

# Comments to the CPUC VGI Work Group meeting on the 15<sup>th</sup> May 2017

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Regarding the VGI Working Group WebEx held on the 15<sup>th</sup> May 2017, I'd like to submit the following general comments. These comments are not focused on any specific presentation from the meeting, but rather the meeting and working group in general.

## **1. Scope Creep of the VGI Working Group:**

The original scope of our discussions was focused on the communication between the EVSE and the EV. The question was, and still is, if a mandate is necessary and if so, which protocol shall be mandated? The motivation continues to be accelerating the adoption of E-Mobility and ensuring interoperability. The goal must be that a customer/driver can purchase any EV, charge at any CPO's charging station, and sign up with any MSP. This type of interoperability can only be achieved with defined standards.

Although the entire VGI ecosystem (as outlined by the Elaad report) is extremely important to this goal and needs to be considered its entirety, beyond the EVSE should remain out of scope of this particular working group, or at least this particular phase of the working group. If this working group considers the VGI ecosystem in its entirety, we will not reach any meaningful conclusions within our September timeframe. Reaching a conclusion as soon as possible regarding the EVSE-to-EV communication is of paramount importance to automotive OEMs and CPOs so that they may start implementing the communication interface into their products.

Because of this, we need to correct the extreme scope creep which has dramatically shifted the focus of this working group and return to the original core question. Is an EVSE-to-EV communication mandate necessary and which protocol shall be used? This is a realistic goal/conclusion which we could reach by our September target.

## **2. Structure the VGI Working Group in Phases:**

Because there is a lot to consider when speaking of the entire VGI ecosystem, the working group should be conducted in phases. Phase 1, which should run until the end of September, should focus on the EVSE-to-EV communication. Phase 2 could, for example, focus on the communication between the EVSE and the CPO backend. Phase 3 could focus on the backend communication between CPO and MSP, and so on. Certain phases may run in parallel to reduce the total duration of the VGI Working Group, when possible.

By doing this we will achieve our September targets while allowing the Working Group to continue its work beyond this date, and ultimately address the entire VGI spectrum in manageable phases with concrete milestones. In other words, we need to handle the working group like a project. We need to know which decisions/milestones need to be reached first and which can be done in parallel. Attempting to address everything at once is simply an unmanageable task and we will not succeed.

**3. Use-Cases/Requirements already exist:**

During the May 15<sup>th</sup>, 2017 WebEx, there was a strong emphasis on defining use-cases from scratch. This is a serious repetition of work. Both the ISO/IEC 15118-1 and SAE J2847/1 standards are dedicated to describing use-cases and requirements for the EV-to-EVSE/grid communication. These documents have been created and agreed upon by international groups consisting of global automotive OEMs, CPOs, utilities and other interested parties, many of which are now involved with the CPUC's VGI Working Group.

If the working group insists on defining use-cases, we should start with the existing work which has already been accomplished by the ISO/IEC 15118-1 and SAE J2847/1 standards, and build on these use-cases/requirements. This would save us time and effort by avoiding significant rework. At the very least, we need to set a deadline as to when this working group finalizes their use-cases so that we can begin addressing the question of what protocol is apt to fulfilling these use-cases.

**4. Monopoly vs. Healthy Market Competition:**

During the May 15<sup>th</sup>, 2017 WebEx some criticism was made towards to the Elaad report for being too focused on the situation in Europe and not reflecting the situation in the USA. In addition, it was pointed out that in the USA the charging infrastructure is mostly dominated by monopolies with little to no roaming taking place. Although this may be the situation today, I would like to point out that it will be beneficial to promote a diverse market with healthy competition between CPOs and MSPs. Competition in the market place will ultimately lead to innovation, reduced costs to the end consumer, as well as a greater freedom of choice. To achieve this we once again require standards so that the customer/driver buys into a system whereby he/she can purchase any EV, charge at any CPOs charging station and sign up with any MSP. Ultimately, driving an EV shall be as easy, if not easier, than driving a conventional ICE, which means that the driver can refuel or recharge at any gas or charging station. Only with such standardized, open and interoperable infrastructures across the USA will we be able to accelerate the adoption of E-Mobility.