

Carbon Emissions from Electricity Calculator

Calculate electricity-related CO₂e in pounds, short tons, and metric tons from measured energy use and an entered emissions factor.

Generated October 10, 2026

<https://www.elecatrix.com/power-energy-cost/carbon-emissions-from-electricity-calculator/>

Inputs

Input	Value	Unit
Electricity use	12000	kWh
Emission factor	0.7	lb CO ₂ e/kWh

Results

Result	Value	Unit
Emissions	8400	lb CO ₂ e
Emissions	4.2	short tons CO ₂ e
Emissions	3.8102	metric tons CO ₂ e
Factor per 1000 kWh	700	lb CO ₂ e

Calculation details

Detail	Value	Unit
Calculation basis	Electricity emissions equal kWh multiplied by the entered emissions factor.	
Review boundary	Screening estimate only; no hourly grid mix, marginal emissions, offsets, certificate, or lifecycle accounting result is made by this calculator.	

Formulas

$$E_{lb\ CO_2e} = E_{kWh} \times f_{lb/kWh}$$

$$E_{lb/1000\ kWh} = f_{lb/kWh} \times 1000$$

$$E_{short\ tons} = \frac{E_{lb\ CO_2e}}{2000}$$

$$E_{metric\ tons} = \frac{E_{lb\ CO_2e}}{2204.62262185}$$

Carbon Emissions from Electricity Calculator

Calculate electricity-related CO₂e in pounds, short tons, and metric tons from measured energy use and an entered emissions factor.

Generated October 10, 2026

<https://www.elecatrix.com/power-energy-cost/carbon-emissions-from-electricity-calculator/>

Warnings and limitations

This emissions calculation uses only the entered factor and electricity use. It does not model hourly grid mix, marginal emissions, offsets, certificates, reporting standards, or lifecycle carbon accounting.