# India’s Renewable Energy Journey: Powering a Cleaner Future

Posted On: 13 NOV 2026 1:02PM by PIB Delhi

**India’s Energy Landscape**

India’s renewable energy landscape is expanding rapidly to meet rising demand, strengthen energy security, and support a cleaner future. The transformation spans solar, wind, hydro, bio-energy, geothermal and green hydrogen.

Policy support, infrastructure development, domestic production, manufacturing expansion and wider energy access are shaping this transformation. From rooftop solar for households to large wind, floating solar and storage projects, India is steadily raising the share of renewables in its energy mix.

**Numbers At a Glance:**

**Total installed power capacity:** Around **560 GW** in October 2026, up from 249 GW in 2014.

**Non-fossil capacity: 308 GW** as of 31 July 2026, accounting for **55%** of total installed capacity.

**India ranks third** globally in **renewable energy** installed capacity.

India invested **USD 63.7 billion** in its renewable energy sector during July 2024–June 2026.

**Bharat Renewable Energy Summit & Expo (BRESE) 2026**

***Invest. Innovate. Inspire***

The **Bharat Renewable Energy Summit & Expo (BRESE) 2026** was held from 2–5 November in New Delhi. The Summit brought together **global policymakers, investors, industry leaders, manufacturers and innovators**. Australia, Denmark, the European Union, France, Germany, the Netherlands, Norway, Sweden and the United Kingdom participated as country partners. Thirteen Indian States and Union Territories, including Gujarat, Rajasthan, Maharashtra, Uttar Pradesh and Andhra Pradesh, showcased their renewable energy potential, investment opportunities and manufacturing capabilities. The event also featured an exhibition bringing together 400+ manufacturers, technology providers, startups and research institutions. Discussions covered **renewable energy financing, clean energy manufacturing, energy storage, emerging technologies and workforce development**.

**Solar Power: Scaling Up, Reaching More People**

India's **installed solar capacity** has reached **~175 GW** (as of 31 October 2026), rising from 2.8 GW in 2014. Solar is now the largest component of India's renewable energy capacity. **India became the world's second-largest solar growth market in 2025**, adding more than **37 GW** of solar capacity, compared with **34 GW** added by the United States.




**PM-Surya Ghar: Muft Bijli Yojana**

Launched with a total outlay of ₹75,021 crore for 1 crore households in February 2024.

**65.26 lakh households** are now benefiting from rooftop solar installations across the country (As of 02.11.2026).

Approximately **₹35,800 crore in subsidy** has been transferred to the beneficiaries.

Nearly **21 lakh households** have received zero electricity bills till October, 2026.

Cumulatively, **19.1 GW of rooftop solar capacity has been commissioned** under the scheme so far.

**Pradhan Mantri Surya Sarovar Yojana**

The government approved the **Pradhan Mantri Surya Sarovar Yojana (PM-SSY)** on **31 July 2026** with an outlay of **₹5,070 crore**. It adds a new dimension to India's solar expansion with the development of **Floating Solar Photovoltaic Projects with Energy Storage Systems.**

**Target:** 5,000 MW of Floating Solar PV projects.

Co-located storage with a minimum two-hour duration, equivalent to **10,000 MWh.**

Projects to be sanctioned from **FY 2026–27 to FY 2030–31.**

**Wind Energy**

Wind energy continues to be an important pillar of India’s renewable energy expansion. India ranks **fourth globally in installed wind power capacity**. The sector is also seeing stronger annual additions and growing domestic manufacturing.

**Installed capacity: 59.20 GW as on 29 October 2026**.

India added **6.05 GW in FY 2025–26**, its highest-ever annual wind capacity addition and **46% higher** than FY 2024–25.

Around **28 GW** of additional wind capacity is under implementation.

Wind turbine manufacturing capacity reached about **24 GW** (March 2026), up from 10 GW in 2014. The sector has achieved **70–80% indigenisation** across key components.

The Union Cabinet approved a **₹7,453 crore VGF scheme** on 19 June 2024 for **1 GW of offshore wind projects**.

**Bio-Energy**

Bio-power capacity stands at 11.75 GW as of 29 October 2026. The CBG ecosystem has also expanded, with 839 CBG plants registered as of 02 November 2026. Of these, 210 have been commissioned and 255 are under construction.

**Biomass cogeneration: 9821.32 MW** of bagasse-based and **1047.85 MW** of non-bagasse capacity as of **30 September 2026**.

**Waste-to-Energy:** As of 30 September 2026, grid-connected waste-to-energy capacity stood at 324.24 MW. Off-grid plants contributed another 554.16 MW.

**National Bioenergy Programme:** The programme supports **Waste-to-Energy, Biomass and Biogas projects** through financial assistance. Phase-I covered **FY 2021–22 to FY 2025–26,** with an outlay of **₹858 crore.**

**GOBARdhan: Turning Waste into Energy Growth**

**Galvanizing Organic Bio-Agro Resources Dhan (GOBARdhan)– National Circular Bioenergy Scheme:** Approved by the government on **6 August 2026**, with an outlay of **₹23,731 crore** for **FY 2026–27 to FY 2035–36**.

The scheme aims to **nearly ten-fold domestic CBG production** and create a national circular bioeconomy. **Llar Cooperation**

**Hydro**

Hydropower remains an important source of renewable electricity, providing reliable and flexible power generation. It also supports grid stability as solar and wind capacity expand. Cumulative capacity of **hydro power** is **57.49 GW (as of 29 October 2026)**, including large and small hydro.

