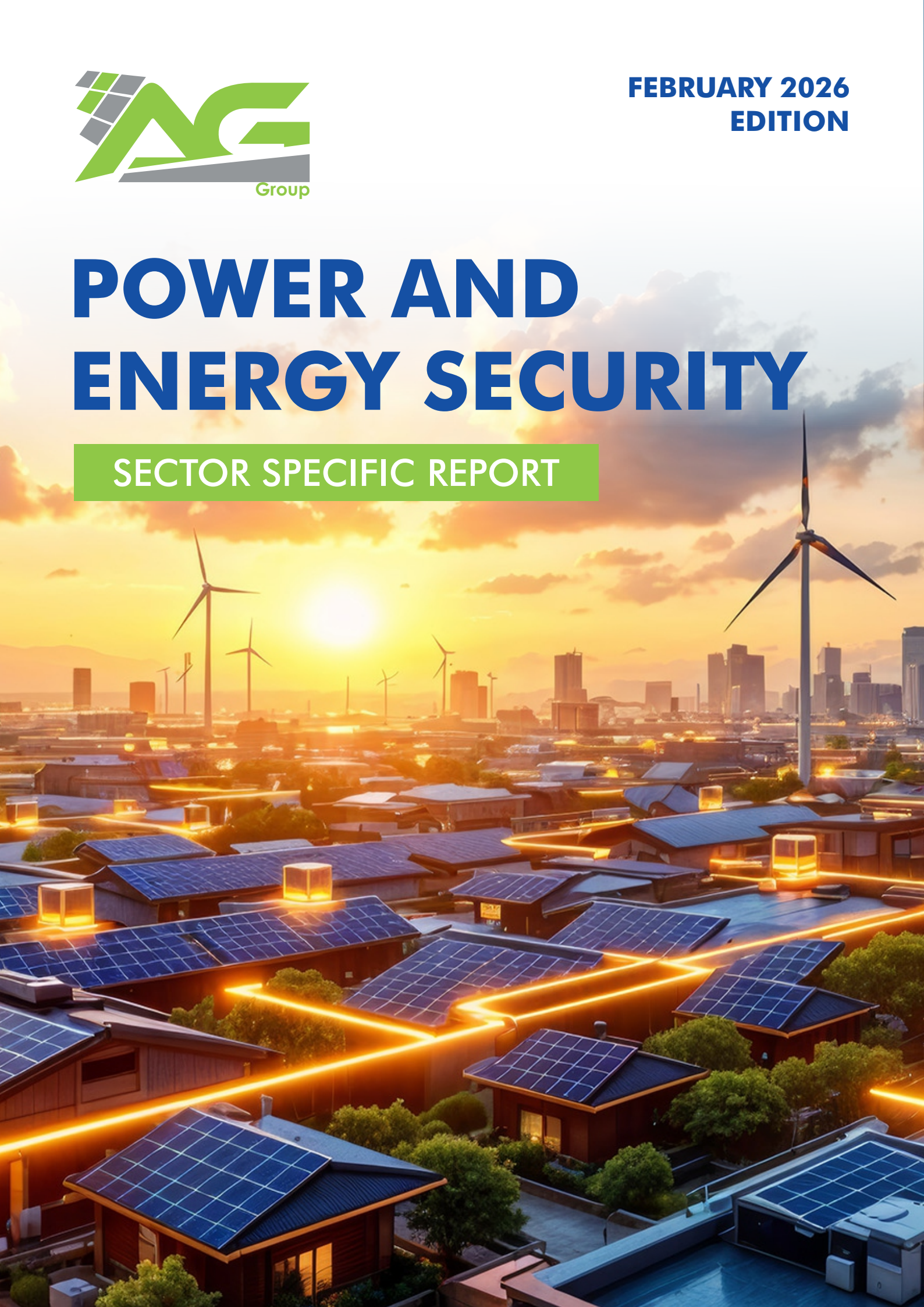
Group

FEBRUARY 2026
EDITION

POWER AND ENERGY SECURITY

SECTOR SPECIFIC REPORT



01

WEF 2026 BOOSTS GLOBAL PARTNERSHIPS FOR INDIA'S CLEAN ENERGY TRANSITION

The **World Economic Forum (WEF) 2026 Annual Meeting** served as a pivotal platform for advancing global collaboration around India's clean energy transition. **India's engagement at Davos** underscored its emergence as a **key driver of the global renewable energy agenda**, highlighting strong investor interest and growing international confidence in the **country's long-term decarbonization vision** and climate commitments.

