Power Supply Improvement

1. **Record Demand Met**: India successfully met an all-time maximum power demand of 250 GW (May 24) compared to 130 GW (2014). In June 2025, a peak demand of 241 GW was met. **Peak shortage is zero as of now.**

2. **Sharp Reduction in Power Shortages**: Due to significant additions in generation and transmission capacities, energy shortages at the national level have reduced to a mere **0.1% (April 25)**, a major improvement from **4.2% (2013-14)**.

3. **Total electricity generation** grew annually by 5.2% in 2024-25. It increased from 1739 BU (FY24) to 1829 (FY25)

4. **Improved Power Availability:** The average electricity supply in rural areas increased from 12.5 hours (2014) to 22.6 hours (2025), with urban areas reaching 23.4 hours.

Generation

5. **Installed Generation Capacity:** During 2024-25, **34 GW** generation capacity (including 29.5 GW of Renewable Energy) has been added, **the highest ever**. The total installed generation capacity in the country is **475 GW** (March 2025) compared to **249 GW** (2014)

6. **Thermal projects.** During the last year, Commissioned **5.17 GW** and Awarded **23.16 GW**.

7. **Coal Stock Position:**
   - The coal stock at thermal power plants is comfortable at 57.5 Million Tons (31st May 2025) compared to 44.7 MT (30th June 2024).
   - Imported coal for blending reduced from 24 MT (FY 24) to 14 MT (FY 25). Did not extend advisory to blend coal beyond 15th October, 2024.

- Captive coal production increased from 117 million tons (FY 24) to 153 million tons (FY 25).

8. **SHAKTI policy**: Cabinet approved the revised SHAKTI Policy for Coal Allocation to Power Sector streamlining coal linkage mechanisms for the power sector. This will increase ease of doing Business, enhance coal accessibility, and operational flexibility.

9. **Hydro**

i) **Budgetary Support towards Cost of Enabling Infrastructure** for hydro projects has been widened in September 2024. To include cost of enabling infrastructure (transmission lines, roads, bridges, rail sidings etc.). This envisages development of 31 GW of Projects. The total outlay is Rs. 12,461 cr. The scheme period is till 2032.

ii) For the **North Eastern States**, a Scheme for **Central Financial Assistance (CFA)** towards equity participation by State Governments for development of hydro electric projects was approved in August 2024, to support the development of 15 GW of hydro capacity. These States would be provided up to Rs 750 Cr per project (24% of project cost) as CFA towards equity. This will cost Rs. 4136 cr. The scheme period is till 2032.

10. **Commissioned the following Hydro Projects**

i) In **Himachal Pradesh**, Parbati-II HEP (800 MW) in April 2025.

ii) In **Madhya Pradesh**, 178 MW Omkareshwar Floating Solar PV in October 2024.

iii) In **Rajasthan**, 107 MW Bikaner Solar Power Project in April 2025, with efforts on to commission full capacity of 300 MW this year.

iv) In **Bhutan**, 680 MW of Punatsangchhu-II project, with efforts are on to commission full capacity of 1020 MW this year.

v) In **Uttarakhand**, 250 MW of Tehri PSP.

11. Approved the following Projects

i) In **Nepal**, 669 MW Lower Arun Hydroelectric Project. The project cost is 5792 Cr. The implementation period is 60 months.

ii) In **Uttar Pradesh**, 1200 MW Jalaun Solar Park with project cost of ₹ 797 crore by NHPC in April 2025.

iii) In **Arunachal Pradesh**:

- **Heo (240 MW) and Tato-I (186MW)** approved in November 2024**.** Their cost is ₹1750 Cr and ₹1939 Cr respectively. Scheduled completion period is 50 months.
- Public Investment Board approval received for **Tato-II HEP (700 MW)** of NEEPCO in May 2025. The estimated cost of the project is ₹8146.21 Cr.

12. Government in September 2024 conferred **Navratna status** on NHPC and SJVN, both CPSEs, granting greater autonomy to take up projects.

13. Lanco Teesta Hydro Power Limited (LTHPL) Merged with NHPC in January 2025, consolidating NHPC's ownership of the project.

Transmission Network

14. Capacity Expansion:

i) **Approved 9250 ckm** (129 GVA) to evacuate 63 GW under Inter State Transmission System (ISTS) costing Rs. 65,000 Cr.

ii) **Awarded 22,050 ckm** (198 GVA) to evacuate 109 GW (44 ISTS projects) costing ₹1.46 lakh Cr.

iii) **Commissioned 9059 ckm** (97 GVA) of 220 kV and above transmission lines. The total network length now is **4.95 lakh ckm** now.

