
ELECTRIC VEHICLE CHARGERS IN NEW CONSTRUCTION ADDITIONS AND ALTERATIONS

Disciplines: Sustainability

History: Original Issue 07/24/24

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PURPOSE

This interpretation of regulations (IR) provides clarity on electric vehicle (EV) charging requirements included in 2022 Supplement to Title 24 part 11 California Green Building Standards Code (CALGreen), effective July 1 2024.

APPLICABILITY

This IR is applicable to public K-12 school and community college projects which require electric vehicle charging stations (EVCS) as part of the scope of work as provided in the 2022 CALGreen supplement effective July 1, 2024.

In addition to the requirements of CALGreen, EV charging facilities shall be accessible in accordance with the California Building Code Chapter 11B and compliant to the California Electrical Code.

BACKGROUND

In the 2022 and prior editions of CALGreen, public K-12 and community college EV charging requirements the California Building Standards Commission (CBSC) and DSA adopted the same mandatory measures for light duty charging for all nonresidential construction under their jurisdiction. Effective July 1, 2024, EV charging regulations specific to public K-12 and community colleges have moved to CALGreen section 5.106.5.6. Additionally, certain alterations to parking facilities require compliance with applicable EV charging regulations.

1. SCOPE

Scoping requirements for EV charging at public K-12 schools community colleges are located in CALGreen section 301.4 Mandatory measures for public schools and community colleges.

1.1 Section 301.4.1 requires new building and site construction on a new site to comply with Chapter 5 as adopted by DSA. See section 2.1 below.

1.2 Section 301.4.2 addresses requirements for work on an existing site. Newly constructed buildings on an existing site do not trigger EV charging requirements unless parking facilities are included in the project scope.

1.2.1 Section 301.4.2.1 requires new sitework to provide EVCS if the new sitework is a parking facility. See section 2.1 of this IR.

1.2.2 Sections 301.4.2.2 through 301.4.2.4 are unrelated to EVCS.

1.2.3 Section 301.4.2.5 requires alterations and additions to parking facilities to provide EVCS. See section 2.2 below.

1.2.4 Section 301.4.2.6 requires an alteration to an existing building to comply with requirements for existing EV capable spaces to provide EV Supply Equipment (EVSE) to create fully functioning EVCS.

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2. TECHNICAL/QUANTITATIVE REQUIREMENTS

2.1 New Parking Facilities on a New or Existing Campus

When a new parking facility is constructed on a new or existing campus, new EV capable spaces and EVCS will be required per table 5.106.5.6.1. New EV capable spaces and EVCS are based on the total number of new parking spaces provided and may be aggregated and located in a single parking facility and are not required to be dispersed among all new parking facilities.

In lieu of compliance with the required number of EVCS as indicated in Table 5.106.5.6.1, required EVCS may be provided per CALGreen section 5.106.5.6.3 alternative compliance, which substitutes a minimum total power required for EVCS. EVCS under alternative compliance may allocate the power for EVCS in any combination of Level 1, low power level 2, or level 2 EVSE. The alternative compliance option does not require EV capable spaces to be provided.

2.2 EVCS for Alterations of or Additions to Existing Parking Facilities

CALGreen section 5.106.5.6.4 requires that alterations of or additions to existing parking facilities provide EVCS, but does not require EV capable spaces to be provided. As an alternative to providing EVCS in the altered or added parking facility, new EVCS required by this section may be located in an alternate parking facility on the same campus.

In lieu of compliance with the required number of EVCS as indicated in Table 5.106.5.6.1, required EVCS may be provided per CALGreen section 5.106.5.6.3 alternative compliance, which substitutes a minimum total power required for EVCS. EVCS under alternative compliance may allocate the power for EVCS in any combination of Level 1, low power level 2, or level 2 EVSE.

