

Solar power contribution in india





Overview

Solar power in India is an essential source of . Since the early 2000s, has increased its solar power significantly with the help of various government initiatives and rapid awareness about the importance of and in the society. In order to decrease , reduce reliance on , with

Solar photovoltaic projects comprised 21.2% of India's total installed power capacity and 46.8 % of the total installed renewable capacity at the end of December 2024. India's installed solar capacity rose 10.5% quarter-over-quarter (QoQ) and 57.2% year-over-year (YoY).

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In 2024, the country made significant strides in solar and wind energy installations, policy advancements, and infrastructural improvements, setting the stage for ambitious targets in 2025. With a commitment to achieving 500 GW of non-fossil fuel-based energy capacity by 2030, India is emerging as.

Solar photovoltaic power can effectively be harnessed providing huge scalability in India. Solar also provides the ability to generate power on a distributed basis and enables rapid capacity addition with short lead times. Off-grid decentralized and low-temperature applications will be advantageous.

Solar power in India is an essential source of renewable energy and electricity generation in India. Since the early 2000s, India has increased its solar power significantly with the help of various government initiatives and rapid awareness about the importance of renewable energy and.

India's solar energy market is experiencing significant and rapid growth, establishing itself as a global leader in solar power deployment. Indeed, in 2023, India was the third-largest solar energy producer in the world, adding over 16.6 GW of new solar installations. This growth is driven by.

Investment in the wind sector halved compared to the same period in 2024 but was 28 per cent higher than in the second half of 2024, according to



BloombergNEF's (BNEF) 2H 2025 Renewable Energy Investment Tracker report. New Delhi: India attracted \$11.8 billion in renewable energy investments in the.

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India achieved a significant milestone in its renewable energy journey in February 2025, with solar power accounting for nearly 63.95% of the country's total renewable energy generation, excluding large hydropower. The nation generated 12,913.58 million units of solar energy, reflecting its strong commitment to clean and sustainable power.

How has solar energy changed India's power landscape?

Solar energy has significantly transformed India's power landscape, driven by falling costs, supportive policies and increased investments in technology and infrastructure. The country's installed renewable energy capacity (including large hydro), according to the Ministry of New and Renewable Energy (MNRE), stood at 209.4 GW as of December 2024.

What is India's solar power capacity?

India's solar power installed capacity was 119.02 GW AC as of 31 July 2025. The use of solar power is also necessary for India to achieve carbon neutrality by 2070, by achieving 500 GW of renewable energy by 2030, of which at least around 250 GW will be generated by solar power.

How much solar power does India have in 2025?

By the end of February 2025, India's total renewable energy capacity, excluding large hydropower, had reached 167.709 GW, with solar installations contributing an impressive 102.566 GW. This marks a substantial increase in solar power adoption, reinforcing India's leadership in the global renewable energy sector.

Why is solar power growing in India?

This growth is largely driven by favorable government policies, financial incentives, and continuous advancements in solar technology. By the end of



February 2025, India's total renewable energy capacity, excluding large hydropower, had reached 167.709 GW, with solar installations contributing an impressive 102.566 GW.

Why is the solar power market important in India?

From job creation to fostering innovation and more, the solar power market is key to India's economic development & energy transition. As Hon'ble Prime Minister Narendra Modi said in 2020, "Solar energy is going to be a major medium of energy needs not only today but in the 21st century."



Solar power contribution in India



[India's Renewable Energy Capacity Hits 200 GW ...](#)

A variety of renewable energy resources contribute to this impressive figure. Solar power leads the way with 90.76 GW, playing a crucial role in India's efforts to harness its abundant sunlight. Wind power follows ...

[India's Renewable Energy Output Hits 124.9 BU in Q4 ...](#)

India generated 512.2 billion units of electricity in the fourth quarter of 2024-25, with renewable energy contributing 124.9 billion units. Solar power production led the way, highlighting the country's significant strides in ...



Solar Energy Represents 17% of India's Installed Power Capacity

As of January 2024, India emerges as a trailblazer in the renewable energy revolution, with solar energy constituting a substantial 17.3% of the overall installed power capacity, and renewable ...

[Tapping Renewable Energy Potential in India](#)

Solar power: Solar power in India leads with an installed capacity of 94.17 GW, including 15.16 GW from grid-connected rooftop solar and 4.10 GW from off-grid solar solutions. **Hydro Power:**

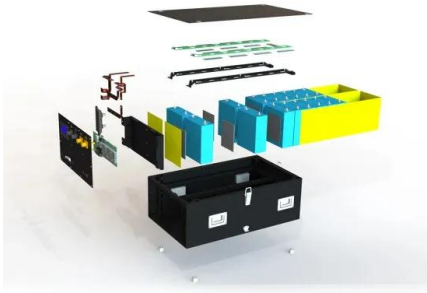


Small Hydro Power has an installed ...



Solar adoption in India entering "accelerating growth" ...

Solar and wind to meet two thirds of India's power generation growth by FY 2032 NEP14 estimates India's total annual electricity generation to grow by 1,174 TWh in FY 2022-32 period. Annual solar and wind generation ...



Solar Energy's Contribution to India's Power Mix ...

Solar photovoltaic projects comprised 21.2% of India's total installed power capacity and 46.8 % of the total installed renewable capacity at the end of December 2024. India's installed solar capacity rose 10.5% quarter ...



India's Renewable Energy Surge: Solar Generation...

In January 2025, India achieved a major milestone in its renewable energy sector, with solar power accounting for nearly 59.99% of the country's total renewable energy generation, excluding large hydropower. The ...



[India Sees \\$11.8 Billion Renewable Energy ...](#)

4 ???· India attracts \$11.8 billion in renewable energy investments in the first half of 2025, dominated by solar energy at 77%. The report highlights the growth in capacity and investments despite global challenges.



Power Sector at a Glance ALL INDIA , Government of India

Goverment of India, Ministry of Power1.1 The electricity generation target (Including RE) for the year 2023-24 has been fixed as 1750 Billion Unit (BU). i.e. growth of around 7.2% over actual ...



[India's Solar Power Revolution: Leading the Way in ...](#)

India currently stands 4th globally in solar power capacity. In the last five years, the country's solar installed capacity has experienced a monumental transformation, increasing from 21,651 MW to 70,096 MW in 2023.



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