At WEF 2026, India reinforced its commitment to **accelerating renewable energy deployment** through predictable policies, regulatory stability, and large-scale infrastructure readiness. Interactions with global leaders, financial institutions, and clean energy companies focused on **expanding investment flows into solar, wind, and allied technologies**. These discussions reflected recognition of India as one of the world's fastest-growing and most resilient renewable energy markets globally.

Source: https://www.energetica-india.net/news/wef-2026-engagements-secure-strong-global-endorsement-for-indias-re-transition-roadmap-says-union-minister-pralhad-joshi

Source: https://www.weforum.org/stories/2022/11/renewable-energy-generation-soars/

A central theme of India's narrative at the forum was the **alignment of clean energy expansion with inclusive economic growth**. National programmes promoting household solar adoption, decentralized energy access, and farmer-oriented renewable solutions illustrated how sustainability objectives are being integrated with livelihoods, energy affordability, rural development, and broader social equity goals. This approach **positioned India as a practical model for balancing climate action with development priorities**.

STRATEGIC OUTCOMES OF WEF 2026 FOR INDIA

GLOBAL RECOGNITION

- India positioned as a leading renewable energy market
- International visibility for clean energy leadership

PARTNERSHIP EXPANSION

- Strengthened cooperation with foreign governments
- Engagement with global energy and climate institutions

CAPITAL MOBILISATION

- Renewed investor interest in renewable energy projects
- Long-term confidence in clean energy investments

TECHNOLOGY ALIGNMENT

- Focus on scalable clean technologies
- Emphasis on digital and data-driven energy systems

TRANSITION ACCELERATION

- Faster deployment of renewable capacity
- Contribution to global clean energy and climate goals

Technology and innovation also featured prominently in discussions. India highlighted the **role of digital public infrastructure, advanced data analytics, and artificial intelligence** in enhancing grid management, improving energy efficiency, and supporting large-scale integration of variable renewable energy. These digital interventions were presented as essential tools for **reducing system losses and optimizing demand**. They were also emphasized as critical for strengthening long-term energy resilience across power systems.

Source:https://www.pib.gov.in/PressReleasePage.aspx?PRID=2217064&reg=3&lang=1

Beyond formal sessions, WEF 2026 enabled India to **deepen partnerships in emerging areas such as green hydrogen, energy storage, clean manufacturing, and carbon markets**. Led by the Union ministry overseeing new and renewable energy, these engagements strengthened international cooperation across the clean energy value chain and investment ecosystems. Collectively, the outcomes of WEF 2026 reinforced **India's position as a central hub for global clean energy collaboration and a key contributor to the worldwide transition toward a low-carbon future**.

02

HPCL COMMISSIONS RESIDUE UPGRADATION FACILITY AT VISAKH REFINERY

Hindustan Petroleum Corporation Limited (HPCL) has successfully commissioned a state-of-the-art **Residue Upgradation Facility (RUF)** at its Visakh Refinery in Andhra Pradesh, marking a significant advancement in India's refining infrastructure. The facility is a key component of the Visakh Refinery Modernisation Project and is designed to enhance the conversion of low-value heavy residues into high-value petroleum products. This development strengthens India's downstream refining capabilities while supporting long-term energy security objectives.

Source: https://www.newsonair.gov.in/pm-modi-lauds-successful-commissioning-of-hpcls-residue-upgradation-facility-at-visakh-refinery-in-andhra-pradesh/

The newly commissioned RUF has a processing capacity of **3.55 million tonnes per annum (MMTPA)** and uses advanced **LC-Max residue hydrocracking technology**. The unit enables the conversion of approximately **93 per cent of bottom-of-the-barrel residues** into valuable distillates such as diesel, aviation turbine fuel, and other transportation fuels. This high conversion efficiency represents a major technological leap in deep-conversion refining within the Indian oil sector.

