



Building Standards Commission
2525 Natomas Park Drive, Suite 130
Sacramento, California 95833-2936
via email: cbsc@dgs.ca.gov

May 15, 2023

Re: Electric Vehicle Charging Clarification in the CALGreen Intervening Code Cycle

Building Standards Commissioners and Housing and Community Development Staff:

We the undersigned Senators and Assemblymembers are writing to express our interest in the Housing and Community Development's (HCD) upcoming changes to Title 24, Part 11 of the 2022 CALGreen intervening code cycle, specifically relating to electric vehicle (EV) infrastructure in new multifamily residences. **In summary, we are requesting that HCD clarify, in Item 5, that a developer may follow the Tier 1 or Tier 2 standards in lieu of the standards included in the mandatory section.**

This clarification has the potential to provide more of the 50,000¹ new multifamily residences impacted by this regulation with access to home EV charging at no additional cost to the builders. It also provides some degree of equity between those in multifamily residences and those single-family residences which have had 100% access to home charging since 2015.

Access to inexpensive, reliable and safe home charging is critical to EV adoption. As detailed in a recent National Academy of Sciences report, roughly 80% of charging occurs at home where the EV is parked overnight. For most people, it only makes sense to buy an EV if they have access to charging at home. Public charging rates are unregulated and much higher than the CPUC-regulated utility rates that single-family residents can access at home. Today, a lack of at-home, affordable charging options means that EVs are impractical for the approximately 40% of Californians who live in multifamily residences. This is an inequity and a huge barrier to meeting the state's goals for EV adoption.

As the California Building Standards Commission (CBSC) and HCD are aware, reducing greenhouse gas emissions is a state priority. Recognizing that the

¹ HCD's Initial Statement of Reason, dated March 28, 2023, Page 15

transportation sector now accounts for close to 50% of all emissions within the state, the legislature and governor have made clear their intent to move aggressively to support a just transition to zero emission vehicles (ZEVs), including setting the following targets:

- 1 million ZEVs or near-ZEVs by 2023 (SB 1275, De Leon 2014)
- 5 million ZEVs by 2030 (Exec. Order B-48-18, Brown 2018)
- 100% of sales of new passenger cars and trucks will be zero-emission by 2035 (Exec. Order N-79-20, Newsom 2020).

Further, EVs are cleaner, quieter, and less expensive to drive. They reduce both neighborhood air pollution and our carbon footprint. In addition, because of their lower operational costs and lower maintenance requirements, EV provide greater transportation security (and lower overall cost of ownership) than comparable internal combustion vehicles. While people wealthy enough to own their own homes can install vehicle chargers at home, renters are usually dissuaded from owning an EV because of a lack of affordable charging options. The option to drive electric vehicles should not, and cannot, be limited to single-family residents.

We are pleased that HCD in this CALGreen intervening code cycle has incorporated the recommendations provided by equity-focused stakeholders. For example, we especially appreciate the changes that converted EV Capable requirements to EV Ready and will require direct wiring to each unit's electrical meter in cases where the units have dedicated parking spaces.

Another big improvement is the inclusion of Tier 1 and Tier 2 Option B which specifies that a builder may comply by providing EV Ready charging for at least 1 dedicated parking space for every unit within a multifamily complex. These Tier 1 and Tier 2 options are considered more stringent, by definition, than the mandatory requirements, so we should be happy to see builders voluntarily meet these standards over the mandatory requirements. **However, there may be cases where meeting the requirements for Tier 1 or Tier 2 results in a number of EV charging parking spaces (or the amount of electrical power provided to those parking spaces) that would not meet a strict interpretation of the mandatory requirements.**² Often in these cases the builder's Tier 1 costs are likewise less than the Mandatory costs—which builders welcome, but only if they can be confident that they would be in compliance.

We therefore ask that HCD clarify that the builder will be in compliance by meeting the Tier 1 and Tier 2 requirements in lieu of the mandatory requirements, even if the resulting number of powered parking spaces (or the electrical power provided) is less than that required by the mandatory requirements.

