DESPAIR AND OPTIMISM

COMMENTS FOR INFORMATIONAL HEARING

California State Senate

Select Committee on Transitioning to a Zero-Emission Energy Future

California's Zero-Emission Vehicle Infrastructure

California Hydrogen Car Owners Association For Future

TALKING POINTS:

Thank you for inviting Bobbie and I here today to speak. We, along with other hydrogen car drivers, started the California Hydrogen Car Owners Association in February of this year. Albeit still small, we are growing. As reflected in our mission statement, we, " build upon the great foundation created by the current hydrogen car owners' groups by *diligently and courteously* advocating for hydrogen cars and hydrogen car drivers in California."

HYDROGEN REFUELING INFRASTRUCTURE

- ✓ DESPAIR:
- ✓ OPTIMISM:
- ✓ HOW WE COULD DO BETTER:

TALKING POINTS:

Our talk will cover three areas:

DESPAIR: It really is very difficult to be a hydrogen car driver in California these days.

OPTIMISM: As tough as things are now, there are real reasons for hope.

HOW WE COULD DO BETTER: Here we have just a couple of suggestions from the, "Man on the Street".

DESPAIR:

- **Without exception, this is what we hear (and have experienced):**

  "*Love the car, hate the refueling.*"

TALKING POINTS:
Without exception, this is what we hear, and what we strongly believe, "Love the car, hate the refueling."

BECAUSE OF LACK OF FUEL & EQUIPMENT FAILURES,

LONG LINES ARE COMMON (HERE, 13 CARS)

TALKING POINTS:
Very often, a significant number of the state's 53* stations are out of commission due to a lack of fuel, or equipment failures. The stations that <u>are</u> operating very often have long lines. We took this picture last winter at the West Sacramento station. We are the car that is third from the last. We, along with three others, were not able to fuel that afternoon and had to stay overnight. We ended up spending the night in a nearby motel.

The worst times that we have seen in the last two years were last winter, and the most recent three weeks. Our Mirai is at home today for lack of fuel.

* - Stations on SOSS counted on 8/22/23.

DESPAIR:

- Recently read on Facebook:
  No one was hurt, but my Mirai was recently totaled. While I love the car, I'm secretly glad, as I won't have to fight the fueling hassles any longer.

- The City of Lancaster has 11 fuel cell cars. Ten of these were purchased used, as a result of drivers that have returned their cars.

TALKING POINTS:

A few weeks back, we read a most interesting post on Facebook. It said, *No one was hurt, but my Mirai was recently totaled. While I love the car, I'm secretly glad, as I won't have to fight the fueling hassles any longer.*

Last week we visited the City of Lancaster, the First Hydrogen City in the U.S. They have 11 fuel cell cars. Ten of these were purchased used, as a result of drivers that have returned their cars.

OPTIMISM:

- Synonymous driving to gas and diesel cars of today.
- No automaker has walked away from this technology.
- Streamlined permitting:
  The example of Assembly Bill 1236.
- "If we build it, they will come."
  The Story of South Korea.

TALKING POINTS:

But, like we say, there are real, tangible reasons for optimism:

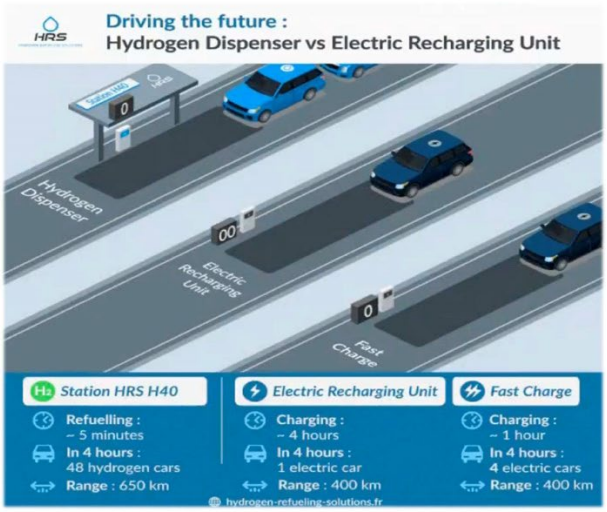
- Hydrogen cars have a driving experience that is nearly synonymous to the gas or diesel cars of today.
- No automaker has walked away from the technology.
- We see great hope for streamlined permitting of hydrogen fueling stations.
- This will work when there are enough stations. We'll look at how South Korea has succeeded, where we are failing.

