

Important Changes for Single-Family Buildings

The 2022 Energy Code is effective as of January 1, 2023. Any projects that apply for a permit on or after this date will be subject to the 2022 Energy Code.

This brief document highlights some key changes to the Energy Code that apply in the design of single-family buildings.

Battery Systems Ready - §150.0(s)

All new single-family residences that include one or two dwelling units have **Mandatory** requirements for being ready for the future installation of **battery storage systems**, also called Energy Storage Systems (ESS), and so shall meet the following:

1. **Sufficient space reserved** to allow future installation of a system isolation equipment or a transfer switch within 3 ft of the main panelboard.
2. At least one of the following shall be provided.
 - a. ESS-ready interconnection equipment with a minimum backed up capacity of 60 amps and a minimum of four ESS-supplied branch circuits, or
 - b. Four or more branch circuits from a single panelboard suitable to be supplied by the ESS: At least one circuit must supply the refrigerator, lighting circuit near the primary egress, and a sleeping room receptacle outlet.
3. A main panelboard with a minimum busbar rating of 225 amps.

Electric Ready - §§150.0(t)-(v), (n)

New homes have **Mandatory requirements** for being ready to install electric heat pump space heaters, cooktops, clothes dryers and heat pump water heaters.

Heat Pump Space Heater Ready. If a natural gas or propane furnace is installed, then:

- Install a dedicated **240-volt, 30 amp**. branch circuit wiring, within 3 ft from the furnace.
- Reserve space on the main electrical service panel to allow for the installation of a double pole circuit breaker.

Electric Clothes Dryer Ready. If a clothes dryer location has gas or propane plumbing, then:

- Install dedicated **240-volt, 30 amp.** branch circuit wiring, within 3 ft from the clothes dryer.
- Reserve space on the main electrical service panel to allow for the installation of a double pole circuit breaker.

Electric Cooktop Ready. If a gas or propane cooktop is installed, then:

- Install a dedicated **240-volt, 50 amp.** branch circuit wiring, within 3 ft from the cooktop.
- Reserve space on the main electrical service panel to allow for the installation of a double pole circuit breaker.

Heat Pump Water Heater Ready. If a gas or propane water heater is installed, then:

- **Reserve a space at least 2.5 ft x 2.5 ft x 7 ft** tall for a future heat pump water heater (HPWH).
- **If the HPWH space is within 3 ft of the installed water heater,** install a dedicated **125-volt, 20 amp.** electrical receptacle.
- **If the HPWH space is farther than 3 ft of the installed water heater,** install a dedicated **240-volt, 30 amp.** electrical receptacle.
- Reserve space on the main electrical service panel to allow for the installation of a single pole circuit breaker.

Kitchen Range Hood Airflow - §150.0(o)1G

New airflow requirements for kitchen range hoods dependent upon the area of the dwelling unit (ft²) and whether the hood is over an electric or natural gas range.

For compliance, kitchen hoods shall have a minimum Capture Efficiency (CE) or minimum airflow according to Table 1.

These requirements apply to New Construction, Additions and Alterations.

Dwelling Unit (ft ²)	Hood Over Electric Range	Hood Over Nat. Gas Range
> 1500	50% CE or 110 cfm	70% CE or 180 cfm
> 1000 - 1500	50% CE or 110 cfm	80% CE or 250 cfm
750 – 1000	55% CE or 130 cfm	85% CE or 280 cfm
<750	65% CE or 160 cfm	85% CE or 280 cfm

Table 1. Kitchen Range Hood Airflow Rates (cfm) and ASTM E3087 Capture Efficiency (CE) Ratings

Federal Minimum Efficiency Requirements for Split System Heat Pump and Air-conditioning Units

The Department of Energy (DOE) minimum efficiencies for central air conditioners and heat pumps will increase on January 1, 2023. The new testing procedure and efficiency ratings will be SEER2, EER2 and HSPF2. Minimum central **heat pump** efficiency ratings will change to **HSPF2** and **SEER2** based on when the equipment was manufactured. Minimum central **air-conditioner** efficiency ratings will change to **SEER2** and **EER2** based on when the equipment was installed.