

B

ELECTRICAL LOAD CALCULATION WORKSHEET



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This worksheet may be used to calculate the capacity of an existing electrical service when your project includes additional electrical loads in accordance with California Electrical Code Article 220.82.

Project Address: _____ Date: _____

Main Electric Service Size: 100A 125A 150A 200A Other _____

GENERAL LOADS

Lighting & Receptacles	House sq. ft.:	<input type="text"/>	x 3 VA=	<input type="text"/>
Kitchen appliance circuits (2 min.)	1500 VA x	<input type="text"/>	circuits=	<input type="text"/>
Bathroom circuits (1 min.)	1500 VA x	<input type="text"/>	circuit(s)=	<input type="text"/>
Laundry circuit	1500 VA x	<input type="text"/>	circuit(s)=	<input type="text"/>
Subtotal (A) =				<input type="text"/>

APPLIANCES AND EQUIPMENT – Use the actual Nameplate Rating (NPR) of the appliance. Enter "N/A" if not present at the site.

Range	NPR=	<input type="text"/>
Oven	NPR=	<input type="text"/>
Water Heater	NPR=	<input type="text"/>
Dishwasher	NPR=	<input type="text"/>
Garbage Disposal	NPR=	<input type="text"/>
EV Charger	NPR=	<input type="text"/>
Pool/Spa Pump	NPR=	<input type="text"/>
Total Subpanel Loads	combined=	<input type="text"/>
Other _____	=	<input type="text"/>
Other _____	=	<input type="text"/>
Subtotal (B) =		<input type="text"/>

HVAC LOADS

Air Conditioning and Cooling	NPR=	<input type="text"/>
Heat Pump (w/o supplemental heating)	NPR=	<input type="text"/>
Heat Pump (w/ supplemental heating)	NPR + 65%=	<input type="text"/>
Electric Space Heating (< 4 units)	NPR x 65%=	<input type="text"/>
Electric Space Heating (≥ 4 units)	NPR x 40%=	<input type="text"/>
Electric Thermal Storage and Other	NPR=	<input type="text"/>
(Enter the single largest load from above) Subtotal (C) =		<input type="text"/>

Subtotal (A)+(B)	<input type="text"/>	- 10,000 VA x 0.40	<input type="text"/>	+ 10,000 VA=	<input type="text"/>
				+ Subtotal (C)	<input type="text"/>
				÷ 240=	<input type="text"/>
*Total Demand is:					<input type="text"/>

*If the total demand, including any new equipment, is less than the rating of the existing electrical service then no service upgrade is necessary. If the total demand is greater than the rating of the existing electrical service, then a service upgrade is required with your project.

ELECTRICAL LOAD CALCULATION WORKSHEET



EXAMPLE:

Main Electric Service Size: 100A 125A 150A 200A Other _____

GENERAL LOADS

Lighting & Receptacles	House sq. ft.:	2,000	x 3 VA=	6,000
Kitchen appliance circuits (2 min.)	1500 VA x	2	circuits=	3,000
Bathroom circuits (1 min.)	1500 VA x	1	circuit(s)=	1,500
Laundry circuit	1500 VA x	1	circuit(s)=	1,500
Subtotal (A) =				12,000

APPLIANCES AND EQUIPMENT – Use the actual Nameplate Rating (NPR) of the appliance. Enter “N/A” if not present at the site.

Range	NPR=	14,000
Oven	NPR=	N/A
Water Heater	NPR=	3,000
Dishwasher	NPR=	1,500
Garbage Disposal	NPR=	800
EV Charger (proposed)	NPR=	1,400
Pool/Spa Pump	NPR=	N/A
Total Subpanel Loads	combined=	N/A
Other _____	=	N/A
Other _____	=	N/A
Subtotal (B) =		20,700

HVAC LOADS

Air Conditioning and Cooling	NPR=	6,960
Heat Pump (w/o supplemental heating)	NPR=	N/A
Heat Pump (w/ supplemental heating)	NPR + 65%=	N/A
Electric Space Heating (< 4 units)	NPR x 65%=	9,750
Electric Space Heating (≥ 4 units)	NPR x 40%=	N/A
Electric Thermal Storage and Other	NPR=	N/A
(Enter the single largest load from above) Subtotal (C) =		9,750

Subtotal (A)+(B)	32,700	- 10,000 VA x 0.40	9,080	+ 10,000 VA=	19,080	
					+ Subtotal (C)	28,830
					÷ 240=	121 amps
					*Total Demand is:	121 amps

*Total demand with the proposed EV charger is less than the main electrical service rating of 150 amp, therefore an electrical service upgrade is not required.