**Small Hydro Power Development Scheme**

The government has approved the **Small Hydro Power (SHP) Development Scheme** in March 2026 for **FY 2026–27 to FY 2030–31**, with an outlay of **₹2,584.60 crore**.

The scheme aims to add approximately **1,500 MW** of small hydro capacity through projects of **1–25 MW**. It particularly supports projects in **hilly and North-Eastern regions**.

**Green Hydrogen**

Green hydrogen has emerged as a clean fuel option for hard-to-abate sectors. It can also support energy security and industrial growth.

**National Green Hydrogen Mission:**

The government launched **the National Green Hydrogen Mission (NGHM)** in 2023 as an umbrella programme to establish a Green Hydrogen ecosystem and catalyse a systemic response to the opportunities and challenges in this sector.

Approved in January 2023 with an outlay of **₹19,744 crore**, targeting **5 MMT (Million Metric Tonne)** of green hydrogen production by 2030.

Indian companies have signed **5.5 lakh MTPA** of Green Hydrogen offtake commitments since 2023, the world's largest supply commitment.

Indian companies signed 18 new offtake agreements in 2026, covering **over 4 lakh MTPA** of Green Hydrogen equivalent.

**Over 70%** of the total 5.5 lakh MTPA offtake commitments since 2023 are earmarked for exports.

Green Hydrogen projects are expected to attract investments of around **₹90,000 crore** (US$9.5 billion).

**Production capacity:** Around **8,000 tonnes per annum** of green hydrogen production capacity had been commissioned by **February 2026**.

**Transport:** In July 2026, the Government launched **12 pilot projects** under the Mission for **70 hydrogen-powered vehicles across 21 routes**.

India's first indigenous **hydrogen fuel cell-powered train** began operations on the Jind–Sonipat section in July 2026.

**Geo Thermal**

Geothermal energy offers a reliable renewable source that can complement variable sources such as solar and wind. Geothermal energy uses heat stored within the Earth to generate electricity or provide direct heat.

**National Policy on Geothermal Energy (notified on 15 September 2025)**

The policy provides a framework for the exploration, development and utilisation of geothermal resources.

The Geological Survey of India has estimated **India's geothermal potential at around 10,600 MW**, based on exploration across **381 hot springs**, with **42 geothermal manifestations** identified as promising areas.

The policy promotes technology partnerships, knowledge transfer and joint R&D. India has cooperation mechanisms with Australia, Iceland, Saudi Arabia and the United States for geothermal energy.

**Five projects sanctioned during July–August 2025**, including a **pilot production plant, resource assessment projects and a solar–geothermal hybrid plant**. These aim to establish the **techno-economic viability** of geothermal applications.

**Looking Ahead: Building India’s Energy Future**

India is building an energy system powered increasingly by **clean, renewable sources**. Expanding solar, wind, hydro and bio-energy capacity is being supported by domestic manufacturing, energy storage and emerging technologies such as green hydrogen and geothermal energy.

As energy demand grows, renewable energy will support **reliable power, greater energy security and a cleaner future**. Continued policy support and technological progress will help build an energy system that is **sustainable, self-reliant and future-ready**.

**References**

**Cabinet**

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2241799&reg=3&lang=1

https://www.pib.gov.in/PressNoteDetails.aspx?ModuleId=3&NoteId=158349&reg=48&lang=2

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2292445&reg=48&lang=1

**Ministry of Power:**

https://npp.gov.in/dashBoard/cp-map-dashboard

**Prime Minister Office (PMO):**

https://x.com/PMOIndia/status/2117118441916445054

**Ministry of New and Renewable Energy (MNRE)**

https://mnre.gov.in/documents/guidelines/physical-achievements-kzN2kTMtQWa?pageTitle=Physical-Achievements

https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2329695&reg=48&lang=1

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2296782&reg=48&lang=1

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2250039&reg=48&lang=2

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2293256&reg=48&lang=1

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2244667&reg=48&lang=2

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2245157&lang=2&reg=48

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2250039&lang=1&reg=3

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2291541&reg=48&lang=1

https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2026700&reg=48&lang=2

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2200435&reg=48&lang=2

https://pmkusum.mnre.gov.in/#/landing

https://mnre.gov.in/en /physical-progress/

https://mnre.gov.in/en/bio-energy-overview/

https://mnre.gov.in/en/new-technologies-overview/

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1777364&reg=48&lang=2

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2268992&reg=48&lang=2

https://pmsuryaghar.gov.in/#/

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2249408&reg=3&lang=1

**Ministry of Petroleum & Natural Gas**

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2266034&reg=48&lang=2

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2295494&reg=3&lang=1

https://ppac.gov.in/download.php?file=rep_studies/1785837484_LPG_Profile_Report_Q1_FY_2026-27_Final_Web.pdf

https://www.pmuy.gov.in/index.aspx

https://gobardhan.eil.co.in/

**Department of Atomic Energy (DAE)**

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2198951&reg=3&lang=1

https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=156593&ModuleId=3&reg=3&lang=2

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2294814&reg=48&lang=1

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https://www.pib.gov.in/PressReleasePage.aspx?PRID=2247971&lang=2&reg=48

**Ministry of Railways**

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2285240&reg=48&lang=1

**PIB Backgrounders**

https://www.pib.gov.in/FactsheetDetails.aspx?Id=150630&reg=3&lang=1

https://www.pib.gov.in/FactsheetDetails.aspx?Id=149232&reg=48&lang=2

https://www.pib.gov.in/PressReleasePage.aspx?PRID=2270740&reg=3&lang=1

https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=156593&ModuleId=3&reg=3&lang=2

https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=155990&ModuleId=3&reg=48&lang=2

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