

Electrical Safety Month – Electrical Vehicle Charging Safety

Electric vehicles have become much more common in the past few years. Public charging stations are easy to find around the valley and many EV owners decide to have EV chargers installed at their residence for an even more convenient source of power.

With this increased demand for EV charging stations, safety becomes vital. If not installed correctly, electric vehicle charging can create serious risks, including electric shocks or fires.

There are four key safety features that are integrated into charging station systems - Overcurrent Protection, Ground Fault Protection, Temperature Monitoring, and Communication Protocols for Safety.

Charging types vary based on the amount of electricity used and how fast they charge. There are 3 levels of chargers. Levels 2 and 3 **must** be installed by a qualified electrician. Level 3 chargers, also known as DC Fast Chargers, are not made for charging all electric vehicles. Some EV's are not designed to handle this level of charging. Be sure to refer to the manufacturer's technician's guide to verify.

Having the charging station installed by an **EV certified electrician** is important, as they know the latest code requirements and are able to determine if the additional load from the charger will require an upgrade to the building's electrical service. Often in older structures this is the case, where the electrical service has not been upgraded to handle a bigger demand.

Live Electric is certified to install EV chargers. We have trained and certified Union electricians that are frequently installing electric charging stations around the valley.

Below are charging tips I have gathered from various locations.

Safety tips for EV charging:

- **Location Considerations:** Always choose a well-ventilated area for charging your EV. Avoid charging in locations prone to extreme temperatures or weather conditions.
- **Inspecting Charging Equipment:** Regularly inspect your charging cable and connector for any visible damage or wear and tear. Report any irregularities immediately to avoid potential hazards.
- **Adhering to Manufacturer Guidelines:** Always follow the manufacturer's instructions when charging your EV. This includes using only the recommended charging equipment and following the correct procedures.

Home charging safety:

- **Installation Considerations:** Always hire a certified electrician to install your home charging station. Ensure that your electrical system can handle the extra load of an EV charger before installation.
- **Safe Charging Practices:** Avoid overloading your electrical circuits by unplugging other high-energy devices while charging your EV. Also, never leave your car charging unattended for extended periods.
- **Preventive Maintenance:** Regularly check your charging station for any potential issues. This includes looking for signs of overheating, checking for loose connections, and ensuring that the charging station is anchored securely.

Public charging safety:

- **Choosing Reliable Charging Stations:** Use only well-maintained and reliable charging stations. Avoid stations that show signs of neglect or damage.
- **Parking and Positioning:** Park your vehicle properly at the charging station to avoid causing traffic or obstructing access to other charging points.
- **Securing Personal Belongings:** Always lock your vehicle and secure your belongings before leaving your car at a public charging station.