DOCKETED	
Docket Number:	24-BSTD-02
Project Title:	2025 CALGreen Rulemaking
TN #:	256431-2
Document Title:	Initial Statement of Reasons for the proposed changes to the 2025 CALGreen
Description:	Initial Statement of Reasons for the proposed changes to the 2025 California Green Building Standards Code, Title 24, Part 11 (CALGreen), Appendices A4.2 & A5.2.
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Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	5/16/2024 1:42:35 PM
Docketed Date:	5/16/2024

CALIFORNIA ENERGY COMMISSION

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CEC-057 (Revised 1/21)



INITIAL STATEMENT OF REASONS

PROPOSED REVISIONS TO THE CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS

2025 CALIFORNIA GREEN BUILDING STANDARDS CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11

Docket No. 24-BSTD-02

INTRODUCTION

Notice is hereby given that the California Energy Commission (CEC) proposes to adopt changes to the Building Energy Efficiency Standards contained in the California Green Building Standards Code, California Code of Regulations (CCR), Title 24, Part 11 (referenced herein as CALGreen; Part 11; and Title 24, Part 11) after considering all recommendations, comments, and objections regarding the proposed action. A description of the proposed standards is provided in the Informative Digest below.

INFORMATIVE DIGEST

The Warren-Alquist Act (California Public Resources Code (PRC) Sections 25001 et seq.) establishes the CEC as California's primary energy policy and planning agency. PRC Sections 25213, 25218, 25218.5, 25402, 25402.1, 25402.4, 25402.5, 25402.8, 25910, 25942, and 25943 mandate and authorize that the Energy Commission adopt rules and regulations, as necessary, to reduce the inefficient consumption of energy and water in newly constructed buildings and certain additions and alterations to existing buildings.

One of the ways the CEC satisfies this requirement is through the California Green Building Standards Code, (California Code of Regulations, Title 24, Part 11) found in the California Building Standards Code, which are adopted pursuant to Health and Safety Code Sections 18930, 18934, and 18935 and, where applicable, the California Environmental Quality Act, PRC Sections 21000 *et seq*. As a part of the California Building Standards Code, the California Green Building Standards Code follows the same three-year update cycle.

Therefore, the CEC proposes to update the voluntary energy efficiency provisions of the California Green Building Standards Code (CCR, Title 24, Part 11). The proposed changes for Part 11 are amendments to current code language that are intended as templates and examples for local jurisdictions to use in considering above-code ordinances. The proposed changes do not have a regulatory effect as local jurisdictions

are not compelled to use or follow these examples. The CEC proposes to adopt the following amendments:

- Introduce new sections for alterations to existing residential buildings and nonresidential buildings.
- Introduce new standards for altered space conditioning systems in existing single-family homes.
- Introduce new standards for altered pool and/or spa heating equipment in both multifamily and nonresidential existing buildings.
- Update performance compliance margins for newly constructed single-family homes.
- Introduce outdoor lighting standards for newly constructed residential buildings and residential additions.
- Update outdoor lighting standards for newly constructed nonresidential buildings and nonresidential additions.
- Remove Renewable Energy Section from the nonresidential appendix A5.
- Rename Energy Efficient Steel Framing section to Energy Efficient Framing.

STATEMENT OF SPECIFIC PURPOSE, PROBLEM, RATIONALE and BENEFITS Government Code Section 11346.2(b)(1) requires "a statement of the specific purpose of each adoption, amendment, or repeal, the problem the agency intends to address, and the rationale for the determination by the agency that each adoption, amendment, or repeal is 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."

The problem that the CEC seeks to address in adopting building energy efficiency standards is enumerated in its enabling statute. The legislative findings in the Warren-Alquist Act includes, in part, the following:

§ 25000.1(a) The Legislature further finds and declares that, in addition to their other ratepayer protection objectives, a principal goal of electric and natural gas utilities' resource planning and investment shall be to minimize the cost to society of the reliable energy services that are provided by natural gas and electricity, and to improve the environment and to encourage the diversity of energy sources through improvements in energy efficiency and development of renewable energy resources, such as wind, solar, and geothermal energy.

§ 25001. The Legislature hereby finds and declares that electrical energy is essential to the health, safety and welfare of the people of this state and to the state economy, and that it is the responsibility of state government to ensure that a reliable supply of electrical energy is maintained at a level consistent with the need for such energy for protection of public health and safety, for promotion of the general welfare, and for environmental quality protection.

