CALIFORNIA HYDROGEN BUSINESS COUNCIL

CA Office: 18847 Via Sereno, Yorba Linda, CA 92886
DC Office: 1211 Connecticut Ave NW, Ste 650, Washington, DC 20036

Phone: (310) 455-6095 | Fax: (202) 223-5537
info@californiahydrogen.org | www.californiahydrogen.org

August 11, 2017

The Honorable Philip Y. Ting
Assembly Member
Capitol Office, Room 6026
P.O. Box 942849
Sacramento, CA 94249-0019

Subject: CHBC SUPPORT IF AMENDED for AB 1184

Dear Assembly Member Ting,

The California Hydrogen Business Council (CHBC) is very intrigued by your Electric Vehicle bill (AB 1184). The CHBC is committed to advancing the commercialization of hydrogen in the energy sector – including, transportation, goods movement, and stationary power systems – to reduce emissions and dependence on oil. Therefore, as the trade association representing the fuel cell electric vehicle industry, we are overall supportive of the direction of the bill, but are concerned that your bill is not technology neutral towards all electric vehicles (EVs) and therefore would create a divide between different EV technology solutions.

In addition to the tens of thousands of Battery electric vehicles, thousands of fuel cell electric vehicles (FCEVs) are on the road in California, supported by 28 retail hydrogen fueling stations.[1] FCEVs offer consumer an additional option to go electric by provide long ranges and fast refueling. Many automakers have announced FCEVs models in their lineup, including Honda, Toyota, Hyundai, GM, BMW, Daimler, Audi, and Ford, [2] not including the several recent announcement on medium and heavy-duty vehicles from US Hybrid, Toyota, Kenworth, Loop Energy, Nikola Motors, and UPS[3].

However, as with battery electric vehicles, the initial price for those models is still higher than their gasoline counterparts, despite incredible reduction in prices from earlier models. Additional price reduction for the vehicles are very possible, Daimler recently announced a reduction of 90% of costly Platinum in their newest fuel cell systems.[4]

It is our firm expectation that FCEVs will decrease in cost in the near future, but we see great value in bringing down the price of the early vehicle to further adoption of the technology by California residents.

[1] https://cafcp.org/stationmap
[2] http://www.businessinsider.com/12-hydrogen-car-projects-2017-5/#the-epa-recently-gave-the-car-an-estimated-range-of-366-miles-the-longest-range-of-any-zero-emissions-vehicle-honda-says-the-clarity-has-a-refuel-time-of-just-three-to-five-minutes-2
[3] https://www.trucks.com/2017/05/08/hydrogen-fuel-cell-trucks-holy-grail/
[4] http://www.miningweekly.com/article/daimler-slashes-platinum-needed-by-new-fuel-cell-mercedes-car-2017-07-12/rep_id:3650

We also request this investment in fuel cell electric vehicles to compensate for Electrify America's *California ZEV Investment Plan: Cycle 1*[5], which did not allocate any funding of their $300,000,000 investment to hydrogen and fuel cell efforts. This is contrary to California's commitment and framework to support emission-free transportation, which has been agnostic in the choice of technologies that offer zero tailpipe emissions, including Fuel Cell Electric Vehicles (FCEVs) and hydrogen.

Bringing down the cost of FCEVs will open electric mobility to the many consumers who do not have dedicated parking to charge BEVs, cannot charge overnight or do not have access to workplace charging.

Keeping California's commitment to deployment of all forms of electric drives will increase consumer acceptance of zero emission options and help fulfill the State's policy goals.

The members of the CHBC[6] thank you and your staff's efforts and stand ready to support a version of AB1184 that is inclusive of fuel cell electric vehicles.