With the commissioning of the RUF, HPCL expects a **significant improvement in refinery margins and fuel output**. Distillate yield at the Visakh Refinery is projected to rise by nearly **10 per cent**, enhancing the availability of cleaner fuels in the domestic market. The facility is also expected to **improve overall energy efficiency** by maximizing value extraction from residual streams. The upgraded configuration allows the refinery to meet growing energy demand more efficiently while **reducing reliance on external fuel sourcing**.

Source: https://www.tribuneindia.com/news/business/hpcls-visakh-refinery-residue-upgradation-facility-commissioned-with-worlds-first-lc-max-unit/

The project has also improved the refinery's **Nelson Complexity Index to 11.6**, placing it among India's most complex and flexible refineries. This increased complexity **enables the processing of heavier and opportunity crude oils**, improving cost optimization and operational resilience amid global crude price volatility. Such operational flexibility is increasingly important as refiners adapt to **changing crude quality patterns and global energy market uncertainties**.

STRATEGIC SIGNIFICANCE OF RESIDUE UPGRADATION FACILITY

1. Enhances conversion of heavy residues into high-value petroleum products
2. Strengthens domestic fuel production and supply reliability
3. Improves refinery flexibility to process varied crude grades
4. Supports sustained improvement in refining margins
5. Reinforces long-term competitiveness of refinery infrastructure

Source: https://www.thehansindia.com/andhra-pradesh/hpcl-commissions-residue-upgradation-facility-at-visakh-refinery-1037504#

Thus, the commissioning of the Residue Upgradation Facility represents a major milestone for HPCL and India's refining industry. By boosting fuel output, improving margins, and enabling efficient residue utilization, the project supports **national objectives of energy efficiency, self-reliance, and sustainable industrial growth**, reinforcing India's position as a technologically advanced refining hub.

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03

NHPC BRINGS FIRST UNIT OF NATION'S LARGEST HYDROPOWER PROJECT INTO COMMERCIAL OPERATION

On **23 December 2025**, **NHPC Limited**, a *Navratna* public sector enterprise under the **Government of India**, achieved a significant milestone by bringing the **first unit** of the nation's **largest hydropower project**—the **2,000 MW Subansiri Lower Hydroelectric Project**—into **commercial operation**. This development marks a major step forward in strengthening India's renewable energy capacity and long-term energy security.

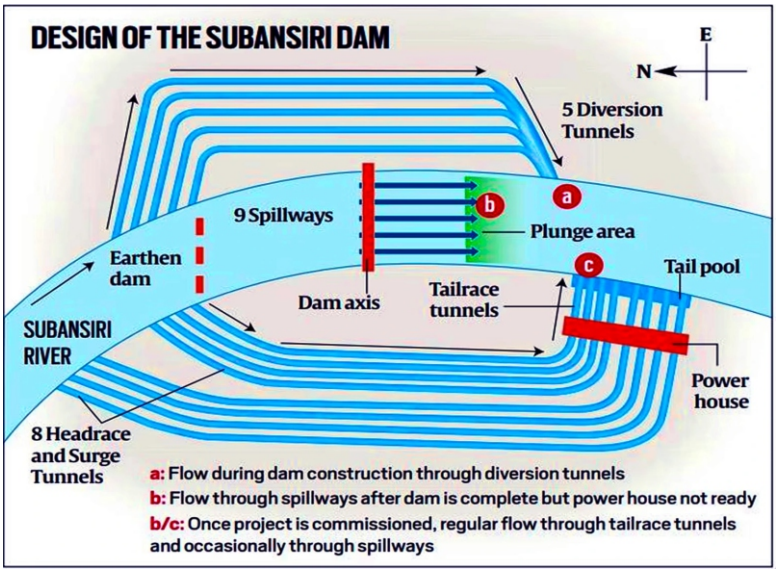
Source: https://www.newsip.in/nhpc-ignites-indias-largest-hydropower-unit-at-subansiri

The **Commercial Operation Date (COD)** of **Unit-2 (250 MW)** was inaugurated through a virtual event held in New Delhi, attended by senior officials from the Ministry of Power and NHPC. The successful commissioning was described as a landmark technical and institutional achievement, reflecting years of sustained effort in overcoming complex geological, environmental, and logistical challenges associated with **large hydropower development in the North-East region**. The achievement also highlights enhanced coordination between central agencies, state governments, and project engineers in delivering nationally significant infrastructure.