§ 25002. The Legislature further finds and declares that the present rapid rate of growth in demand for electric energy is in part due to wasteful, uneconomic, inefficient, and unnecessary uses of power and a continuation of this trend will result in serious depletion or irreversible commitment of energy, land and water resources, and potential threats to the state's environmental quality.

§ 25007. It is further the policy of the state and the intent of the Legislature to employ a range of measures to reduce wasteful, uneconomical, and unnecessary uses of energy, thereby reducing the rate of growth of energy consumption, prudently conserve energy resources, and assure statewide environmental, public safety, and land use goals.

§ 25008. It is further the policy of the state and the intent of the Legislature to promote all feasible means of energy and water conservation and all feasible uses of alternative energy and water supply sources.

While the specific purposes of individual amendments are described below, the overall purpose of the adoption of new amendments to CALGreen is "to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy, including the energy associated with the use of water, and to manage energy loads to help maintain electrical grid reliability" consistent with the express statutory authority and direction in PRC §25402, which benefits the state by slowing demand growth, reducing depletion of resources, improving reliability, minimizing costs, and mitigating threats to the state's environmental quality – that is, by directly addressing the problems the legislature observed when creating the CEC. Based on the evidence in the record, the CEC has determined that the proposed changes are necessary to provide these benefits by establishing or improving standards, including voluntary and model standards, for building energy efficiency and improving the likelihood of successful deployment of building design and construction measures that directly cause or indirectly enable improved efficiency during occupancy and operation.

RESIDENTIAL VOLUNTARY MEASURES

Section: A4.202.1

Specific Purpose: The specific purpose of this change is to remove references to the old energy metrics, Energy Design Rating (EDR) and Time Dependent Valuation (TDV), and to add a reference to the new energy metric Long-term System Cost (LSC). Long-term System Cost (LSC) is similar to Time Dependent Valuation (TDV) and Energy Design Rating (EDR) in that it varies for every hour of the year to capture the value of energy and emissions at different times of the day and at different times of the year. LSC is a cost metric that represents long-term costs to the energy system over 30-years, which will better account for, and relay to the public, the long-term dollar cost impact to California's energy system.

Additionally, new definitions for On-Site Recovered Energy and Solar Pool Heating System were added for the altered pool or spa heating voluntary measure, and to align with the Energy Code.

Necessity: These changes are necessary to clarify and make specific how the energy budget is calculated and the use of the terms to be used for establishing energy budgets. The proposed changes are also reasonably necessary to ensure consistency with the Energy Code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A4.203.1

Specific Purpose: The specific purpose for this change is to revise the subsection references to include the new outdoor lighting requirements of A4.203.1.4. **Necessity:** The proposed changes are reasonably necessary to ensure consistency within the code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A4.203.1.1

Specific Purpose: The specific purpose of this change is to remove references to the old energy metric, Energy Design Rating, and to add references to the new energy metric Long-term System Cost.

Necessity: These changes are necessary to clarify and make specific how the energy budget is calculated and the use of the terms to be used for establishing energy budgets. The proposed changes are also reasonably necessary to ensure consistency with the Energy Code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: Table A4.203.1.1

Specific Purpose: The specific purpose of the changes to this section is to remove references to the old energy metric, Energy Design Rating (EDR), add references to the new energy metric Long-term System Cost (LSC), and update the performance compliance margin targets in the associated table – Table A4.203.1.1.

Necessity: These changes are necessary to clarify and make specific how the energy budget is calculated and the use of the terms to be used for establishing energy budgets. These changes are also necessary to ensure that targets considered by local jurisdictions are achievable within the context of proposed updated statewide requirements in the Energy Code and associated computer modeling software. The increased LSC compliance margins are necessary to provide local jurisdictions options to choose a compliance pathway that achieves greater energy savings than the minimum requirement in Part 6, consistent with the CEC's mandate to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy as direct by California Public Resources Code Sections 25213 and 25402.

Section: A4.203.1.2

Specific Purpose: The specific purpose of this change is to update the subsection

references to reflect the removal of A4.203.1.8.