This will make it clear to local building officials that a builder can be in compliance by making charging available to every *multifamily residence* that has a parking space instead of meeting the requirements to provide EV charging based on specific percentages of total parking spaces at the building. Given that the Tier 1 and Tier 2 requirements are more stringent than the mandatory section and that these regulations

² See examples in Attachment

have been vetted by the stakeholders via the 45-day comment period and more, this clarification should be uncontroversial and acceptable to include in a 14-day notice.

Providing this clarification will not only give helpful guidance to builders and local enforcing agencies, it will also increase access to EV charging for residents of new MFH, approaching the access that single-family residents have enjoyed since 2015.

Given the urgency of addressing climate change, improving our air quality, and meeting the ZEV adoption targets cited above, it is incumbent upon every agency to do what is reasonable, within its area of authority, to support these goals.

We deem that this clarification is both within HCD's authority and consistent with HCD's mandate to propose cost-effective and feasible building standards to promote greener construction. We therefore strongly urge you to take this step in this intervening CALGreen code cycle.

Thank you for your consideration,



JOSH BECKER
Senator, District 13



BEN ALLEN
Senator, District 24



ANNA CABALLERO
Senator, District 14



DAVE CORTESE
Senator, District 15



JOHN LAIRD
Senator, District 17



NANCY SKINNER
Senator, District 9



LOLA SMALLWOOD-CUEVAS
Senator, District 28



MARC BERMAN
Assemblymember, AD 23



LAURA FRIEDMAN
Assemblymember, AD 44



TINA MCKINNOR
Assemblymember, AD 61



DIANE PAPAN
Assemblymember, AD 21

Attachment

Scenarios Comparing Parking Space, Power and Cost Impacts of the Proposed Mandatory Requirements and Voluntary Tier 1 Requirements in Title 24, Part 11, 2022 CALGreen Intervening Code Cycle for Electric Vehicle Charging in New Multifamily Residences

BACKGROUND INFORMATION

Proposed Mandatory Requirements:

Metric strictly based on a percentage of *total parking spaces*:

- 40% of spaces must be Low-Power Level 2 (LPL2) EV Ready (receptacles or chargers)
- 10% of spaces must be Level 2 EVSE (installed chargers)

Proposed Tier 1 Option B:

Metric based both on housing units and percentage of guest/shared parking:

- 100% of units with access to parking must have at least 1 LPL2 EV Ready parking space
- 10% of open/ guest/ shared parking spaces must be Level 2 EVSE

The concern with differing metrics:

Because the Mandatory requirements do not specify that every unit with access to one or more dedicated parking spaces will get access to charging, it is not certain that every unit with dedicated parking will get charging access in their assigned parking spaces. Further, because parking ratios often do not exceed twice that of the number of units, it is likewise not certain that every unit with access to an open/ guest /shared parking space(s) will get access to charging. The scenarios below illustrate cases in which meeting the Tier 1 standards *will* ensure access to parking but might be interpreted by building officials as not meeting the Mandatory standards for the number of overall parking spaces with LPL2 EV Ready or Level 2 EVSE equipment.

Power Requirements:

LPL2 EV Ready: 208/240v, 20a; 4.8 kW at breaker

Level 2 EVSE: 208/240v, 40a; 9.6 kW at breaker

Associated Costs, Low and High Range, per HCD's Initial Statement of Reason (ISOR), dated March 28, 2023, pages 7-8:

Type/ Cost Estimate	Low	High
\$/LPL2	\$ 789.35	\$ 1,484.90
\$/EVSE	\$ 2,595.80	\$ 3,882.89

SCENARIO 1

An apartment complex with 100 Units and 300 parking spaces where each unit has 2 dedicated parking spaces and there are 100 common/guest parking spaces.

Summary:

Without the requested clarification, the local Building Official is less likely to approve a building meeting the Tier 1 option B requirements because the number of spaces impacted and the power required by Tier 1 option B are less than that required by the Mandatory requirements. Yet, Tier 1 option B provides 100% EV charging access to every unit while the Mandatory requirements may or may not provide 100% access depending on how the EV charging infrastructure is deployed.

