

## 2021 International Residential Code (IRC) Significant Changes: Electric Vehicle Charging

**BEGINNING JULY 1, 2023**

New construction projects which create dwelling units *and* include an attached garage or attached carport will now need to **provide one 40-amp dedicated 208/240-volt branch circuit** for each dwelling unit, intended for future electric vehicle charging. This circuit may terminate in electric vehicle charging equipment; however, a junction box or receptacle outlet is also acceptable.



For full code text, see 2021 IRC Section [R309.6](#) (WA Amendment)



Figure 1 Electrical panel image. Source: [How to Install a 240-Volt Circuit Breaker \(thespruce.com\)](#)

While electric vehicles can be charged by a standard household outlet (120-volt), this “Level 1 Charging” provides about 2-5 miles of range per hour, so a full charge can take up to 24 hours. The 240-volt circuit will allow for faster charging, known as “Level 2 Charging”. Level 2 charging provides about 10-25 miles of range per hour, so a full charge can take as little as 3-10 hours. For the average driver, Level 2 charging will allow them to fully charge overnight.

Installing the capability for Level 2 charging at the time of initial construction is a cost-effective way to prepare a home to be ready for an electric vehicle. This type of circuit is the same type of wiring as an electric stove or clothes dryer and can easily be installed by a professional electrician.

*This handout summarizes one significant change in the 2021 International Residential Code (IRC). See complete code text for details.*