SYNONYMOUS DRIVING

SHORTER REFILL TIMES

Comparison of EV Fast Charging, Electric Recharging Unit and Hydrogen Dispenser

Courtesy of HRS, Ltd



TALKING POINTS:

This 30 second clip compares the refueling/recharging time at:

- a hydrogen dispenser,
- a standard electric recharging unit, and,
- a fast charger.

It represents the number of vehicles that can renew their full driving range over a 4-hour period.

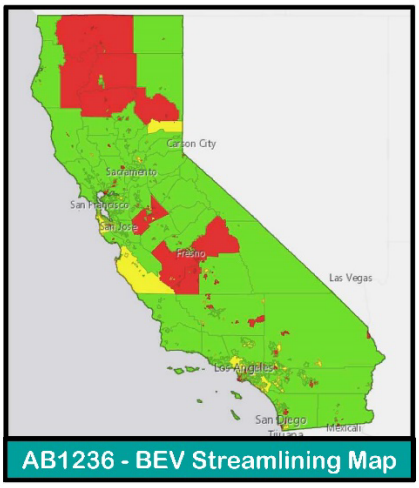
- For the standard electric charger - 1 car
- For the fast charger - 4 cars
- For the hydrogen dispenser - 48 cars

STREAMLINED PERMITTING

The example of Assembly Bill 1236:

Historically, permitting has been the longest and most complicated portion of station development.

But, there is a strong reason for optimism. SB 1291 (Archuleta) provides for H_2 fueling permit streamlining similar to BEVs.

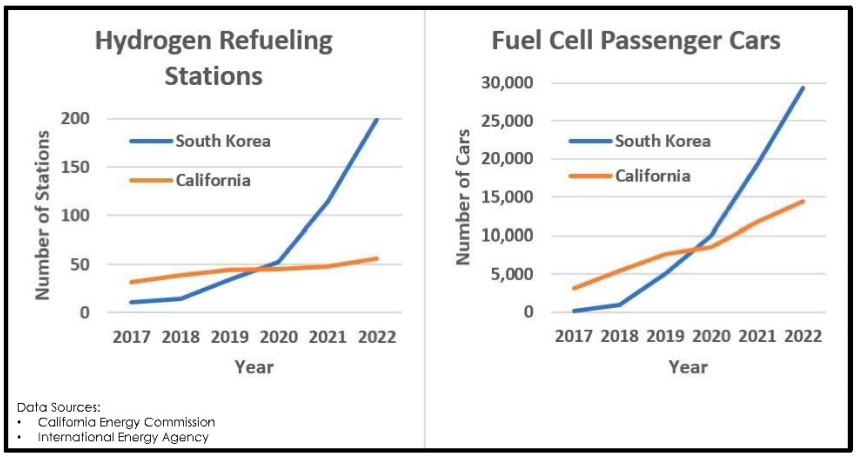


TALKING POINTS:

Assembly Bill 1236, passed in 2015, directed the Governor's Go-Biz office to work with jurisdictions to streamline the permitting process for electric charging stations. The results have been phenomenal. The areas in green in the figure represent those jurisdictions that have adopted the streamlined process.

We can have the same result. Senate Bill 1291 will replicate the process for hydrogen fueling stations.

IF WE BUILD IT,



TALKING POINTS:

Hydrogen cars can succeed in California if we are not constrained by the lack of fueling stations.

The blue line on the left graph shows the rapid pace that South Korea has been building fueling stations. The brown line is the more timid California pace.

On the right graph, the blue line shows the corresponding sales of hydrogen cars in South Korea. There were virtually no FCEVs on the road in 2017. Now, there are 30,000.

IF WE BUILD IT, THEY WILL COME.