Necessity: The proposed changes are reasonably necessary to ensure consistency within the code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A4.203.1.2.5

Specific Purpose: The specific purpose of these changes are to: [1] clarify that vertical fenestration shall be rated in accordance with Title 24, Part 6, Section 110.6; [2] clarify that the U-factor requirement applies to all climate zones (1-16); [3] clarify that the SHGC requirement of 0.23 applies to climate zones 1-14 and 16; and [4] add language to reduce the SHGC requirement for climate zone 15 to 0.20 to align with proposed changes to Part 6.

Necessity: The proposed changes are reasonably necessary to ensure and improve the general clarity and internal consistency with the Energy Code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A4.203.1.2.8

Specific Purpose: The specific purpose of this change is to remove the prerequisite requirement for heat pump space and water heating.

Necessity: The proposed changes are reasonably necessary because they are being proposed as prescriptive requirements for Part 6 and the change will ensure consistency with the Energy Code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A4.203.1.4

Specific Purpose: The specific purpose of this change is to add a new section for outdoor luminaires under Appendix A4.

Necessity: The proposed change is necessary to introduce a new residential voluntary measure about outdoor luminaires.

Section: A4.203.1.4.1

Specific Purpose: The specific purpose of this change is to add a new requirement for outdoor luminaires illuminating any freestanding surface to direct light to the target surface to be illuminated by the outdoor luminaires.

Necessity: The proposed change is reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy being used on light emitted to unintended spaces and spaces outside the target illumination of the outdoor luminaires, as directed by California Public Resources Code Sections 25213 and 25402.

Section: A4.203.1.4.2

Specific Purpose: The specific purpose of this change is to add a new requirement for outdoor pole-mounted and arm-mounted luminaires being limited in tilting to minimize the potential for causing uplight, sky glow, and glare.

Necessity: The proposed change is reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy being used on light emitted to sky and unintended spaces and spaces outside the target illumination of the outdoor luminaires, as directed by California Public Resources Code Sections 25213 and 25402.

Section: Exception to A4.203.1.4

Specific Purpose: The specific purpose of this change is to add an exception for certain luminaires to the outdoor lighting requirements.

Necessity: The proposed change is reasonably necessary to provide an exception for luminaires that qualify for the exceptions to the luminaire shielding requirements of Section 160.5(c)1 of the Energy Code. This change is also reasonably necessary to ensure and improve the general clarity and internal consistency of the Green Code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A4.204

Specific Purpose: This specific purpose of this change is to add a section containing

requirements that apply to alterations to existing residential buildings.

Necessity: This change is necessary to ensure there is no confusion over the requirements that apply to newly constructed buildings rather than alterations to existing

buildings.

Section: A4.204.1

Specific Purpose: The specific purpose of this change is to clarify which voluntary

measures apply to alterations to existing residential buildings.

Necessity: This change is necessary to ensure that all of the requirements of Section A4.204.1 are met, and to improve the general clarity and internal consistency of the Green Code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A4.204.1.1 Altered space-conditioning system - mechanical cooling **Specific Purpose:** The specific purpose of changes is to add selection requirements for altered space-conditioning systems – mechanical cooling in climate zones 1-14, and 16. Altered heat pump space heating requirements are proposed for every climate zone except climate zone 15, based on cost-effectiveness, GHG and market impacts. The performance standard design would match the proposed prescriptive requirements of the dual heat pump baseline in Title 24, Part 6. The air conditioner path was designed to be reasonably energy equivalent with the heat pump path.

Necessity: This change is necessary to enable alternate compliance through a prescriptive option for alterations of space conditioning systems. These changes are necessary to increase energy efficiency through cost-effective building design standards. It is necessary to provide alternate pathways that have approximately equivalent energy savings to provide homeowners and installers with compliance options that are consistent with the CEC's mandate to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy, as directed by California Public Resources Code Sections 25213 and 25402. It is necessary to allow supplemental heating to ensure the measure is cost-effective. It is necessary to establish the specific requirements of the air conditioner option to ensure the air conditioner pathway is approximately energy equivalent to the heat pump option, based on energy calculations demonstrated in the rulemaking record.

Section: Exception 1 to A4.204.1.1

Specific Purpose: The specific purpose of this change is to provide a clear guideline for situations where the existing main electrical service panel lacks the capacity to support the additional electrical demands of a heat pump, especially when it is installed as a new addition or as a replacement for an air conditioner.

