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EVgo comments RE: Alternative and Renewable Fuel and Vehicle Technology Program 2019-2020 Investment Plan

Additional submitted attachment is included below.

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February 22, 2019

California Energy Commission
1516 Ninth Street
Sacramento, CA 95814 -5512

RE: Docket No. 18-ALT-01 - Alternative and Renewable Fuel and Vehicle Technology Program 2019-2020 Investment Plan, Revised Staff Report

To Commissioner Scott and Advisory Committee Members:

EVgo commends the California Energy Commission's (CEC) for its continued leadership in establishing California as the undisputed leader in transportation electrification and making strides toward the state's climate goals. EVgo is proud to serve as a partner to the CEC and other industry partners to deploy our nation-leading public electric vehicle (EV) charging infrastructure enabling more Californians to access the benefits of electric vehicles (EVs) today.

In 2018, EVgo increased its volume of electric miles powered by 88% compared to 2017, charging more than 75 million miles through its public network of more than 1,100 DC fast chargers across 34 U.S. states and 66 metropolitan markets. More than a third of the miles fast charged in 2018 were due to light duty vehicle (LDV) fleets, comprised of rideshare, carshare, and delivery vehicles. Two critical reasons driving outsized demand on EVgo's public fast charging network from light duty fleet drivers are:

1) Rideshare drivers' vehicle miles traveled are 3 to 7 times that of personal use drivers;
2) Fast charging represents the vast majority of charging for rideshare drivers, for whom every minute of charging represents lost potential revenue.

Home charging is rarely an option for these drivers, and a driver survey from Maven Gig, one of EVgo's key partners, confirms that more than 85% of fleet drivers do not have access to home charging. Even those drivers who have access to overnight charging and drive for a full day will stop to charge midday based on direct customer reporting to EVgo of their driving habits.

The extremely fast growth in demand on EVgo's public network by LDV fleets in 2018 has led to congestion, and in regional electric vehicle (EV) hot spots, saturation, across its California urban chargers. Fast charging availability is the critical gating item for increased deployment of additional electrified LDV fleets in the strongest EV markets.

In response to this growing trend, EVgo sees the construction of a network of not just publicly available chargers, but also dedicated fast chargers for LDV fleets, as a key program. As such, and as a follow-up to the discussion during the February 6 meeting and our comment letter from November 21, EVgo would like to raise the topic of LDV fleet electrification for consideration in the 2019-2010 investment plan. EVgo strongly believes that LDV fleet charging would better serve all EV drivers while also providing important grid benefits. We summarize several key points on these topics below.

I. SB 1014 should be included in the investment plan under "Related Policies and Programs" (Chapter 2), "Related State Policy" (Chapter 3), or both.

SB 1014[1], sponsored by Senator Skinner and signed by Governor Brown in September 2018, established the California Clean Miles Standard and Incentive Program, which, among other goals, will require transportation networking companies (TNCs) to submit plans to reduce their greenhouse gas emissions and "entities contracting with participating drivers to provide zero-emission vehicles for use on transportation network

[1] https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1014

company platforms." The role of rental fleet, car share fleets, and other light duty fleets must also be evaluated as part of the legislation.

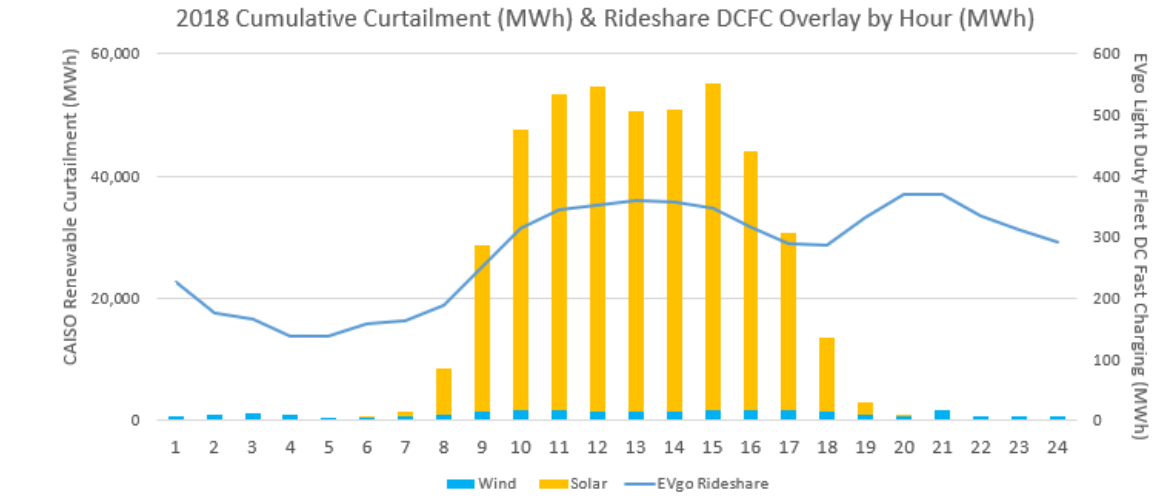
While the draft investment plan compiles related legislation to ZEV infrastructure and other items relevant to the plan, SB 1014 is absent from the list of related policies despite a specific call-out in the legislation to the Energy Commission to coordinate with other state agencies to "ensure that ongoing state planning efforts and funding programs that are intended to accelerate the adoption of zero-emission vehicles and charging infrastructure shall consider the goals of the California Clean Miles Standard and Incentive Program."[2] For these reasons, EVgo recommends that a reference to SB 1014 be included in the plan to provide a more accurate representation of state policy goals.

