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Hubject Comments - Comments on MDHD BEV Charging Infrastructure Grant Funding Opportunity Concept

Additional submitted attachment is included below.

January 10, 2020

California Energy Commission
Docket 19-ERDD-01
1516 Ninth Street
Sacramento, CA 95814

Re: DER Strategies for MDHD BEV Charging Infrastructure Funding Concept

Dear California Energy Commissioners and Staff,

We appreciate the opportunity to provide feedback on the Request for Comments on the DER Strategies for MDHD BEV Charging Infrastructure funding concept. We are excited to support projects and strategies that can enable faster and more cost-effective integration of charging infrastructure for MDHD BEVs.

Hubject, founded in 2012, is focused on increasing EV adoption through simplifying electric vehicle charging; one of the primary barriers to EV purchase. First in Europe through its eRoaming platform enabling cross network charging and now by leading in the development and implementation of Plug&Charge using ISO 15118. This technology not only streamlines charging with faster charging session authentication and authorization, but also enables smart and bi-directional charging, as well as wireless or inductive charging.

Hubject is actively supporting and contributing to ISO 15118, a Global Intelligent Standard to secure communication between an EV and electric vehicle supply equipment (EVSE), through its development of a functioning Plug&Charge ecosystem and involvement in CharIN, an EV trade organization developing and establishing Combined Charging System (CCS) connector and ISO 15118 as the global standards. CharIN has over 180 members, representing a cross section of EV stakeholders, including; automakers, utilities, hardware manufacturers, charging networks and technology companies.

We support the proposed Grant Funding Opportunity (GFO), which will enable faster and more cost-effective integration of charging infrastructure for medium- and heavy-duty battery electric vehicles as distributed energy resources. Within this program, we respectfully recommend the Energy Commission recognize the importance and benefits of the ISO 15118 protocol for charging and include ISO 15118 as a requirement in the GFO. Many protocols have been tested for smart charging using EPIC funding, but ISO 15118 is an open protocol that has not yet been tested and validated in the medium/heavy duty space, which has the most potential to use batteries as DERs, and this would be an ideal opportunity to test and validate ISO 15118 in medium and heavy-duty use cases.

ISO 15118 will help support the California Energy Commission's goals, including: (1) Interoperability, (2) Competition and Customer Choice, (3) Cost Control, and (4) Convenience.

1. *Interoperability:* ISO 15118 will help standardize EVSEs enabling interoperability and the ability to function with each other, without special effort by the end-user. The development of ISO 15118 is being coordinated through CharIN a trade organization of a cross section of 180+ EV stakeholders including automakers, utilities, hardware manufacturers, charging networks and technology companies – creating an industry-wide standard. In addition, ISO 15118 integrates well with OCPP, the "defacto" communication standard of chargers and backend systems.
2. *Competition and Consumer Choice*: ISO 15118 provides open standards to allow for portability between suppliers and increases choice to ensure easy access by all in a competitive, and highly innovative market.
3. *Cost Control*: ISO 15118 includes communication for smart charging which will help utilize existing grid infrastructure, avoid peak demand charges, and maximize the use of renewable energy. The focus on a single standard will help increase deployment and scalability of easy seamless charging, as well as reduce the cost for manufacturing and implementation.
4. *Convenience*: ISO 15118 provides the ultimate convenience by enabling Plug&Charge, which facilitates charging without having to use an RFID card, credit card, or app on a cell phone.

In response to the questions, we respectfully recommend:

1. The school bus use case be prioritized in this solicitation. School buses are ideally suited to serve as a DER, as they are only used during school days, which is roughly 180 days/year, and are typically unused during the summer months. These idle energy storage assets can help reduce peak load and demand on the grid, as well as provide needed resiliency for critical infrastructure facilities during power shutoffs. In addition, the transit bus use case should be prioritized to demonstrate how smart charging via ISO 15118 provides the load balancing needed to avoid distribution system upgrades, especially as California implements the Innovative Clean Transit Rule that will require all transit agencies to purchase zero-emission transit buses.
    a. ISO 15118 is an open global standard and should be used as a target technology because it is easily scalable, which helps reduce costs and improves standardization across all manufacturers. Using one protocol between the EV charging station and the EV will increase deployment and scalability, reducing the cost for manufacturing, hardware and implementation.
    b. Utilizing ISO 15118 will also help reduce costs because it is enables smart charging and bidirectional charging, thus balancing the load to avoid grid infrastructure upgrades.
2. The ISO 15118 protocol meets the operational requirements of the priority use cases. Hardware and software need to be implemented in MDHD vehicles to initiate Plug&Charge, smart charging and bidirectional charging capabilities, which could be tested and implemented as a part of this GFO.
3. The CEC dedicates at least $2 million per project to make a meaningful difference on this issue and providing at least 75% of the DER equipment and software costs.

We greatly appreciate the opportunity to provide feedback to the Energy Commission on the DER Strategies for MDHD BEV Charging Infrastructure funding concept. We are glad to provide any additional information and respond to follow up questions.

Sincerely,

Paul M. Glenney

CEO, Hubject Inc.