

Global Electricity Review 2024 - India's Rank, Key Highlights

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- What is Global Electricity Review 2024?
- What are the Key highlights of the Global Electricity Review 2024?
- India specific observations made in the Global Electricity Review 2024
- Opportunities for Solar energy in India

Why in News?

As per the Global Electricity Review 2024, India surpassed Japan to claim the title of the world's third-largest solar power generator in 2023 as it has climbed from ninth ranking in 2015.

What is Global Electricity Review 2024?

- The Global Electricity Review 2024 was published by global energy think tank Ember.

- The report offers a comprehensive examination of the global power landscape in 2023, drawing on data from individual countries.
 - It has analysed the data from 80 nations that represent 92 percent of global electricity demand, along with historical data from 215 countries.
- It provides a realistic summary of how on track the electricity transition is for limiting global heating to 1.5 degrees.

What are the Key highlights of the Global Electricity Review 2024?

- **Share of solar energy in global electricity in 2023**
 - The report finds that solar produced a record 5.5 per cent of global electricity in 2023.
- **The trajectory of solar energy has been accelerating rapidly**
 - For the nineteenth consecutive year, solar maintained its status as the fastest-growing electricity source worldwide.
 - It outpaced coal in new electricity additions by more than twofold in 2023.
- **Share of renewable energy in global electricity produced**
 - Globally however, renewable sources of energy made up 30% of global electricity produced.
 - Renewables have expanded from 19% of global electricity in 2000, driven by an increase in solar and wind power, to 30% in 2023.
 - Combined with nuclear, the world generated almost 40% of its electricity from low-carbon sources in 2023.
- **Fossil fuel generation to drop in 2024**
 - The report forecasts fossil fuel generation to drop in 2024 and the trend to continue in other years.
 - It suggests that 2023 might be the year when the fossil fuel production may have peaked globally.
- **China is the main contributor in renewable energy**
 - China was the main contributor in 2023, accounting for 51% of the additional global solar generation and 60% of new global wind generation.

India specific observations made in the Global Electricity Review 2024

- **India as third-largest solar power generator in 2023**
 - India's growth in solar generation in 2023 pushed the country past Japan to become the world's third-largest solar power generator.
 - It has climbed from ranking ninth in 2015.
 - China and USA are two major producers ahead of India in 2023.
 - In terms of installed solar power capacity, India at 73 gigawatt (1 GW is one billion watts) ranks fifth in the world while Japan is at third place (83 GW).
- **Share of solar energy in overall electricity produced**
 - In 2023, India generated 5.8 percent of its electricity from **solar energy**.
- **India experienced the world's fourth-largest surge in solar generation in 2023**
 - India experienced the world's fourth-largest surge in solar generation in 2023.

- It added 18 Terawatt hours (TWh) to its capacity, following China (+156 TWh), the United States (+33 TWh), and Brazil (+22 TWh).
- These top four countries collectively accounted for 75 percent of global solar growth that year.
- **Solar energy generation in 2023 as compared to 2015**
 - Global solar generation in 2023 exceeded six times that of 2015, with India experiencing a seventeen-fold increase during the same period.
- **India needs to significantly ramp up annual capacity additions**
 - India stands among the select few nations committed to tripling renewable capacity by 2030.
 - The report suggests that India will need to significantly ramp up annual capacity additions to meet this ambitious target.

Opportunities for Solar energy in India

- **Increasing demand**
 - The government's ambitious target of 500 GW of installed capacity from non-fossil fuels by 2030 is the main driver to scale solar power in India.
 - India also accounts for the fastest rate of growth for demand of electricity through 2026 among major economies.
 - This is because of strong economic activity and expanding consumption of products to mitigate extreme weather.
 - According to **NITI Aayog**, as of May 2024, solar power while making up 18% of India's total installed electricity of 442 GW, made up only 6.66% of the power actually produced.
 - This data reflects the gap between potential and actuals as the power produced per year can vary due to fluctuations in a country's power demand and local circumstances.
 - **Estimated solar power potential**
 - The country has an estimated solar power potential of 748.99 GW.
 - Hence, the potential of solar energy is not fully tapped, so far.
 - The government is making efforts to harness the available potential through various schemes & programs.
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Q.1. What is the unit of electrical energy?

The basic unit of electrical energy is the joule or watt-second. The commercial unit of electrical energy is the kilowatt-hour (kWh).

Q.2. What is renewable energy?

Renewable energy is energy that comes from natural sources that are replenished faster than they are used. Renewable energy sources are abundant and all around us, such as sunlight and wind.

Source: [Fall in Japan's power demand sees India as third largest producer of solar power in 2023](#) | [EMBER](#) | [Times of India](#) | [Economic Times](#)

Source: <https://vajiramandravi.com/current-affairs/global-electricity-review/>

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