II. LDV fleet electrification, especially with rideshare, provides grid benefits.

A LDV fleet charging program would also provide critical grid benefits. After analyzing its 2018 data with its LDV fleet partners, EVgo found that LDV fleets on EVgo's public network in California reduced midday renewable energy curtailment by gigawatt-hours (GWh), confirming a demonstrable and material benefit to the grid. Comparing the cumulative annual load profile by hour from EVgo's LDV fleet fast charging with the CAISO 2018 cumulative curtailment by hour demonstrates the alignment of LDV rideshare fast charging during midday hours.

Fundamentally, LDV fleet drivers seek to maximize driving time and revenue during the morning and evening rush hours and maximize charging midday and at night. During 2018, EVgo's data demonstrates CAISO system benefits without price signals to align driving with peak retail pricing or peak wholesale demand, indicating the opportunity to improve the LDV fleet fast charging profile further.

The graph below reports EVgo's cumulative 2018 LDV fleet fast charging in MWh (blue line) aligning with the cumulative CAISO renewable curtailment in GWh. More than 45% of LDV fleet fast charging was performed during peak solar hours from 9 am through the 3 pm hour with more than 30% of charging during nighttime hours from 8 pm through the 4 am hour.



Sources: CAISO Curtailment http://www.caiso.com/Documents/Wind_SolarReal-TimeDispatchCurtailmentReportDec31_2018.pdf
Rideshare, 2018 EVgo fast charging operational data

[2] Sec. 4 (4)(d)

The 2018 operational data from EVgo's fast charging for LDV fleet demonstrates:

1) Elevated midday demand for fast charging, mitigating solar curtailment;

2) Reduced charging during the afternoon ramp, as drivers return to driving during rush hour;

3) A double benefit to the grid by reducing the depth of the duck belly as well as reducing the absolute ramp requirement during the duck neck period.

Based on the load profile shape shifting over the course of 2018, EVgo expects that congestion on its public network in high demand areas in the second half of the year pushed charging later into the afternoon on average, indicating that the natural preference without congestion would further reduce afternoon rush hour charging and concentrate additional charging activity during peak solar.

Thus, the opportunity to provide benefits to the grid from fast charging LDV fleets would likely increase if charging infrastructure programs were tailored to light duty fleets. These programs already exist in the medium-heavy duty space, but despite public policy goals and the passage of SB 1014, no such program currently exists for light duty.

III. LDV fleet charging should be considered for its benefits to the public network, and for the increased awareness that it brings to riders about electric vehicles.

During the February 6 meeting, dedicated chargers for LDV fleets, such as those by TNCs, was raised as a potential area for investment by an advisory committee member. During the discussion, advisory committee members shared their personal experiences with not being able to access a public charger due to congestion from fleet drivers. Others suggested that the public would not be able to access fleet chargers, and therefore they should not be included. We believe the latter comments are misguided, and LDV fleet electrification does indeed benefit the public and also lead to increased EV adoption.

First, dedicated infrastructure for light duty fleets *benefits the public by relieving pressure from the public network*. Fleet drivers' need for frequent charges increases the time that customers must wait in line to charge at a station. This can negatively impact the public charging experience for personal use EV drivers and discourage personal use. Moreover, dedicated charging is often co-located with public charging and for purposes of this program, a minimum of 2 public fast chargers could be required at all light duty fleet charging stations.

As mentioned in our November 21 comment letter, light duty fleet drivers with EVs also serve as ideal EV ambassadors to the driving public. In the *Electrifying the Ride-Sourcing Sector in California* report, the California Public Utilities Commission (CPUC) writes that exposure to EVs for both the public and TNC drivers "has been found to result in lasting positive impressions that influence subsequent vehicle purchase decisions." Additionally, while dedicated LDV fleet charging infrastructure would not be available to the public, TNC drivers serve the public and make their ride hailing services available to the public.

Conclusion

Given the grid and public benefits of LDV fleet electrification, EVgo respectfully asks that the CEC to consider a LDV fleet program as part of the 2019-2020 investment plan. While we are aware of the AB 2127 process, waiting to enact such programs until after the AB 2127 assessment process would delay providing the immediate relief needed to the public network, and the opportunity to create programs that would naturally mitigate solar curtailment.

EVgo recommends a program within the CalEVIP framework that would enable LDV fleet charging, and recommends that staff work with stakeholders to discuss appropriate funding levels. EVgo thanks the CEC for the opportunity to provide input on this investment plan and extends itself as a resource to the Commission and advisory committee members in further planning.

Sincerely,

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