



Residential Lighting Guidelines 2022 Energy Code Effective 1-1-2023

Town of Atherton
Building Department
80 Fair Oaks Ln
Atherton, California 94027
Phone: (650) 752-0560
Inspection requests:
(650) 752-0542

ENERGY CODE STANDARDS:

- The residential lighting requirements of the 2022 California Energy Code apply to all indoor and outdoor lighting attached to single-family buildings.
- Lighting that is not permanently attached to the building, such as decorative landscape lighting, is not regulated by the residential lighting requirements.

INDOOR LIGHTING:

- All luminaires installed in low-rise residential construction must be high efficacy. Permanently installed luminaires include ceiling luminaires, chandeliers, vanity lamps, wall sconces, under cabinet luminaires, and any other type of luminaire that is attached to the house. Permanently installed luminaires include hard wired or plug-in luminaires.
- A “high efficacy luminaire” is one that meets the efficacies listed in the Standards, contains only high efficacy lamps or high efficacy LED lighting, and does not contain a socket which allows any low efficacy lighting system to be used. Any luminaire containing a medium screw base socket is classified as low efficacy, regardless of the type of lamp installed in that socket.
- The definition of “high efficacy luminaires” has been expanded to include lighting identified as linear fluorescent, pin-based compact fluorescent, GU-24 base CFL, HID, induction lighting, and luminaires that contain a JA8 compliant lamp. See the 2022 California Energy Code, Table 150.0-A for a full list of high efficacy luminaires.
- All permanently installed luminaires with interchangeable lamps must contain lamps that comply with the requirements of, and be marked as, JA8 high efficacy luminaires.
- Light sources must be marked JA8 - E if they are installed in enclosed or recessed luminaires. An enclosed luminaire is defined as having ventilation openings < 3-square inches per lamp.
- Recessed downlight luminaires with screwbased sockets are not allowed by the 2022 California Energy Code.
- Screw based luminaires must comply with JA8 requirements.



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- All under-cabinet lighting must be switched separately from other lighting in the home.
- Night lights, step lights, and path lights are not required to comply with the 2022 California Energy Code, Table 150.0-A, provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.

OUTDOOR LIGHTING:

- All lighting attached to the residence, or to other buildings on the same lot, must be high efficacy and must be controlled by a manual ON and OFF switch and one of the following automatic control types:
 - a. Photo control and motion sensor; or
 - b. Photo control and automatic time switch control; or
 - c. Astronomical time clock control that automatically turns the outdoor light OFF during daylight hours; or
 - d. EMCS that provides the functionality of an astronomical time clock, does not have an override or bypass switch that allows the luminaire to be always ON, and is programmed to automatically turn the outdoor light OFF during daylight hours.
- Residential garages with space for seven cars or less must comply with the residential lighting requirements.
- At least one luminaire in each bathroom, garage, laundry room, and utility room must be controlled by a vacancy sensor. Preset scene controllers and EMCS can take the place of sensors and dimmers as long as the functionality meets the Energy Code requirements.

COMPLIANCE DOCUMENTATION:

- Form CF2R-LTG-01-E must be completed and a copy must be provided to the inspector at the final inspection.
- Lighting systems do not require HERS verification or testing.
- A complete list of installed lighting systems, including the lighting schedule, all information necessary to operate and maintain the lighting system, and references to support future upgrades to the lighting system, must be provided to the homeowner prior to a final inspection.

The 2022 California Energy Code is available at: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>