Sincerely,

Emanuel Wagner
Assistant Director
California Hydrogen Business Council

[5] https://www.electrifyamerica.com/our-plan

[6] 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. Members of the CHBC include Advanced Emission Control Solutions, LP, Advanced Power and Energy Program (APEP) - UC Irvine (UCI), Air Liquide Advanced Technologies U.S., Airthium, Alameda-Contra Costa Transit District (AC Transit), American Honda Motor Co., Anaerobe Systems, Ballard Power Systems, Bay Area Air Quality Management District (BAAQMD), Beijing SinoHytec, BMW of North America LLC, Boutin Jones, California Air Resources Board (CARB), California Fuel Cell Partnership (CaFCP), California Performance Engineering, CALSTART, Cambridge LCF Group, Center for Transportation and the Environment (CTE), China Hydrogen Fuel Cell Corporation, Coalition for Clean Air (CCA), Community Environmental Services, CP Industries, E4 Strategic Solutions, Eco Energy International LLC, ElDorado National – California, Energy Independence Now (EIN), EPC, Ergostech Renewal Energy Solution, First Element Fuel, FuelCell Energy, General Motors, Geoffrey Budd G&SB Consulting, Giner, Gladstein, Neandross & Associates (GNA), Golden State EPC, Greenlight Innovation, GTM Technologies, H2B2, H2Safe, H2SG Energy Pte, H2Tech Systems, Hitachi Zosen Inova ETOGAS, HODPros, Horizon Fuel Cells Americas, Hydrogenics Corporation, Hydrogenious Technologies, HydrogenXT, Hyundai Motor Company, i-2-m, Idaho National Laboratory, Intelligent Energy, IRD Fuel Cells, ITM Power, Ivys, Johnson Matthey Fuel Cells, Linde North America, Loop Energy, McPhy Energy, Millennium Reign Energy, Montreux Energy, MPL Consulting, National Renewable Energy Laboratory (NREL), Nel Hydrogen, New Flyer of America, Next Hydrogen Corporation, Noyes Law Corporation, Nuvera Fuel Cells, Pacific Gas and Electric Company (PG&E), Paramount Energy West, PDC Machines, Planet Hydrogen, Plug Power, Port of Long Beach (POLB), PowerHouse Energy, Powertech Labs, Primidea Building Solutions, Proton OnSite, Ramco Consulting Company, Rio Hondo College, RIX Industries, Sacramento Municipal Utility District (SMUD), SAFCell, Schatz Energy Research Center (SERC), Sheldon Research & Consulting, Solar Hydrogen System, South Coast Air Quality Management District (SCAQMD), Southern California Gas Company, Sumitomo Corporation of Americas, SunLine Transit Agency, Tatsuno North America, Terrella Energy Systems, The Leighty Foundation, TLM Petro Labor Force, Toyota Motor North America, United Hydrogen Group, US Hybrid Corporation, Volute, WireTough Cylinders, Zero Carbon Energy Solutions.

The CHBC proposed the following amendments to AB1184 that are consistent with the CHBC's request to create parity between PEVs, BEVs and FCEVs.

SECTION 1.

The Legislature finds and declares all of the following:

(a) Reducing emissions of greenhouse gases to 40 percent below 1990 levels by 2030 to meet the state's climate goals will require widespread transportation electrification, including but not limited to the use of batteries, fuel cells, and hydrogen.

(b) Continuing to reduce greenhouse gas emissions is critical for the protection of all areas of the state, but especially for the state's low-income communities, as those communities are affected first and, most frequently, by the adverse impacts of climate change, including suffering an increased frequency of extreme weather events, such as drought, heat, and flooding. The state's low-income communities also are disproportionately impacted by the deleterious effects of climate change on public health.

(c) California's low-income populations continue to face disproportionate impacts from substandard air quality in the form of higher rates of respiratory illnesses, hospitalizations, and premature death. Climate change also is expected to have disproportionate impacts on low-income and other vulnerable communities in the state.

(d) Seven of the 10 cities with the most severe air pollution in the United States are in California. California has the largest proportion of its population, over 40 percent, living close to busy roadways and exposed to an elevated risk of air pollution and health impacts.

(e) It is the goal of the Legislature to support transportation electrification and the widespread deployment of zero-emission vehicles throughout the state; to establish a self-sufficient zero-emission industry in which electric vehicles are a viable and economic option for all consumers and businesses by 2030; and to promote jobs, business growth, and the public health through the smart planning of reliable energy resources and deployment of clean transportation technology.

(f) Accelerating the transition to electric vehicles in the state will reduce fuel bills and transportation costs across the state for all residents, promote grid management policies and integration of eligible renewable energy resources that bring benefits to electric customers, support advanced transportation businesses and jobs, and deliver billions of dollars per year in climate, health, and energy benefits.

(g) Widespread transportation electrification requires increased participation and access for low- and moderate-income communities and other consumers of electric vehicles, and increased use of those vehicles in those communities and by other consumers to enhance overall air quality, lower greenhouse gases emissions, and promote general benefits to those communities and other consumers.

(h) The California Electric Vehicle Initiative (Chapter 6.5 (commencing with Section 44215) of Part 5 of Division 26 of the Health and Safety Code) will offer benefits to all electric customers by reducing curtailment and improving integration of renewable resources, optimizing operation of conventional resources, maximizing utilization of grid assets, as well as lowering greenhouse gas emissions and improving air quality.

(i) Electric vehicles and hydrogen production provide a new source of load for electric utilities that increase grid asset utilization, which reduces rates for all electric customers. Electrical and gas

corporations should support the transition to these vehicles and hydrogen production in ways that are beneficial to the electrical grid.

(j) Participants in the California Electric Vehicle Initiative should have access to a set of rate options designed to maximize grid asset utilization while minimizing overall bill impact.

