

BLUEPRINT

CALIFORNIA ENERGY COMMISSION
EFFICIENCY DIVISION

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For additional help with the Energy Code, see Energy Code Ace's **online offerings** of trainings, tools, and resources.



2025 Energy Code Update: Draft Regulations

The **2025 Energy Code** will improve upon the 2022 Energy Code by updating energy efficiency standards for newly constructed buildings, additions, and alterations to existing buildings, consistent with state and federal law. During pre-rulemaking California Energy Commission (CEC) staff evaluated proposed revisions to the 2025 Energy Code and prepared draft regulations (known as **Express Terms**). During the rulemaking in 2024, the CEC will have 45-day and 15-day public comments periods. The final 2025 Energy Code language will be proposed for adoption after the public comment periods in 2024 for an anticipated publication in 2025, with an effective date of January 1, 2026.

Summary of Staff Proposed Changes

- Introduces heat pump standards for existing single-family homes and for designated types of existing nonresidential buildings
- Updates heat pump standards for newly constructed single-family, multifamily, and designated types of nonresidential building
- Updates photovoltaic system standards for newly constructed buildings
- Updates energy storage standards for high-rise multifamily, nonresidential, and hotel and motel buildings
- Increases envelope efficiency standards
- Increases space conditioning system efficiency and control standards
- Improves indoor air quality requirements for multifamily buildings
- Improves efficiency standards for multifamily domestic water heating systems
- Establishes electric-ready requirements for multifamily domestic water heating systems
- Simplifies standards for multifamily buildings
- Increases efficiency requirements for pool and spa water heating systems

- Increases daylighting control requirements for nonresidential buildings
- Increases efficiency standards for laboratories
- Increases efficiency requirements for controlled environment horticulture buildings
- Increases efficiency requirements for nonresidential refrigeration systems
- Establishes industrial pipe insulation requirements
- Establishes electric-ready requirements for commercial kitchens
- Makes general improvements to the clarity and consistency of existing provisions
- Relocates portions of the Alternative Calculation Method Approval Manual pertaining to the application, approval, updates, expiration, and decertification of third-party compliance software to Title 24, Part 1

- Relocates field verification and diagnostic testing requirements from Title 20 to Title 24, Part 1

Preliminary rulemaking materials including technical reports and data gathered to substantiate the proposed measures can be found on CEC **docket 22-BSTD-01**. The formal rulemaking is scheduled to begin in the first quarter of 2024.

The CEC encourages public participation in its proceedings. Participants may attend the workshops to provide verbal comments, or written comments can be submitted to the rulemaking docket. For more information visit the **2025 Energy Code webpage**.

2022 Energy Code: Daylighting with Linear Fixtures

The 2022 Energy Code **§ 130.1(d)2** updates the automatic daylighting control requirements for linear lighting systems. Linear LED and other solid state lighting (SSL) linear light sources may be treated as linear lamps in increments of 4-foot segments or smaller, and each segment is separately controlled based on the type of the daylit zone in which the segment is primarily located. The intent is to allow 4-foot segments for linear lighting that span daylit zones, so that the lighting can be separately controlled in each daylit zone.

For general lighting luminaires located in overlapping skylit daylit zones and sidelit daylit zones, the luminaire shall be controlled as part of the skylit daylit zone.

The luminaire may be partially in the daylit zone and it is still to be controlled as the skylit zone.

Similarly for general lighting luminaires located in overlapping primary sidelit daylit zones and secondary daylit zones, the luminaire shall be controlled as part of the primary sidelit daylit zone. The luminaire may be partially in the secondary daylit zone and it is still to be controlled as part of the primary sidelit daylit zone.

Previous **Blueprint Issue 130** stated per the 2019 Energy Code luminaires that are at least 50 percent in a daylit zone must be included in the zone and meet applicable control requirements for that zone, which no longer applies under the 2022 Energy Code.

2022 Compliance Software

Recently approved updated versions of the 2022 Energy Code compliance software are available on the **2022 Energy Code compliance software webpage**.

- For single-family buildings
 - Right-Energy Title 24 2022.3.0
- For nonresidential and multifamily buildings
 - IES VE Title 24 2022 1.1

All permit applications submitted on or after January 1, 2023, must comply using software and compliance forms approved for the 2022 Energy Code. Visit the **compliance software webpage** for all of the approved software and the expiration dates.

ENERGY STANDARDS HOTLINE

Available to help with Energy Code (Title 24, Part 6) questions.

✉ EMAIL
title24@energy.ca.gov

☎ CALL
800-772-3300 | 916-654-5106
Toll free in CA | Outside CA

HOURS 8 a.m.–12 p.m. and 1 p.m.–4:30 p.m.

New Resources on the ORC

Twelve new covered processes fact sheets for the 2022 Energy Code are available on the Online Resource Center [covered processes webpage](#).

- Commercial Kitchens
- Commercial Refrigeration
- Compressed Air Systems
- Computer Room and Data Centers
- Controlled Environment Horticulture
- Elevators
- Enclosed Parking Garages
- Escalators and Moving Walkways
- Laboratory and Factory Exhaust
- Process Boilers
- Refrigerated Warehouses
- Steam Traps

Q&A

Single-Family Energy Storage System (ESS) Ready

Can the 2022 Energy Code ESS ready requirement be met without a subpanel?

