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CHBC Comments on 21-IEPR-03 Transportation and Demand Scenarios Project

CHCB Respectfully Submits the Attached Comments.

Additional submitted attachment is included below.

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December 16, 2021

RE: 21-IEPR-03 Electricity and Natural Gas Demand Forecast – Transportation Forecast and Demand Scenarios Project

I. INTRODUCTION

The California Hydrogen Business Council (CHBC)[1] appreciates the opportunity to submit comments on the Transportation Forecast and Demand Scenarios Project Workshop ("Workshop") of the 21-IEPR-03 Electricity and Natural Gas Demand Forecast – Transportation Forecast and Demand Scenarios Project. The scenarios outlined in the Workshop do not align with the reality of the zero-emission transportation industry and, if finalized, will leave out crucial hydrogen technologies that would help California reach it's zero-emission, air quality, and decarbonization goals. Transitioning to a decarbonized future requires a diverse portfolio so that all Californians have access to electric vehicles. Fuel cell electric vehicles (FCEV) will reduce the strain on California's grid from charging and will provide options to Californians that require long range and quick refueling. Forecasting hydrogen and FCEV use that is reflective of Californians' needs ensures a decarbonized transportation sector and improved air quality.

II. DISCUSSION

Meeting California's goal of one million zero-emission vehicles (ZEV) on the road by 2025[2] and 100 percent zero-emission new vehicle sales by 2035 for light-duty and 2045 for medium and heavy-duty where feasible[3], requires utilizing all zero-emission vehicles, including battery electric vehicles (BEV)

[1] The CHBC is comprised of over 130 companies and agencies involved in the business of hydrogen. Our mission is to advance the commercialization of hydrogen in the energy sector, including transportation, goods movement, and stationary power systems to reduce emissions and help the state meet its decarbonization goals**. The views expressed in these comments are those of the CHBC, and do not necessarily reflect the views of all of the individual CHBC member companies.** CHBC Members are listed here: https://www.californiahydrogen.org/aboutus/chbc-members/
[2] Executive Order B-16-12
[3] Executive Order N-79-20

and FCEVs. The Workshop forecasted a future where California would meet its goals with majority battery electric transportation system. Forecasting a majority battery electric transportation system that requires plugging into California's grid that is on average, only 33.09 percent renewable[4], will lead to resiliency issues during public safety power shutoffs and reliance on natural gas and coal to cover the power needs of an impacted grid from transportation electrification. Although hydrogen can help clean the grid by offering a long-term storage solution and backup power in lieu of natural gas and coal powered peaker plants, a predominantly battery electric transportation system is still not a holistic solution. FCEVs in the light and heavy-duty sectors offer long-range and quick refueling which is beneficial to the 50 percent of Californians that live in multi-unit dwellings[5] and the trucking industry whose duty cycles suffer when needing to stop for charging. Therefore, California must include realistic forecasts of our ZEV future, so we do not miss decarbonization and air quality targets—a grave result of being unprepared due to faulty forecasting.

The CHBC respectfully recommends the scenario designs outlined in the Workshop presentations are amended to represent forecasts from other agencies and industry. The following amendments should be considered:

1. Hydrogen Production: The workshop forecasted the cost of hydrogen for transportation in a high hydrogen use case to be $7.40 per gallon of gas equivalent (GGE)/per kilogram by 2030 when the Department of Energy's Hydrogen Shot announced in July 2021, forecasts hydrogen at $1 per kilogram by 2030.[6] Such a high cost reflects a relatively low use case as compared to the federal government's forecast, resulting in lack of scale for hydrogen production. For California to remain a leader in the race against climate change, the state cannot be forecasting—and therefore planning—a lower hydrogen use case than the federal government. Not only will this lead to

[4] https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation.
[5] https://www.forbes.com/sites/energyinnovation/2020/09/28/california-wont-achieve-its-new-zero-emission-vehicle-goal-until-multi-unit-dwellers-can-access-ev-charging/?sh=1ebe67d45ff2. Of the 90 percent of chargers that are located at residences, only 18 percent of those chargers are in multi-unit dwellings where half of all Californians live.
[6] https://www.energy.gov/eere/fuelcells/hydrogen-shot.

missed opportunity for funding, but it will drive clean jobs out of the state to those states with forecasts that match the federal government.

2. Light-duty FCEV: By 2027, the Workshop predicted FCEV stock to be less than 150,000 vehicles, which included "plug-in hybrid FCEVs," which are not commercially available; whereas, in the Joint Agency AB 8 Report, it is predicted there will be at least 245,000 FCEVs on the road by 2027.[7] Further, the Joint Agency AB 8 Report finds that the 200 hydrogen station goal by 2030 will support over 290,000 FCEVs[8]. Inconsistent reporting from California's agencies will lead to a slow adoption of FCEVs, a missed target for ZEV stock overall, and unmet decarbonization and air quality goals.
3. Medium and Heavy-duty FCEV: Due to the quick refueling time (5-10 minutes), light weight fuel trucks (due to fuel cell stack and hydrogen tanks), and long-range, 70,000 FCEV trucks are expected to be on the road by 2035.[9] Moreover, FCEV trucks and buses have been in operation at the Los Angeles Port in the Shore-to-Shore project, the Port of Oakland's NorCAL ZERO project, the Orange County Transportation Association, the SunLine Transit Public Transit, and AC Transit for years—SunLine Transit's buses have been operating since 1994.[10] The Workshop's high case market share prediction of FCEV trucks and buses at 40 percent by 2035 falls far below the momentum of the FCEV truck and bus market today. With transportation making up 30 percent of California's greenhouse gases[11], the state cannot afford to underestimate the value of FCEV trucks and buses on the road and in environmentally disadvantaged communities.

III. CONCLUSION

[7] https://www.energy.ca.gov/publications/2021/joint-agency-staff-report-assembly-bill-8-2021-annual-assessment-time-and-cost.
[8] https://www.energy.ca.gov/publications/2021/joint-agency-staff-report-assembly-bill-8-2021-annual-assessment-time-and-cost.
[9] https://www.greencarreports.com/news/1133575_california-projects-100-retail-hydrogen-stations-by-the-end-of-2023.
[10] https://cafcp.org/buses_trucks.
[11] https://hsrail.org/reducing-fossil-fuels-california#:~:text=Transportation%20creates%20roughly%2030%20percent,the%20way%20we%20move%20around.

The CHBC appreciates the opportunity to submit comments on the Workshop, and respectfully requests consideration of the aforementioned amendments to the 21-IEPR-03 Transportation and Demand Scenarios Project.

Respectfully Submitted,

Policy Director
California Hydrogen Business Council