

Annual Equipment Energy Calculator

Calculate daily and annual energy, annual cost, and calendar-year average power from connected equipment watts, quantity, operating schedule, and energy rate.

Generated October 10, 2026

<https://www.elecatrrix.com/power-energy-cost/annual-equipment-energy-calculator/>

Inputs

Input	Value	Unit
Equipment power	500	W
Quantity	4	items
Hours per day	8	h/day
Operating days	250	days/year
Electricity rate	0.16	\$/kWh

Results

Result	Value	Unit
Daily energy	16	kWh/day
Annual energy	4000	kWh/year
Annual cost	640	\$/year
Calendar-year average power	0.4566	kW

Calculation details

Detail	Value	Unit
Calculation basis	Energy is total watts divided by 1000, multiplied by daily runtime and annual operating days. Cost uses the entered energy rate.	
Review boundary	Screening estimate only; no duty-cycle model, tariff tier, demand charge, tax, rider, or utility bill reconciliation is made by this calculator.	

Formulas

$$P_{total} = P_{equipment} \times N$$

$$E_{daily} = \frac{P_{total}}{1000} \times h_{day}$$

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$$E_{\text{annual}} = E_{\text{daily}} \times D_{\text{operating}}$$

$$\text{Annual cost} = E_{\text{annual}} \times \text{Rate}$$

$$P_{\text{average}} = \frac{E_{\text{annual}}}{8760}$$

Warnings and limitations

This annual energy estimate uses entered runtime assumptions only. It does not model load cycling, controls, weather, occupancy, maintenance, demand charges, taxes, or utility tariff rules.