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SoCalGas Comments on the CEC Workshop on US DOT CFI Grant Program

Additional submitted attachment is included below.



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July 25, 2024

Hannon Rasool
Director, Fuels and Transportation Division
California Energy Commission
Docket Unit, MS-4
Docket No. 24-EVI-01
715 P Street
Sacramento, CA 95814-5512

Subject: Comments on the CEC Workshop on the Development of Applications to Round 2 of the U.S. Department of Transportation’s Charging and Fueling Infrastructure (CFI) Grant Program

Dear Mr. Rasool,

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide comments on the California Energy Commission (CEC) Workshop on the Development of Applications to Round 2 of the U.S. Department of Transportation’s (U.S. DOT) Charging and Fueling Infrastructure (CFI) Grant Program held on July 18, 2024. SoCalGas commends the CEC for its continued efforts in seeking federal funding opportunities that could benefit the state of California in its development of medium- and heavy-duty (MD/HD) zero emissions vehicle (ZEV) infrastructure for battery electric vehicle (BEV) charging and hydrogen fuel cell electric vehicle (FCEV) refueling stations. SoCalGas further commends the CEC for including hydrogen refueling in its Drayage Proposal for MD/HD zero-emission vehicle infrastructure project along drayage routes near California ports. If awarded, CFI funds will play an integral role in the implementation of the California Air Resources Board’s (CARB) Advanced Clean Fleets (ACF) rule requirements¹ for public and private MD/HD vehicle fleets to begin transitioning toward zero emissions starting in 2024 with a goal of being 100 percent ZEVs by 2045,² where feasible.

¹ ACF includes Drayage Truck Requirements for drayage trucks transporting cargo to and from California’s intermodal seaports and railyards. The ACF Drayage Truck Requirements helps to meet the directive of Executive Order (EO) N-79-20, which set a goal for 100 percent zero-emission drayage trucks in the State by 2035.

² See CARB, Advanced Clean Fleets, accessed June 18, 2024, available at: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets>.

SoCalGas comments focus on the following topics: 1) SoCalGas recommends the CEC continue to include hydrogen refueling stations along with electric chargers in its Round 2 application for the Tristate Proposal, 2) Hydrogen MD/HD trucks are well suited for long-haul goods movement.

1) SoCalGas recommends the CEC continue to include hydrogen refueling stations along with electric chargers in its Round 2 application for the Tristate Proposal.

CEC staff noted during the workshop³ that the CEC is currently developing two applications for Round 2 of the U.S. DOT’s CFI program; one for the Tristate Proposal and another for the Drayage Proposal.⁴ However, as proposed, only the Drayage Proposal will include hydrogen refueling stations as part of its application. SoCalGas recommends the CEC continue to include hydrogen refueling stations along with electric chargers in its Round 2 application for the Tristate Proposal. First, it is in the public interest to allow for all zero-emission transportation technologies and fuels to compete for federal funding.^{5,6} Second, research reinforces the need for and benefits of hydrogen refueling infrastructure. A study by Coomonte et al. states that the establishment of clean refueling infrastructure, along with the advancement and adoption of hydrogen fuel production technologies, play a critical role in streamlining the commercialization of FCEVs.⁷

Just as the buildout of EV charging stations facilitated consumer adoption of EVs, the buildout of hydrogen refueling stations will encourage fleet owners, especially those in the goods movement sector, to convert to zero-emission MD/HD hydrogen FCEVs. Since 2009, funding from the CEC through the Clean Transportation Program (CTP) for the buildout of EV charging stations and the manufacture and retrofit of EVs has played a critical role in the development of California’s EV market.⁸ Similar funding from the CEC CTP for the manufacture of FCEVs and hydrogen refueling stations is needed for the development of the HD ZEV market. To date, total funding from CTP has been \$584M for EV charging, \$257M for Light duty (LD) hydrogen, and \$489M for MD/HD ZEV infrastructure.⁹

³ CEC Workshop on the Development of Applications to Round 2 of the U.S. Department of Transportation’s Charging and Fueling Infrastructure (CFI) Grant Program. Available at: <https://www.energy.ca.gov/event/workshop/2024-07/workshop-development-applications-round-2-us-department-transportations>.

⁴ CEC staff noted during the workshop that the CEC, in collaboration with the California, Oregon, and Washington DOTs, applied for Round 1 of CFI funding which included both EV charging and hydrogen refueling stations. Some of the Round 1 applications are under reconsideration which means there is still a chance that California could be awarded funds for these Round 1 proposals.

⁵ Coomonte et al. “Review of the Planning and Distribution Methodologies to Locate Hydrogen Infrastructure in the Territory,” January 2, 2024, p. 10, available at: <https://www.mdpi.com/1996-1073/17/1/240#B9-energies-17-00240>,

⁶ Hassan et al. “Hydrogen Fuel Cell Vehicles: Opportunities and Challenges,” July 23, 2023, p. 5, available at: <https://www.mdpi.com/2071-1050/15/15/11501>.

⁷ *Ibid.*, Coomonte et al., p. 22.

