

Energy From Power And Time Calculator

Calculate electrical energy in watt-hours and kilowatt-hours by multiplying constant power by elapsed time.

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<https://www.elecatrix.com/power-energy-cost/energy-from-power-time-calculator/>

Inputs

Input	Value	Unit
Power	1500	W
Time	3	h

Results

Result	Value	Unit
Energy in watt-hours	4500	Wh
Energy in kilowatt-hours	4.5	kWh
Power used	1500	W
Time used	3	h

Calculation details

Detail	Value	Unit
Calculation basis	Energy Wh = power W x time h; energy kWh = energy Wh / 1000.	
Boundary	Constant-power energy arithmetic only; no duty-cycle variation, standby load, power factor, efficiency, tariff, demand charge, or code-compliance result is made.	

Formulas

energy Wh = power W x time h

energy kWh = energy Wh / 1000

Warnings and limitations

This is a constant-power energy estimate. It does not reproduce a utility bill or model duty-cycle variation, losses, tariffs, demand charges, or code compliance.