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Additional submitted attachment is included below.

November 13, 2017

Oxygen Initiative 2017 IEPR Comments

Oxygen Initiative is committed to the accelerated adoption of zero carbon technologies such as plug-in electric vehicles (PEVs) and develops software that aids various fragmented stakeholders in supporting this acceleration with game-changing technologies. As such we express our appreciation for the California Energy Commission's staff and their work in assembling the 2017 IEPR.

Our comments here are directed to the portions of the IEPR that deal with strategies supportive of California's statutory goals and Executive Directives, namely:

- Achieving a renewable portfolio standard (RPS) of 50% by 2030
- Accelerated transportation electrification
- Smart charging of electric vehicles as a means to:
    - Simplify the customer refueling experience with a 'Plug and Play' experience wherever and whenever they refuel.
    - Anticipate the seamless roaming requirements of future 'ACES' (Autonomous, Connected, Electric and Shared) vehicles.
    - Avoid any impact on range needs of the vehicle owner due to smart charging

- Achieve optimized (lowest) carbon intensity of needed e-fuel via dynamic “Location Marginal Pricing” in support of the Low Carbon Fuel Standard. (LCFS)
- Enabling PEVs to provide real-time load augmentation during periods of “over-generation” as mentioned on Page 91 of the draft IEPR.
- Intelligent prioritized staggering of vehicle charging profiles to avoid local transformer overload while respecting planned departure time and needed energy.

- Working in concert with the international/global community to achieve scalable solutions to climate change among automakers and charging station manufacturers.

Oxygen Initiative finds that, while the California Government has set up an interagency Vehicle Grid Integration Working Group, the existing stakeholders that had been involved in an unproductive stalemate for years simply replicated that unproductive dialogue in the context of the VGI Working Group. Further, the group recommendation offered on October 30, 2017 (after 6 months of meetings, some of which required transoceanic travel by European automakers) replicated the market failure by failing to select a communications protocol and punted the issue back to the market. California must do better and it must do it now.

By not selecting a communications standard and only specifying hardware, the market will enter 2018 exactly as it was before the creation of the VGI Working Group: unable to move beyond the stalemate.

This persistent stalemate will have the following effects:

- Automakers will be unable to leverage standards-based (scalable) smart charging and begin series-production of VGI-ready vehicles that also support California's goal of accelerated market uptake
- Utilities will have no guidance on what to buy, and will therefore buy stations with no communications standard at all for AC Level 2 charging
- ARB policies and CAISO grid-support applications that require associated smart meter data for compensation will lack sufficiently accurate reporting data.

In our opinion, the failure to declare a VGI standard places a regulatory failure on top of an existing market failure. Where we can step in to help simplify the consumer's experience and the automaker's production planning challenges while supporting our guiding principles for grid integration, we must.

California's Governor, we believe, summons us to do this now. Governor Brown has publicly and repeatedly stated the urgency of acting decisively and, wherever possible, in coordination with other global influencers. In December of 2016, a group of 9

automakers submitted to the CEC 16-TRAN-01 proceeding a comment[1] that, while they did not want to be mandated to adopt the ISO/IEC 15118 VGI standard, they supported it. This **same standard** is already being installed on series production vehicles

by the vast majority of automakers for DC Level 3 charging, thereby simplifying the task and lowering the cost of implementation for AC Level 2 smart charging. Since that time, the list of global automakers has grown as has the number of nations that are specifying the standard for infrastructure investments. California should follow this lead and do it now, in advance of the massive investments in public, semi-public and private charging infrastructure that must come if we are to rise to this historic moment.

[1] http://docketpublic.energy.ca.gov/PublicDocuments/16-TRAN-01/TN215326_20170113T100319_Stefa_Reinsdorf_OEM_Group_Comments_OEM_Consolidated_Comment_to.pdf