15. **National Electricity Plan: Transmission:** Notified National Electricity Plan from 2023 to 2032 for central and state transmission systems to meet a peak demand of 388 GW by 2032. The total cost of the plan is Rs 9.15 lakh Cr. The transmission network will be expanded from 4.95 lakh ckm in May'25 to 6.48 lakh ckm in 2032.

16. Under **One Sun One World One Grid**, Agreements were signed Saudi Arabia (1700 km, ₹ 47,000 Cr) and UAE (1400 km, ₹43,500 Cr) for cooperation in grid interconnection.

17. Standard Bidding Documents for procurement of Inter-State Transmission Services through Tariff Based Competitive Bidding (TBCB) process amended on 5th June 2025 by incorporating Insurance Surety Bond (ISB) and Payment on Order Instruments (POI) as alternative security instruments.

Storage Projects

18. About **5.4 GW** has been awarded taking the PSPs under implementation to **10 GW** (eight projects). Additionally **2.5 GW** (two projects) are under bidding.

19. **Battery Energy Storage Systems:** Approved development of 13.2 GWh BESS in various States under Viability Gap Funding (VGF) Scheme. Tendering process for 6.7 GWh has been concluded and 3 GWh has been awarded.

Distribution

20. **Revamped Distribution Sector Scheme (RDSS):** Under RDSS, 19.8 Cr smart meters, 52.5 lakh Distribution Transformers and 2.1 lakh feeder meters have been sanctioned. Around 2 Cr smart meters have been installed under RDSS and overall more than 3 Cr smart meters have been installed across India under various schemes.

21. So far, projects worth Rs 1.31 lakh Cr for smart metering works, and Rs 1.52 lakh Cr for strengthening distribution network have been sanctioned. Overall 28% physical progress has been achieved.

As a result, **Aggregate Technical and Commercial (AT&C) losses** have declined from 22% (FY21) to 16% (FY24).

Unrealised cost per unit of electricity supplied has reduced from 71 paise (FY 21) to 19 paise (FY24).

22. Household Electrification: Have approved electrification of about 13.6 lakh balance households;

- this includes 1.29 lakh Particularly Vulnerable Tribal Group (PVTG) households identified under PM Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN), and
- 2.86 lakh households and public institutions identified under Dharti Aaba Janjatiya Gram Utkarsh Abhiyan (DA-JGUA).

23. Agriculture feeder segregation (RDSS): Have approved balance 31,119 feasible mixed agriculture feeders to provide reliable daytime power supply to farmers. Till date, 6,200 have been segregated. The cost of this is Rs 40,525 crore.

24. Ease of living: During FY25-

a. All States/UTs now reduced timelines for new connection (3 days in Municipal Corporations, 7 days in Municipalities and 15 days in Rural Areas). (14 States in 2024).
b. All States/UTs are now issuing simplified bills in regional language. (21 States in 2024).
c. 18 States/UTs have simplified their new connection charges (14 States in 2024).
d. 33 States/ UTs have notified Green Energy Open Access Regulations (23 States in 2024).

25. Distribution Utility of Chandigarh has been successfully privatized in February 2025.

Energy Conservation and Efficiency

26. To support traditional **MSMEs** to shift towards energy efficiency, **ADEETIE** (Assistance in Deploying Energy Efficient Technology in Industries and Establishments) Scheme has been operationalised. The scheme provides interest subvention to MSMEs and handholds them in conducting investment grade energy audits. The budgeted outlay is Rs. 925 crore and Rs. 75 crore from the Bureau of Energy Efficiency.

27. Indian Carbon Market (ICM). To meet country's ambitious climate goals, a robust National Framework for Indian Carbon Market (ICM) is being developed. The Indian Carbon Market Framework has two key mechanism – Compliance mechanism which aims to address the emissions from its energy use and industrial sectors and offset mechanism to incentivize the voluntary actions from entities (not covered under compliance) for GHG reduction, thus providing a comprehensive approach to decarbonization of the economy.

- The Central Government notified the Carbon Credit Trading Scheme, in June 2023 and amendment notification in December 2023.
- Subsequently, Government of India published sectors covered under Compliance and Offset Mechanisms and operational procedures for both the mechanisms.
- In April 2025, Mandatory targets for large industries in four emission intensive sectors (Aluminium, Cement, Chlor-Alkali and Pulp & Paper) have been notified by the Central Government for comments.
- Additional four sectors (Refinery, Petrochemical, Iron & Steel and Textile) have been approved by the National Steering Committee.
- It is estimated that, these targets will reduce emissions by 93 million tCO2 per annum by 2030 with baseline of 2023-24.
- Government of India also published 8 methodologies covering renewable energy, hydrogen production, industrial energy efficiency, landfill methane recovery, and mangrove afforestation & reforestation.

28. **Sustainable Building Codes Issued.** We have published new Building Codes with sustainability features in September, 2024. This will further reduce energy consumption by 18%. Kerala has already adopted these codes.