Source:https://www.pib.gov.in/PressReleseDetailm.aspx?PRID=2207797&reg=3&lang=1

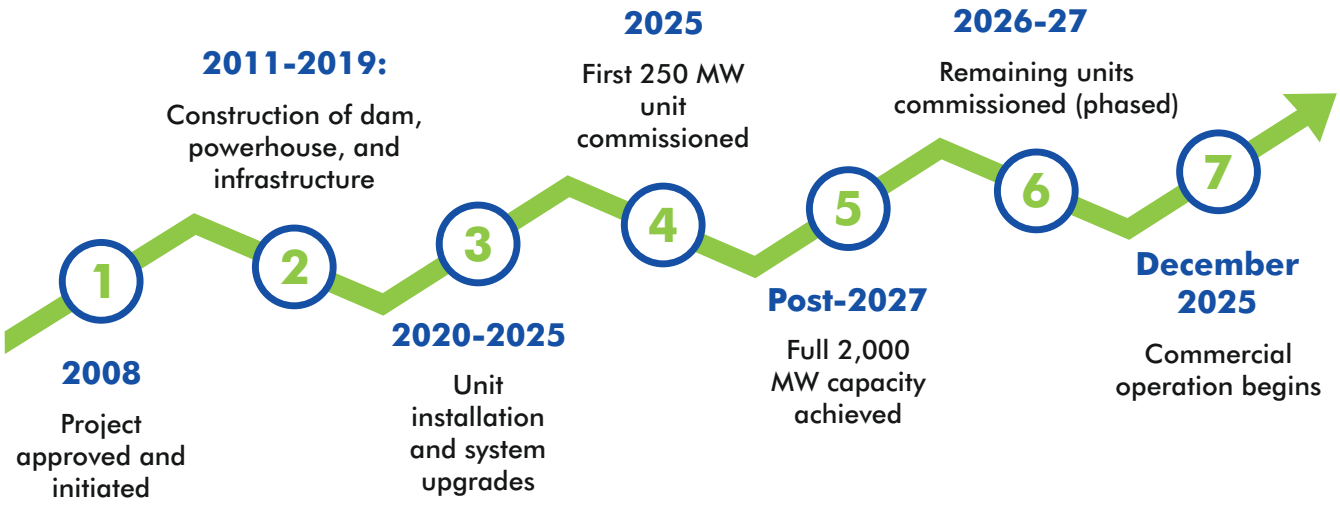
Located on the **Subansiri River** along the **Arunachal Pradesh–Assam border**, the Subansiri Lower project is planned with a total installed capacity of **2,000 MW**, comprising **eight units of 250 MW each**. With the first unit now operational, the project has begun phased power injection into the national grid. Once fully commissioned, it will significantly **enhance grid stability and power availability, particularly benefiting the North-Eastern states**.

The project is expected to play a pivotal role in **advancing India's clean energy transition by supplying large-scale, renewable, and low-carbon electricity**. It will also contribute to regional socio-economic development through improved infrastructure, employment generation, and reliable power supply. NHPC has indicated that additional units are scheduled for commissioning in a phased manner, with several units **expected to achieve commercial operation during 2026–27**.



Source: https://ajmaliasacademy.in/subansiri-lower-hydroelectric-project-begins-power-generation/

YEAR-WISE TIMELINE OF THE PROJECT



Designed as a **run-of-river hydropower scheme**, the Subansiri Lower Hydroelectric Project represents **one of the most ambitious renewable energy undertakings in the country**. The commencement of commercial operations of its first unit underscores NHPC's strategic role in delivering complex green energy infrastructure and supporting **India's broader goals of sustainable development and long-term decarbonization**.