Necessity: This change is necessary because a significant number of existing single-family buildings are equipped with electrical service panels that are not sized to accommodate the probable increased electrical load introduced by the addition of a heat pump. These proposed changes are reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy, thereby promoting more sustainable energy usage practices and alignment with energy conservation goals, as directed by California Public Resources Code Sections 25213 and 25402.

Section: Exception 2 to A4.204.1.1

Specific Purpose: The specific purpose of this exception is to establish a criterion for situations where a significant discrepancy exists between the capacity requirements of a heat pump and an air conditioner for the same property. This exception applies when the required capacity of a heat pump, necessary to meet the system selection requirements outlined in Section 150.0(h)5, exceeds that of an air conditioner by 12,000 Btu/h or more to satisfy the design cooling load.

Necessity: This change is necessary because many existing single-family buildings may experience a substantial discrepancy between the heating and cooling demands, particularly in regions with extreme weather conditions. These proposed changes are reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy, as directed by California Public Resources Code Sections 25213 and 25402.

Section: A4.204.1.2

Specific Purpose: The specific purpose of this change is to add new heating source sizing requirements for the primary pool, spa, or pool/spa heater. This applies to alteration of existing pool, spa, or pool/spa heating systems in multifamily buildings. This change requires a solar pool heating system, a heat pump pool, spa, or pool/spa heater, or a heating system that derives at least 60 percent of heating energy from on-site renewable or recovered energy.

Necessity: These changes are necessary to increase energy efficiency through cost-effective building design standards. These additions reduce LSC and source energy use through the use of cost-effective solar thermal swimming pool, spa, and pool/spa applications, properly sized heat pump pool, spa, and pool/spa heaters, or alternative energy efficient pool, spa, and pool/spa heating technologies. These proposed changes are reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy being used on pool, spa, and pool/spa heating, as directed by California Public Resources Code Sections 25213 and 25402. Additionally, the option including the heating system that derives at least 60 percent of heating energy from on-site renewable or recovered energy is reasonably necessary to ensure clarity and consistency, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section Exception 1 to A4.204.1.2

Specific Purpose: The specific purpose of this change is to provide an exception for portable electric spas that comply with the appliance efficiency regulations in Title 20 of the California Code of Regulations from the requirement.

Necessity: These changes are necessary because portable electric spas are subject to regulation under California Appliance Efficiency Standards (Title 20) and are regulated separately as a package by the U.S. Department of Energy (DOE). This product has been optimized to perform efficiently through these rulemaking processes. These changes are necessary to increase energy efficiency cost-effective building design standards, as directed by California Public Resources Code Sections 25213 and 25402.

Section: Exception 2 to A4.204.1.2

Specific Purpose: The specific purpose of this change is to provide an exception for a pool, spa, or pool/spa that is heated solely by a solar pool heating system without any backup heater.

Necessity: This change is necessary because a pool that relies only on solar heating does not consume any energy from utility sources. These proposed changes are reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy being used on pool, spa, and pool/spa heating, as directed by California Public Resources Code Sections 25213 and 25402.

NONRESIDENTIAL VOLUNTARY MEASURES

Section: A5.202.1

Specific Purpose: The specific purpose of this change is to remove references to the old energy metric, Time Dependent Valuation (TDV), and to add references to the new energy metric, Long-term System Cost (LSC).

Additionally, new definitions for On-Site Recovered Energy and Solar Pool Heating System were added for the altered pool or spa heating voluntary measure, and to align with the Energy Code.

Necessity: These changes are necessary to clarify and make specific how the energy budget is calculated and the use of the terms to be used for establishing energy budgets. The proposed change is also reasonably necessary to ensure consistency with the Energy Code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A5.203.1.1.1

Specific Purpose: The specific purpose of this change is to organize the existing requirements of Section A5.203.1.1.1 as a new subsection so that the section can be added with new subsections for outdoor lighting under Appendix A5, Nonresidential Voluntary Measures.

Necessity: The changes are necessary as editorial changes to allow an addition of new subsections.

Section: A5.203.1.1.1.1

Specific Purpose: The specific purpose of this change is to make a minor grammatical

change.

Necessity: The changes are necessary to ensure clarity and consistency, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A5.203.1.1.1.2

Specific Purpose: The specific purpose of this change is to add a new requirement for outdoor luminaires illuminating any freestanding surface to direct light to the target surface to be illuminated by the outdoor luminaires.

