


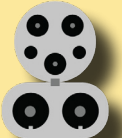



ELECTRIC VEHICLE CHARGING

Charging equipment for plug-in electric vehicles PEVs – which include plug-in hybrid electric vehicles (PHEVs) and all-electric vehicles (EVs) – is classified by the rate at which the batteries are charged. Charging times vary based on how depleted the battery is, how much energy it holds, the type of battery, and the type of charging equipment. – *US Department of Energy Alternative Fuels Data Center*

	AC LEVEL 1	AC LEVEL 2	DC FAST CHARGING
Types of Plugs/ Connectors <small>Graphics from U.S Department of Energy Alternative Fuels Data Center</small>	 SAE J1772	 SAE J1772	  CHAdeMO SAE Combo  Tesla
Power Levels (Installed circuit rating)	110/120 VAC at 15 or 20 amps	208/240 VAC at 20 amps 208/240 VAC at 40 amps 208/240 VAC at 50 amps 208/240 VAC at 100 amps	440 or 480 VAC
Miles of Range Restored per Hour of Charge	~4-6 miles per hour	8-12 miles per hour 16-24 miles per hour 32-48 miles per hour >60 miles per hour	~80% in <30 minutes
Common Charge Locations	Home or workplace	Home, workplace, or public station	Public station or commercial depot
Unit Cost, Range for Residential	\$300 - \$600	\$500 - \$700	Not recommended for residential
Installation Cost, Range for Residential	\$1,000 - \$1,700	\$1,200 - \$2,000	Not recommended for residential
Unit Cost, Range for Non-Residential	\$300 - \$1500	\$400 - \$6500	\$10,000 - \$40,000+
Installation Cost, Range for Non-Residential	\$0 - \$3,000	\$600-\$12,700	\$4,000-\$51,000+

Notes: * Miles of range restored per hour of charge is also contingent on the specifications/limits of the vehicle as well. Data Sources:
 • [HomeAdvisor. 2019. How Much Does An Electric Car Charging Station Installation Cost? Accessed 08 November 2019](#)
 • [Smith M, Castellano J. 2015. Costs Associated With Non-Residential Electric Vehicle Supply Equipment. Accessed 07 November 2019](#)
 • [Office of Energy Efficiency & Renewable Energy \(EERE\). 2019. ND. Vehicle Charging. United States Department of Energy. Accessed 01 November 2019](#)
 • [Center for Sustainable Energy \(CSE\). 2016. Electric Vehicle Charging Station Installation Best Practices: A Guide for San Diego Region Local Governments and Contractors. Accessed 29 October 2019](#)