(One additional note. The U.S. has the worst hydrogen station to car ratio in the world; i.e., there are too many cars chasing too few stations)

HOW WE COULD DO BETTER:

In advance of this hearing, we met with 12 industry and agency leaders. A short summary of thoughts at the conclusion of these meetings…

TALKING POINTS:

So, in advance of this hearing, we met with 12 industry and agency leaders. As a result of these meetings, there were two recommendations worthy of note:

CREATE AN ADVISORY COMMITTEE OF HYDROGEN CAR DRIVERS:

- *Currently, the H_2 industry is well represented at the State level; H_2 drivers not so much.*
- *Will provide credible real-world feedback on how we are doing.*
- *Act as a liaison with other drivers.*

TALKING POINTS:

The first is to create an advisory committee of hydrogen car drivers:

- Currently, the hydrogen industry is well represented at the State level, but hydrogen drivers not so much.
- Such a committee would provide timely and credible real-world feedback on how we are doing.
- Members of the committee would act to liaison with other drivers.

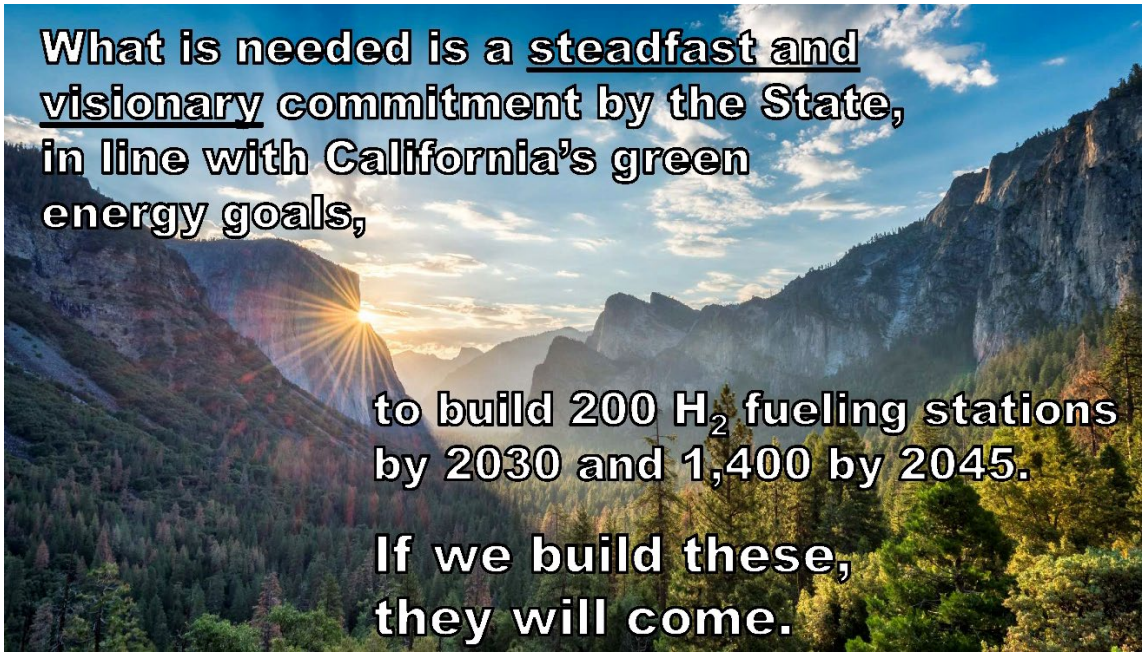
MOST IMPORTANTLY, BUILD MORE STATIONS

During our meetings, it was agreed to a person, that it is *undeniable that the lack of a reliable and robust hydrogen fueling infrastructure in California is single-handedly thwarting the success of these cars in California's green energy future.*

TALKING POINTS:

Second, but most importantly, build more stations:

During our meetings, to a person, it was agreed that it is undeniable that the lack of a reliable and robust hydrogen fueling infrastructure in California is single-handedly thwarting the success of these cars in California's green energy future.



TALKING POINTS:

What is needed is a steadfast and visionary commitment by the State, in line with California's green energy goals, to build 200 hydrogen fueling stations by 2030 and 1,400 stations by 2045.

If we build these, they will come.

Thank you very much.