



# California Electrical & Energy Codes

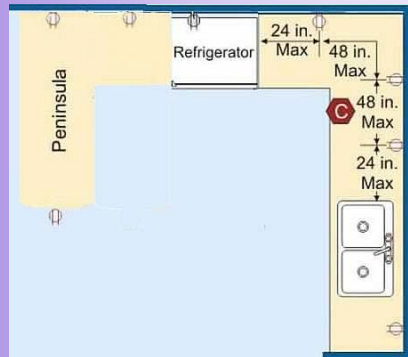
The California Electrical and Energy Codes are updated on a three-year cycle. The codes are updated to implement new standards in result of new technology, improved safety and improved construction practices. The 2019 Standards will **become effective on January 1, 2020.**

These codes are viewable online at:  
<https://www.energy.ca.gov/> AND  
<https://www.dgs.ca.gov/BSC/Codes>

## California Electrical Code



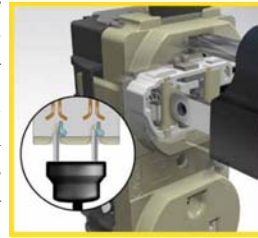
- **GFCI Receptacles:** GFCI receptacles now required in other than dwelling unit occupancy types in crawl spaces, unfinished basements, drinking coolers, spray washing machines, tire inflation machines for public use, and vending machines (210.8(B) & 422.5)
- **Arc Fault Protection:** Now required for branch circuits in guest rooms and guest suites (210.12(C))
- **Meeting Room Receptacles:** Meeting rooms less than 1,000sqft in other than dwelling units now have floor and wall receptacle requirements (210.71)
- **Counter Receptacles:** “Work surfaces” added to list of required counter receptacle areas in dwelling units (210.52(C))



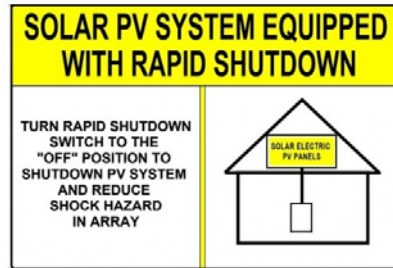
- **Garage Receptacles:** Required garage receptacles shall not be higher than 5 1/2ft above the floor

## California Electrical Code Cont.....

- **Service Equipment:** Indoor service equipment in non-dwelling occupancies require a 15/20 amp receptacle in the same room/area and within 25ft of equipment (210.64)
- **Tamper Resistant Receptacles:** Added to pre-schools, elementary schools, business offices, corridors, waiting rooms in medical facilities, dormitories, and certain assembly occupancy areas (406.12)

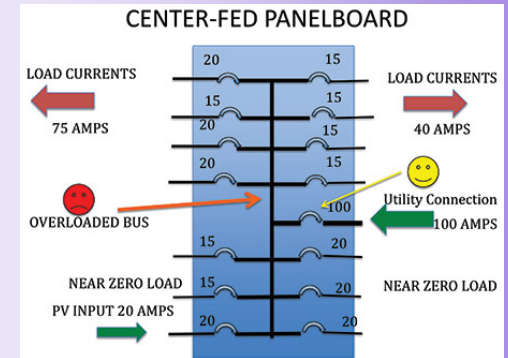


- **Swimming Pools:** Omitted specific underground conduit clearances and depths and now installed in compliance with Table 300.5 (680.11)
- **Rapid Shutdown:** 3 rapid shutdown methods are provided for circuits inside an array boundary. Changed rapid shutdown voltage limitation length of time to 30 seconds (was 10 seconds). Also rapid shutdown labelling substantially changed to warn emergency responders of hazards presented by a PV system. (690.56(C))
- **Emergency Circuits:** Exposed raceways and cables shall be labelled for the specific use at 25ft intervals. Receptacles supplied by an emergency circuit shall be marked with a distinctive color (700.10)



## California Electrical Code Cont.....

- **Connection:** “Inverter Output” verbiage changes to “Power Source Output” verbiage that changes some of the specific labelling verbiage requirements (705.12)
- **Interconnected Power Sources:** Allowed in center-fed busbar panels if the connection is made at either end, not both ends of the busbar and doesn't exceed 120 percent of the busbar rating (705.12(B)(2)(3)(d)).



## California Energy Code (Residential)

- **2x6 Walls:** 2x6 walls require R-20 insulation (was R-19) (150.0(c)2)
- **Mechanical Filters:** Heating/cooling system filter ratings increased to MERV 13 (150.0(m)12)
- **Water Heaters:** Pre-wiring required for water heaters in new construction that consists of a dedicated 120/240V, 3-wire circuit with 10AWG wire to the receptacle within 3ft of the water heater location. Unused wire shall be electrically isolated and there shall be a reserved circuit breaker space in the panel (150.0(n))
- **Insulation Inspections:** Quality Insulation Installation (QII) is now a prescriptive requirement for new construction and additions over 700sqft (150.1(c)1E)

