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 (2013 California Electrical Code Article 220).

1. Square footage of existing living area\(^1\) \times 3 \text{ watts/sq} = \text{watts}

2. 20 amp small appliance circuits @ 1500 watts each = \text{watts}

3. Laundry circuits @ 1500 watts each = \text{watts}

4. Electrical appliances at nameplate value\(^2\)
   a. Range = \text{watts}
   b. Oven = \text{watts}
   c. Garbage Disposal = \text{watts}
   d. Clothes Dryer\(^3\) = \text{watts}
   e. Dishwasher = \text{watts}
   f. Other: ____________________ = \text{watts}
   g. Other: ____________________ = \text{watts}
   h. Other: ____________________ = \text{watts}

Sub-Total (Lines 1-4) = \text{watts}

5. First 8,000 watts @ 100% = \text{watts}

6. Balance (sub-total – 8,000) @ 40% = \text{watts}

7.\(^4\) Air conditioning @ 100% = \text{watts}
   Central space heating @ 100% = \text{watts}
   <4 Space heaters @ 100% = \text{watts}
   >4 Space heaters @ 100% = \text{watts}
   = \text{watts}

Total (Lines 5-7) = \text{watts}

Convert to amps by dividing by 240 volts (A = w/v) = \text{amps}

\(^1\) Use outside dimensions
\(^2\) If values are given in amps, multiply by volts to obtain watts (w = axv)
\(^3\) Minimum 5000 watts
\(^4\) 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.