

# BLUEPRINT

CALIFORNIA ENERGY COMMISSION  
EFFICIENCY DIVISION

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For additional help with the 2019 Energy Code see Energy Code Ace's **online offerings** of trainings, tools, and resources.



## 2022 Energy Code Adopted

The California Energy Commission (CEC) adopted the 2022 Building Energy Efficiency Standards (Energy Code). The 2022 Energy Code will go into effect on January 1, 2023, following approval by the California Building Standards Commission.

Homes and businesses use nearly 70 percent of California's electricity and are responsible for a quarter of the state's greenhouse gas (GHG) emissions. Over the next 30 years, the Energy Code is estimated to provide \$1.5 billion in energy cost savings and reduce 10 million metric tons of GHGs, equivalent to taking nearly 2.2 million cars off the road for a year.

Each update to the Energy Code guides the construction principles for buildings to better withstand extreme weather, lower energy costs, and reduce climate and air pollution. Expanded adoption of new energy-efficient technologies will help reduce costs of these products over time.

The 2022 Energy Code focuses on several key areas in newly constructed buildings:

### Heat Pumps

Heat pumps consume less energy and produce fewer emissions than gas-powered units. The 2022 Energy Code encourages electric heat pump technology for space heating and water heating for single-family, multifamily, and select commercial buildings, such as schools, offices, banks, libraries, retail, and grocery stores.

### Electric Ready

The 2022 Energy Code establishes electric-ready requirements for single-family homes to allow owners to switch from gas to electric for heating, cooking, and appliances. The electric-ready requirement also prepares the home for future installation of a battery storage system.

### Solar and Battery Storage

The 2022 Energy Code includes solar photovoltaic (PV) system and battery storage standards for certain nonresidential buildings, such as high-rise multifamily, hotel, motel, tenant space, office, medical office, clinical, retail, grocery

stores, restaurants, schools, and civic spaces. The update makes clean energy available on-site and complements California's progress toward a 100 percent clean electricity grid.

### **Indoor Air Quality**

The 2022 Energy Code strengthens ventilation standards to improve indoor air quality. The update recognizes differences in pollutants created by natural gas and electric cooking, as well as the role of indoor air volume in pollution concentrations. The update adds duct sealing requirements for central shaft ventilation systems

and relaxes insulation requirements for ducts in conditioned space.

### **Lighting**

Updates to the lighting requirements improve clarity and consistency. The 2022 Energy Code provides default outdoor lighting zones, updates the tables for nonresidential lighting power allowances, and removes the lumen maintenance test from Reference Joint Appendix JA8.

### **Multifamily**

The 2022 Energy Code consolidates low-rise and high-rise multifamily requirements into a set of dedicated chapters. The update

adds Sections 160.0–160.9 for mandatory requirements, Sections 170.0–170.2 for performance and prescriptive compliance approaches, and Sections 180.0–180.4 for additions, alterations, and repairs. The CBECC-Com compliance software will be integrated to demonstrate performance compliance with the multifamily requirements.

For more information, view the **executive summary** (Figure 1) and visit the **2022 Energy Code webpage**.



Figure 1: Executive Summary

## New Resources on ORC

The Online Resource Center (ORC) has new 2019 Energy Code lighting videos on the [lighting webpage](#). The videos (Figure 2) are designed to increase knowledge and implementation of code-compliant lighting in nonresidential and residential buildings.