04

FOCUS ON STRONG DISCOMS IN EDICON 2026 TO SUPPORT POWER SECTOR GROWTH

At the **Electricity Distribution Industry Conference (EDICON 2026)** held in **New Delhi** on **21–22 January 2026**, government officials and power sector stakeholders stressed the need for financially strong and operationally efficient **power distribution companies (DISCOMs)** to support India's rapidly expanding energy economy. The conference, organized by the **Ministry of Power** in partnership with the **All India Discoms Association (AIDA)**, highlighted distribution utilities as central to reliable service delivery and future growth of the power sector.

Source: https://www.newsonair.gov.in/union-minister-manohar-lal-calls-discoms-backbone-of-countrys-power-sector/

The discussions highlighted that ***strong DISCOMs are essential for improved services and greater responsiveness to consumer needs***. Efficient and financially viable distribution utilities are better positioned to meet rising electricity demand, reduce technical and commercial losses, and contribute to a resilient and future-ready power system. Efforts to strengthen DISCOMs includes reforms such as **cost-reflective tariffs**, where prices more accurately cover supply and distribution costs, balanced with **targeted subsidies** for vulnerable consumer segments in accordance with provisions of the **Electricity Act**.

Source: https://www.businesstoday.in/latest/economy/story/discoms-future-growth-depends-on-debt-restructuring-511439-2026-01-19

EDICON 2026 also served as a platform for sharing progress and recognizing excellence across the distribution sector. The first edition of the **AIDA annual report "India Discoms: 2025"** was unveiled, providing insights into sector performance, operational challenges, and ongoing initiatives, including policy developments like the **Draft Electricity Amendment Bill** and the **India Energy Stack**. Measures aimed at enhancing supply reliability, improving operational efficiency, and strengthening financial sustainability were discussed in detail.

In addition, awards were conferred on 12 DISCOMs to recognize best practices and performance excellence in key areas of electricity distribution reform and service delivery. These recognitions aimed to **promote healthy competition, highlight replicable models, and motivate utilities to adopt technology-driven and financially sustainable practices**. These reinforced the broader objective of strengthening the distribution segment as a foundation for power sector growth.

Source: https://www.psuconnect.in/psu-news/pfc-participates-in-edicon-2026-highlights-financial-viability-of-discoms

KEY CATEGORIES OF AWARDS

- Improvement in Recovery of Revenue in Rural Areas
- Best Use of Smart Meter Data
- Improvement in Consumer Satisfaction in Terms of Digital Payments
- Innovation in Renewable Energy Integration
- Agricultural Feeder Solarization
- Effective Change Management for Improvement in Consumer Services

Thus, **strengthening DISCOMs remains central to India's power sector agenda**. A financially sound distribution segment is viewed not only as critical for reliable electricity delivery but also as a key enabler of sustained economic growth and the country's long-term energy transition goals.

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05

INDIA ACHIEVES MAJOR MILESTONE AS POWER TRANSMISSION NETWORK EXCEEDS 5 LAKH CIRCUIT KM

India has achieved a major milestone in its power sector with the national electricity transmission network crossing **5 lakh circuit kilometres (ckm)**. This landmark reflects the country's sustained efforts to strengthen energy infrastructure to meet rising electricity demand while supporting the transition towards clean and sustainable power. The expansion significantly enhances grid connectivity, reliability, and the ability to transmit power efficiently across regions.

Source: https://energy.economictimes.indiatimes.com/news/power/indias-power-transmission-network-crosses-5-lakh-circuit-km/127139293

According to official data from the **Ministry of Power**, the transmission network—comprising lines of **220 kV and above**—has now reached over 5 lakh ckm, supported by a transformation capacity of around **1,407 GVA**. This growth demonstrates India's steady progress in building a robust national grid capable of balancing supply and demand, integrating diverse energy sources, and ensuring uninterrupted power delivery across urban and rural areas.

Source: https://energy.economictimes.indiatimes.com/news/renewable/ntpc-green-launches-25-gw-solar-parks-in-rajasthan-a-major-step-towards-renewable-energy/125237951

The milestone was achieved with the commissioning of a **628 ckm, 765 kV transmission line** connecting **Bhadla II and Sikar II substations in Rajasthan**. This critical infrastructure enhances the evacuation of renewable energy from the Rajasthan Renewable Energy Zone and strengthens the overall capability of the national grid to absorb large volumes of clean power. The project is strategically important as **Rajasthan has emerged as one of the country's largest hubs** for solar and wind energy generation.

