July 5, 2018

Clerk of the Board
California Air Resources Board
101 I Street
Sacramento, CA 95814

Re: *Electric Motor Werks, Inc. Comments on the June 20, 2018 Proposed Amendments to the Low-Carbon Fuel Standard regulation*

Electric Motor Werks, Inc. ("eMotorWerks) provides the following comments on the June 20, 2018 Proposed Amendments to the Low Carbon Fuel Standard (LCFS) regulation (Proposed Amendments).

eMotorWerks supports the California Air Resources Board (ARB) staff's initiative and foresight in developing proposed LCFS amendment language that would encourage the expanded use of low carbon resources in electrifying the state's transportation networks. These comments discuss: (1) Incremental Credits for residential EV charging hierarchy (2) Fueling Station Equipment Registration for Incremental Credits from residential EV charging; and (3) the provisions for indirect accounting to support low carbon intensity EV charging.

I. The Incremental Credit Hierarchy Should Be Revised To Promote Adoption, Customer Engagement Innovation and Grid Integration

At the direction of the Board, Staff has proposed a hierarchy for assigning Incremental Credits for residential EV charging at single-family residences. eMotorWerks supports prioritization.

Where the LSE is not generating Incremental Credits, there is no basis for prioritizing one metering source over another. A major rationale for granting LSE prioritization is the direct relationship with electricity supply. All other entities would be similarly situated in this respect.

The proposed prioritization will stifle innovation in financing and customer engagement. A supplier of EV infrastructure and metering cannot create a customer offer, based on LCFS value, to reduce the cost of equipment or commit to offset the cost of EV charging if at any moment, *after* registering the Fueling Station Equipment (FSE) with CARB for Incremental Credits, an EV manufacturer can attempt to register the EV and displace the current fuel reporting entity.

eMotorWerks asserts that when initiating the Incremental Credits component of the LCFS regulation, CARB must not ignore customer choice in the prioritization, as noted by at two parties in the June 11 workshop, and should equalize the prioritization of metered sources to generate Incremental Credits, by identifying either manufacturer of the EVSE or EV as equally eligible to claim Incremental Credits in Section 95483(c)(1)(B)(2), based on customer choice.

If CARB is not willing to equalize eligible for metered sources as a general rule, then CARB should prioritize those entities that submit not only metered information per FSE, but also the accurate and reliable hourly interval metering as proposed under the "EV Grid - Smart Charging" pathway - as information only, unless "Smart Charging" Incremental Credits are also sought by the Fuel Reporting Entity. This would provide incremental value to CARB in analyzing the carbon intensity of these new Incremental Credits, and it would be a step toward grid-integration of EV charging, which should be the long-term interest of the LCFS regulation.

The utilization of networked EV charging data and capabilities is at the core of the Joint Agencies California Vehicle-Grid Integration Roadmap, developed in coordination with CARB.[1] eMotorWerks has called for greater alignment with actual carbon intensity from the beginning of the informal stakeholder process to update the LCFS regulation. Those entities that can assist CARB and the state to meet the goals of the California Vehicle-Grid Integration Roadmap should be prioritized.

If CARB chooses to prioritize hourly interval metering, the incremental credit hierarchy should be amended through the following amendments to Section 95483(c)(1)(B):

> Incremental Credits. Any entity, including an EDU, is eligible to generate incremental credits ~~(in addition to the base credits)~~ for improvements in carbon intensity of electricity used for ~~residential~~ EV charging at single-family residences. ~~An EDU that generates incremental credits must meet the requirements set forth in paragraphs 2. through 5. in section 95491(d)(3)(A).~~ Multiple claims for incremental credits for metered residential EV charging associated with a single FSE ID will be resolved pursuant to the following order of preference:
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> 1. The Load Serving Entity (LSE) supplying electricity to the EV associated with the FSE ID and metered FSE data has first priority to claim credits;
>
> 2. Any entity authorized by residential FSE owner or operator and technically capable to supply the hourly quantity of charging based on metered records, as required by §95491.(d)(3)(B).
>
> 3. Any other entity designated by residential FSE owner or operator to supply the quantity of charging based on metered records.

II. FSE Registration for EV Charging Should Not Rely on Vehicle Identification Number

eMotorWerks recognizes that FSE Registration to generate Incremental Credits from residential EV charging may require administrative enhancements. However, eMotorWerks does not support reliance on Vehicle Identification Number (VIN) as the unique identifier element for FSE registration. Residential EV charging is tied to a residence where the owner receives

[1] https://www.caiso.com/Documents/Vehicle-GridIntegrationRoadmap.pdf

electricity supply, i.e., its fuel. A EV may legitimately charge at multiple locations, and a vehicle may change ownership and migrate to a new location.

In addition, VIN is not easily available to all potentially claiming parties, particularly non-EDU LSEs, which are highly likely to claim Incremental Credits through the use of metering from EV supply equipment.

CARB Staff should amend Section 95483.2 (b)(8)(B)(4) to remove the VIN requirement for FSE Registration, except for the case when vehicle telemetry is used as the metering source.

III. Indirect Accounting of Renewable Electricity for EV Charging Requires Clarification In Order to Be Utilized by Fuel Reporting Entities.

eMotorWerks supports the proposed amendment to §95488.8.(i)(A) to increase the number of quarters for which renewable electricity attributes may be applied for purposes of the LCFS program. Given the administrative latency of renewable attribute market systems, this increase in time should reduce the likelihood of infeasible utilization of this provision.

§95488.8.(i)(B)(1) may still create barriers for fuel reporting entities to utilize this provision to generate LCFS credits from low CI electricity – both for residential and non-residential EV charging.

eMotorWerks proposes that a fuel reporting entity utilizing a low CI pathway can submit and confirm fuel transactions from EV charging within 90 days of quarter end, but confirm the retirement of renewable attributes no later than 210 days after the end of the reporting quarter. This will ensure renewable energy attributes generated within a single quarter are still utilized within three quarters for the purpose of LCFS credit generation.

Non-LSE fuel reporting entities will need to contract with third-party electricity and renewable attribute market participants to execute on the low CI electricity requirements of the LCFS regulation for EV charging. In addition, fuel reporting entities may own renewable electricity equipment and/or designate a fuel reporting entity to utilize the renewable attributes for LCFS credit generation. As such, §95488.8.(i)(B)(1) should be clarified:

1. Electricity is generated using equipment owned by~~,~~ or under contract to the pathway applicant or its contracted agent for all environmental attributes of the claimed electricity. In order to substantiate renewable electricity claims, the applicant must make contracts or ownership information available to the Executive Officer, upon request, to demonstrate that the electricity meets the requirements of this subarticle. ~~Generation i~~Invoices or reports (if equipment owned) are required to substantiate the quantity of renewable electricity produced from the renewable assets. Monthly invoices or reports must be unredacted copies of originals showing electricity sourced (in kWh) and contracted price (if applicable);

IV. eMotorWerks Supports Multi-Family Charging Credit Provisions.

eMotorWerks supports EV Charging at Multi-family Residences as a separate category from residential charging collectively, which previously included both single-family and multi-family. This modification to the proposed regulations will facilitate faster deployment of EV charging infrastructure in multi-family residences, which is one of the most challenging locations to provide with EV infrastructure.

eMotorWerks appreciates the hard work of CARB Staff and the Board in advancing the LCFS regulation, particularly the provisions related to zero emission vehicles.

Respectfully submitted,

/s/

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