



The California Green Building Standards Code,
Part 11 of Title 24
CEVW meeting agenda items
CO-HOSTED BY BSC, DSA & HCD



CALGREEN ELECTRIC VEHICLE WORKGROUP (CEVW)
June 16, 2022



CEVW Agenda Items

AGENDA ITEM 1 a: Overview & b: Introductions

AGENDA ITEM 2: Discuss Amended Charter (see attachment)

AGENDA ITEM 3: April 14, 2022, meeting recap

Some items discussed at the 1st meeting included:

1. Discussed charter and goals of the group and made minor edits regarding participants.
2. Introduced the roles and responsibilities of proposing state agencies and the SMEs.
3. Established workshop meeting dates
4. Discussed recently approved EV regulations for the 2022 CALGreen Code.
5. Discussed EV code suggestions provided during the 2021 rulemaking comment period.
6. Heard suggested topics for the 2022 Intervening Code Adoption Cycle.



CEVW Agenda Items

AGENDA ITEM 4: DSABox information.

(DSA staff will discuss this agenda item)

1. In order to obtain access to the shared files, complete the form [ECVS Workgroup DSABox Access Form](#)
2. An email will be sent to your email address inviting you to the folder.
 - Either log in to your existing DSABox account; or,
 - Create a new account
3. Once set up you will have access as a viewer/downloader.
4. To have files or information added to the DSABox please send your information to enrique.rodriguez@dgs.ca.gov or paul.johnson@dgs.ca.gov



CEVW Agenda Items

AGENDA ITEM 5: EV code change suggestions from the CEVW.

Some suggested topics from the 1st meeting to be discussed at this meeting include:

a) Develop the appropriate determination for power levels based on actual daily charging needs done scientifically with metrics.

Please share any data and information regarding this item.

Any reports or studies available that determined the need of a typical EV driver?

Any thoughts on this specific suggestion?

Available references:

<https://www.peninsulacleanenergy.com/wp-content/uploads/2021/09/Determining-the-Appropriate-Level-of-Power-Sharing-for-EV-Charging-in-Multifamily-Properties-1.pdf>

<https://zenodo.org/record/4021421#.YpfE-6jMJJaQ> (Multi-Unit Dwelling Plug-in Electric Vehicle Charging Innovation Pilots in U.S. Metropolitan Areas)



CEVW Agenda Items

AGENDA ITEM 5: EV code change suggestions from the CEVW.

Some suggested topics from the 1st meeting to be discussed at this meeting include:

b) EV charging for employee based on long dwell times.

What does this mean?

Provide more charging opportunities at workplace locations?

Difference between workplace parking based on use? Office building vs retail vs industrial employee parking?

How to designate between employee vs customer?

How to monitor or police the use of employee only parking?



CEVW Agenda Items

AGENDA ITEM 5: EV code change suggestions from the CEVW.

Some suggested topics from the 1st meeting to be discussed at this meeting include:

c) Include EV ready and low power Level 2 for nonresidential sites.

What does this mean?

EV ready? Electric Vehicle (EV) Ready Space definition similar to HCD definition?

Power requirements? Low power level 2 charger 208/240 20-A minimum branch circuit with a receptacle (Similar to HCD)?

How to regulate the use of receptacles? e.g., Non-EV drivers using receptacles for personal use.

Who pays for power usage?



CEVW Agenda Items

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Some suggested topics from the 1st meeting to be discussed at this meeting include:

d) Signage for EV Ready spaces.

What does this mean?

Electric Vehicle Ready Space Signage? Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s) (Similar to HCD)?

Location of signage?



CEVW Agenda Items

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Some suggested topics from the 1st meeting to be discussed at this meeting include:

e) Align convenience cord set Kilowatt's requirements between the current code 3.3 Kw and the CARB requirements taking effect in 2026 of 5.7 Kw.

To eliminate the potential conflict, CARB has proposed a fix which was heard in their June 9, 2022, Board Hearing. The proposal is as follows:

(CARB staff will provide an update)

Charging Cord Proposal.

By requiring all vehicles to have an included charging cord that is Level 1 and Level 2 capable, at various amperages, and with a minimum 20-foot length, the cord can meet the charging needs of a much larger portion of vehicle owners. And by allowing the consumer to select a lower amperage for charging, the need to modify the home's electrical circuit to be compatible with the cord is greatly reduced.



CEVW Agenda Items

AGENDA ITEM 5: EV code change suggestions from the CEVW.

Some suggested topics from the 1st meeting to be discussed at this meeting include:

f) Additions and alterations for existing nonresidential sites.

Related bills:

SB 32, Statutes of 2016 - further goals of Global Warming Solutions Act (GWSA)– reduce GHG to at least 40% below 1990 levels by 2030.

