



## Comments to the VGI Working Group's Draft Proposal

The following comments have been submitted by the automakers Audi, Mercedes-Benz, Porsche and Volkswagen. These comments are intended to be included in the VGI Working Group's Draft Proposal presented at the 30 October 2017 WebEx meeting. The original draft proposal can be found on the CPUC's VGI website here: <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442455174>

### **Southbound Communication (EVSE-to-EV)**

Defining futureproof hardware specifications for "grid-friendly" EVSEs will help ensure their longevity in terms of usability and relevance by allowing them to be updated as newer VGI protocols and versions become available.

However, only defining hardware specifications is not enough to enable the intended VGI capabilities of these EVSEs. To reduce the risk of grid-friendly IOU EVSEs becoming stranded assets, we need to ensure that they are being used for VGI as intended. This requires that the EVSEs support a VGI protocol (both hardware and software) which is well-defined, mature, and most importantly, supported by an international community of EV and EVSE manufacturers.



During the VGI Working Group's WebEx on the October 30th 2017, the automakers gave the following feedback regarding their short to medium term planning for implementing VGI charging technology which was closely echoed by the EVSE manufacturers.

Automaker	AC	DC	Wireless
<b>BMW</b>	<b>ISO15118</b>	<b>ISO15118</b>	<b>ISO15118</b>
<b>Fiat Chrysler</b>	SEP2.0	<b>ISO15118</b>	<b>ISO15118</b>
<b>Ford</b>	<b>ISO15118</b>	<b>ISO15118</b>	<b>ISO15118</b>
<b>GM</b>	No high level comms	<b>DIN/ISO15118</b>	Telematics
<b>Honda</b>	TBD	<b>DIN/ISO15118</b>	TBD
<b>Lucid</b>	<b>ISO15118</b>	<b>ISO15118</b>	-
<b>Mercedes-Benz</b>	<b>ISO15118</b>	<b>ISO15118</b>	<b>ISO15118</b>
<b>Nissan</b>	Telematics	ChaDeMo	TBD
<b>Porsche</b>	<b>ISO15118</b>	<b>ISO15118</b>	<b>ISO15118</b>
<b>Audi</b>	<b>ISO15118</b>	<b>ISO15118</b>	<b>ISO15118</b>
<b>VW</b>	<b>ISO15118</b>	<b>ISO15118</b>	<b>ISO15118</b>

Table 1: Overview of Automaker's short to medium term planning  
 Source: <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442455245>

Because grid-friendly EVSEs will need to support complete protocols (both hardware and software) in order to fulfil their VGI duties, we recommend that ISO/IEC15118 be used for the southbound communication based on its support by both automakers and EVSE manufactures, as it will not only ensure quality and reliability of the consumer charging experience but also the interoperability between the EV and the charging station.

Thus, we recommend adding the following to the [VGI Working Group's Draft Proposal](#) for the southbound communication:

- For conductive charging the Control Pilot (CP) signal and pin as specified by SAE J1772 / IEC 61851-1 shall be a hardware requirement.
- To ensure the VGI functionality ISO/IEC 15118 shall be supported by grid-friendly EVSEs and EVs.

