

DOCKETED	
Docket Number:	20-IEPR-02
Project Title:	Transportation
TN #:	233433
Document Title:	SoCalGas Final comments IEPR HD ZEV Market Trends 61120
Description:	N/A
Filer:	System
Organization:	Allison Smith
Submitter Role:	Public
Submission Date:	6/11/2020 3:31:08 PM
Docketed Date:	6/11/2020

*Comment Received From: Allison Smith
Submitted On: 6/11/2020
Docket Number: 20-IEPR-02*

SoCalGas Final comments IEPR HD ZEV Market Trends 61120

Additional submitted attachment is included below.



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June 11, 2020
California Energy Commission
Dockets Office, MS-4
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Subject: Comments on IEPR Workshops on Heavy-Duty Zero-Emission Vehicle Market Status, Docket #20-IEPR-02

Southern California Gas Company (SoCalGas) appreciates the opportunity to comment on the California Energy Commission (CEC) Workshops on Heavy-Duty Zero-Emission Vehicle Market Status held on May 20 and 21, 2020, as part of the 2020 Integrated Energy Policy Report Update. SoCalGas supports the efforts of CEC to accelerate the commercial development of advanced technologies. The penetration of zero-emission heavy-duty vehicles is an important component to reaching the State's air quality and climate goals. In order to meet those goals, the State will need to use a suite of technologies and fuels in the heavy-duty truck sector including renewable gas, plug-in battery vehicles, and fuel cell electric vehicles (FCEV). Specific to the zero-emission technologies, SoCalGas is concerned that FCEV technologies were not adequately represented in the workshops.

FCEVs hold a great deal of potential in replacing California's heavy-duty fleet of trucks with cleaner emissions. While battery-electric trucks can work in some applications, they have weight, range, and re-fueling time limitations which currently prevent them from replacing diesel trucks at scale. FCEVs are lighter, can achieve 750 miles per fill,¹ and can refuel in a matter of minutes. These characteristics are similar to existing diesel technologies and therefore, would not disrupt the operational or fueling model for truck fleets.

FCEVs in the heavy-duty sector are still under development and are classified as Technology Readiness Level 5/6 (TRL5/6) by the California Air Resources Board.² That number is expected to increase in the upcoming years with real-world demonstrations currently underway. Anheuser-Busch Companies, LLC. has partnered with Nikola Motor Company to demonstrate Class 8 FCEVs in delivery service. They are currently testing the initial trucks of an 800-truck

¹ Nikola Motor Company Website. Access on 7.10.20 from:

<https://nikolamotor.com/hydrogen#hydrogen-advantages>

² CARB. Appendix D: Heavy-Duty Investment Strategy including Fiscal Year 2019-20 Three-Year Recommendations for Low Carbon Transportation Investments. No Date. Available at:

<https://ww2.arb.ca.gov/sites/default/files/2019-09/fy1920fundingplan-appd.pdf>

order.³ Additionally, Kenworth Trucks, Inc. and Toyota Motor Corporation, with a grant from the California Air Resources Board, have partnered to test 10 Class 8 FCEVs in Southern California and the central coast.⁴

FCEVs are also being used in transit applications. In the Coachella Valley, Sunline Transit Agency recently announced its zero-emission bus roadmap that includes 67 FCEV buses, which can already get over 300 miles per fill. And, the Orange County Transportation Authority recently put 10 FCEV buses into service. Both transit agencies are also including public fueling stations for hydrogen fuel.

One of the current barriers of FCEVs is the cost. Today, FCEV heavy-duty trucks cost significantly more than diesel trucks on a per unit and total cost of ownership basis.⁵ However, CARB projects that by 2030, the total cost ownership of FCEV heavy-duty trucks will be comparable to those fueled by diesel.⁶ The cost comparability is driven by the cost of fuel and can be accelerated with support from the State.

SoCalGas believes that having multiple zero-emission options with different capabilities will accelerate the transition to clean fuels and technologies. The State should be technology neutral and support all zero-emission technologies equally.

In conclusion, SoCalGas provides these comments to support California's move towards our aggressive climate goals and can provide additional input if needed.

Sincerely,

/s/ Tim Carmichael

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³ Anheuser-Busch Website. Accessed on 6.7.20 at: <https://www.anheuser-busch.com/community/initiative/nikola-hydrogen-electric-trucks.html>

⁴ HDT Truckinginfo. *Kenworth, Toyota Unveil Jointly Developed Hydrogen Fuel Cell Truck*. April 22, 2019. Available at: <https://www.truckinginfo.com/330270/toyota-and-kenworth-unveil-jointly-developed-hydrogen-fuel-cell-truck>

⁵ CARB. *Advanced Clean Truck Workgroup Meeting Presentation*. February 25, 2019. Available at: <https://ww2.arb.ca.gov/sites/default/files/2019-02/190225actpres.pdf>

⁶ *Ibid.*