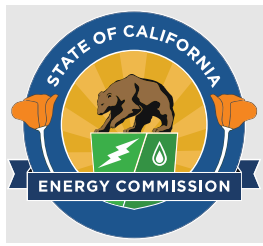


DOCKETED

Docket Number:	22-HYD-01
Project Title:	Hydrogen Fuel Cell Electric Vehicle Infrastructure Opportunities and Barriers
TN #:	252919
Document Title:	Joint Agency Workshop Agenda - The Fuel Cell Electric Vehicle Customer Experience
Description:	N/A
Filer:	Spencer Kelley
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	11/3/2023 2:39:05 PM
Docketed Date:	11/3/2023



**Joint Agency Workshop Agenda:
The Fuel Cell Electric Vehicle Customer Experience
November 6, 2023**

November 6, 2023, 9:30 a.m. – 3:00 p.m.

[Click to join](#) remotely through Zoom

To participate by telephone, call **877-853-5257** or **888-475-4499**

Webinar ID: **860 8814 7553**, Password: **483895**

Purpose: To discuss the experience of light-duty fuel cell electric vehicle (FCEV) drivers and industry progress and plans to improve customer experience.

Time	Agenda
9:30 AM	<p align="center">Opening Remarks</p> <p align="center">Presenters: Senator Newman and Commissioner Monahan</p>
9:45 AM	<p align="center">California Hydrogen Infrastructure Buildout Background</p> <p>Representatives from California Agencies will present background on state investments in hydrogen refueling infrastructure and fuel cell electric vehicle (FCEV) incentive programs.</p> <p>Presenters:</p> <p>Mark Johnson, CEC</p> <p>Andrew Martinez, CARB</p> <p>Gia Vacin, GO-Biz</p>
10:00 AM	<p align="center"><u>Panel 1</u></p> <p align="center">Customer Experience Owning and Driving an FCEV</p> <ul style="list-style-type: none"> • What are the experiences of FCEV drivers in California and what are the biggest challenges the encounter? • What are original equipment manufacturers (OEMs) hearing from customers about the vehicles and the stations? • What are OEMs and station developers doing to address these challenge? What are the core issues that customers, OEMs, and station developers can work on together to create a great customer experience? • How has the LCFS credit price volatility impacted the cost of hydrogen deliveries and the retail price of hydrogen? <p>Moderator: Mark Johnson, CEC</p> <p>Panelists:</p> <ol style="list-style-type: none"> 1. Doug Jalaie, Nexo Driver

Time	Agenda
	<ol style="list-style-type: none"> 2. Greg and Bobbie Cane, Mirai Drivers 3. Stix, Mirai Driver 4. Jackie Keller, Clarity Driver 5. Jackie Birdsall, Toyota 6. Gil Castillo, Hyundai 7. Marc Deutsch, Honda 8. Shane Stephens, FirstElement Fuel
11:00 AM	<p style="text-align: center;"><u>Panel 2</u></p> <p style="text-align: center;">Station Locations and Development Plans</p> <ul style="list-style-type: none"> • What areas of the state most need hydrogen stations in the near term? • Where do residents who want access to hydrogen live and work? • Where do drivers prefer to fuel in relation to home, work, and other destinations? • What long-distance travel do drivers want to be able to complete in an FCEV? • Where are there good opportunities for light-duty commercial FCEV deployment? <p>Moderator: Andrew Martinez, CARB</p> <p>Panelists:</p> <ol style="list-style-type: none"> 1. Jackie Birdsall, Toyota 2. Gil Castillo, Hyundai 3. Marc Deutsch, Honda 4. Lew Fulton, UC Davis
11:45 AM	<p style="text-align: center;"><u>Panel 3</u></p> <p style="text-align: center;">Low Carbon Hydrogen Supply and Cost</p> <ul style="list-style-type: none"> • What are the biggest contributors to the cost of dispensed hydrogen? • Why have costs increased so much over the past year(s) and when can drivers anticipate that costs decrease? • How is hydrogen supply reliability being addressed? • Are any other improvements to hydrogen supply needed? • What efforts are being put in place to get maximum feasible emissions reductions from hydrogen fuel? • How will expected economies of scale be realized to decrease hydrogen cost? <p>Moderator: Andrew Martinez, CARB</p> <p>Panelists:</p> <ol style="list-style-type: none"> 1. Alison Hawkins, Air Products 2. Al Burgunder, Linde 3. Mo Vargas, Bayotech 4. Tyson Eckerle, ARCHES Representative 5. Pedro Pajares and Miguel Ruelas, H2B2

Time	Agenda
12:30 PM	Lunch Break
1:15 PM	<p style="text-align: center;"><u>Panel 4</u></p> <p style="text-align: center;">Station Operation</p> <ul style="list-style-type: none"> • What are the reasons/causes for a typical station outage? • How can queuing at stations be improved? • How can back-to-back fueling be improved? • How can communication to drivers be improved regarding station operational status? • How will response times evolve as the market gets larger or denser in some areas? • What steps are being taken to decrease the price of hydrogen at the pump? • How will station design evolve if medium-duty vehicles come to market in large numbers? • What is the outlook for hydrogen delivery (is there a line of sight to resolve driver shortages)? <p>Moderator: Gia Vacin, GO-Biz</p> <p>Panelists:</p> <ol style="list-style-type: none"> 1. David Park, H2FCP 2. James Kast, Iwatani 3. Alison Hawkins, Air Products 4. Matt Miyasato, FirstElement Fuel
2:00 PM	<p style="text-align: center;"><u>Panel 5</u></p> <p style="text-align: center;">Refueling Station Reliability and Equipment Supply Chain</p> <ul style="list-style-type: none"> • What station equipment fails most frequently or contributes the most to low reliability? • What station equipment improvements are needed? • How is nozzle freeze lock being addressed? • How are the noise levels at stations being mitigated? • What station equipment configurations are working best? (For example, integration with station islands with other fuels, or separate islands?) • What are the expectations of next-generation fueling equipment? • Are new dispensers, compressors, etc. within sight? • Who is innovating right now in the station equipment space? • What features do customers want at dispensers that are not currently available or limited to certain stations? • Are there certain station designs that appear to provide more consistent positive customer experience? <p>Moderator: Gia Vacin, GO-Biz</p> <p>Panelists:</p> <ol style="list-style-type: none"> 1. Matt Miyasato, FirstElement Fuel 2. Alison Hawkins, Air Products

Time	Agenda
	3. Genevieve Saur, NREL 4. Meagan Kohls, Iwatani
2:30 PM	<p style="text-align: center;">California Light-Duty Fuel Cell Electric Vehicle Survey</p> <p>UC Davis will present on an upcoming survey and interviews of light-duty FCEV drivers, as well as interviews with medium- and heavy-duty fuel cell truck automakers, fleets, fuel suppliers, and equipment providers. The survey will explore the motivations for FCEV purchase or lease decisions, driver experiences with FCEVs and hydrogen refueling, and whether FCEV buyers plan to continue with FCEV ownership.</p> <p>Presenter: Ken Kurani, UC Davis</p>
2:45 PM	Public Comment and Adjourn