

# **ENERGY STAR Program Requirements for Electric Vehicle Supply Equipment**

EV Charging Industry Stakeholders Comments on Eligibility Criteria v1.1

January 22, 2021

## **I. INTRODUCTION**

ChargePoint, EVBox, EVgo, and Tesla (collectively, the “EV Charging Industry Stakeholders”) submit these comments in response to the request for comments issued by the Environmental Protection Agency (“EPA,” or “the Agency”) on December 16, 2020 regarding the Version 1.1 Final Draft Specification of ENERGY STAR’s Program Requirements for Electric Vehicle Supply Equipment (“EVSE”).

## **II. BACKGROUND ON EV CHARGING INDUSTRY STAKEHOLDERS**

### About ChargePoint

Since 2007, ChargePoint has been committed to making it easy for businesses and drivers to go electric, with the largest EV charging network and most complete set of charging solutions available today. ChargePoint’s cloud subscription platform and software-defined charging hardware includes options for every charging scenario from home and multifamily to workplace, parking, hospitality, retail and fleets of all kinds. ChargePoint continues to create the new fueling network to move all people and goods on electricity now and in the future.

### About EVBox

Founded in 2010, EVBox Group empowers businesses to build a sustainable future by providing flexible and scalable electric vehicle charging solutions. With its extensive portfolio of commercial and ultra-fast EVBox charging stations, as well as scalable charging management software engineered by Everon, EVBox Group ensures that electric mobility is accessible to everyone. EVBox Group is a leader in R&D, with facilities across Europe and North America developing groundbreaking electric vehicle charging technology. With offices across the globe, including Amsterdam, Bordeaux, Munich, and Chicago, and strong foundations in dozens of markets, EVBox Group is working to shape a sustainable future of transportation.

### About EVgo

EVgo is the nation’s largest public fast charging network for electric vehicles, and the first to be powered by 100% renewable energy. With more than 800 fast charging locations in more than 600 cities across 34 states, EVgo owns and operates the most public fast charging locations in the U.S. and serves more than 220,000 customers. Today, more than 115 million Americans live within a 15-minute drive of an EVgo chargers. Founded in 2010, EVgo leads the way on transportation electrification, partnering with automakers; fleet and rideshare operators; retail hosts such as hotels, shopping centers, gas stations and parking lot operators; and other stakeholders to deploy advanced charging technology to expand network availability and make it easier for all Americans to enjoy the benefits of driving an EV. As a charging technology first mover, EVgo works closely with business and government leaders to accelerate the ubiquitous adoption of EVs by providing a reliable and convenient charging experience close to where drivers live, work and play, whether for a daily commute or a commercial fleet.

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### About Tesla

Tesla's mission is to accelerate the transition to sustainable energy through the development of all-electric vehicles and electric vehicle charging stations, as well as clean energy products including photovoltaic solar and battery storage. Tesla is a U.S. based manufacturer whose vehicle line-up includes the Model S sedan, Model X crossover vehicle, Model 3 sedan, and Model Y crossover vehicle. The vehicles have all-electric range of up to 402 miles per charge, and industry leading performance and safety ratings. Tesla's Supercharger network is the largest direct current fast charging network with more than 20,000 charging stalls globally.

### III. COMMENTS

The EV Charging Industry Stakeholders respectfully submit our comments on EPA's ENERGY STAR Version 1.1 Final Draft Specification for EVSE. The scope of these comments is limited to Section 3.10.6 – Grid Communications.

In its notice for comments, EPA acknowledged that the Version 1.1 Final Draft Specifications “propose more prescriptive requirements (e.g., remote management and scheduling capabilities, as well as defined DR signals) intended to make the connected designation more useful has proposed.”<sup>1</sup> We agree that any consideration for connected EV charging in the Final Specification should be done in a manner that makes ENERGY STAR designation more useful.

The EV Charging Industry Stakeholders are concerned that connected charging requirements from the Version 1.1 Final Draft Specifications would make an ENERGY STAR designation less useful to consumers of EVSE. We believe it would be more appropriate for EPA to focus on functional requirements rather than attempting to pre-determine which protocols should be adopted by the industry. By avoiding the inclusion of a prescriptive list of accepted protocols in subclauses (i), (ii), and (iii) of Section 3.10.6., EPA could ensure that ENERGY STAR requirements are durable enough to evaluate protocols as they evolve over time.

In the event that EPA maintains these subclauses, we recommend that Section 3.10.6 be amended to avoid unnecessarily confusing consumers and supporting long-term usefulness of the ENERGY STAR designation for EVSE. At a minimum, we recommend amending subclause (iii) as follows for several reasons:

- iii. ~~It is mandatory to report whether the charge controller within the EVSE has transceiver and/or the necessary hardware for communication (Power Line Carrier) supporting supports at least one of the following station-to-vehicle protocols: ISO 15118-2 or later, SAE J1772, IEC 61851-1, or CHAdeMO 2.0 for higher level communication. It is also mandatory to report if the EVSE is compliant with UL 9741 in case of bidirectional EV charging system.~~

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<sup>1</sup> EPA Email Notice for Comment, December 16, 2020.

