



# RESIDENTIAL ELECTRICAL LOAD CALCULATIONS

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Phone: (702) 229-6251

### Standard Calculation: Article 220 NEC

#### General Lighting Load 220.12

General Lighting Load:

Home Sq Ft \_\_\_\_\_ + Garage Sq ft \_\_\_\_\_ = \_\_\_\_\_ x 3 Volt Amps = \_\_\_\_\_ VA  
 Small Appliance Circuits @ 1500 VA each, Min of 2 \_\_\_\_\_ (qty) = \_\_\_\_\_ VA  
 Laundry (Washing Machine) circuit 1500 VA, Min of 1 \_\_\_\_\_ (qty) = \_\_\_\_\_ VA  
**Sub Tot (1)** \_\_\_\_\_ VA

#### Application of Demand Factor (Table 220.42)

First 3,000 VA of Subtotal (1) at 100% ST \_\_\_\_\_ = \_\_\_\_\_ VA  
 Remainder of Subtotal (1) at 35% \_\_\_\_\_ = \_\_\_\_\_ VA  
 If over 120,000 VA use 25% ST \_\_\_\_\_ = \_\_\_\_\_ VA  
**Sub Tot (2)** \_\_\_\_\_ VA

#### Electrical Cooking Appliances. Use NEC Table 220-55

100% Nameplate Rating \_\_\_\_\_  
 From Table 220.55 \_\_\_\_\_  
 \_\_\_\_\_ = \_\_\_\_\_ VA  
 Dryer Load (220.54) 100% VA \_\_\_\_\_ = \_\_\_\_\_ VA  
**Sub Tot (3)** \_\_\_\_\_ VA

#### Heating or A/C 220.60

HVAC Condenser(s) \_\_\_\_\_ + FAU(s) \_\_\_\_\_ = Total HVAC Load \_\_\_\_\_  
 (OR use formula: Home sqft/400 sqft per ton x2000va per ton = Total HVAC Load) \_\_\_\_\_

Total Load for Supplemental Heating \_\_\_\_\_  
 Total Load for Heat Pump \_\_\_\_\_

**Sub Tot (4)** \_\_\_\_\_ VA

#### Fixed Appliances 220.53

Disposer \_\_\_\_\_ Water Heater \_\_\_\_\_  
 Compactor \_\_\_\_\_ Dishwasher \_\_\_\_\_  
 Microwave \_\_\_\_\_  
 (4 or more appliances, a demand of 75% is allowed) Sub Tot 5a \_\_\_\_\_ x \_\_\_\_\_ **Sub Tot (5)** \_\_\_\_\_ VA

#### EV Chargers - Article 625.41

EV Charger \_\_\_\_\_ (Continuous load, full circuit value) **Sub Tot (6)** \_\_\_\_\_ VA

#### Miscellaneous Motor Loads 220.50

Largest Motor \_\_\_\_\_ x 25% \_\_\_\_\_  
 Other loads (pool pump, spa, welder) \_\_\_\_\_ **Sub Tot (7)** \_\_\_\_\_ VA

**Grand Total (2+3+4+5+6+7)** \_\_\_\_\_ VA

**Calculated Load (Grand Total/240)** \_\_\_\_\_ AMPS

**Panel Size** \_\_\_\_\_

**\*If there is a subpanel, a separate Electrical Load Calculation is required.**