

Solar Panels installed at the rooftop of hostels of Panjab University in Chandigarh, January 20 2016. (Express Photo by Sahil Walia)

Prime Minister Narendra Modi on Monday (January 22) announced the 'Pradhan Mantri Suryodaya Yojana', a government scheme under which one crore households will get rooftop solar power systems.

This isn't the first scheme for promoting the installation of rooftop solar power systems, though. In 2014, the government launched the Rooftop Solar Programme that aimed to achieve a cumulative installed capacity of 40,000 megawatts (MW) or 40 gigawatts (GW) by 2022 — watt is a unit of power and is calculated as the amount of energy used over time, specifically one Joule per second.

However, this target couldn't be achieved. As a result, the government extended the deadline from 2022 to 2026. The Pradhan Mantri Suryodaya Yojana seems to be a new attempt to help reach the target of 40 GW rooftop solar capacity.

Here is a look at the new scheme, India's current solar capacity, the Rooftop Solar Programme, and why solar energy is important for the country.

What is the Pradhan Mantri Suryodaya Yojana?

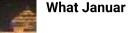
Essentially, it is a scheme that will involve installing solar power systems at

on 1 crore houses."

rooftops for residential consumers.

In a post on X, Modi said: "Today, on the auspicious occasion of the consecra PRATAP BHANU N life in Ayodhya, my resolve has been further strengthened that the people of should have their own solar rooftop system on the roof of their houses. The decision I have taken after returning from Ayodhya is that our government launch 'Pradhanmantri Suryodaya Yojana' with the target of installing rooftop solar





He added that the scheme would help not only reduce electricity bills of the "poor" and middle class", but also push India's goal of becoming self-reliant in the energy sector.

What is India's current solar capacity?

According to the Ministry of New and Renewable Energy's website, solar power installed capacity in India has reached around 73.31 GW as of December 2023. Meanwhile, rooftop solar installed capacity is around 11.08 GW as of December 2023.

In terms of total solar capacity, Rajasthan is at the top with 18.7 GW. Gujarat is at the second position with 10.5 GW. When it comes to rooftop solar capacity, Gujarat tops the list with 2.8 GW, followed by Maharashtra by 1.7 GW.

Notably, solar power has a major share in the country's current renewable energy capacity, which stands at around 180 GW.

Why is an expansion of solar energy important for India?

India is expected to witness the largest energy demand growth of any country or region in the world over the next 30 years, according to the latest World Energy Outlook by the International Energy Agency (IEA).

To meet this demand, the country would need a reliable source of energy and it can't be just coal plants. Although India has doubled down on its coal production in recent years, it also aims to reach 500 GW of renewable energy capacity by 2030.

Therefore, it is essential to expand solar power capacity — the country has increased it from less than 10 MW in 2010 to 70.10 GW in 2023, as mentioned before.

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What is the Rooftop Solar Programme?

Launched in 2014, the scheme aims to expand India's rooftop solar installed capacity in the residential sector by providing Central Financial Assistance — the financial assistance to the eligible projects as per MNRE Guidelines — and incentives to DISCOMs (distribution companies).

The programme's goal is to increase rooftop solar installed capacity to 40 GM by March 2026 and it is currently in its second phase. Owing to the scheme, the country's rooftop solar has increased from 1.8 GW as of March 2019 to 10.4 GW as of November 2023.

A consumer can avail of benefits of the scheme through DISCOM tendered projects or through the National Portal (www.solarrooftop.gov.in), Minister of New and Renewable Energy RK Singh said in a written response to a query raised in Lok Sabha last year.

"On the National Portal, the consumer has the choice to select any vendor and choose the brand and quality/efficiency of solar equipment. The DISCOMs role is limited to issuing of technical feasibility approval, installation of net-meter and inspect the system," he added.

After installation and inspection of the system, the subsidy is sent directly to the bank account of the consumer.

Moreover, "surplus solar power units generated from the rooftop solar plant can be exported to the grid as per the metering provisions issued by respective SERCs (State Electricity Regulatory Commissions)/JERCs (Joint Electricity Regulatory Commission). The consumer can receive monetary benefits for the surplus exported power as per the prevailing regulations."

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First uploaded on: 22-01-2024 at 21:30 IST