

**INITIAL STATEMENT OF REASONS  
FOR PROPOSED BUILDING STANDARDS  
OF THE DIVISION OF THE STATE ARCHITECT-STRUCTURAL SAFETY (DSA-SS)  
REGARDING THE 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE  
CALGREEN  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11  
(DSASS-CC 04/19)**

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

**STATEMENT OF SPECIFIC PURPOSE, PROBLEM, RATIONALE and BENEFITS**

Government Code Section 11346.2(b)(1) requires a statement of specific purpose of each adoption, amendment, or repeal and the problem the agency intends to address and the rationale for the determination by the agency that each adoption, amendment, or repeal is reasonably necessary to carry out the purpose and address the problem for which it is proposed. The statement shall enumerate the benefits anticipated from the regulatory action, including the benefits or goals provided in the authorizing statute.

**General purpose, problem, rationale and benefits:** The Division of the State Architect (DSA-SS) proposes to amend the 2019 California Green Building Standards Code for inclusion in the 2019 California Green Building Standards Code via a supplement, effective July 1, 2021.

Key amendments proposed during this code cycle include:

- Amend the Electric Vehicle (EV) infrastructure tables to increase the percentages for both mandatory and voluntary.
- Amend the Light Pollution reduction to add clarity.
- Relocate pre-rinse spray valves from voluntary into mandatory with additional amendments to reference Title 20.
- Update the volatile organic compound limits reference standard for carpet systems, carpet cushion and resilient flooring systems in the mandatory and voluntary code provisions.

The intent of the code continues to (1) reduce greenhouse gas (GHG) emissions from buildings, (2) promote environmentally responsible, cost-effective, healthier places to live and work and (3) reduce potable water consumption in buildings.

The proposed changes to the building standards with statewide application will lead to substantial environmental benefits through reduction of GHG emissions, criteria pollutants, and fossil fuel dependency leading to improved public health, and potentially result in significant cost savings (avoided costs) associated with future installation of EV charging stations at nonresidential buildings.

DSA-SS's proposal for amending the 2019 California Green Building Standards Code (CALGreen) was presented to the GREEN/Plumbing, Electrical, Mechanical, and Energy (PEME) Adhoc Code Advisory Committee during its March 4th and 5th, 2020 meeting. Each committee recommendation is listed below, accompanied by DSA-SS's response.

The proposed additions, amendments and deletions to Chapter 5 and appendix A5, of Part 11, Title 24, California Code of Regulations, are being made to clarify, implement and make specific requirements relative to the following items:

## **ITEM 1: ELECTRIC VEHICLE INFRASTRUCTURE**

### **Table 5.106.5.3.3 EV charging space calculation.**

#### **Section 5.106.5.3.5 [N] Future charging spaces.**

DSA-SS is proposing to increase the percentage of electric vehicle infrastructure for inclusion in the 2019 CALGreen Intervening Code Cycle, Table 5.106.5.3.3 for nonresidential mandatory measures. DSA-SS is also proposing an amendment to the EV code Section 5.106.5.3.5 by adding a “Note” that states, “Future electric vehicle charging spaces shall count toward the total parking spaces required by the local enforcing agencies.” This amendment is needed because there is confusion from designers and local enforcing agencies that misinterpret the intent of the future EV charging stalls as not counting toward the total parking spaces requirements.

DSA-SS’s Zero Emission Vehicle (ZEV) regulation is one strategy to improve air quality and reduce greenhouse gas emissions through advanced technology vehicle production and Low-Emission Vehicle Regulations placed on automobile manufacturers. Consumers are embracing electric and electric/hybrid vehicles and there is a need for widespread infrastructure to support future charging needs. Additionally, the Governor’s Office Zero Emission Vehicle (ZEV) Action Plan identifies strategies and actions supporting the milestones identified in Executive Order B-16-12, and a revised target of 5 million ZEVs on California’s roadways by 2030 as directed by Executive Order B-48-18.