EO N-79-20: 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035.

AB 2127 (Ting): Requires the California Energy Commission, working with the State Air Resources Board and the California Public Utilities Commission, to prepare and biennially update a statewide assessment of the electric vehicle charging infrastructure needed to support the levels of electric vehicle adoption required for the state to meet its goals of putting at least 5 million zero-emission vehicles on California roads by 2030.

Other bills:



CEVW Agenda Items

AGENDA ITEM 5: EV code change suggestions from the CEVW.

f) Additions and alterations for existing nonresidential sites-Continued.

What does this mean?

What are the triggers for requiring EV capable infrastructure?

Example 1:

Currently 2022 HCD requirement:

4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings. When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2EVSE.



CEVW Agenda Items

AGENDA ITEM 5: EV code change suggestions from the CEVW.

f) Additions and alterations for existing nonresidential sites-Continued.

What does this mean?

What are the triggers for requiring EV capable infrastructure?

Example 2:

Based on current CALGreen triggers for Additions and Alterations as provided in Chapter 3 Section 301.3? 1,000 addition and/or \$200,000 project valuation?

Historically, the trigger has been based on 10 or more added parking spaces.

Is 10 or more spaces appropriate for the triggers?

What are the appropriate percentages for these scenarios?



CEVW Agenda Items

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f) Additions and alterations for existing nonresidential sites-Continued.

What does this mean?

What are the triggers for requiring EV capable infrastructure?

Example 3:

Triggered when electrical service panel upgrades are conducted associated with parking lot alterations? e.g., new paving and curbing?

Triggered when electrical service panel upgrades are conducted but not part of any site improvements? Suggestion: Size panel to accommodate future power requirements for future EV capable spaces?

What are the appropriate percentages for these scenarios?



CEVW Agenda Items

AGENDA ITEM 5: EV code change suggestions from the CEVW.

Some suggested topics from the 1st meeting to be discussed at this meeting include:

g) HCD Residential Occupancies (*HCD staff will discuss this agenda item*)

Should HCD abandon the 10% EV Capable for multifamily, hotels, and motels, and increase EV Ready instead?

Are low power Level 2 (L2) receptacles 208/240 20-A or L2 EVSE (208/240 Volt 40-ampere receptacles) the right solution for multifamily, hotels, and motels?

Is there a need to determine what type of receptacles should be installed in low power level 2 parking spaces (NEMA ID) 6-20R, 10-20 R, etc.?

Should consideration be provided to CARB proposed rule for Level 2 cord sets for new cars in 2025 and the impact on current low power L2 receptacles?

Should HCD adjust triggers for parking facility alterations or expansions (currently 10% EV Capable)?



CEVW Agenda Items

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Some suggested topics from the 1st meeting to be discussed at this meeting include:

h) ALMS reference standard.

What does this mean?

Currently **Article 625 Electric Vehicle Power Transfer System**

625.42 Rating.

The power transfer equipment shall have sufficient rating to supply the load served. Electric vehicle charging loads shall be considered to be continuous loads for the purpose of this article. Service and feeder shall be sized in accordance with the product ratings. Where an automatic load management system is used, the maximum equipment load on a service and feeder shall be the maximum load permitted by the automatic load management system.

Any information specific to listed ALMS and/or testing criteria?

UL or other rating systems available?



CEVW Agenda Items

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Some suggested topics from the 1st meeting to be discussed at this meeting include:

(CARB staff will share information for the MHDV EV infrastructure proposed updates)

i) Medium-Duty and Heavy-Duty Vehicle EV infrastructure (MHDV) (updates).

Current 2022 CALGreen code: ...mandatory requirement to install additional infrastructure to support later addition of chargers up to 400kW ZEV fueling in new warehouses, grocery stores, and retail buildings with off-street loading spaces...in buildings of 10,000 square feet or more.

2022 Intervening Code Cycle amendment proposal to add the following types of facilities: office buildings and industrial buildings.

Minimum square footage is yet to be determined for these facility types



CEVW Agenda Items

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Some suggested topics from the 1st meeting to be discussed at this meeting include:

j) The applicability of Direct Current Fast Chargers (DCFC) in the code.

How can DCFCs be better utilized in CALGreen?

Common power allocations 50Kw minimum vs 150Kw?

Data on DCFC use patterns?

Availability of DCFCs in the marketplace?



CEVW Agenda Items

AGENDA ITEM 6: Related items not on the agenda.

1. Consideration for the following ad-hoc subgroups: Existing facility alterations, Power demand, dwell times, cost data, ALMS
- 2.
- 3.

AGENDA ITEM 7: Action items.

1. Next meeting August 18, 2022
2. Sign up for DSABox
- 3.
- 4.
- 5.

End

