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IoTecha comments for Vehicle-Grid Innovation Lab (ViGIL) draft solicitation concept

Additional submitted attachment is included below.

Vehicle-Grid Innovation Lab (ViGIL)

Comment submitted by IoTecha Corp.

May 27, 2020
California Energy Commission
Docket 19-TRAN-02
1516 Ninth Street
Sacramento, CA 95814

Re: Vehicle-Grid Innovation Lab (ViGIL) Draft Solicitation Concept

Dear California Energy Commissioners and Staff:

IoTecha is pleased to submit the following comments in support of the California Energy Commission's

Vehicle-Grid Innovation Lab (ViGIL) solicitation. We commend the CEC for creating this program and we strongly support your efforts to promote interoperability and certification programs to further accelerate EV adoption.

We at IoTecha are working to accelerate the Electric Vehicle revolution by providing an integrated Platform called IoT.ON™ – consisting of software, hardware and Cloud components - for the Smart Charging infrastructure and enabling the integration of Electric Vehicles with the Power Grid. Our customers are prominent global manufacturers of both Electric Vehicles and EV charging stations. Our products include IoT Cloud Services, EV Modules, EVSE Modules and products, unique ISO/IEC 15118 Sniffer Tools, IoT Edge for Charging Management, and our Gateway to 3rd party Energy Management and Fleet Management systems that can be implemented at the Cloud or/and Edge levels.

We have a particular expertise in ISO/IEC 15118 and IoTecha has been a very active member of CharIN e.V., which has taken the lead in establishing the Combined Charging System (CCS) connector and ISO/IEC 15118 as a global standard. IoTecha's HomePlug GreenPHY analyzer for ISO/IEC 15118 is the only tool in the industry that enables in-depth analysis of HPGP and V2G communication with a *non-invasive* packet capture and protocol analyzer.

Our specific comments are as follows:

1. We suggest that it would be a better approach to divide the available funds into separate awards for multiple labs, rather than having a single lab for testing all protocols. It is a relatively young industry and it would be difficult to find a single entity that is a true expert in all protocols. As an example, a lab that excels in the end-to-end ISO/IEC 15118 PnC testing would not necessarily have expertise in OpenADR and vice versa.

In fact, not all protocols are required to be used at the same time. It would benefit the industry to have multiple labs, each of which has expertise in a particular protocol. We believe this is a more efficient approach, both in terms of speed and throughput of the testing, and in terms of reliability and credibility of the tests.

We suggest that the $3 million award should be divided into a minimum of 3, and up to 5 separate awards, for separate labs specializing in each of the protocols as listed below:

1) ISO 15118 *(required)*

2) Open Charge Point Protocol (OCPP) Version 1.6JSON and 2.0.1 *(required)*

3) Section 3.40 of the NIST 2020 Handbook 44 (Electric Vehicle Fueling Systems) *(required)*

4) IEC 62746-10-1 (2019) (Open Automated Demand Response 2.0b *(optional)*

5) ENERGY STAR® for Electric Vehicle Supply Equipment *(optional)*

2. IoTecha recommends adding criteria, under sub-section (2) Project Readiness and Implementation, to evaluate whether the proposed lab includes an operational ISO 15118 PKI & Ecosystem that issues certificates to test all roles within charging events. The PKI and Ecosystem would ensure the security of the EV charging sessions through a TLS handshake in order to protect against data theft and to prevent hacking into the vehicle and charging stations. This is an important element for evaluating the readiness of potential EVSE and vehicles.

We thank the Commission for this opportunity to provide comments. We are available to provide additional information or to reply to any questions that you may have.

Respectfully submitted by

IoTecha Corp.

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