

September 27, 2021

BUILDING STANDARDS COMMISSION
2525 Natomas Park Drive, Suite 130 Sacramento, California 95833-2936
Via Email: cbsc@dgs.ca.gov

RE: CALGreen New Construction, Electric Vehicle Infrastructure, Residential ALMS

Dear Building Standards Commissioners and Staff,

We commend the HCD and the BSC for pursuing opportunities to expand EV charging infrastructure for residential and nonresidential new construction in the 2022 CALGreen code cycle.

Automatic Load Management System (ALMS) Recommendations

ALMS is defined in the nonresidential and residential code changes as follows:

AUTOMATIC LOAD MANAGEMENT SYSTEM (ALMS). A system designed to manage load across one or more electric vehicle supply equipment (EVSE) to share electrical capacity and/or automatically manage power at each connection point.

For both residential and nonresidential specifications in the current code cycle, the term ALMS has been defined and applied to effectively share power among multiple vehicles, and minimum provisions have been specified.

However, it is important that the code supports the variety of topologies that are currently available to deploy ALMS. These include a distributed approach with EVSEs that have more than one connection point, such as ClipperCreek's HCS-D Dual Charging Station. These EVSEs are capable of managing and sharing one 40 ampere circuit for charging two or more vehicles.

The code in section 5.106.5.3.2 is inconsistent with EVSEs that can manage more than one connection point. For clarity, the proposed code's use of ALMS and "connection point" terms needs to be applied in a consistent manner.

For **the residential code** we recommend the following changes:

4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

...

- 1. EV Chargers.*** Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at

least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests. When chargers are installed, spaces shall comply with Sections 4.106.4.2.2.1 and 4.106.4.2.2.2.

When Level 2 EVSE is installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) connection point served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes and installed EVSE connection point(s) shall have an output capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.

For the residential and nonresidential code we recommend more clarity in the descriptions used for EV charging. There are several places throughout the BSC and HCD documents where the words “EV Chargers”, EVSE and EVCS are used interchangeably and inconsistently. This is likely to lead to confusion for the Authority Having Jurisdiction, and should be corrected.

Please reach out if you have any questions or require clarification.

Thank you for considering the above recommendations.

Guy Hall, Director, Electric Auto Association*

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* Organizations are listed for identification purposes only