2.2.1 Specific alterations or additions to parking facilities are required to provide new EVCS and include the following:

- Per CALGreen section 5.106.5.6.4.1, when the scope of work includes an increase in power supply to an electric panel serving light fixtures illuminating the parking area.
- In some cases infrastructure upgrades or other types of alterations undertaken include increasing the power supply to an electrical panel which happens to also serve the lighting system of a parking facility. These types of projects are required to provide the required number of EVCS as indicated in Table 5.106.5.6, but are not required to provide EV capable spaces.
- Per CALGreen section 5.106.5.6.4.1, when area containing parking spaces is added to a parking facility.
- The total number of EVCS shall be based on the total number of parking spaces in the new and added parking.
- Per CALGreen section 5.106.5.6.4.2, when new photovoltaic (PV) system is added in an existing parking facility.
- The required number of EVCS can be provided in accordance with Table 5.106.5.6 or by alternative compliance per CALGreen section 5.106.5.6.3.

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2.3 Requirement to install EVSE in EV capable spaces

Level 2 EVSE is required to be installed in existing EV capable spaces when an alteration project is required to be submitted to DSA by the California Administrative Code section 4-309. Alteration projects which consist only of accessibility improvements are not required to comply with the CALGreen requirements for EV charging.

3. EXCEPTIONS TO EV CHARGING REQUIREMENTS

CALGreen section 5.106.5.6 provides two primary exceptions to the installation of EVCS. Exception 1. On a case-by case basis, EV charging will not be required when it has been demonstrated to not be feasible under at least one of the three following conditions:

3.1 Where there is no local utility power supply. Typically, this occurs where a new parking facility is added in a remote location without access to power. The project must include no electrical or electrical infrastructure work.

3.2 Where the local utility is unable to supply adequate power. Typically, this occurs where a new parking facility is added and electrical utility infrastructure to the project site provided from the local utility is insufficient, requiring the district to bear the cost to provide the additional electrical infrastructure to support EVSE equipment. An estimate of the costs from the local utility company for the additional electrical infrastructure to the site shall be provided to DSA.

3.3 Where the installation of EVCS is impracticable. DSA clarifies that the installation of EV charging may be deemed impracticable based on one of the following criteria:

- Cost for New Construction requiring EVCS: When the cost to install the minimum number of EVCS required by Table 5.106.5.6 is disproportionate as compared to the adjusted construction cost. Projects qualifying under this cost criterion will be permitted to install fewer than the minimum number, and at least one level 2 EVCS shall be provided. Projects which are requesting a determination of infeasibility based on cost impracticability must provide an estimate to substantiate this determination.
- Cost for Alterations requiring EVSE to be installed: When the cost to install EVSE in existing EV capable spaces as required by CALGreen section 5.106.5.6.5 is disproportionate as compared to the adjusted construction cost. Projects qualifying under this cost criterion will be permitted to install EVSE in fewer existing EV capable spaces, and at least one level 2 EVCS shall be provided. Projects which are requesting a determination of infeasibility based on cost impracticability must provide an estimate to substantiate this determination. Projects solely for the purpose of fire life safety improvements such as fire alarm or fire sprinkler improvements may be considered under this cost criterion.
- Other site or project specific conditions may exist which may, on a case-by-case basis, make the installation of EV charging facilities impracticable. Applicants are encouraged to schedule a pre-application to discuss exceptions to the CALGreen charging requirements and obtain DSA concurrence. Failure to schedule a pre-application meeting to discuss exceptions may result in nonconcurrence by DSA. Design teams must substantiate adverse conditions with documentation consisting of cost estimates, existing site data, or other related data, such as letters from utility companies. Documentation shall be provided at the pre-application meeting and included in the meeting minutes.

Note: DSA may waive the requirement to install one level 2 EVCS when the cost to install one level 2 EVCS is disproportionate as compared to the adjusted construction cost.

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3.4 Exception 2 exempts projects which are accessed only by automated parking facilities. Existing technology for these automated parking facilities is not broadly available and creates potential operational hazards. For automated parking facility projects EVCS is not required.

REFERENCES:

2022 California Code of Regulations (CCR) Title 24
Part 1: California Administrative Code (CAC)
Part 2: California Building Code (CBC)
Part 3: California Electrical Code (CEC)

This IR is intended for use by DSA staff and by design professionals to promote statewide consistency for review and approval of plans and specifications as well as construction oversight of projects within the jurisdiction of DSA, which includes State of California public schools (K–12), community colleges and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is subject to revision at any time. Please check DSA's website for currently effective IRs. Only IRs listed on the webpage at www.dgs.ca.gov/dsa/publications at the time of project application submittal to DSA are considered applicable.