



# RESIDENTIAL ELECTRICAL LOAD ESTIMATING

This worksheet can be used to determine the required size of an electrical panel for an existing dwelling with 120/240 or 120/208 volt, three wire, single phase services (based on the 2013 California Electrical Code Article 220).

- 1. \_\_\_ Square footage of existing living area<sup>1</sup> x 3 watts/sq. ft. = \_\_\_\_\_ watts
- 2. \_\_\_ 20 amp small appliance circuits @ 1500 watts each = \_\_\_\_\_ watts
- 3. \_\_\_ Laundry circuits @ 1500 watts each = \_\_\_\_\_ watts
- 4. Electrical appliances at nameplate value<sup>2</sup>
  - a. Range = \_\_\_\_\_ watts
  - b. Oven = \_\_\_\_\_ watts
  - c. Garbage Disposal = \_\_\_\_\_ watts
  - d. Clothes Dryer<sup>3</sup> = \_\_\_\_\_ watts
  - e. Dishwasher = \_\_\_\_\_ watts
  - f. Other: \_\_\_\_\_ = \_\_\_\_\_ watts
  - g. Other: \_\_\_\_\_ = \_\_\_\_\_ watts
  - h. Other: \_\_\_\_\_ = \_\_\_\_\_ watts

**Sub-Total (Lines 1-4)= \_\_\_\_\_ watts**

- 5. First 8,000 watts @ 100% = \_\_\_\_\_ watts
- 6. Balance (sub-total - 8,000) @ 40% = \_\_\_\_\_ watts
- 7.<sup>4</sup> Air conditioning @ 100% = \_\_\_\_\_ watts
- Central space heating @ 100% = \_\_\_\_\_ watts
- <4 Space heaters @ 100% = \_\_\_\_\_ watts
- >4 Space heaters @ 100% = \_\_\_\_\_ watts

= \_\_\_\_\_ watts

**Total (Lines 5-7) = \_\_\_\_\_ watts**

**Convert to amps by dividing by 240 volts (A = w/v) = \_\_\_\_\_ amps**

<sup>1</sup> Use outside dimensions

<sup>2</sup> If values are given in amps, multiply by volts to obtain watts (watts = amps x volts)

<sup>3</sup> Minimum 5000 watts

<sup>4</sup> Use larger connected load of A/C or space heating, not both. Heat pumps are calculated at 100% or 65% if the heat pump is supplementary.