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2019-2020 ARFVTP Investment Plan feedback

Please find attached CaFCP's collaborative feedback to the 2019-2020 ARFVTP Investment Plan

Additional submitted attachment is included below.

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February 22, 2019

Commissioner Janea Scott
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: feedback on CEC's 2019-2020 ARFVTP Investment Plan

Dear Commissioner Scott,

For over a decade the California Energy Commission (CEC) has successfully implemented the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) to help California reach its environmental and energy goals. The hydrogen infrastructure and fuel cell vehicle stakeholder community are tremendously appreciative of all the work put into ARFVTP over the years, as the program has resulted in significant annual greenhouse gas reductions, petroleum displacement and air pollution emission reduction benefits for California[1]. The California Fuel Cell Partnership (CaFCP) is fully committed to supporting CEC and ARFVTP and submit these comments in the spirit of collaboration to the 2019-2020 Investment Plan docket (CEC-600-2018-005-SD-REV).

CONNECT ALL ZEVS TO CALIFORNIA'S ZEV TARGETS

The Introduction and Context sections of this Investment Plan appropriately call out many of the related policies, programs and funding mechanisms that compliment ARFVTP, including Executive Order B-16-12 and Executive Order B-48-18 which guide ZEV charging and hydrogen refueling infrastructure investments to support 1.5MM ZEVs by 2025 and 5MM ZEVs by 2030, respectively. These ZEV targets are also called out in detail in other technology sections of the Investment Plan, aptly connecting the achievement of ZEV targets through ARFVTP investments to realizing greenhouse gas reduction targets, petroleum reduction goals, and air quality standards in California.

However, no such immediate connection is made between these same California ZEV targets and fuel cell electric vehicles (FCEVs) to open the section on Hydrogen Refueling Infrastructure needs. Omission of this connection, regardless of any current annual funding cap for hydrogen, misses the direct correlation between FCEVs and the established state ZEV targets, including how these relate to any funding solicitation that is to follow this Investment Plan. We respectfully request you **include the same directive references to California's ZEV targets and environmental goals for FCEV technologies**. We also encourage you to reference the targets from the July 2018 *California Fuel Cell Revolution* vision document[2], specifically developed through a collaborative public-private process to help achieve these same state ZEV goals.

[1] https://efiling.energy.ca.gov/getdocument.aspx?tn=226289 Table 6, Table 8
[2] https://cafcp.org/sites/default/files/CAFCR.pdf

CLARIFY RENEWABLE OPPORTUNITIES

Renewable, cost effective feedstocks are essential to reaching California's environmental goals, including expanded renewable hydrogen production pathways. To achieve these and the Hydrogen Council's 100% decarbonized hydrogen goal for mobility markets by 2030[3] a policy and market landscape that leverages all mechanisms and resources available is necessary. The current Investment Plan language states that "*future funding opportunities will exclude landfill gas projects from consideration and instead limit biomethane production projects to those that use prelandfill organic waste*" (CH. 5: Alternative Fuel Production, page 77).

While we understand and support the intent of these programs to discourage new landfill projects, **the use of biomethane from existing landfills as a feedstock for renewable hydrogen is a responsible use of renewable resources, addressing potential air quality and localized concerns from flaring as well as producing renewable electricity.** The CaFCP encourages further consideration on this topic, as all available feedstocks are necessary to achieve lower cost renewable hydrogen. Landfill gas sourced from existing sites and converted to hydrogen provides a best-in-class use of this resource from both an environmental and economic perspective, and this use is consistent with the CalRecyle program goals to "*increase recovery of landfill gas for use as a biomass renewable energy source to replace energy from nonrenewable fossil fuel sources*."[4] We encourage clarification in the Investment Plan to include a statement: *"Funding opportunities for the use of all biomethane feedstocks remain eligible for renewable hydrogen production".*

INCLUSION OF HYDROGEN AND FUEL CELL TECHNOLOGIES IN ADVANCED FREIGHT

The ARFVTP Investment Plan appropriately calls out the importance of heavy-duty applications to the state's economy and the significant opportunity they hold in transforming transportation's environmental impact in California. Hydrogen fuel cell powered, zero emission heavy duty vehicles offer the same fast fill, long range as their light-duty counterparts, yet they do not receive a detailed Technology Overview treatment in the current Investment Plan. This oversight and lack of technology recognition, aside from a single mention as a previously funded project under GFO-17-603, misses the opportunity to highlight and emphasize hydrogen fuel cell technology's tremendous suitability for heavy duty and fleet operations. We encourage **inclusion of a detailed hydrogen fuel cell technology overview in the Advanced Freight and Fleet Technologies section, especially for longer range goods movement vehicles,** to support and encourage this important ZEV technology transformation opportunity.

APPLYING SIMILAR APPROACHES TO COMPLIMENTARY POLICIES AND SUPPORT MECHANISMS

ARFVTP funding recommendations continue to be guided by, and complementary to, other energy and environmental policies and regulations such as the Low-Carbon Fuel Standard (LCFS), the Renewable Fuel Standard, the *Zero-Emission Vehicle Action Plan*, the *California Sustainable Freight Action Plan* and the recent Executive Orders focused on ZEV deployment. The program considers each technology's anticipated barriers and opportunities, along with the impacts or lack thereof these other mechanisms, in a portfolio-based approach to avoid adopting any single preferred fuel or technology.

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[3] www.hydrogencouncil.com/our-2030-goal
[4] www.calrecycle.ca.gov/climate/landfill

However, we **recommend further review of how these policies, regulations and other funding opportunities are considered and applied across technologies to ensure equitable expectations and treatment**. For example, adoption of new LCFS amendments in other technologies is considered an additive effect "that will further incentivize" ARFVTP support and deployment of infrastructure, while the same LCFS credits are expected to "supplant" ARFVTP operation and maintenance funding for hydrogen infrastructure (pages 39 and 52, respectively). While this may be a well-intended way to extend existing ARFVTP funding for hydrogen infrastructure, creating different fundamental approaches around the same regulation may lead to unintended treatment or less flexible solicitation details later. Similarly, and in recognition of the early recommendation of aligning all ZEV activities toward the same long-term ZEV targets, we are eager to work with CEC on developing an EVI-Pro-like model for forecasting hydrogen infrastructure needs to support the 5MM ZEV goals, as outlined in the ZEV Action Plan.[5]

CaFCP members and the hydrogen infrastructure and fuel cell vehicle stakeholder community are extremely appreciative of all the hard work put into ARFVTP by the CEC commissioners, staff and advisory committee members. For over a decade the program has helped to transform California's transportation fuels and vehicle technologies to meet the state's environmental and economic goals. We are fully committed to supporting the Energy Commission and ARFVTP, and look forward to continued collaboration to hasten the transition to the zero-emission transportation future we all envision.

Thank you for your consideration and if you have any questions about these comments, please do not hesitate to contact me at your earliest convenience.

Sincerely,

William Elrick,
Executive Director, CaFCP

Ole Höfelmann
President, Air Liquide Advanced Technologies U.S. LLC
Chair, CaFCP

[5] http://business.ca.gov/Portals/0/ZEV/2018-ZEV-Action-Plan-Priorities-Update.pdf, page 6