



Frequently Asked Questions

What is U.S. electricity generation by energy source?

In 2019, about 4,118 billion kilowatthours (kWh) (or about 4.12 trillion kWh) of electricity were generated at utility-scale electricity generation facilities in the United States.¹ About 63% of this electricity generation was from fossil fuels—coal, natural gas, petroleum, and other gases. About 20% was from nuclear energy, and about 18% was from renewable energy sources.

The U.S. Energy Information Administration estimates that an additional 35 billion kWh of electricity generation was from small-scale solar photovoltaic systems in 2019.²

U.S. utility-scale electricity generation by source, amount, and share of total in 2019¹

Energy source	Billion kWh	Share of total
Total - all sources	4,118	
Fossil fuels (total)	2,580	62.7%
Natural Gas	1,582	38.4%
Coal	966	23.5%
Petroleum (total)	19	0.5%
Petroleum liquids	12	0.3%
Petroleum coke	7	0.2%
Other gases	14	0.3%
Nuclear	809	19.7%
Renewables (total)	720	17.5%
Hydropower	274	6.6%
Wind	300	7.3%
Biomass (total)	58	1.4%
Wood	40	1.0%
Landfill gas	10	0.2%
Municipal solid waste (biogenic)	6	0.1%
Other biomass waste	2	0.1%
Solar	72	1.8%
Photovoltaic	69	1.7%
Solar thermal	3	0.1%
Geothermal	16	0.4%
Pumped storage hydropower³	-5	-0.1%
Other sources³	13	0.3%

¹ Preliminary data for 2019. Utility-scale electricity generation is electricity generation from power plants with at least one megawatt (or 1,000 kilowatts) of total electricity generating capacity. Data are for net electricity generation.

² Small-scale solar photovoltaic systems are electricity generators with less than one megawatt of electricity generating capacity that are usually at or near the location where the electricity is consumed. Most small-scale solar photovoltaic systems are installed on building rooftops.

³ [Pumped storage hydroelectricity](#) generation is negative because most pumped storage electricity generation facilities use more electricity than they produce on an annual basis. Most pumped storage systems use fossil fuels or nuclear energy for pumping water to the storage component of the system.

Learn more:

[Electric Power Monthly: Chapter 1: Net Generation](#)

[Electric Power Annual: Chapter 3: Net Generation](#)

[Monthly Energy Review: Electricity](#)

[Energy Explained: Electricity in the United States](#)

Last updated: February 27, 2020

Other FAQs about Electricity

- [Can electric utility customers choose their electricity supplier?](#)
- [Does EIA have county-level energy production data?](#)
- [Does EIA have data on costs for electricity transmission and distribution?](#)
- [Does EIA have data on each power plant in the United States?](#)
- [Does EIA have projections for energy production, consumption, and prices for individual states?](#)
- [Does EIA publish data on peak or hourly electricity generation, demand, and prices?](#)
- [Does EIA publish electric utility rate, tariff, and demand charge data?](#)
- [Does EIA publish electricity consumption and price data by state and by utility?](#)
- [Does EIA publish energy consumption and price data for cities, counties, or by zip code?](#)
- [Does EIA publish the location of electric power plants and transmission lines?](#)
- [How is electricity used in U.S. homes?](#)
- [How many nuclear power plants are in the United States, and where are they located?](#)
- [How many power plants are there in the United States?](#)
- [How many smart meters are installed in the United States, and who has them?](#)
- [How much coal, natural gas, or petroleum is used to generate a kilowatthour of electricity?](#)
- [How much does it cost to build different types of power plants in the United States?](#)
- [How much does it cost to generate electricity with different types of power plants?](#)
- [How much electricity does a nuclear power plant generate?](#)
- [How much electricity does an American home use?](#)
- [How much electricity is lost in electricity transmission and distribution in the United States?](#)
- [How much electricity is used for cooling in the United States?](#)
- [How much electricity is used for lighting in the United States?](#)
- [How much energy does the world consume by each energy end-use sector?](#)
- [How much of U.S. carbon dioxide emissions are associated with electricity generation?](#)
- [How much of U.S. energy consumption and electricity generation comes from renewable energy sources?](#)
- [How much of world energy consumption and production is from renewable energy?](#)
- [How old are U.S. nuclear power plants, and when was the newest one built?](#)
- [What is U.S. electricity generation by energy source?](#)
- [What is the difference between electricity generation capacity and electricity generation?](#)
- [What is the efficiency of different types of power plants?](#)
- [What is the outlook for home heating fuel prices this winter?](#)
- [What types and amounts of energy are produced in each state?](#)

On This Page:

- [Coal](#)
- [Conversion & Equivalents](#)
- [Diesel](#)
- [Electricity](#)
- [Environment](#)
- [Gasoline](#)
- [General Energy](#)
- [Natural Gas](#)
- [Nuclear](#)
- [Oil/Petroleum](#)
- [Prices](#)
- [Renewables](#)

- [Full list of upcoming reports](#)
- [Sign up for email notifications](#)
- [Get the What's New RSS feed](#)

- [Didn't find the answer to your question?](#)
- [Ask an energy expert](#)