



# Pradhan Mantri Suryodaya Yojana

[Source: IE](#)

## Why in News?

Recently, the Indian Prime Minister launched the '**Pradhan Mantri Suryodaya Yojana**,' a pioneering government initiative aimed at **installing rooftop solar power systems in one crore households** across the nation.

## What are Rooftop Solar Panels?

- **About:** Rooftop solar panels are **photovoltaic panels** installed on the roof of a building that is connected to the main power supply unit.
- **Benefit:** It reduces the consumption of **grid-connected electricity** and saves electricity costs for the consumer.
  - Surplus solar power units generated from the rooftop solar plant can be exported to the grid as per the metering provisions.
  - The consumer can receive monetary benefits for the surplus exported power as per the prevailing regulations
- **Related Government Initiatives:** 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**.
  - However, this target could not be achieved. As a result, the government extended the deadline from 2022 to 2026.
  - According to some reports, the **Pradhan Mantri Suryodaya Yojana** seems to be an attempt to help reach the **target of 40 GW rooftop solar capacity**.

## What is the Current Solar Capacity in India?

- **India's Current Solar Capacity:**
  - **Rooftop Solar Capacity:** Total rooftop solar installed **capacity is around 11.08 GW** as of December 2023.
    - **Gujarat tops the list with 2.8 GW**, followed by Maharashtra by 1.7 GW.
    - According to a recent report by **Council on Energy, Environment and Water (CEEW)**, only **20%** of rooftop solar capacity installations are in the residential sector, with the majority in commercial and industrial sectors.
      - The report suggests that **India's 25 crore households could deploy 637 GW of solar energy on rooftops**, and just one-third of this could meet the entire residential electricity demand in the country.
  - **Total Installed Capacity:** According to the **Ministry of New and Renewable Energy** **solar power installed capacity** in India has reached around 73.31 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.

## India's Surging Energy Demand

- India is projected to experience the highest energy demand growth globally over the next three decades, as per the International **Energy Agency**.
  - Despite an increase in coal production, India is committed to achieving **500 GW of renewable energy capacity by 2030**.
- Also, the country aims for **50% of electricity generation from non-fossil fuel sources by 2030**, having already reached **43%**, with renewables contributing **30%** to the total installed capacity.
  - Rapid growth in renewable capacity, especially in solar energy, is essential to meet the surging electricity demand.

## What are the Other Government Initiatives to Harness Solar Energy?

- [National Solar Mission](#)
- [Solar Park Scheme](#)
- [Kisan Urja Suraksha evam Utthaan Mahabhiyan \(PM-KUSUM\)](#)
- [Suryamitra Skill Development Programme](#)
- [International Solar Alliance](#)

## UPSC Civil Services Examination Previous Year Question (PYQ)

### Prelims

#### Q. Consider the following statements: (2016)

1. The International Solar Alliance was launched at the United Nations Climate Change Conference in 2015.
2. The Alliance includes all the member countries of the United Nations.

#### Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (a)

### Mains

Q. India has immense potential of solar energy though there are regional variations in its developments. Elaborate. (2020)