



GENERAL PERMITTING REQUIREMENTS

1. Provide site plan of project location and identify the proposed location of the Electric Vehicle Supply Equipment.
2. Demonstrate physical protection of Electric Vehicle Supply Equipment. (CEC 110.27)
3. Provide electrical load calculations of existing and/or proposed electrical system, including EVSE model number and full load amperage.
4. Provide electrical single line diagram of proposed work.

ELECTRICAL INSTALLATION REQUIREMENTS

Electric Vehicles – an automotive type vehicle for on-road use, such as passenger automotive, buses, van, neighborhood electric vehicles primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electrical current. (CEC Art. 625)

LOCATION IDENTIFICATION: Identify the equipment installation location.

INDOOR SITES: Installation of Electric Vehicle Supply Equipment shall comply with California Electrical Code Article 625

Equipment Height: The coupling means of the electric vehicle supply equipment shall be stored at a height of not less than 450mm (18 inches) above the finished floor. (CEC Art 625.50)

FASTEN EQUIPMENT: Electric Vehicle Supply Equipment may be permanently connected and fastened in place (CEC Art. 625.17)

Electric Vehicle Supply Equipment is provided with an interlock that de-energizes the electric vehicle connector and its cable whenever the electric connector is uncoupled from the electric vehicle. (625.18)

EQUIPMENT PROTECTION: Electrical Vehicle Supply Equipment operating at 50 volts or more shall be guarded against accidental contact by approved enclosures. (CEC Art. 625.10(C))

DISCONNECT: When equipment is rated more than 60 amps or more than 150 volts to ground, the disconnecting means shall be provided and installed in a readily accessible location. (CEC Art. 625.42)

SYSTEM CERTIFICATION: Verify the equipment is listed by a nationally recognized testing laboratory (as recognized by the Authority Having Jurisdiction (AHJ)).

Level 2 Electric Vehicle Charger Service Load Calculator

INSTRUCTIONS: Review the list of electrical loads in the table below and check all that exist in your home (don't forget to include the proposed Level 2 charger). For each item checked, fill in the corresponding "Watts Used" (refer to the "Typical Usage" column for wattage information). Add up all of the numbers that are written in the "Watts Used" column and write that number in the "TOTAL WATTS USED" box at the bottom of the table. Then go to the next page to determine if your existing electric service will accommodate the new loads.

Check all Applicable Loads (√) Description of Load Typical Usage Watts Used

GENERAL LIGHTING AND RECEPTACLE OUTLET CIRCUITS

Multiply the square footage of house x 3 3 watts/sq. ft. _____

KITCHEN CIRCUITS

Kitchen circuits 3,000 watts _____

Electric oven 2,000 watts _____

Electric stove top 5,000 watts _____

Microwave 1,500 watts _____

Garbage disposal under kitchen sink 1,000 watts _____

Automatic dish washer 3,500 watts _____

Garbage compactor 1,000 watts _____

Instantaneous hot water at sink 1,500 watts _____

LAUNDRY CIRCUITS

Laundry circuit 1,500 watts _____

Electric clothes dryer 4,500 watts _____

HEATING AND AIR CONDITIONING CIRCUITS

Central heating and air conditioning 6,000 watts _____

Window mounted air conditioning 1,000 watts _____

Whole house or attic fan 500 watts _____

Central electric furnace 8,000 watts _____

Evaporative cooler 500 watts _____

OTHER ELECTIC LOADS

Electric water heater (storage type) 4,000 watts _____

Electric tankless water heater 15,000 watts _____

Swimming pool heater 3,500 watts _____

Other (describe) _____

Other (describe) _____

Other (describe) _____

ELECTRIC VEHICLE CHARGER CIRCUIT

Level 2 electric vehicle charger wattage rating _____

TOTAL WATTS USED _____

INSTRUCTIONS: Using the "TOTAL WATTS USED" number from previous page, check the appropriate line in column 1 and follow that line across to determine the minimum required size of the electrical service panel shown in column 3. In column 4, write in the size of your existing service panel (main breaker size). If your existing service panel (column 4) is smaller than the minimum required size of the existing service (column 3), then you will need to install a new upgraded electrical service panel to handle the added electrical load from the proposed Level 2 charger.

The table below is based on CEC 220.83(A), 230.42 and Annex D.

1	2	3	4
Check the Appropriate line (√)	Total Watts Used (from pervious page)	Minimum Required Size of Existing 240-Volt Electrical Service Panels (Main Service Breaker Size)	Identify the Existing Your Main Service Breaker (Amps)*
_____	Up to 48,000	100 Amps	_____
_____	48,001 to 63,000	125 Amps	_____
_____	63,001 to 78,000	150 Amps	_____
_____	78,001 to 108,000	200 Amps	_____
_____	108,01 to 123,000	225 Amps	_____

*Note that the size of your existing service (column 4) MUST be equal to or larger than the Minimum Required Size (column 3) or a new larger electrical service panel will need to be installed in order to satisfy the electrical load demand of the EV charger.

STATEMENT OF COMPLIANCE

By my signature, I attest that the information provided is true and accurate.

Job Address: _____
(Print job address)

Signature: _____ Date: _____
(Signature of applicant)

In addition to this document, you will also need to provide a copy of the manufacture’s installation literature and specifications for the Level 2 charger you are installing.

Note: This is a voluntary compliance alternative and you may wish to hire a qualified individual of company to perform a thorough evaluation of your electrical service capacity in lieu of this alternative methodology. Users of this methodology and these forms are advised to seek professional assistance in determining the electrical capacity of a service panel.