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Verena Radulovic
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Re: Energy Star rating of EVSE

Ms. Radulovic:

General Motors (“GM”) fully supports the EPA’s Energy Star goals to drive energy efficiency and help individuals and businesses save money through superior technology. GM is committed to accelerating the growth of the electric vehicle (EV) market, and consumer acceptance of important features such as EV charging is critical to this market growth. GM believes the EPA has an important opportunity to help shape the future of EVs and encourage the use of charging solutions that ensure more positive consumer experiences, and thus the broader consumer acceptance of EVs overall. We also believe the Energy Star rating means more to consumers than just energy efficiency and that an Energy Star marking on Level 1 (120V) hardware likely implies an endorsement that consumers interpret as “recommended”. And as GM believes consumers should be broadly encouraged to move towards Level 2 (240V) devices (as we will outline below), **we recommend that EPA apply the Energy Star rating only to Level 2 systems, and not to Level 1 units.**

Today, automakers commonly provide a Level 1 (L1) cordset as standard equipment in new EVs. These are provided as “convenience” chargers. Some EV drivers use the L1 cordsets to regularly charge their EVs, as it conveniently plugs into a standard household electrical outlet and requires no special installation. Other EV drivers who wish to have a faster charger will shop around and select a Level 2 (L2) EVSE. And it is in this case of the L2 EVSE - which is a shopped-for appliance - that an Energy Star endorsement would be helpful in driving



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consumers towards L2 charging systems, which inherently provide a higher level of system efficiency. Not only do most automakers officially recommend L2 EVSE charging to consumers today, but this L2 recommendation becomes even more important for consumers as automakers introduce longer-range EVs, such as our Chevrolet Bolt EV with a 60kWh battery and an EPA-estimated range of 238 miles, which begins production in the next few months.

An Energy Star “endorsement” on select L2 EVSEs will have the following advantages that are important to broader consumer acceptance of EVs:

- L2 charging provides faster, more satisfying charge times (particularly important as battery size grows significantly for second generation BEVs coming to market imminently).
- L2 charging is inherently more energy-efficient at the system level than L1 charging, so consumers will save more money in electricity costs than those who utilize L1 for regular charging.
- An L2 EVSE is very likely to be installed by a professional electrician, which helps to avoid nuisance faults associated with L1 cordsets (such as a tripped circuit resulting from the use of a non-dedicated circuit, common in many garages today).
- A focus on L2 supports the position of vehicle OEMs that L1 cordsets are intended more for convenience charges rather than for daily use, especially with large battery BEVs.
- An L2 EVSE more effectively and efficiently satisfies “overhead” loads that are present during and after the battery has completed charging – this includes battery thermal conditioning loads, computer loads, instrumentation loads, etc... L1 will take more than twice as long to satisfy these same loads at its lower voltage and lower current - and with inherently higher energy losses.
- An L2-only endorsement encourages consumer investment in an L2 EVSE home “appliance”, and hence increases their likelihood of purchasing additional EVs in the future, as well as the likelihood that subsequent home-owners purchase an EV.
- And finally, an L2 EVSE results in a faster charge, and thus represents a more flexible energy load that is more capable and much more likely to be incorporated into demand response (DR) systems for our future power grid. The promotion of L2 EVSE today will therefore support more efficient power grids of the future.

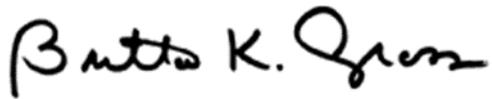
We believe an Energy Star rating system exclusively for L2 EVSE devices will help drive awareness among consumers that L2 charging offers many meaningful advantages, in addition to energy efficiency, and will result in higher consumer satisfaction with the technology, resulting in broader consumer acceptance of EVs.



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We appreciate the EPA's efforts to help drive efficiency in EV charging through the Energy Star program and we appreciate your consideration of this input as well as the opportunity to continue to work together.

Sincerely,



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