Further, from an economic perspective, the builder prefers Tier 1 option B because the EV charging infrastructure acquisition and installation cost estimates are 36-39% less than the Mandatory costs (based on using HCD's low- and high-cost estimates). Likewise, the associated apartment management or Home Owners Association (HOA) prefers Tier 1 option B as there are fewer public EV chargers to manage, and the residents prefer Tier 1 option B as it provides universal EV charging access.

<u>Mandatory</u>	<u>Tier 1, Option B</u>
120=300 spaces*40% LPL2 30=300 spaces*10% EVSE 150 total impacted parking spaces Unclear if every unit has access to EV charging	100=100 units*100% LPL2 10=100 guest/shared spaces*10% EVSE 110 total impacted parking spaces Every unit has access to EV charging
<u>Power, kW</u> 576 =120 LPL2*4.8 kW/LPL2 288 =30 EVSE*9.6 kW/EVSE 864 kW Total (at breaker)	<u>Power, kW</u> 480 =100 LPL2*4.8 kW/LPL2 96 =10 EVSE*9.6 kW/EVSE 576 kW Total (at breaker)
<u>Cost, Low Estimate</u> \$94,722.00=120 LPL2*\$789.35/LPL2 \$77,874.00=30 EVSE*\$2,595.80/EVSE \$172,596.00 Total Cost	<u>Cost, Low Estimate</u> \$78,935=100 LPL2*\$789.35/LPL2 \$25,958=10 EVSE*\$2,595.80/EVSE \$104,893 Total Cost
<u>Cost, High Estimate</u> \$178,188.00=120 LPL2*\$1,484.90/LPL2 \$116,486.70=30 EVSE*\$3,882.89/EVSE \$294,674.70 Total Cost	<u>Cost, High Estimate</u> 148,490=100 LPL2*\$ 1,484.90/LPL2 \$38,828.9=10 EVSE*\$3,882.89/EVSE \$187,318.90 Total Cost

SCENARIO 2

An apartment complex with 100 Units and 180 parking spaces where 50 units have 1 dedicated parking space, 50 units have 2 dedicated parking spaces, and there are 30 common/guest parking spaces.

Summary

Without the requested clarification, the local Building Official is less likely to approve a building meeting the Tier 1 option B requirements because it would require installing significantly fewer EVSE charging stations than required by the Mandatory requirements. Yet, the Tier 1 option B provides 100% EV charging access to every unit while the Mandatory requirements clearly do not.

Further, from an economic perspective, the builder prefers Tier 1 option B because the EV charging infrastructure acquisition and installation cost estimates are 16-9% less than the Mandatory costs. Likewise, the associated apartment management or HOA prefers Tier 1 option B because there are fewer public EV chargers to manage, and the residents prefer Tier 1 option B because it provides universal EV charging access.

<u>Mandatory</u>	<u>Tier 1, Option B</u>
72=180 spaces*40% LPL2 18=180 spaces*10% EVSE 90 total impacted parking spaces Every unit will not have access to EV charging	100=100 units*100% LPL2 3=30 guest/shared spaces*10% EVSE 103 total impacted parking spaces Every unit has access to EV charging
<u>Power, kW</u> 345.6 =72 LPL2*4.8 kW/LPL2 172.8 =18 EVSE*9.6 kW/EVSE 518 kW Total (at breaker)	<u>Power, kW</u> 480 =100 LPL2*4.8 kW/LPL2 28.8 =3 EVSE*9.6 kW/EVSE 509 kW Total (at breaker)
<u>Cost, Low Estimate</u> \$56,833.20=72 LPL2*\$789.35/LPL2 \$46,724.40=18 EVSE*\$2,595.80/EVSE \$103,557.60 Total Cost	<u>Cost, Low Estimate</u> \$78,935=100 LPL2*\$789.35/LPL2 \$7,787.40=3 EVSE*\$2,595.80/EVSE \$86,722.40 Total Cost
<u>Cost, High Estimate</u> \$106,912.80=72 LPL2*\$1,484.90/LPL2 \$69,892.02=18 EVSE*\$3,882.89/EVSE \$176,804.82 Total Cost	<u>Cost, High Estimate</u> 148,490=100 LPL2*\$ 1,484.90/LPL2 \$11,648.67=3 EVSE*\$3,882.89/EVSE \$160,138.67 Total Cost