DSA-SS is proposing to increase the percentages for EV infrastructure in Table 5.106.5.3.3 from 6 percent to 10 percent for lots over 201 spaces. This increase will accommodate a foreseeable increase in the demand for EV charging. DSA-SS is also proposing to increase the voluntary Tier 1 and Tier 2 percentages for parking lots over 201 spaces to avoid conflict with the proposed changes in the mandatory code Table 5.106.5.3.3. and to further the EV infrastructure in the tier options. These changes in both the mandatory and voluntary provisions will support new buildings incorporating EV infrastructure in conjunction with electric vehicle market penetration. These amendments will add uniformity and consistency between mandatory and voluntary provisions. The addition of the “Note” in section 5.106.5.3.5 will provide guidance to the design and regulation community for properly using the EV infrastructure table stall count toward the total required parking spaces.

Under a mandate from Assembly Bill 1092 (Chapter 410, Statutes of 2013) authored by Assembly Member Levine, BSC was directed to develop mandatory EV standards for nonresidential buildings during the 2016 Triennial Code Adoption Cycle. While DSA-SS was not specifically mentioned in the bill to develop building standards for the installation of future electric vehicle infrastructure; DSA-SS has adopted similar mandatory regulation in CALGreen including EV infrastructure regulations.

Health and Safety Code Section 18930.5(b) as amended by Assembly Bill 341 allows DSA-SS and other state agencies that propose building standards to allow for input by state agencies that have expertise in green building subject areas. The California Air Resources Board (CARB) has expertise in air quality, climate change, and EV charging infrastructure. On September 30, 2019, CARB provided in-depth technical and cost analysis along with

suggested code changes to the EV charging infrastructure building standards for nonresidential buildings included in the CALGreen Code.

DSA-SS proposes to increase the current 6 percent requirement for EV charging spaces to 10 percent in new nonresidential buildings. The proposed revisions to the mandatory building standards are essential to fill the gap of EV charging infrastructure needed by 2025 to support the implementation the states goals as specified in Executive Order B-16-E-O12 to provide infrastructure to support 1.5 million ZEVs by 2025. These provisions also support the Executive Order B-48-18, which includes a target for 5 million ZEVs on California roads by 2030.

In addition to supporting the Administration’s directives, DSA-SS’s goal is to enable future charging capability at nonresidential buildings in an effort to increase access to EV charging which currently exists. CARB’s study has shown that this effort will further encourage the purchase and use of EVs for routine transportation. In addition, this proposal would result in significant cost savings for future installation of EV charging stations at nonresidential buildings.

CARB gathered data from the California Energy Commission to identify a need for 99,000 to 133,000 EV charging spaces in nonresidential buildings by 2025. CARB, also gathered information on existing, funded, planned, and proposed EV charging infrastructure to determine the remaining gap in EV charging stations after 2025 in an estimated gap between 8,000 and 76,000 EV charging spaces needs to be for nonresidential buildings by 2025.

According to CARB, DSA-SS’s proposed building standards will help to improve air quality and reduce an estimated 173,000 to 204,000 tons of carbon dioxide equivalent annually between mid-2021 and the end of 2024.

**CAC Recommendation:** The GREEN-PEME Ad hoc Code Advisory Committee recommended Approve as Submitted (AS) to item 1.

**DSA-SS Response:** DSA-SS accepts the CAC recommendation.

## ITEM 2: LIGHT POLLUTANT REDUCTION

**Section 5.106.8 and Table 5.106.8 Light pollution reduction.**

**Sections: 5.106.8.1 Facing – Backlight; 5.106.8.2 Facing – Glare.**

DSA-SS’s proposes to strike the [N] banner from Exceptions in Section 5.106.8 since the exceptions apply to additions, alterations, and new construction, per the *California Energy Code*.

DSA-SS proposes to amend Exception 1 and to add an exception for luminaires to align CALGreen with the backlight upright and glare (BUG) requirements and exceptions adopted into Section 130.2(b) of Title 24, Part 6, *2019 California Energy Code*.