(k) In addition to electric customer protection objectives, a principal goal of energy resource planning and investment is to minimize the cost to society of reliable energy services provided in the state, improve the environment and power grid management, encourage the diversity of energy sources through better integration of eligible renewable energy resources, including wind, solar, biomass, and geothermal energy, energy storage, hydrogen production, and widespread transportation electrification, including but not limited to the use of batteries, fuel cells, and hydrogen.

(l) Widespread transportation electrification should stimulate innovation and competition, enable consumer options in charging equipment and services, attract private capital investments, and create high-quality jobs for residents.

(m) Battery and fuel cell technology~~ies~~ ~~is~~ are improving faster than expected and electric vehicles are expected to reach cost parity with conventional alternatives in the mid-2020s.

(n) Deploying electric vehicles should be consistent and complementary with policies to develop charging infrastructure and hydrogen fueling infrastructure throughout the state. These efforts should facilitate increased sales of electric vehicles by making charging and hydrogen fueling easily accessible and should provide the opportunity to access electricity and hydrogen as a fuel that is cleaner and less costly than gasoline or other fossil fuels in public and private locations.

(o) Providing incentives for the purchase, lease, use, and effective grid integration of electric vehicles and hydrogen fueling infrastructure in the near-term will accelerate deployment and availability of these vehicles in the state and globally, deliver associated health and climate benefits, and provide overall economic benefits to drivers, electric customers, and the state as a whole.

(p) Incentives for electric vehicles will further the following goals:

(1) One million zero-emission vehicles by 2022 and establishing a self-sustaining market, as stated in the Charge Ahead California Initiative (Chapter 8.5 (commencing with Section 44258) of Part 5 of Division 26 of the Health and Safety Code).

(2) Governor Brown's target of 1.5 million zero-emission vehicles by 2025.

(3) Governor Brown's recent public statements to set a further ambitious target of 5 million zero-emission vehicles by 2030, to be on track to achieve an 80 percent reduction of greenhouse gas emissions in the state by 2050.

SEC. 2.

Chapter 6.5 (commencing with Section 44215) is added to Part 5 of Division 26 of the Health and Safety Code, to read:

CHAPTER 6.5. California Electric Vehicle Initiative

44215.

For purposes of this chapter, the following terms have the following meanings:

(a) "Battery" has the same meaning as in subdivision (a) of Section 44268.

(b) "Initiative" means the California Electric Vehicle Initiative established pursuant to this chapter.

(c) "Electric vehicle charging station" has the same meaning as in subdivision (c) of Section 44268.

(d) "Electric vehicle" means a vehicle that uses electricity from a plug-in battery, a fuel cell stack, or a combination of both to provide all the motive ~~power of~~ energy to propel the vehicle.

(e) "Plug-in hybrid electric vehicle" means a vehicle that uses a plug-in battery to provide at least 25 miles of driving range.

(f) "Smart charging" means the potential to charge flexibly to respond to the electrical transmission and distribution grid's market conditions, particularly for integrating wind and solar generation.

(g) "Hydrogen production" means hydrogen derived from the electrolysis of water and/or other energy sources that reduce greenhouse gas emissions.

44215.2.

The California Electric Vehicle Initiative is hereby established to be administered by the state board, in coordination with the State Energy Resources Conservation and Development Commission and the Public Utilities Commission. To meet the objectives of the initiative, the state board shall do all of the following:

(a) Authorize, on or before September 1, 2018, to December 31, 2025, inclusive, changes to the Clean Vehicle Rebate Program, established as part of the Air Quality Improvement Program, established pursuant to Article 3 (commencing with Section 44274) of Chapter 8.9, to establish the initiative and provide incentives to the market to achieve a statewide deployment of 1,500,000 ~~electric~~ zero emission vehicles by 2025.

(b) Establish a portfolio of funding resources for the initiative to deliver the continuous funding of point-of-sale rebates that decline upon the achievement of market penetration targets by vehicle and income segment, as described in Section 44215.4.

(c) Promote, in coordination with the State Energy Resources Conservation and Development Commission and the Public Utilities Commission, ~~widely available but unexploited electrical~~ hydrogen fuel development and utility transmission and distribution grid benefits ~~to electric customers~~, including, but not limited to, all of the following:

(1) Smart charging and hydrogen production for the benefit of the grid.

(2) Integration of eligible renewable energy resources.

(3) Maximization of the utilization of grid assets.

(4) Avoidance of the curtailment of resources previously provided incentives by the state or procured to meet targets for the California Renewables Portfolio Standard Program (Article 16 (commencing with Section 399.11) of Chapter 2.3 of Part 1 of Division 1 of the Public Utilities Code).

(d) Promote a self-sustaining state market for electric vehicles in which those vehicles are a viable mainstream option for individual vehicle purchasers, businesses, and public fleets to increase access for low- and moderate-income communities and consumers to electric vehicles and to increase the placement of those vehicles in those communities and with those consumers to enhance air quality, reduce greenhouse gas emissions, and promote overall benefits for those communities and consumers.

