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Comments on Draft 2018-2019 ARFVTP Investment Plan

Additional submitted attachment is included below.

DATE: November 17, 2017
TO: California Energy Commission
FROM: Ryan Schuchard, Policy Director
RE: Draft 2018-2019 ARFVTP Investment Plan

CALSTART appreciates this opportunity to provide comments to the California Energy Commission (Commission) on the *2018-2019 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program* (Plan).[1] We respectfully offer five recommendations, as follow.

#1. Develop an electric vehicle (EV) infrastructure program that has a separate and distinct focus on medium- and heavy-duty vehicles (MHDVs). We support the Commission's increased emphasis on EV infrastructure for 2018-19. Having invested $15 million in a block grant program last year that is only now starting, we recommend that the Commission develop a similar program to address key gaps and support the electric MHDV market.

As discussed at the November 7 workshop, MHDVs are a growing source of fuel use and emissions, causing 23% of GHG emissions by transportation, and being the primary cause of the most harmful criteria emissions.

While light-duty EV electrification infrastructure programs are being pioneered around California with key support from the Commission and other agencies, such endeavors lag for electric MHDVs. The primary electrification efforts for MHDVs are taking place through the California Public Utilities Commission's (CPUC) SB 350 proceeding. Investor-owned utilities (IOUs) are proposing variations of two principal solutions, public ratebasing of distribution infrastructure and designing of electric MHDV specific rates. These efforts are important, but the current wave of activity represents just a fraction of what is needed.

Although MHD EVs share some obvious common needs with LD EVs, such as physical deployment of electric vehicle service equipment (EVSE), they face distinct and separate barriers. First, unlike the common standards for Level 1 and Level 2 charging for light-duty vehicles, there are not similar ones for the electric MHDV sector. Second, MHDV commercial fleets have much higher load charging requirements per vehicle and the need to pool multiple (and often large numbers of) vehicles within single fleets. Charging requirements for such MHDVs can impose significant impacts on the grid and by extension be cost-prohibitive. Third, the cost for installing infrastructure at existing commercial facilities such as distribution centers remains high.

[1] Available at http://energy.ca.gov/altfuels/2017-ALT-01/documents/

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There is a significant need to conduct demonstration and pilot programs that meet the requirements of the fleets but do not negatively impact the grid. By developing a new block grant focused on this area, the Commission can enable important demonstration programs that test different types of methodologies for charging hundreds of trucks or buses. We need to learn from such programs and find ways to improve the business over the long haul for charging these types and quantities of vehicles.

Commercial vehicle operators are in particular need of incentives for MHD EVSE in Municipally Owned Utility (MOU) service territories.

California's state legislature recently allocated $180 million for incentives to clean commercial vehicles (AB 134) through the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP). We estimate that this investment could yield 900-1,000 new electric MHDVs on the road. For the commercial vehicle sector to begin to scale and to reach these numbers, it is imperative that we address the infrastructure challenges.

Recommendations:

A. Establish a $15 million block grant for MHDV electrification, with an emphasis on planning for gaps and needs for vehicle deployment. Such a program could fill gaps while utilities ramp up support for MHD EVs and place the g first MHDV-scale systems in operation; and
B. As part of the new block grant, provide funding for developing best practices for and demonstration of charging with microgrids, distributed generation, storage, and control strategies, as well as charging standardization.

#2. Focus investments for light duty (LD) EVs on MOUs and pay special attention to corridor rapid charging. We estimate that the majority of LD EV infrastructure is being rolled out and facilitated in IOU territories by IOUs. In turn, we believe that California's territories served by MOUs are in significant need, based in part on concerns expressed by our members.

We believe that a key barrier not yet being well-addressed for LD infrastructure that is need of additional funds is corridor rapid charging. The scalable business model for rapid (level 3) charging still is not clear Investments in LD EV infrastructure should include a focus on testing and proving models that work.

Note: We are awaiting information on plans for the existing $15 million block grant; we assume the proposed funding is for an additional tranche, but it is difficult to comment since we have not yet seen plans.

Recommendations:

A. Focus investments for LD EVs on MOUs and corridor rapid charging; and
B. Additional recommendations TBD after we learn more information about implementation plans for the existing LD electrification block grant.

#3. Develop a roadmap for hydrogen station self-sufficiency. As the hydrogen market approaches having an installed base of 100 stations, it will be important for the industry to have a roadmap for moving towards economic self-sufficiency. In particular, a large portion of the cost of fuel should be shouldered by self-sustaining sources. Also, stations will need to accommodate MHDVs both in terms of access and capacity.

Recommendations:

A. Develop a game plan to start ratcheting down the subsidy per station and include stations that accommodate trucks.

#4. Boost funding for the "emerging opportunities" category to $8-10 million. We support increased funding in important technical assistance for innovation programs. Electrification is rapidly growing in the aviation sector. We can imagine a couple of thousand electric aircraft in California in the coming few years, with the right supporting policies.

Also, large private fleets are increasingly engaged in zero emission vehicle and alternative fuel adoption, but are not yet guided by common standards and quantified performance. We believe that California has an opportunity to develop a first-of-a-kind program that would quantify and synthesize MHDV environmental performance across multiple key environmental objectives, and in turn compare leaders among commercial fleets and drive continuous improvement. Such a program would both leverage significant private sector investment and encourage commercial fleet operators to be more assertive in demonstrating and piloting new technologies.

Recommendations:

A. Invest in deployment of demos that support the emerging electric aviation sector; and
B. Invest in the development of a "LEED for Fleets" program that aims to spur significant amounts of voluntary action and leverage private sector investment, and make California the first state to implement such a program.

#5. Use manufacturing funds in a broader support framework to include regional service and support centers, and combine workforce funds with these centers. Early stage electric and other technologies still suffer from a lack of

sufficient service and maintenance sites. Regionally, service technician training can provide a growing job opportunity base as the MHD EV market expands.

Recommendations:

A. Broaden eligible projects under the manufacturing category to include regional service and maintenance centers.

As always, CALSTART appreciates the opportunity to provide comment to the Commission and stands ready to work with Commission to continue and successfully implement the Plan.