⁸ “Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program,” CEC, April 2009, available at: <https://www.energy.ca.gov/sites/default/files/2021-07/cec-600-2009-008-cmf.pdf>.

⁹ “2024–2025 Investment Plan Update for the Clean Transportation Program,” CEC, May 2024, available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=256545>.

In addition, a McKinsey report found that hydrogen refueling infrastructure built at scale for long-haul trucking is less costly to build than electric truck charging infrastructure because hydrogen refueling stations do not require electric grid upgrades and have a smaller carbon footprint.¹⁰ Because hydrogen refueling stations do not need to be sited near electric substations like EV charging stations do, the hydrogen refueling stations could theoretically be situated in closer proximity to major transportation corridors in alignment with hydrogen FCEV refueling needs. Hydrogen refueling stations also benefit from economies of scale because faster refueling times allow more trucks to use the refueling station.¹¹ Further, FCEVs' duty cycles mirror those of diesel trucks, thus drivers do not have to deploy new logistical strategies for delivering goods or experience excessive wait times to allow for electric charging. None of this is to say that FCEVs and BEVs should be competing against each other, but rather should complement each other for the desired use case.

2) Hydrogen MD/HD trucks are well suited for long-haul goods movement.

The CEC posed a question to the public during the workshop about whether there are preferred use cases for battery electric and hydrogen MD/HD trucks. Hydrogen HD trucks are suitable for the long-haul goods movement sector. The sector will benefit from hydrogen refueling infrastructure that can be installed and placed into commercial operation quickly. Furthermore, the faster refueling provided by hydrogen maximizes the amount of time long-haul and drayage trucks can be on-road transporting goods, while minimizing the time spent idling during refueling. Hydrogen-fueled trucks also carry a lower weight penalty because hydrogen tanks weigh considerably less than batteries.¹² As noted in the Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) proposal, hydrogen is expected to play an important and sizable role in the heavy-duty trucking industry, especially long-haul trucks for goods movement.¹³

Ports have high energy needs; thus, port electrification may encounter challenges with upgrades to the transmission and distribution electric grid. For example, the Port of Los Angeles' (LA) details in its Zero Emissions White Paper that infrastructure planning for zero emission technology will require major design efforts.¹⁴ Ensuring adequate power for a fleet of HD battery-powered trucks will require work with the local utility and physical revisions to the grid-supplied power systems that serve the port.¹⁵ For each terminal using heavy-duty battery-electric yard tractors,

¹⁰ Heid, Bernd, "Unlocking hydrogen's power for long-haul freight transport," McKinsey, 2022, p. 4, available at: <https://www.mckinsey.com/capabilities/operations/our-insights/global-infrastructure-initiative/voices/unlocking-hydrogens-power-for-long-haul-freight-transport>.

¹¹ *Ibid.*, Heid, p. 4.

¹² *Ibid.*, Heid, p. 4.

¹³ "CA's Clean Hydrogen Market Development," GO-Biz, September 5, 2023, available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=252171&DocumentContentId=87170>.

¹⁴ "Zero Emissions White Paper Draft," Port of LA, August 7, 2015, available at: https://kentico.portoflosangeles.org/getmedia/f5183c7e-3731-4cd6-a4d0-346955a17e3a/Zero_Emissions_White_Paper_DRAFT.

¹⁵ *Ibid.*, Port of LA.

dedicated charging areas on the terminal will need to be set aside and equipped with appropriate power supply technology.¹⁶

Clean fuels such as renewable natural gas (RNG) as feedstock and renewable hydrogen will likely play a critical role in addressing these challenges and are key to the Southern California Hydrogen Hub. For example, the Port of LA acknowledges in its 2021 Feasibility Assessment for Drayage Trucks that building out new charging or fueling infrastructure for Class 8 drayage trucking will present significant infrastructure challenges and require massive investments.¹⁷ While acknowledging these challenges, the Ports of LA and Long Beach are continuing to pursue strategies to improve air quality and reduce emissions. The Port of LA is currently spearheading build-out of hydrogen fueling infrastructure for the “Shore to Store” project which will fund the development of ten hydrogen fuel cell electric Class 8 on-road trucks and two large capacity renewable hydrogen fueling stations in California in Wilmington and Ontario. The new installations will serve as a model by which other freight facilities can structure their operations as these types of facilities work towards decarbonization goals.

Conclusion

SoCalGas appreciates the opportunity to provide comments on the CEC’s dual applications to the U.S. DOT CFI Program. We recommend the CEC maximize funding opportunities for zero-emission transportation infrastructure by including hydrogen and electric in both the CEC’s competitive proposals, in accordance with supporting the State’s clean transportation and decarbonization goals. Thank you for your consideration of our comments.

Respectfully,

/s/ Kevin Barker

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¹⁶ *Ibid.*, Port of LA.

¹⁷ “2021 Update: Feasibility Assessment for Drayage Trucks,” July 2022, Port of LA, p. 81, https://cleanairactionplan.org/download/240/trucks/5186/draft-drayage-truck-feasibility-assessment-update_v20_-_final-for-public-posting_july-21-2022-1.pdf.