DSA-SS proposes to add Exception 5, for “Luminaries with less than 6,200 initial luminaire lumens” to align CALGreen with similar language adopted in the *2019 California Energy Code* Section 130.2(b), luminaire cutoff requirements. The purpose of the new exception 5 is to align the scope of Part 11, Section 5.106.8 to the scope of similar provisions in Part 6, Section 130.2(b). To the extent that the language in Part 11 could have been understood to be broader in application than that in Part 6, this change has the material effect of narrowing the application of these requirements to luminaires within the scope of the Part 6

provisions. This change is necessary to prevent a conflict between the scoping provisions of light pollution in Parts 6 and 11; the scoping provisions in Part 11 are intended to reflect the scoping provisions in Part 6.

DSA-SS's proposes to strike the **[N]** banner from "Notes", note #1 in Section 5.106.8 to avoid a potential conflict with the *California Energy Code* because note #3 mentions a reference to the *California Energy Code* for additions and alterations.

DSA-SS proposes to repeal footnotes 3 and 5 from Table 5.106.8 and relocate them into two new code Sections: Section 5.106.8.1 with an exception for "corners", and Section 5.106.8.2. This amendment will add clarity for their application and intent. As a result of the proposed change, the footnotes in Table 5.106.8 are being updated accordingly. The original language was ambiguous regarding when increases in stringency of backlight and glare would apply, and how luminaire facing was to be addressed. This change has the material effect of ensuring that increased requirements do not apply to luminaires located more than two mounting heights away from property lines and precluding illogical facing of luminaires located close to property boundaries. The changes to this section are necessary to align the application of Section 5.106.8 to the intent of the original code language and to ensure the requirements comply with backlight and glare ratings, but do not apply when they would not be of benefit.

DSA-SS's proposed amendments will benefit the code user by clarifying the exceptions to the requirements of light pollution reduction by avoiding conflict with mandatory provisions of *California Energy Code*, Part 6 of the California Code of Regulations for newly constructed nonresidential buildings, additions and alterations. Additionally, the new code sections will help clarify the application and intent of how backlight and glare are to be addressed when located near property lines.

**CAC Recommendation:** The GREEN-PEME Ad hoc Code Advisory Committee recommended Approve as Submitted (AS) to item 2.

**DSA-SS Response:** DSA-SS accepts the CAC recommendation.

### ITEM 3: PRE-RINSE SPRAY VALVES

#### Section: 5.303.3.4.6 Pre-rinse Spray Valve

In coordination with the Department of Housing and Community Development (HCD), the Division of the State Architect (DSA), the Office of Statewide Health Planning and Development (OSHPD), and the California Energy Commission (CEC), DSA-SS is proposing this new subsection to align with the Appliance Efficiency regulations adopted by the CEC in Title 20 of the California Code of Regulations. On January 28, 2019, the amended federal standards for all commercial pre-rinse spray valves went into effect (Title 10, Code of Federal Regulations, section 431, subpart O). The federal standards for flow rate of commercial pre-rinse spray valves manufactured on or after January 28, 2019, shall be equal to or less than the values shown in Table H-2. Table H-2 can be found in Title 20, California Code of Regulations, section 1605.1(h)(4). and per Title 20 Section 1605.3(h)(4)(A); Commercial pre-rinse spray valves manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf) [113 grams-force (gf)]. Additionally, Title 20 has a requirement that pre-rinse spray valves need to be labeled per Title 20, Section 1607(d)(7) therefore DSA-SS is also adding a reference

to that Title 20 regulation.

**CAC Recommendation:** The GREEN-PEME Ad hoc Code Advisory Committee recommended Approve as Submitted (AS) to item 3.

**DSA-SS Response:** DSA-SS accepts the CAC recommendation.

#### **ITEM 4: POLLUTION CONTROL**

**Sections: 5.504.4.4 Carpet systems; 5.504.4.4.1 Carpet cushion; 5.504.4.6 Resilient flooring systems.**

DSA-SS proposes to amend Chapter 5, Section 5.504.4.4 Carpet systems, Section 5.504.4.4.1 Carpet cushion, and Section 5.504.4.6 (resilient flooring systems) to update the referenced standard for the new California Department of Public Health (CDPH) for Volatile Organic Compounds (VOC) limits. DSA-SS is proposing to only reference the new CDPH VOC limits standard for these materials and proposes to repeal all other certification programs and testing labs listed as those programs and testing labs all reference the CDPH testing standard criteria. The CDPH website contains a list approved certification programs and testing labs. DSA-SS is proposing to provide a web link to CDPH's website for certification programs and testing labs that meet the CDPH standard.