### Nonresidential

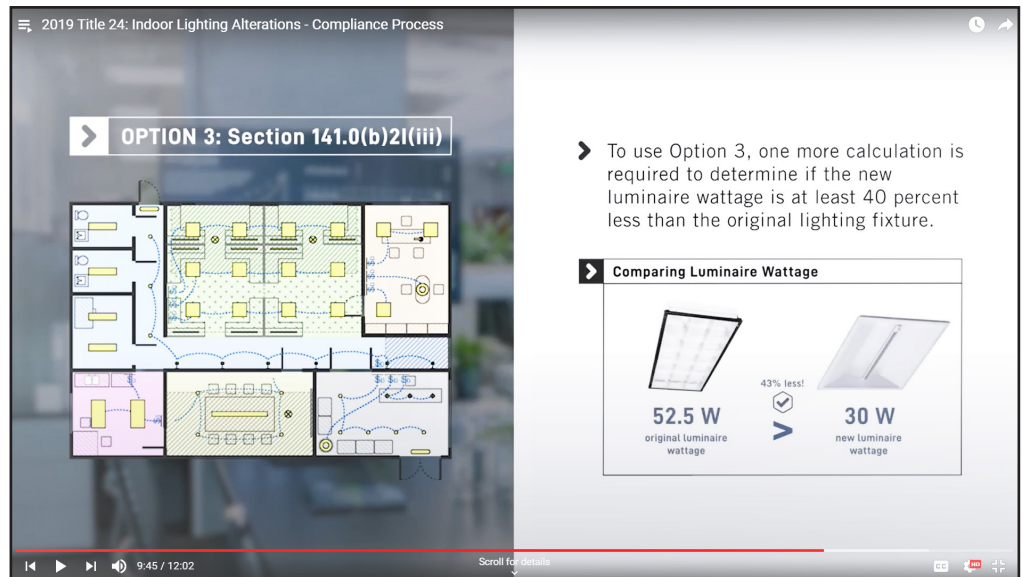
- Indoor Lighting Controls Requirements and Technologies – Manual Area Controls
- Lighting Controls and Envelope Acceptance Testing Requirements
- Indoor Lighting Alterations – Compliance Process
- Outdoor Lighting and Sign Control Requirements

### Residential

- High-Efficacy Requirements for Residential Light Sources

The videos were developed by the University of California, Davis, California Lighting Technology Center (CLTC) with funding from Southern California Edison, in collaboration with RMS Energy Consulting, LLC, and the CEC.

Figure 2: Indoor Lighting Alterations Video



## 2019 Compliance Manual Errata

Errata for the **2019 Residential Compliance Manual** and the **2019 Nonresidential Compliance Manual** have been published.

These errata address revisions to the compliance manuals including minor changes to correct grammatical errors, clarify meaning, and clean up confusing language. View the errata on the [2019 Energy Code webpage](#).

## Q&A

### PV for Newly Constructed Detached Buildings

**Does a new detached building classified as occupancy U (like a pool house, rec room, art studio, etc.) on a residential lot need to meet the solar PV requirements in Energy Code Section 150.1?**

Yes. A conditioned, newly constructed building classified as U-building on a residential lot needs to meet the PV requirements in **Section 150.1(c)14** of the Energy Code. Using the prescriptive method, the annual PV electrical output Equation 150.1-C allows for an input of zero for the number of dwelling units. Using the performance method, the PV calculation is automated to at least one dwelling unit.

ENERGY  
STANDARDS

HOTLINE

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

EMAIL  
[title24@energy.ca.gov](mailto: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.

**Can a new detached accessory dwelling unit (ADU) add PV modules to the existing PV on the main house if the ADU has a separate utility meter and the added PV kilowatts will not specifically serve the ADU?**

Yes. Adding new PV modules to an existing PV system will satisfy the PV requirements in **Section 150.1(c)14** as long as the added PV modules are on the same residential lot as the ADU. The Energy Code does not regulate whether the added PV modules are serving the ADU meter or the main house meter. Any added PV modules must also comply with other parts of the building code as applicable.

**Ultraviolet (UV) Lights for Sanitation**

**Do UV lighting fixtures used for sterilizing need to comply with the mandatory lighting control requirements in Section**

**130.1 and power allowance requirements in Section 140.6 of the Energy Code?**

No. UV lighting for sanitation that does not provide any visual illumination is not regulated by the Energy Code. The UV fixtures should be controlled separately from any visual illumination components.

**Does a lighting luminaire that includes an element for sterilization (whether UV or other type) need to meet the lighting control and power allowance requirements?**

Yes. The luminaire must comply with lighting control requirements in **Section 130.1** and the power allowance requirements in **Section 140.6** for the visual illumination. However, the sanitation element is exempt from these requirements and should be controlled separately from the lighting element of the luminaire.

FOR MORE INFORMATION

**Online Resource Center (ORC):**  
[www.energy.ca.gov/orc](http://www.energy.ca.gov/orc)

**Home Energy Rating System (HERS):**  
[www.energy.ca.gov/HERS](http://www.energy.ca.gov/HERS)

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

**2019 Approved Compliance Software:**  
<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency-2>

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SPECIAL THANKS

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The CEC welcomes feedback on Blueprint. Please contact the editor at [Title24@energy.ca.gov](mailto:Title24@energy.ca.gov).

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