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Michael Nearman, Deputy Executive Director
California Building Standards Commission
2525 Natomas Park Drive, Suite 130 Sacramento, California 95833-2936
Via Email: cbsc@dgs.ca.gov

Cc:
Kyle Krause
Deputy Director, Codes and Standards
California Department of Housing and Community Development
Via Email: Kyle.Krause@hcd.ca.gov

Re: 45-Day Comment Period for the 2021 California Green Building Standards Code Adoption

ChargePoint congratulates California BSC and HCD for introducing proposed changes to CALGreen to increase the provision of EV charging infrastructure in new developments. These changes will play an important role in enabling the adoption of EVs.

However, the proposed changes do not provide sufficient future-proofing for new residential construction. The Governor's Executive Order N-79-20 stipulates that all (100%) passenger vehicle and truck sales be zero emissions vehicles (ZEV) by 2035. To achieve 2045 emissions reduction objectives, the vast majority of passenger vehicles must be EVs.

Access to home charging is critical to households being comfortable adopting EVs. Given that new construction will be standing well past 2045, it is imperative that all new construction be 100% EV Ready, beginning as soon as possible.

100% EV Ready new construction requirements are the best practice in North America. 17 communities in British Columbia, Canada, have adopted 100% EV Ready requirements for multifamily buildings, as has the City of Toronto, Canada, in "Tier 2" of its Toronto Green Standard Version 4; similar requirements are being considered by multiple other cities across North America. Additionally, the Cities of Oakland, San Francisco, San Jose and Palo Alto have all adopted EV infrastructure requirements for new construction that will result in comparable levels of future-proofing for new residential developments.

The attachment to this letter includes ChargePoint's redline proposed changes to the HCD's 45 Day Express for their proposed CALGreen amendments. In brief, ChargePoint's changes would:

Reinstate the specific dollar value thresholds required for exceptions to the requirements in section 4.106.4.1.2. It is important that consistent thresholds be in place to determine utility infrastructure design requirements and costs, and that local enforcing agencies not be put in the position of being able to provide an exception for the requirements if utility infrastructure impacts result in any increase in costs.

Require 100% EV Ready parking for new multifamily, hotel and motel occupancies in sections 4.106.4.2.1 and 4.106.4.2.2. ChargePoint's proposed changes to HCD's Express Terms would adopt 100% EV Ready requirements in Section 4.106.4.2.1 and 4.106.4.2.2.

Includes junction boxes in the definition of EV Ready parking. ChargePoint's proposed changes specify that each parking space be EV Ready, defined as featuring an adjacent wired electrical junction box, receptacle or EV supply equipment (EVSE). The inclusion junction boxes in the definition facilitates designs that are predicated on future installation of hardwired EVSE capable of Automatic Load Management Systems (see below) – such design solutions are not the only option, but are proper for cost-effective design.

Introduce EV Charging Performance Requirements in sections 4.106.4.2.1.2 and 4.106.4.2.2.2 that allow for reasonable maximum amounts of load management on branch circuits. The proposed language introduces EV Charging Performance Requirements (sections 4.106.4.2.1.2 and 4.106.4.2.2.2). These Performance Requirements specify that Automatic Load Management Systems (ALMS) may be used to control electric vehicle loads for EV-Ready spaces, subject to the performance requirements in the proposed Tables 4.106.4.2.1 and Table 4.106.4.2.2 (see example table below). These performance requirements dictate the maximum extent of load sharing that may occur across a branch circuit. By allowing for reasonable levels load sharing on branch circuits, the proposed Performance Requirements provides more cost-effective means of compliance for new developments, while ensuring a reasonable amount of power delivered to EVs in the course of overnight charging. The requirements would also allow unlimited use of ALMS to control EV loads at the panel and building service level. These Performance Requirements provide maximum design flexibility, allowing the construction and EV charging service industry to innovate the most cost-effective means of providing EV charging to households.

Example: Table 4.106.4.2.1

Circuit Breaker Amperage	Maximum Number of EV Ready or EVSE-Installed Parking Spaces that May Share a Branch Circuit
20A	1
30A	1
40A	3
50A	4
60A	5

70A	6
80A	8
90A	9
100A	10
125A	12

Allowing for load sharing across branch circuits will ensure that CALGreen allows the most cost-effective strategies for providing access to EV charging in multifamily buildings. A 2020 costing study by AES Engineering suggests that 100% EV Ready requirements meeting the above performance requirements can be achieved for approximately $750 per parking space. Given this cost, ChargePoint believes that our proposed 100% EV Ready requirements can frequently be implemented at a comparable cost to HCD's current proposal.

Thank you for the opportunity to provide comment on the proposed changes to CALGreen. We look forward to continuing to engage with BSC and HCD to implement effective EV Ready requirements.

We appreciate the ability to provide these comments. If you have any questions or seek further clarification, please contact Cesar Diaz at cesar.diaz@chargepoint.com

Sincerely,

Cesar Diaz
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ChargePoint