

**DOCKETED**

<b>Docket Number:</b>	17-EVI-01
<b>Project Title:</b>	Block Grant for Electric Vehicle Charger Incentive Projects
<b>TN #:</b>	231211
<b>Document Title:</b>	Charging Interface Initiative Comments - Future Equipment Requirements for CALeVIP - CharIN Answers
<b>Description:</b>	***This document supersedes TN 231196***
<b>Filer:</b>	System
<b>Organization:</b>	Charging Interface Initiative
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	12/13/2019 11:49:57 AM
<b>Docketed Date:</b>	12/13/2019

*Comment Received From: Charging Interface Initiative  
Submitted On: 12/13/2019  
Docket Number: 17-EVI-01*

**Future Equipment Requirements for CALeVIP - CharIN Answers**

*Additional submitted attachment is included below.*



CharIN e. V. | c/o innos – Sperlich GmbH | Kurfürstendamm 11 | 10719 Berlin

## Future Equipment Requirements for CALeVIP

Re: Docket 17-EVI-01

CharIN e. V. (CharIN) appreciates the opportunity to provide comments on the November 18, 2019 Future Equipment Requirements for CALeVIP presentation. CharIN's comments include background information and comments.

The CharIN Vision: Developing and establishing the Combined Charging System (CCS) as the global standard for charging battery powered electric vehicles of all kind.

Our mission:

- Expanding the global network by integrating 180 companies on each level of the defined value chain of charging to support and promote CCS
- Drafting requirements to accelerate the evolution of charging related standards
- Defining a certification system for all manufacturers implementing CCS in their products

Our global activities:

- Publishing position papers which give guidance and present a common goal of international focus groups working on advanced technical topics
- Identifying and integrating the key players on each level of the charging value chain
- Setting up international representative offices in defined key regions of the world
- Concepting and hosting own international charging community seminars and meetings to globally promote CharIN and CCS
- Participating in established global conferences and trade shows around charging to grow awareness, take advantage of networking and empower member companies

## Comments:

CharIN fully supports requiring newly installed EVSEs to support ISO/IEC 15118 as described in the “CharIN implementation guide for the charging communication feature Plug-and-Charge within the ISO/IEC 15118 communication protocol. It is also important for EVSE’s to support DIN SPEC70121, previous versions of ISO/IEC 15118 and pulse width modulated-signaling (PWM) according to IEC 61581-1 Ed3.

- Ensuring cyber security:  
The ISO15118 standard provides the necessary technical foundation for the creation of a secure charging infrastructure, but this is only a part of what is needed. CharIN is leading the effort focused on the creation of best practices covering all aspects of the secure ecosystem based on the ISO15118 enabled PKI. CharIN considers security to be the corner stone of the technology and is continuously re-evaluated.
- Which specific sub-parts of ISO 15118 should be implemented?  
CharIN sees a need for Plug and Charge supporting infrastructure as many car manufacturers and EVSE suppliers are close to the market roll out and all these vehicles will support Smart Charging. In the close future, V2G capability will be requested, which will be provided by the next version of ISO 15118-20.
- Understanding customer charging needs and addressing them with the manufacture of new products

CharIN consolidates the perspective of its members and provide common opinions to enable good customer experiences. Customers are looking for easy, seamless charging with interoperability through Plug&Charge which is provided by ISO15118-2

- How and when should ISO 15118 be imposed as a term for funding, given the various states of the standard, conformance procedures, and limited testing facilities?

The implementation of 15118 can be seen as a strong recommendation from the industry right now in conjunction with DIN SPEC 70121:2014. Additional funding could accelerate the market ramp up. CharIN is continuously working on a comprehensive CCS compliance program to enable industry-wide full interoperability through worldwide working groups and test events.

### Interop testing

CharIN took over the format from ISO Testival and started with the 1<sup>st</sup> CharIN Testival in Arnhem, NL in October 2019. The next CharIN Testival will take place at Lucid Motors in Newark CA during the last week of April 2020. CharIN plans at least one Testival per year in each region of the world to track the interoperability of existing products closely

#### Conformance Test:

CharIN is finalizing the certification process and the relevant basic document set in Q1 2020. The necessary test devices (CharIN Certified Test Systems – CCTS) will be prepared to provide interoperability tests starting with the DC charging stations (EVSEs) first.

#### Certification process

Multiple labs will be able to apply as a CharIN approved lab to run the CCS certification according to the process which will be defined by end of Q1.

- What is a reasonable level of achievement in the near-term (2021) for manufacturers, as they seek self, user, or third party certifications?

CharIN is setting up a third party certification using its free CCTS specification to ensure conformance with the related specifications and test documents. Starting with CCS Basic (DIN SPEC 70121 in 2020).

- The role of the Energy Commission in alleviating constraints observed by EVSE and EV manufacturers in the supply chain of standards-based products

Facilitate EV adoption by promoting and guaranteeing a good customer experience by ensuring charging is convenient, interoperable and at a good reasonable cost. This is achieved by defining clear guidelines and timing for manufactures to rely on for funding purposes. To help in this, the CEC can support CCS certificates and related documents which will be named by the CCS specification or other guideline documents to help the market provide interoperable products.

Sincerely Yours,  
Claas Bracklo (Chairman)