July 22, 2022­­­­

Liane M. Randolph, Chair

California Air Resources Board

1001 “I” Street

Sacramento, CA 95814

**RE: Peninsula Clean Energy Advanced Clean Cars II Comments – Require 16 Amp Level 1 Charging Capability**

Dear Chair Randolf and Members of the Board,

Peninsula Clean Energy authority (“PCE”) submits these comments to the California Air Resource Board (“CARB”) in regards to the Advanced Clean Cars II (“ACC II”) draft regulations.

PCE, a community choice aggregator (“CCA”), is the official electricity provider for San Mateo County and the City of Los Banos in Merced County. Founded in 2016 with a mission to reduce community greenhouse gas emissions, the agency serves 315,000 customers by providing more than 3,500 gigawatt hours annually of carbon-free energy. As a community-led, not-for-profit agency, PCE makes significant investments in our communities to expand access to sustainable and affordable energy solutions. PCE is on track to deliver electricity that is 100% renewable by 2025. PCE’s EV Ready Program is a $28 million electric vehicle (“EV”) charging infrastructure program seeking to install 3,500 charging ports at public and multi-unit dwelling sites in our community over four years.

In general, PCE applauds CARB staff in its efforts to accelerate electric vehicle (“EV”) adoption and provide more equitable access to EVs in California and joins other commenters in support of increased annual EV targets, increased ranges for all-electric and plug-in hybrid vehicles, improving charging cords to dual-voltages and longer lengths, more affordable (low MSRP) EVs, etc.

We reserve our comments to focus on one Level 1 charging as a means to further improve access to a convenient and accessible place to plug in at home and has otherwise not been addressed in the draft regulations. **We encourage CARB to include regulations that mandate that automakers allow EV drivers to set the charge level of their Level 1 charging, with a maximum of 16 amps when drivers are using dedicated 20-amp circuit for their Level 1 charger.**

As noted in the Initial Statement of Reasons, Level 1 charging provides significant convenience and cost avoidance benefits to EV drivers by allowing them to “make use of the supplied cord with existing residence circuits and no additional costs to either modify the home wiring or buy a different charger.”[[1]](#footnote-1) PCE agrees. Level 1 is a commonly used, “out of the box” charging solution that meets the daily needs of most EV drivers[[2]](#footnote-2) with no installation costs. Allowing drivers to control their Level 1 charge rates in the vehicle and letting drivers charge at 16 amps if they have a dedicated 20-amp circuit will improve the Level 1 charging experience for the many EV drivers that charge this way.

Several vehicles already have the capability to change Level 1 power levels, demonstrating its benefit to customers and that automakers are capable of implementing this feature. The draft regulations note that several automakers such as BMW and Hyundai allow drivers to set their charging level between 8 – 12 amps.[[3]](#footnote-3) Tesla also allows drivers to set their Level 1 charging rate up to 16 amps.

The practical benefit of this proposal is that drivers would be able to get more range on an overnight charge with Level 1 charging thereby improving their overall EV driving experience. An EV that limits Level 1 charging at 12 amps (or 1.4 kW), provides approximately 60 miles of range[[4]](#footnote-4) over a 12-hour overnight charge[[5]](#footnote-5). Allowing an EV driver to charge up to 16 amps on their Level 1 charger would increase the power to 1.9 kW, yielding over 80 miles of range overnight, a considerable difference.

In PCE’s EV Ready charging rebate program,[[6]](#footnote-6) we offer free technical assistance to multi-family property owners and other EV charging site hosts to help them install as many charging ports as possible. For sites with significant parking dwell times, such as multi-family housing, which averages over 12 hours of parking times, Level 1 is often the ideal solution to contain costs and provide maximum access without incurring major electrical service upgrades. In these projects, PCE designs Level 1 charging receptables on dedicated 20-amp circuits[[7]](#footnote-7), since Teslas, as the most common EV make in California, already offer the option charge at 16 amps. Our hope is that other automakers will follow suit and these Level 1 receptables can be used to their maximum potential and provide greater overnight charging across other vehicle brands.

In summary, allowing EV drivers to control their power level when charging on a Level 1 charger, including the ability to charge up to 16 amps, will improve the charging experience for many EV drivers and would be straightforward to implement, particularly since Tesla has already done so. PCE encourages CARB to utilize the ACC II regulations to improve Level 1 EV charging by requiring automakers to implement this capability for the benefit of EV drivers.

Thank you for your consideration of these comments and please don’t hesitate to contact me if you have any additional questions.

Phillip Kobernick

Programs Manager, Peninsula Clean Energy

1. California Air Resources Board, Advanced Clean Cars II Regulations, Initial Statement of Reasons, Section 3.d Dual Voltage Capability, page 52. [↑](#footnote-ref-1)
2. See Peninsula Clean Energy and CLEAResult research, demonstrating that a 1.65 kWh overnight charge satisfies that daily energy needs of 94+% of drivers. <https://www.peninsulacleanenergy.com/wp-content/uploads/2021/09/Determining-the-Appropriate-Level-of-Power-Sharing-for-EV-Charging-in-Multifamily-Properties.pdf>. [↑](#footnote-ref-2)
3. *Supra* note 1. [↑](#footnote-ref-3)
4. Assumes an EV efficiency of 3.5 miles/kWh [↑](#footnote-ref-4)
5. See Center for Sustainable Energy and Forth Mobility study, demonstrating average plug times of 12+ hours by multi-family housing residents, <https://www.peninsulacleanenergy.com/wp-content/uploads/2022/07/CSE-Report-on-MUD-Charging-Incl-Average-Plug-In-Times.pdf> [↑](#footnote-ref-5)
6. <https://www.peninsulacleanenergy.com/ev-ready/>. [↑](#footnote-ref-6)
7. For details on how Peninsula Clean Energy designs Level 1 and power-managed Level 2 EV charging installation projects, please see EV Ready Design Guidelines, <https://www.peninsulacleanenergy.com/wp-content/uploads/2021/05/PCE-EV-Ready-Design-Guidance.pdf> [↑](#footnote-ref-7)