Yes. Per **§ 150.0(s)1A** ESS ready interconnection equipment is required to have a 60-Amp backed-up capacity and a minimum of four ESS-supplied branch circuits. See Figure 1. Various configurations of panels and subpanels could meet the ESS-ready requirements of **§ 150.0(s)**.

Can a smart panel meet the ESS ready requirements in § 150.0(s)?

Yes. Per **§ 100.1** ESS ready interconnection equipment is defined as equipment, including but not limited to an ESS ready panelboard, that can accommodate the connection of a distributed energy resource or an ESS capable of either automatic or manual isolation from the utility power source. An ESS-ready panelboard is defined as a panelboard that can

accommodate either automatic or manual switching between a utility power source to a distributed energy resource or an energy storage system, such as a split bus panelboard.

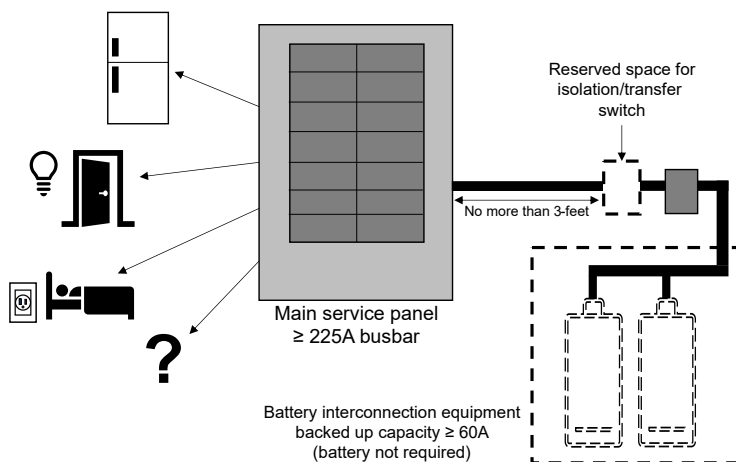


Figure 1: Example of ESS-ready per 150.0(s)1A

Instantaneous Electric Point-of-Use Water Heaters

Can more than one instantaneous electric point-of-use (POU) water heater be used prescriptively per the 2022 Energy Code meet exception 2 to § 150.1(c)8 for single-family new construction?

No. The prescriptive requirement for single-family new construction specifies an instantaneous electric point-of-use water heater may be used when the requirements of **Reference Residential Appendix RA4.4.5** are met. Under the performance approach multiple water heaters may be modeled, however the design will be compared to the efficiency of the prescriptive standard design.

Can more than one instantaneous electric POU water heater be used prescriptively per § 150.2(a)1Div for single-family additions that are 500 square feet or less?

No. Per the prescriptive requirement when a second water heater is installed to serve a single-family addition that is 500 square feet or less an electric point-of-use water heater may be used. Under the performance approach multiple water heaters may be modeled, however the design will be compared to the efficiency of the prescriptive standard design.

Can the instantaneous electric POU water heater serve more than one fixture?

Yes. When the requirements of **Reference Residential Appendix RA4.4.5** are met. The POU water heater pipe runs should meet Table 4.4.5 for pipe diameter and length requirements and take the most direct path. The the manufacturer's installation specifications for the number of fixtures served should also be considered.

Does a 10-foot water heater pipe run meet point of use requirements per RA4.4.5?

Yes. A 10-foot pipe run could meet **RA4.4.5** length requirements depending on the pipe diameter. For example, RA4.4.5 allows up to 15-feet of 3/8-inch pipe, or 10-feet of 1/2-inch pipe. If a combination of piping is used in a single run then one half the allowed length of each size is the maximum installed length.

Multifamily Fenestration NA6 Calculations

Are multifamily projects allowed to use the fenestration default calculations in Reference Nonresidential Appendix NA6 per § 110.6 of the 2022 Energy Code?

Yes. The NA6 default calculations can be used for U-factor, solar heat gain coefficient (SHGC), and visible transmittance (VT) per **exception 3 to § 170.2(a)3Aii** for multifamily projects. NA6 allows low-rise multifamily default calculations for new, altered, and replacement vertical windows and skylights with less than 250 square feet of area. NA6 allows high-rise multifamily default calculations for new, altered, and replacement skylights with less than 200 square feet of area. Vertical windows in high-rise multifamily projects may not use the NA6 calculations and must use the default values in **§ 110.6**.

FOR MORE INFORMATION

Online Resource Center (ORC):
www.energy.ca.gov/orc

Home Energy Rating System (HERS):
www.energy.ca.gov/HERS

Acceptance Test Technician Certification Provider Program (ATTCP): www.energy.ca.gov/ATTCP

2022 Approved Compliance Software:
<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-1>

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The CEC welcomes feedback on Blueprint.
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Blueprint newsletter serves as a resource to assist stakeholders in complying with the Energy Code. It does not provide legal advice. Please refer to California Code of Regulations, Title 24, Parts 1 and 6 for specific requirements.



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CEC-400-2023-013

