as green. We need to let it be widely known that the transition to net-zero hydrogen in transportation will happen at a rate faster than the grid becomes green.

High Cost of Fuel

It is clearly important to imbed equity into our decisions in order to make sure that Zero Emission Vehicles are available to disadvantaged communities.

We have met many FCEV drivers, possibly from disadvantaged communities, driving older hydrogen cars. They have told us that continuing to drive the car, with fuel prices as high as they are, is becoming impossible. A concern for high fuel prices needs to be a part of our Equity Action Plan. We need to see what can be done to bring prices down as soon as reasonably possible.



Citizens Advisory Committee for California Light-Duty Fuel Cell Electric Vehicles Infrastructure Improvement

(aka, Light-Duty FCEV Advisory Committee)

The proposed committee would be composed of seven members, selected by the *Senate Select Committee on Transitioning to a Zero-Emission Energy Future*. At least one experienced staff member would be assigned to provide professional and administrative support.

This committee is needed at the State level to support Light-Duty FCEVs. It would:

1) Force California to maintain focus on the requirements for a successful launch of these vehicles,
2) Provide an ongoing commitment to development of hydrogen refueling station infrastructure,
3) Provide near-term hope to existing and future FCEV owners in order to reduce attrition, and
4) Sunset after 200 stations are deployed.