

2025 RESIDENTIAL ENERGY CODE: Mandatory Measures for New Lighting

This form is required to be posted at the building site or made available for all appropriate inspections.

In low-rise residential buildings such as single family, accessory dwelling units, duplexes, and halfplexes, all hardwired lighting is to be controlled with manual on/off controls in addition to the control requirements supported in the following table:

Residential Indoor Mandatory Lighting Control Requirements for Hard-wired Luminaires		
<i>The table below summarizes residential lighting control requirements. All installed hard-wired luminaires must also meet the requirements in the following table. Portable lighting (lighting that is plugged in) is not subject to these regulations.</i>		
Location	Automatic-off Control Required?	Dimmer Control Required?
Habitable Spaces: Such as kitchens, bedrooms, living rooms, offices, dining rooms	Not Required	YES
Bathrooms, Laundry Rooms, Utility Rooms, Walk-in Closets, or Garages	YES: Sensor with automatic-off functionality ➤ At least one luminaire in each of these rooms must be controlled with vacancy/ occupancy sensor with auto-off function.	Not Required
Other Non-habitable Spaces: Such as attic spaces, non-walk-in closets, detached storage buildings, storage rooms, and hallways	Not Required	Not Required
Navigation Lighting (located anywhere): Night lights, step lights, path lights	Not Required	YES ➤ Not required when lighting is <5 watts.
Blank Electrical Boxes Within the Dwelling Unit: When > 5 ft above floor <i>Number of blank electrical boxes to be no more than the number of bedrooms. They can be located anywhere within the dwelling unit.</i>	YES: One of the options (see below) ➤ Each box must be controlled by a vacancy sensor, dimmer, low voltage wiring, or a fan speed control	YES: One of the options (see below) ➤ Each box must be controlled by a vacancy sensor, dimmer, low voltage wiring, or a fan speed control
Lighting internal to drawers and cabinetry with opaque fronts or doors	YES: Automatic-off ➤ Lighting automatically turns off when the drawer or door is closed (<i>Does not apply to cabinets and drawers that are non-opaque fronted, such as glass.</i>)	Not Required
Outdoors: Lighting attached to a single-family home, duplex or townhome, or any other building on the property	YES ➤ Sensor types allowed include: » Photocell and motion sensor OR » Photocell and time switch OR » Astronomical time clock OR » EMCS that works like any of the above ➤ Controls that override to ON are not allowed unless the override automatically returns the automatic control to normal operation within six hours ➤ Internally illuminated address signs must use ≤ 5 watts. If > 5 watts, then the nonresidential sign lighting power requirements in §140.8 apply	YES ➤ On/off switches are required to allow all other outdoor control functions to work automatically

Exceptions:

- Landscape lighting not attached to a building on the property
- Lighting not attached to buildings on single-family, duplex, or townhome properties

VERIFICATION STATEMENT: I, the undersigned, verify for _____ (project address) that any new lighting installed shall comply with the mandatory features and devices listed above, as required for compliance with the 2025 California Energy Code section 150.0(k)

Signature: _____
 Owner Or Designer Or Contractor

Date: _____

2025 RESIDENTIAL ENERGY CODE Mandatory Measures for New Lighting

All new lighting installed in low-rise residential buildings such as single family, accessory dwelling units, junior accessory dwelling units, duplexes, and half-plexes shall meet the following requirements.