- The Energy Conservation Building Code (ECBC) has been developed to make commercial buildings more energy efficient - keeping them cooler in summers, warmer in winters, and reducing need for lighting and ventilation.
- In September 2024, ECBC was upgraded to Energy Conservation and Sustainability Building Code (ECSBC), adding features like water conservation, waste management, and indoor air quality.
- ECSBC 2024 introduces three performance levels:
    - ECSBC Compliant (mandatory)
    - ECSBC Plus (voluntary)
    - Super ECSBC (voluntary)
- A separate ECSBC for Residential Buildings (Eco Niwas Sanhita-2024) promotes energy efficiency, renewables, and better indoor environment.
- These codes apply to new buildings with connected load ≥ 100 kW or contract demand ≥ 120 kVA.
- State governments can modify these codes as per local climate; after notification, they must include it in building bye-laws and approval processes.
- ECSBC-compliant buildings can lead to 18% more energy savings.
- By 2030, with 1 billion m² of new commercial buildings expected, ECSBC can save up to 300 BU electricity, cut 15 GW peak demand, and avoid 250 million tons CO_2.

Key Achievements:

- 26 States/UTs have notified ECBC
- 13 States have included it in building bye-laws
- 3500+ buildings approved as ECBC-compliant
- Kerala is the first state to notify ECSBC.

29. **EV Charging Guidelines.** We have issued guidelines for setting up of stations for Electric Vehicle Charging and Battery Swapping. This will facilitate setting up of charging stations.

30. The **Minimum Energy Performance Standards** Air Conditioners, Ceiling Fans, and Refrigerators have been upgraded. This will help in reducing your electricity bills.

Reforms and Initiatives

31. **Tariff Based Competitive Bidding (TBCB) Guidelines** for Renewable Energy and ISTS Transmission Service Providers have been amended to allow Insurance Surety Bonds by bidders.

32. **Computer Security Incident Response Team Operationalised.** CSIRT-Power, set up by the Ministry of Power, is a 24x7 cybersecurity unit for handling incidents in the power sector. A dedicated facility was inaugurated on 23rd September 2024 for digital forensics and threat monitoring.
    - Six dedicated CERTs (Computer Emergency Response Teams) have been established for Thermal, Hydro, Transmission, Grid Operation, Renewable Energy, and Distribution, each with sector-specific cyber crisis plans.
    - Advanced training programs launched with IIT Kanpur, IIT Kharagpur, IISc Bangalore, and Rashtriya Raksha University; 251 personnel trained in 8 batches.
    - Over 2,000 professionals trained by National Power Training Institute (NPTI); 118 Ministry of Power officials trained in basic cybersecurity.
    - Cybersecurity was a key agenda in Regional Power Ministers' Conferences in Mumbai, Bengaluru, and Chandigarh, with utilities advised to strictly follow cybersecurity norms.
    - Cybersecurity regulations specific to the power sector are being finalized by the Central Electricity Authority (CEA).
    - New guidelines issued to improve the quality of cybersecurity audits, using the Quality and Cost Based Selection (QCBS) method for auditor selection.
    - Supply chain security strengthened with mandatory testing of imported power equipment; CPRI designated as the nodal agency for cybersecurity testing.
    - Trusted Telecom Portal will be used for safe procurement of IT equipment and services across the power sector.

ANNOUNCEMENTS

1. **Roll out Ultra High Voltage Alternating Current (UHV AC) Transmission System.** Nine lines of 1100 kV have been identified for development by 2034. Testing facilities for these lines and equipment are being developed by Central Power Research Institute.

2. **Waiver of Inter-State Transmission Charges for storage projects** has been extended until 30th June 2028. Pumped Storage Projects awarded and Battery Energy Storage Systems commissioned before this date will be eligible. This extension will support the development of storage needed to meet the country's requirements.

3. Ministry of power has approved a **Viability Gap Funding scheme to develop 30 GWh of BESS** in addition to the 13.2 GWh currently under implementation. This will cost ₹ 5,400 Cr. This will help in meeting the country's BESS requirement of 2028 and attract an investment of about ₹33,000 Cr.

4. **Right of Way (RoW):** We increased the compensation paid to land owners for laying transmission lines. Compensation for tower area increased from 85% to 200% of land value and for RoW corridor from 15% to 30% of land value. Compensation has been linked to market value of land. Subsequently, issued supplementary Guidelines on 21st March 2025 for assessing the market rate of land by registered valuers**.** Haryana and Delhi have adopted the guidelines**.**

5. Payments to **Intra-State Transmission Systems** have now been brought under the scope of the **Late Payment Surcharge** Rules, along with Inter-State Transmission Systems. This move will attract greater private investment in the expansion of Intra-State Transmission Networks.