44215.4.

On or before September 1, 2018, the state board, in coordination with the State Energy Resources Conservation and Development Commission and the Public Utilities Commission, shall do all of the following:

(a) (1) Develop a plan for the continuous funding for the initiative from a portfolio of existing funding sources in an amount not to exceed three billion dollars ($3,000,000,000). The continuous funding plan may include, but need not be limited to, taxpayer-neutral financing options to derive immediate value for point-of-sale rebates from a cashflow stream of current and future funding resources.

(2) Establish a declining rebate plan for the initiative that includes an initial rebate to purchasers of a compact electric vehicle in an amount that establishes a net purchase price, after incentives and tax credits, that approximates the cost of the most frequently sold compact car in the state and gradually reduces the rebate to zero as the program moves to each subsequent rebate step based on achieving successful market penetration targets by income segment.

(3) The funding plan required pursuant to paragraph (1) shall establish a rebate segment for each rebate step to further increase access to and direct benefits from electric vehicles for low- and moderate-income consumers. Those segments may include, but need not limited to, any of the following:

(A) Higher incentives for critical areas of the electrical transmission and distribution grid support, including charging and hydrogen production, as determined by the Public Utilities Commission.

(B) Financing mechanisms, including, but not limited to, both of the following:

(i) A loan or loan-loss reserve credit enhancement program to increase consumer access to electric vehicle financing and leasing options that can help lower expenditures on transportation.

(ii) The prequalification or point-of-sale rebates or other methods to increase participation rates among low- and moderate-income consumers.

(b) Establish a lower rebate level for plug-in hybrid electric vehicles that reflects the electrical storage capacity of the batteries in each eligible plug-in hybrid electric vehicle compared to the electrical storage capacity of the batteries in the most commonly sold electric vehicle that has a range of 200 miles or more and with a plug-in hybrid electric vehicle rebate distribution sunset date of no later than December 31, 2023.

(c) Establish rebate eligibility, dollar level, and dollar volume by rebate step and vehicle type and direct rebate disbursements to be publicly tracked by the initiative's contracted administrator based on income and vehicle segments.

(d) Direct the initiative's contracted administrator to share each rebate applicant's and recipient's contact information with the applicant's and recipient's electrical corporation or publicly owned electric utility that encourage the efficient use of electric vehicles as resources for the electrical transmission and distribution grid.

44215.6.

(a) No later than February 1, 2018, as part of the Clean Vehicle Rebate Program, established as part of the Air Quality Improvement Program, established pursuant to Article 3 (commencing with Section 44274) of Chapter 8.9, the state board shall begin a review to adopt revisions to all other vehicle electrification programs authorized pursuant to this division to ensure those programs consider funding benefits for disadvantaged individuals, low-income individuals, or both for all eligible vehicle types. The state board shall annually develop and approve a low-carbon transportation funding plan.

(b) (1) Notwithstanding Section 13340 of the Government Code, five hundred million dollars ($500,000,000) is hereby continuously appropriated each year without regard to fiscal years from the Greenhouse Gas Reduction Fund, created pursuant to Section 16428.8 of the Government Code, to the state board to support low-carbon transportation projects, including, but not limited to, all of the following:

(A) Car-sharing programs that serve disadvantaged communities and utilize electric vehicles as a mode of transportation.

(B) Additional incentives for existing electric vehicle programs, including, but not limited to, the enhanced fleet modernization program, established pursuant to Article 11 (commencing with Section 44125) of Chapter 5, and programs that provide incentives for access to used electric vehicles that the state board determines can further the adoption of electric vehicle transportation in disadvantaged communities, low-income communities, or both.

(C) Light-duty equity projects; incentives for low- and zero-emission heavy-duty vehicles, schoolbuses, transit buses, and offroad equipment; and sustainable freight projects.

(2) Programs implemented pursuant to this subdivision shall provide adequate outreach to disadvantaged, low-income, and moderate-income communities and consumers, including partnering with community-based organizations.

SEC. 3.

Section 44274.8 is added to the Health and Safety Code, to read:

44274.8.

(a) Notwithstanding any other law, the state board may provide, to the extent moneys are available, for advance payment for projects funded by the state board pursuant to this article, including projects funded from the Air Quality Improvement Fund, created pursuant to Section 44274.5, based on the total

grant or contract to all entities if the state board makes a finding that those advance payments will further the purpose of improving air quality.

(b) Notwithstanding any other law, the state board may provide, to the extent funds are available, for projects funded by the state board from the Greenhouse Gas Reduction Fund, created pursuant to Section 16428.8 of the Government Code, for advance payment based on the total grant or contract to all entities if the state board makes a finding that those advance payments will reduce greenhouse gas emissions.