Necessity: The proposed change is reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy being used on light emitted to unintended spaces and spaces outside the target illumination of the outdoor luminaires, as directed by California Public Resources Code Sections 25213 and 25402.

Section: A5.203.1.1.1.3

Specific Purpose: The specific purpose of this change is to add a new requirement for outdoor pole-mounted and arm-mounted luminaires being limited in tilting to minimize the potential for causing uplight, sky glow, and glare.

Necessity: The proposed change is reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy being used on light emitted to unintended spaces and spaces outside the target illumination of the outdoor luminaires, as directed by California Public Resources Code Sections 25213 and 25402.

Section: Exception 1 to A5.203.1.1.1

Specific Purpose: The specific purpose of this change is to renumber the existing exception (color temperature requirement) as Exception 1, and to clarify that the exception refers to the Energy Code.

Necessity: The proposed change is reasonably necessary to create subsections accommodating a second proposed exception. The clarification is necessary to ensure clarity and consistency, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: Exception 2 to A5.203.1.1.1

Specific Purpose: The specific purpose of this change is to add an exception to the outdoor lighting requirements for luminaires that qualify for the exceptions to the luminaire shielding requirements in Section 130.2(b) of the Energy Code.

Necessity: The proposed change is reasonably necessary to provide an exception for luminaires that are not required to comply with the luminaire shielding requirements of Section 130.2(b) of the Energy Code. This change is also reasonably necessary to ensure and improve the general clarity and internal consistency of the Green Code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A5.204

Specific Purpose: The specific purpose of this change is to add a section containing requirements that apply to alterations to existing nonresidential buildings. **Necessity:** This change is necessary to ensure there is no confusion over the requirements that apply to newly constructed buildings rather than alterations to existing buildings.

Section: A5.204.1

Specific Purpose: The specific purpose of this change is to clarify which requirements apply to alterations to existing nonresidential buildings.

Necessity: This change is necessary to ensure that all of the requirements of Section A5.204.1 are met, and to improve the general clarity and internal consistency of CALGreen, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section A5.204.1.1 Altered Pool or Spa Heating

Specific Purpose: The specific purpose of this change is to add new heating source sizing requirements for the primary pool, spa, or pool/spa heater. This applies to alteration of existing pool, spa, or pool/spa heating systems in nonresidential buildings. This change includes a compliance option including a solar pool heating system, a heat pump pool, spa, or pool/spa heater, or a heating system that derives at least 60 percent of heating energy from on-site renewable or recovered energy.

Necessity: These changes are necessary to increase energy efficiency through cost-effective building design standards. These additions reduce LSC and source energy use through the use of cost-effective solar thermal swimming pool, spa, and pool/spa applications, properly sized heat pump pool, spa, and pool/spa heaters, or alternative energy efficient pool, spa, and pool/spa heating technologies. These proposed changes are reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy being used on pool, spa, and pool/spa heating, as directed by California Public Resources Code Sections 25213 and 25402. Additionally, the option including the heating system that derives at least 60 percent of heating energy from on-site renewable or recovered energy is reasonably necessary to ensure clarity and consistency, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section Exception 1 to A5.204.1.1

Specific Purpose: The specific purpose of this change is to provide an exception from the requirement for portable electric spas that comply with the appliance efficiency regulations in Title 20 of the California Code of Regulations.

Necessity: These changes are necessary because portable electric spas are subject to regulation under California Appliance Efficiency Standards (Title 20) and are regulated separately as a package by the U.S. Department of Energy (DOE). This product has been optimized to perform efficiently through these rulemaking processes. These changes are necessary to increase energy efficiency through cost-effective building design standards, as directed by California Public Resources Code Sections 25213 and 25402.

Section: Exception 2 to A5.204.1.1

Specific Purpose: The specific purpose of this change is to provide an exception for a pool, spa, or pool/spa that is heated solely by a solar pool heating system without any backup heater.

Necessity: This change is necessary because a pool that relies only on solar heating does not consume any energy from utility sources. These proposed changes are reasonably necessary to ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy being used on pool, spa, and pool/spa heating, as directed by California Public Resources Code Sections 25213 and 25402.