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First, mandatory disclosure of whether EVSE can use ISO-15118 for “*higher level communication*” would not provide consumers with meaningful and actionable information. This potential for consumer confusion would be due to the fact that EVSE can selectively comply with different functions of ISO 15118.

ISO 15118 consists of an inner loop to control energy transfer (i.e., EV charging) and an outer loop that manages service contract (i.e., authentication, payment, and receipt):

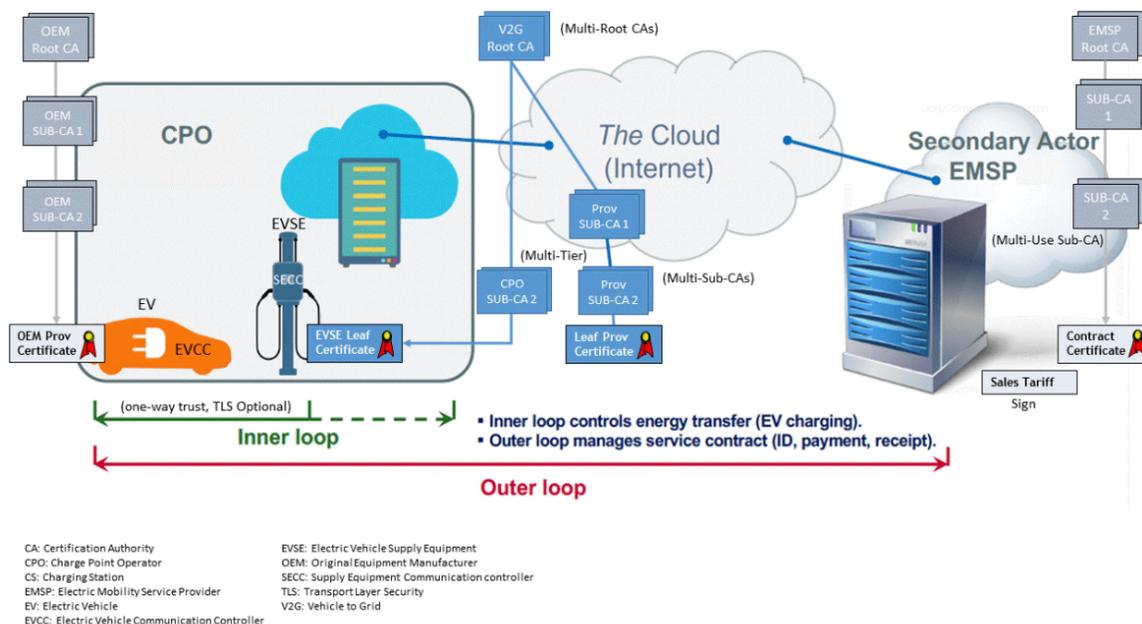


Fig. 1: ISO 15118 PKI – Inner and Outer Loops<sup>2</sup>

These complementary loops and related functions can be supported independent of one another. In other words, EVSE can support ISO 15118 functions related to EV charging without supporting those related to power management. As a result, EVSE manufacturers could accurately claim to “*Support ISO 15118*” without actually supporting its grid communication features. This would render mandatory reporting on ISO15118 meaningless, as consumers would be unable to distinguish which functions are supported. This can be remedied by including a specific reference to “*energy management features.*”

Second, it would be inappropriate for EPA to signal to consumers that ISO 15118 is the de facto standard, particularly since the majority of vehicles do not support power management through

<sup>2</sup> “Practical Considerations for Implementation and Scaling ISO 15118 into a Secure EV Charging Ecosystem.” ChargePoint, digicert, eonTi. May 14, 2019. Available at: <https://www.chargepoint.com/files/15118whitepaper.pdf>

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ISO 15118. ISO 15118 continues to be amended and improved, which should be reflected by specifying the reference to “ISO 151118-2 or later.”

Moreover, there are many other power management protocols already being leveraged by the EV charging industry. Many vehicles with CCS connectors support power management through the relevant aspects of SAE J1772. CHAdeMO 2.0 and IEC 61851-1 also support power management, with additional protocols already in development. EPA should expand the list of responses that meet the mandatory reporting requirement in subclause (iii).

Finally, we recommend against including mandatory reporting on UL 9741, which is generally not supported by vehicles and for which there are limited practical use cases.

### **IV. CONCLUSION**

Thank you for the opportunity to provide these comments. The EV Charging Industry Stakeholders appreciate EPA’s commitment to supporting innovation in the EVSE market, and we would welcome the opportunity for a broader dialogue on these important topics.

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