STRATEGIC SIGNIFICANCE OF TRANSMISSION NETWORK EXPANSION

1 — NATIONAL TRANSMISSION EXPANSION
Enables long-distance, high-voltage power flow across regions

2 — ADVANCED GRID ARCHITECTURE
Supports higher voltage levels for efficiency

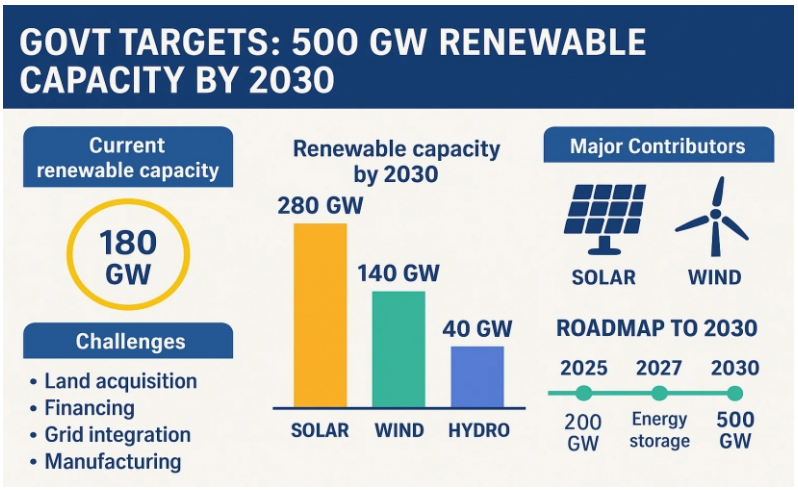
3 — RENEWABLE ENERGY READINESS
Facilitates seamless absorption of large-scale solar and wind power

4 — REDUCED TRANSMISSION LOSSES
Improves operational efficiency and cost-effectiveness

5 — FOUNDATION FOR ENERGY SECURITY
Prepares India for future electricity demand and clean energy targets

Since April 2014, India's power transmission network has expanded by nearly **71.6 per cent**, with over **2.09 lakh ckm** of new transmission lines and **876 GVA** of additional transformation capacity. This expansion has increased the **inter-regional power transfer capacity to more than 1,20,000 MW**, supporting the vision of **"One Nation, One Grid, One Frequency."**

Further, several inter-state and intra-state transmission projects are under development, expected to add tens of thousands of circuit kilometres in the coming years. These investments are crucial for evacuating large-scale renewable energy, enhancing grid resilience, and supporting India's target of achieving **500 GW of renewable energy capacity by 2030**, reinforcing its commitment to a secure and sustainable energy future.



Source: https://batterybusiness.in/govt-targets-500-gw-renewable-capacity-by-2030/

EMINENT INSIGHT

"To secure the energy needs of 1.4 billion Indians is our priority. Given the changing global circumstances, diversifying of energy sources is part of this strategy."

Shri Piyush Goyal
Union Minister of Commerce and Industry
Government of India

RESOURCES

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GURUGRAM

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C-122,
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Sector 56
Gurugram - 122011

DELHI

SYNERGY HUB:

B-4/19,
Safdarjung Enclave,
New Delhi-110029

CORPORATE OFFICE:

609,
Pearls Best Height - 2,
Netaji Subhash Place,
New Delhi

DIMAPUR

2nd Floor/no.419, 3rd mile Darogapathar, Block D, Nagarjan Junction.
Chumukedima- 797115

GUWAHATI

Krine Vista, Flat - 5B, Block B,
Ananda Nagar, Bye Lane 3,
Opp. Anil Plaza, G S Road,
Guwahati - 781005, Assam

HYDERABAD

202, Zeenath Residency,
Srinagar Colony, Panjagutta,
Hyderabad - 500073

IMPHAL

Unit-6, Second Floor Customs,
Office Building, Sangakpham,
Opp. Dav School, Imphal,
Imphal East Manipur - 795010

info@aggrp.in | www.aggrp.in | +91 9810046249 | 0124 4235267

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