Section: A5.211

Specific Purpose: The specific purpose of this change is to remove the "Renewable Energy" section due to issues with implementation and enforceability and to reserve the section for potential future updates.

Necessity: This change is necessary to preserve the numbering structure of the appendix and ensure reliable reductions in wasteful, uneconomic, inefficient, or unnecessary consumption of energy as directed by California Public Resources Code Sections 25213 and 25402. In this case, the requirements of A5.211 do not reliably reduce energy consumption due to issues with implementation and enforcement.

Section: A5.212.1.2

Specific Purpose: The specific purpose of this change is to make a non-substantive grammatical edit by spelling out that escalators shall have a Variable Voltage Variable Frequency (VVVF) motor drive system.

Necessity: This change is necessary to improve the general clarity and internal consistency of CALGreen, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

Section: A5.213

Specific Purpose: The specific purpose of this change is to revise the title of the Section from "Energy Efficient Steel Framing" to "Energy Efficient Framing". Including steel-framing in the header of this section is redundant as the requirement language specifically calls out requirements for steel-framing. Furthermore, this change will create an opportunity for additional energy efficient framing requirements to be added in the future.

Necessity: This change is reasonably necessary to ensure and improve the general clarity and internal consistency of the Green Code, as directed by California Government Code, Section 11349 and 11349.1, and California Code of Regulations, Title 1, Section 16.

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

The CEC relied on input from stakeholders, subject matter experts, and interested parties that provided information, feedback, and subject matter expertise.

The CEC relied upon the following documents:

- 2025 Energy Code Measure Proposal Single Family Heat Pump Replacements
- 2025 CALGreen Measure Proposal LSC Compliance Margins
- 2025 CASE Report Swimming Pool and Spa Heating
- "Seven Strategies to Minimize Negative Impacts of Outdoor Light at Night", DLC, published date as 12/07/2022
- "Another Sky-Glow Culprit: The Trouble with Tilted Outdoor Lighting", Miller, Naomi J., and Grather, Michael, Lighting Design + Application, Volume 51 Issue 2, 2021 February

The listed documents have been filed in this proceeding's docket (24-BSTD-02) and are available to the public unless subject to copyright or other restrictions.

In addition, all documents are available at the CEC, located at 715 P Street, in Sacramento, California.

STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS

There are no prescriptive standards proposed.

CONSIDERATION OF REASONABLE ALTERNATIVES, INCLUDING THOSE THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.

Since 1975, legislative enactments and state energy policies have directed the CEC to adopt cost-effective building standards to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy and thereby improve the state's economy, energy security, and environment. The CEC has been presented with and has considered multiple alternatives to the proposed standards; however, at this time, no reasonable alternatives to the proposed regulations have been proposed that would lessen any adverse impact on small businesses or that would be less burdensome and equally effective in achieving the purposes of the regulation in a manner that achieves the purposes of the statute being implemented.

The proposed regulations take additional steps in meeting California's energy resource conservation goals by updating the voluntary energy efficiency provisions of the California Green Building Standards (Title 24, Part 11) and directing readers to existing standards for the benefit of readers that may not be aware of or familiar with Energy Code requirements.

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

Due to their voluntary nature, the CEC has made an initial determination that the proposed regulations are unlikely to have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with businesses in other states.

The proposed regulations take additional steps in meeting California's energy resource conservation goals through updates to the voluntary energy efficiency provisions of the California Green Building Standards (Title 24, Part 11). The proposed amendments to the voluntary provisions are unlikely to create cost impacts due to their voluntary nature. Businesses may, but are not required, to comply with voluntary provisions. To the extent that actions taken by local agencies may include, modify, or not include all or part of the voluntary provisions, those actions would be subject to existing laws relating to the evaluation and disclosure of impacts of actions by those local agencies. While local agencies may use the provisions in CALGreen as templates or examples for drafting of local ordinances, such agencies are not required to adhere to the specific language or requirements in CALGreen. Consideration of potential future actions taken by local

agencies is therefore speculative and is not included in the assessment of the effects of the proposed standards.

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

The CEC 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.