Definitions

- **Addition:** New conditioned square footage and volume where new luminaires are installed for the first time and any change that increases the illuminated area of an outdoor lighting application that is regulated by the Energy Code.
- **Alterations:** A modification where luminaires are replaced, moved, or added to existing illuminated space (see Addition above) on a project with a building permit.
- **Lamp:** Lighting industry term for a light source, such as a light bulb or fluorescent tube
- **Light Source:** The component in a luminaire that actually provides illumination, such as an LED lamp or a fluorescent tube (also called a lamp or light bulb).
- **Luminaire:** A complete lighting unit consisting of a lamp and the parts designed to:
 - Distribute the light (lens, reflector)
 - Position and protect the lamp (housing)
 - Connect the lamp to the power supply (ballast, transformer; also commonly referred to as a light fixture).
- **Permanently Installed Lighting:** Includes hard wired ceiling luminaires, chandeliers, vanity lamps, wall sconces, under-cabinet luminaires, luminaires in drawers/cabinets, night lights, step and path lights, and any other luminaire that is attached to the building, or buildings, on the property.
- **Portable Lighting:** Lighting that is not permanently installed or hard-wired but uses a plug-in connection for electric power (for example, a freestanding floor or table lamp).
 - The Energy Code does not apply to portable lighting in dwelling units. Requirements for portable lighting are covered by the Appliance Efficiency Regulations.
- **Separable Light Source:** A light source that can be replaced without cutting wires or soldering, such as pin-based or screw-in LED lamps.
- **Occupant Sensing Control:** Automatically reduces lighting power or turns lights OFF after an area is vacated by occupants and is capable of automatically turning the lighting load ON when an area is occupied. Also described as Occupancy Sensor.
- **Vacancy Sensing Control:** Automatically turns lights OFF after an area is vacated of occupants but requires lights to be turned ON manually.

Table 1. Residential Lighting Requirements for Additions and Alterations

These Types of Projects Typically Will Require a Building Permit to meet Title 24, Part 6 Lighting Requirements	These Types of Projects Typically Will Not Require a Building Permit to meet Title 24, Part 6 Lighting Requirements
<ul style="list-style-type: none"> ▪ When adding onto a home, the new areas of the home must meet the applicable requirements. ▪ When remodeling a home, only the work being done with a permit must meet the applicable requirements. ▪ Existing recessed ceiling luminaires with screw-base sockets do not need to be replaced when JA8 trim kits or lamps approved for recessed or enclosed light fixtures are used. ▪ When altering existing lighting controls, the applicable control requirements will apply. Example: When replacing a manual on/off control. (See page 3 for the manual on/off control requirements.) 	<ul style="list-style-type: none"> ▪ Changing light bulbs ▪ Spaces not being renovated in a renovation project ▪ When a project involves the following: <ul style="list-style-type: none"> • Replacing existing lighting fixtures • Moving existing lighting fixtures to a new location <p><i>Note: The Energy Code has no requirements when adding outdoor lighting not attached to a building.</i></p>

MANDATORY FEATURES AND DEVICES:

(Single Family / Accessory Dwelling Unit / Junior Accessory Dwelling Units / Duplex / Half-plex)

The National Appliance Efficiency Conservation Act (NAECA) and/or the California Appliance Efficiency Regulations (Title 20) regulate most lighting equipment installed in California homes, including luminaires, ballasts, and Joint Reference Appendix JA8 lamps. Installers should confirm and document that only certified products are installed. Use the Modernized Appliance Efficiency Database System (MAEDbS) tool to find certified products at <https://cacertappliances.energy.ca.gov/login.aspx>

Table 2 Permanently Installed Lighting Requirements [Sections 150.0(k) and 160.5(a)]

All new, permanently installed lighting must meet the following mandatory requirements:

Permanently Installed Luminaires	Recessed Downlight Luminaires in Ceilings
<p>Installed luminaires and light sources shall comply with Reference Joint Appendix JA8 and shall be certified and marked as required by JA8 per §150.0(k)1A or §160.5(a)1A.</p> <p>Exceptions:</p> <ul style="list-style-type: none">➤ Lighting is integral to exhaust fans, kitchen range hoods, bath vanity mirrors, garage door openers, and ceiling fan kits subject to Department of Energy (DOE)➤ DOE navigation lighting < 5 watts such as night lights, step lights, path lights➤ Lighting in drawers, cabinetry, and linen closets when efficacy ≥ 45 lumens per watt➤ Outdoor LED luminaires; high intensity discharge (HID) luminaires; hardwired high frequency generator and induction luminaires; decorative lighting using colored inseparable solid-state lighting (SSL)	<ul style="list-style-type: none">➤ Must not contain screw-base sockets; and➤ Meet the clearance and installation requirements of the California Electrical Code Article 410.116; and➤ Be marked “JA8-2025-E (or JA8-2016-E, JA8-2019-E, JA8-2022-E)” indicating they are certified as meeting the elevated temperature requirements of Joint Reference Appendix JA8; and➤ When installed in insulated ceilings, and not marked for use in fire-rated installations, have: A certified zero clearance insulation contact and➤ Certified as meeting airtight can (ICAT) requirements (except when exhaust fan housing has integral lighting) and➤ Gasket or caulk sealing between the luminaire’s housing and ceiling for all air leak pathways between conditioned and unconditioned spaces or be installed per manufacturer’s instructions to maintain airtightness between housing and ceiling.

Products certified as JA8-2016/JA8-2016-E, JA8-2019/JA8-2019-E, JA8-2022/ JA8-2022-E or JA8-2025/JA8-2025-E as specified in Joint Reference Appendix JA8 can be used for projects subject to the 2025 Energy Code.

Special Considerations for Lighting Control Requirements:

Bypass of control functions

- Bypass of control functions dictated by the Energy Code, such as dimming and occupancy/vacancy sensors, is not allowed

Dimmers

- Dimmers must be readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase-cut dimmers controlling LED light sources must comply with NEMA SSL 7A
- Dimmers are not required when:
 - Vacancy or occupancy sensors programmed to be auto-off are used
 - Single-family occupancy only: Luminaires connected to a circuit with lighting power < 20 Watts that are controlled by an occupancy or vacancy sensor programmed to be auto-off
 - Ceiling fan integral lighting using a remote control
 - Kitchen range hood and bathroom exhaust fan integral lighting

Energy management control systems (EMCS)

- EMCS can be used if they meet Energy Code lighting control requirements and comply with §150.0(k)2 or §160.5(a)2 EMCS requirements

Garages

- Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages §130.1 and §140.6

Manual Area Controls are required for all luminaires

- Manual on/off switches must be readily accessible wall-mounted manual controls, allowing occupants easy control of lighting in the space.
 - Ceilings fans with integral lighting can use a remote control. Lighting must be controlled separately from fan functions
 - Undercabinet, undershelf, and display case lighting must be switched separately from ceiling-installed lighting within the space
 - Exhaust fans must be controlled separately from any integrated lighting

Energy Forms for Single-Family Buildings

In addition to permits, lighting projects in single-family homes require the following forms, called Certificates of installation, in which the form name will start with CF2R. The forms are available on the Energy Code Ace Get Forms landing page: www.energycodeace.com/content/get-forms .

There are no **Certificate of Compliance** (CF1R) form requirements for single-family indoor and outdoor lighting. Mandatory notes should be included in the design documents.

A **Certificate of Installation** (CF2R) must be provided on-site by the installing contractor or contractors, before final inspection. If Energy Code Compliance (ECC, formerly know as HERS in previous code cycles) measures are required for the overall project (typically associated with HVAC and IAQ systems), then the CF2R must be registered with a ECC provider. If there are no ECC measures associated with the project, then the CF2R must be provided but does not need to be registered.

ECC Requirements	Project Type	Certificates of Compliance	Certificates of Installation*	Certificates of Verification
When Project Overall Requires ECC Registration	New Construction, Additions, Alterations	Not applicable	CF2R-LTG-01-E <i>Registered via an ECC Provider</i>	Not applicable
When Project Does Not Require ECC Registration	Additions	Not applicable	CF2R-ADD-02-E allowed, or use CF2R-LTG-01-E	
	Alterations	Not applicable	CF2R-ALT-05-E allowed, or use CF2R-LTG-01-E	

*Certificates of Installation must be completed and signed by the installing contractor and made available for the building department's final inspection.