



# Solar energy accounts for the proportion of electricity generation

What is the contribution of solar energy to global electricity production?

While the contribution of solar energy to global electricity production remains generally low at 3.6%, it has firmly established itself among other renewable energy technologies, comprising nearly 31% of the total installed renewable energy capacity in 2022 (IRENA, 2023).

What percentage of global electricity generation is renewable?

In 2028, renewable energy sources account for over 42% of global electricity generation, with the share of wind and solar PV doubling to 25%. IEA. Licence: CC BY 4.0 China accounts for almost 60% of new renewable capacity expected to become operational globally by 2028.

What is the largest source of electricity generation in 2025?

In 2025, renewables surpass coal to become the largest source of electricity generation. Wind and solar PV each surpass nuclear electricity generation in 2025 and 2026 respectively. In 2028, renewable energy sources account for over 42% of global electricity generation, with the share of wind and solar PV doubling to 25%.

Which energy source generates the most electricity in 2024?

In 2024, wind and solar PV together generate more electricity than hydropower. In 2025, renewables surpass coal to become the largest source of electricity generation. Wind and solar PV each surpass nuclear electricity generation in 2025 and 2026 respectively.

What percentage of electricity comes from renewable technologies?

This interactive chart shows the share of electricity that comes from renewable technologies. Globally, almost one-third of our electricity comes from renewables. Hydroelectric power has been one of our oldest and largest sources of low-carbon energy.

Is solar energy a primary energy source?

Conversely, primary energy sources such as wind and hydro are consumed solely by the electricity sector and although solar is primarily used in generation, small amounts of solar thermal are used for space and water heating.

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U.S. utilities - percentage of energy from solar; U.S. utilities" annual solar power capacity by sector 2016; Global cumulative installed PV capacity by sector 2010-2050



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The Energy Generation in Wales 2022 report provides a complete and ... increase of 4 percentage points compared to 2021 levels. We have achieved 97% of our 1 GW local ownership target by 2030, an increase of 7% compared to 2021 levels. ... most of the remainder from solar PV and biomass electricity generation.

Insights UK electricity generation in 2022 2022 was one of the greenest years on record for electricity generation - second only to 2020, where several lockdowns helped reduce carbon consumption drastically. In 2022 more electricity came from renewable and nuclear power sources than from fossil fuels and overall wind power was the second largest source... Read ...

Renewables contributed 35% of total electricity generation in 2023, specifically solar (16%), wind (12%) and hydro (6%). The renewables share of total generation was up 3% on 2022, the highest share of total generation on record. About 20% of Australia's electricity was generated outside the electricity sector by households and businesses.

As the chart shows, renewables produced just over 30% of the world's electricity in 2023. This growth was mostly driven by the rapid rollout of solar and wind technologies . Hydropower generation actually fell in 2023 as a ...

It predicts that renewable energy sources such as solar and wind power, together with nuclear, will on average meet more than 90% of the increase in global demand by 2025. ... Asia will account for half of the world's electricity consumption and one-third of global electricity will be consumed in China... over the next three years the ...

Today the Fraunhofer Institute for Solar Energy Systems ISE presented the data on net public electricity generation for the first half of 2023 from the Energy-Charts data platform. Renewable generation, with a share of 57.7 percent of the net electricity generation for public power supply, that is, the electricity mix that comes out of the socket, was significantly higher ...

We rely on Ember as the primary source of electricity data. While the Energy Institute (EI) provides primary energy (not just electricity) consumption data and it provides a longer time-series (dating back to 1965) than Ember (which only dates back to 1990), EI does not provide data for all countries or for all sources of electricity (for example, only Ember provides ...

This dataset contains yearly electricity generation, capacity, emissions, import and demand data for over 200 geographies. You can find more about Ember's methodology in this document.

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California and Nevada were the states with the highest percentage of solar in their electricity generation, with

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28.2 and 25.9 percent, respectively. [Read more](#)

Solar PV accounted for 4.5% of total global electricity generation, and it remains the third largest renewable electricity technology behind hydropower and wind. China was responsible for about 38% of solar PV generation growth in 2022, ...

The share of renewable electricity generation in 2023 was 46.4 per cent, a new record. Despite a small increase in renewable generation, this was 4.7 percentage points up on 2022 and 3.4 percentage points up on the previous record set in 2020. The increase was driven by a fall in total electricity generation, see Chapter 5 for more details.

Today, renewable energy sources (such as onshore and offshore wind, solar, tidal, biomass and hydro) make-up a significant proportion of the electricity mix that powers UK homes and businesses. Expanding our sources of clean, domestic power like onshore wind and solar is proven to be the quickest and cheapest route to energy security and lower consumer bills.

Wind and solar are slowing the rise in power sector emissions. If all the electricity from wind and solar instead came from fossil generation, power sector emissions would have been 20% higher in 2022. The growth alone in ...

China alone should account for almost half of the global increase in renewable electricity in 2021, followed by the United States, the European Union and India. ... Globally, solar PV electricity generation is expected to increase by 145 TWh, almost 18%, to approach 1 000 TWh in 2021. ... Energy from waste electricity projects in Asia will ...

Global electricity generation from coal grew by 189 terawatt hours (TWh, 1.8%) year-on-year to a record high of 10,513TWh. ... While this is a record low, it is only around 4 percentage points lower than a decade earlier - and 5 percentage points below the level seen in 1990. ... This is despite the record amounts of new energy added by wind ...

The global installed solar capacity over the past ten years and the contributions of the top fourteen countries are depicted in Table 1, Table 2 (IRENA, 2023). Table 1 shows a tremendous increase of approximately 22% in solar energy installed capacity between 2021 and 2022. While China, the US, and Japan are the top three installers, China's relative contribution ...

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Power capacity from clean energy sources comprised a record 40.6% of the US electricity mix in 2022, according to the Business Council for Sustainable Energy. This includes nuclear power, which is not



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renewable, but doesn't produce greenhouse gas emissions. Wind, hydroelectric and solar power were the biggest areas of renewable capacity ...

In 2028, renewable energy sources account for 42% of global electricity generation, with the wind and solar PV share making up 25%. In 2028, hydropower remains the largest renewable electricity source. However, ...

Wind power contributed 29.4% of the UK's total electricity generation. Biomass energy, the burning of renewable organic materials, contributed 5% to the renewable mix. Solar power contributed 4.9% to the renewable mix; ...

In 2023, 35% of Australia's total electricity generation was from renewable energy sources, including solar (16%), wind (12%) and hydro (6%). The share of renewables in total electricity generation in 2023 was the highest on record, a share of ...

Energy production - mainly the burning of fossil fuels - accounts for around three-quarters of global greenhouse gas emissions. Not only is energy production the largest driver of climate change, but the burning of fossil fuels and biomass ...

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