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2021 International Energy Conservation Code: Residential Requirements Interior Lighting

**2021 IECC: 100% permanent lighting shall be high efficacy.
Pueblo Regional has amended the 2021 IECC from
100%
to 90%.**

What does this mean?

90% of the light bulbs in the home must be high efficacy, which is LED, or fluorescent lamps only. This does not include plug-in lighting sources like floor and desk lamps.

Interior Lighting Controls

Permanently installed fixtures shall have dimmer, occupant sensor control, or other control installed or built into the fixture.

Exceptions include:

- Bathrooms
- Hallways
- Lighting for safety and security

What does this mean?

Any light fixture in all areas or rooms of the home (example, living room, dining room, kitchen, clothes closets, storage rooms, bedrooms, etc.), **does not include the garage, garage is not part of the interior of the home**. Not included: the bathrooms, hallways, and lights for safety and security. The lighting areas required must have one of the following, a dimmer switch, occupancy switch, automation control switch, at the light switch location of that room or area, exterior lighting is not excluded, but has its own requirement in the next section. Lights for security do not include normal porch lights, lights on the front of garages or coach lights or lights in the soffit or eaves of homes, etc.

Exterior lighting Controls

Permanently installed outdoor lighting > 30 watts total power, are required to turn off with adequate daylight.

- Override permitted up to 24 hrs.
- Must then return to automatic operation.

What does that mean?

Outside lights, more than 2 outside light fixtures, must have a photocell control ahead of the outside light circuit, or a time clock, or automation control switch or photocell build into the outside light fixture, that turn the light fixtures off at the presents of daylight and reset to turn the light fixtures off at the next daylight cycle. (Example, front and back porch lights, lights under a covered porch, coach lights at the front of garage doors, lights at the exit of garages, soffit lighting, etc.).

SECTION R404

ELECTRICAL POWER AND LIGHTING SYSTEMS

R404.1 Lighting equipment. All permanently installed lighting fixtures, excluding kitchen appliance lighting fixtures, shall contain only high-efficacy lighting sources.

R404.1.1 Exterior lighting. Connected exterior lighting for residential buildings shall comply with Section C405.5.

Exceptions:

1. Detached one- and two- family dwellings.
2. Townhouses.
3. Solar-powered lamps not connected to any electrical service.
4. Luminaires controlled by a motion sensor.
5. Lamps and luminaires that comply with Section R404.1.

R404.1.2 Fuel gas lighting equipment. Fuel gas lighting systems shall not have continuously burning pilot lights.

R404.2 Interior lighting controls. Permanently installed lighting fixtures shall be controlled with either a dimmer, an occupant sensor control or other control that is installed or built into the fixture.

Exception: Lighting controls shall not be required for the following:

1. Bathrooms.
2. Hallways.
3. Exterior lighting fixtures.
4. Lighting designed for safety or security.

R404.3 Exterior lighting controls. Where the total permanently installed exterior lighting power is greater than 30 watts, the permanently installed exterior lighting shall comply with the following:

1. Lighting shall be controlled by a manual on and off switch which permits automatic shut-off actions.

Exception:

1. Lighting serving multiple *dwelling units*.
2. Lighting shall be automatically shut off when daylight is present and satisfies the lighting needs.
3. Controls that override automatic shut-off actions shall not be allowed unless the override automatically returns automatic control to its normal operation within 24 hours.