Updating the reference to the new CDPH standard and by only using the CDPH standard for VOC limits will aid the code user in properly applying the most recent reference standard. Using one single source for the most current information will also aid the code user and the regulatory agencies. These amendments are non-substantive with no intended change in regulatory effect.

**CAC Recommendation:** The GREEN-PEME Ad hoc Code Advisory Committee recommended Approve as Submitted (AS) to item 4.

**DSA-SS Response:** DSA-SS accepts the CAC recommendation.

#### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS**

Government Code Section 11346.2(b)(3) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).

There was no technical, theoretical or empirical study, report, or similar documents used as the basis for the proposed amendment to the 2019 California CALGreen Code.

#### **STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS**

Government Code Section 11346.2(b)(1) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or prescriptive standards are required.

The California Building Standards Code has historically been a mix of performance and prescriptive provisions and reference standards. The CALGreen code is no different, and wherever possible, a performance option is included to provide flexibility to the code user.

## **CONSIDERATION OF REASONABLE ALTERNATIVES**

Government Code Section 11346.2(b)(4)(A) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. It is not the intent of this paragraph to require the agency to artificially construct alternatives or describe unreasonable alternatives.

DSA-SS has not identified any reasonable alternatives to these proposed regulations, which do not mandate the use of specific technologies or equipment.

## **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS**

Government Code Section 11346.2(b)(4)(B) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business.

No alternatives were identified that would lessen any adverse impact on small business. Small businesses will not experience an adverse impact due to these amendments.

## **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS**

Government Code Section 11346.2(b)(5)(A) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business.

DSA-SS did not identify any facts, evidence, documents, testimony, or other substantiation to make an initial determination of significant adverse economic impact on businesses. DSA-SS has determined that this regulatory action would not have a significant adverse economic impact on California business enterprises and individual, including the ability of California businesses to compete with businesses in other states.

## **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

Government Code Sections 11346.3(b)(1) and 11346.5(a)(10)

The Division of the State Architect – Structural Safety(DSA-SS) has assessed whether or not and to what extent this proposal will affect the following:

**A.** The creation or elimination of jobs within the State of California.

These regulations may cause some jobs to be created for the installation, maintaining and manufacturing of Electric Vehicle Supply Equipment (EVSE). No jobs are expected to be eliminated within the State of California.

**B.** The creation of new businesses or the elimination of existing businesses within the State of California.

These regulations may cause the creation of businesses that expand into the EV market. These regulations will not affect the elimination of jobs within the State of California.

**C.** The expansion of businesses currently doing business within the State of California.

These regulations will likely promote the expansion of businesses currently involved with EV manufacturing, installation, maintenance and technology development within the State of California.

- D.** The benefits of the regulation to the health and welfare of California residents, worker safety, and the state's environment.

These regulations will increase the sustainability of California's natural resources by reducing fuel use, GHG emissions, criteria pollutants, and fossil fuel dependence. Additionally, updating and clarifying the minimum current CALGreen codes will provide increased protection of public health and safety, worker safety and the environment.

### **ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS**

Government Code Section 11346.2(b)(5)(B)(i) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.

There will be an increase in costs to school and college districts if the percent of EV capable spaces is increased from 6 percent to 10 percent. The average cost of each EV capable space is \$960. The average increase for each new campus will be as follows: \$1,920 for Elementary Schools, \$3,840 for Middle Schools, \$11,520 for High Schools, and \$19,200 for Community Colleges. Attachment 1 to the 399 includes additional information.

There are no increased costs to comply with the additionally proposed updated CALGreen Code regulations. The amendments provide clarity and regulatory consistency for the code user.

### **DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS**

Government Code Section 11346.2(b)(6) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment.

There are no proposed CALGreen Code regulations that duplicate or conflict with federal regulations. CALGreen is a California-only code and there are no federal regulations addressing this same subject matter.