

Japan installs solar power generation



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Overview

Solar power in Japan has been expanding since the late 1990s. Japan is a large installer of domestic PV systems, with most of them grid connected.

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Solar PV in Japan

Solar PV accounted for 25% of Japan's total installed power generation capacity and 11% of total power generation in 2023.

Solar power in Japan

In May 2021, the Japanese Trade Ministry said that Japan may require up to 370 GW of solar capacity by 2050 to reach the goal of cutting carbon emissions to zero.



Solar energy in Japan

In recent years, Japan was one of the largest consumers of solar energy worldwide. Solar energy represents the largest energy-producing renewable energy source in the country. In fact,

[Japan adds 5.8 GW of solar in 2025 - pv magazine International](#)

Estimates indicate Japan added between 5.8 GW and 6 GW of solar last year, likely taking the country past 100 GW of cumulative solar capacity. Last year's installations were led by the



[Tenfold Increase in Japan's Solar Power Capacity over 10 Years](#)

According to the latest data released in a fiscal



2023 white paper on energy, Japan's cumulative installed solar-power capacity was 69.35 million kilowatts in fiscal 2021.

[Status of Renewable Energy Development in Japan](#)

Solar power remains the primary driver of Japan's renewable expansion. In 2023, solar PV generated nearly 30 times more electricity than in 2010, accounting for 9.8% of the total electricity



[Japan Electricity Generation Mix 2025 , Low-Carbon](#)

Low-carbon sources, including solar, nuclear, and hydropower, contribute roughly 35% to the electricity generation, with solar energy making significant strides at

[Japan's solar innovation & growth, trends and future plans](#)

With a 9.2% CAGR, Japan aims for 117.6 GW PV capacity by 2030, backed by robust government support and projects like the Setouchi Kirei Mega Solar Power Plant.



Tensor Energy , Japan solar growth

In contrast with other renewables, solar generation has experienced rapid growth in Japan. In 2024, solar contributed approximately 97 TWh, representing almost 10% of the electricity

Solar Energy in Japan: Room For Growth

In 2022, solar energy accounted for 5.39% of Japan's total energy mix and 9.91% of its electricity generation. In both cases, solar power in Japan holds the largest share of all renewable



[RE Trends in Japan , Statistics & Maps . Renewable Energy Institute](#)

1. Cumulative Installed Solar PV Capacity in the World and in Selected Countries (GW)
2. Cumulative Installed Solar PV Capacity in Japan and by Distribution Area (GW)
3. Solar PV Electricity

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