The proposed regulations take additional steps in meeting California's energy resource conservation goals through updates to the voluntary energy efficiency provisions of the California Green Building Standards (Title 24, Part 11). The proposed amendments to the voluntary provisions are unlikely to create or eliminate jobs due to their voluntary nature

Businesses may, but are not required, to comply with voluntary provisions. To the extent that actions taken by local agencies may include, modify, or not include all or part of the voluntary provisions, those actions would be subject to existing laws relating to the evaluation and disclosure of impacts of actions by those local agencies. While local agencies may use the provisions in CALGreen as templates or examples for drafting of local ordinances, such agencies are not required to adhere to the specific language or requirements in CALGreen. Consideration of potential future actions taken by local agencies is therefore speculative and is not included in the assessment of the effects of the proposed standards. Therefore, the CEC has determined it is unlikely any jobs will be created or eliminated as a result of the proposed regulation.

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

The proposed regulations take additional steps in meeting California's energy resource conservation goals through updates to the voluntary energy efficiency provisions of the California Green Building Standards (Title 24, Part 11) The proposed amendments to the voluntary provisions are unlikely to create or eliminate businesses due to their voluntary nature.

Businesses may, but are not required, to comply with voluntary provisions. To the extent that actions taken by local agencies may include, modify, or not include all or part of the voluntary provisions, those actions would be subject to existing laws relating to the evaluation and disclosure of impacts of actions by those local agencies. While local agencies may use the provisions in CALGreen as templates or examples for drafting of local ordinances, such agencies are not required to adhere to the specific language or requirements in CALGreen. Consideration of potential future actions taken by local agencies is therefore speculative and is not included in the assessment of the effects of the proposed standards. Therefore, the CEC has determined it is unlikely businesses will be eliminated or created as a result of the proposed regulation.

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

The proposed regulations take additional steps in meeting California's energy resource conservation goals through updates to the voluntary energy efficiency provisions of the California Green Building Standards (Title 24, Part 11). The proposed amendments to the voluntary provisions are unlikely to result in the expansion of businesses due to their voluntary nature.

Businesses may, but are not required, to comply with voluntary provisions. To the extent that actions taken by local agencies may include, modify, or not include all or part of the voluntary provisions, those actions would be subject to existing laws relating to the evaluation and disclosure of impacts of actions by those local agencies. While local agencies may use the provisions in CALGreen as templates or examples for drafting of local ordinances, such agencies are not required to adhere to the specific language or requirements in CALGreen. Consideration of potential future actions taken by local agencies is therefore speculative and is not included in the assessment of the effects of the proposed standards. Therefore, the CEC has determined it is unlikely businesses will expand as a result of the proposed regulation.

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

The proposed updates to CALGreen will have no adverse effect on health, welfare, worker safety, or the environment. The updates may encourage consideration and adoption of local ordinances relating to energy efficiency in buildings, and such ordinances, if adopted, may have positive impacts on health, welfare, and the environment known to result from energy efficiency. However, as such impacts are speculative, they are not considered in this rulemaking.

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

There are no estimated costs or savings associated with the proposed regulations because compliance with the Part 11 provisions are voluntary, not required.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

These proposed regulations do not duplicate or conflict with any federal regulations contained in the Code of Federal Regulations.

CONTACT PERSON FOR PROCEDURAL AND ADMINISTRATIVE QUESTIONS

Please direct general inquiries concerning aspects of the rulemaking process including requests for copies of the proposed text (Express Terms), the Initial Statement of Reasons (ISOR), any modified version of the regulations, or the substance of the proposed regulations to:

Corrine Fishman, MA
Regulations Manager
Efficiency Division
corrine.fishman@energy.ca.gov

PROPOSING STATE AGENCY CONTACT PERSON FOR SUBSTANTIVE OR TECHNICAL QUESTIONS ON THE PROPOSED CHANGES TO BUILDING STANDARDS

Specific questions regarding the substantive or technical aspects of the proposed changes to the building standards should be addressed to:

Payam Bozorgchami, PE Senior Civil Engineer Building Standards Branch payam.bozorgchami@energy.ca.gov

INSTRUCTIONS FOR RECEIVING NOTICES AND DOCUMENTS IN THIS PROCEEDING

To stay informed about this project and receive documents and notices of upcoming workshops and hearings as they are filed, please subscribe to the Building Energy Efficiency Standards <u>subscription list</u>,

The <u>subscription list</u> sends out email notifications and direct links when documents and notices are filed in the proceeding docket. If you are unable or do not wish to sign up for the subscription list but still would like to receive documents and notices, please contact the contact person listed above in this notice.