

5. Electricity (Amendment) Bill, 2025 – Polity

Recently, the Electricity (Amendment) Bill, 2025 was unveiled to reform the electricity sector in India

Structural Reforms – The Bill aims to introduce regulated competition in electricity distribution—an area historically dominated by monopoly discoms—allowing multiple licensees to operate within the same geographical area. It enables shared and optimised distribution infrastructure, preventing costly duplication of wires, poles, transformers, and feeder networks.

Universal Service Obligation (USO) –

1. All licensees must ensure non-discriminatory access to electricity for every consumer, irrespective of profitability.
2. This ensures availability of reliable supply even for remote or low-paying consumer groups. The Bill allows State Electricity Regulatory Commissions (SERCs) to exempt distribution licensees from USO obligations for large consumers (>1 MW) eligible for Open Access, but only after consultation with State Governments.
3. This recognises the distinct consumption pattern of bulk consumers like industries, IT parks, and commercial hubs.

Tariff and Cross-Subsidy Rationalisation

The Bill strengthens the shift towards cost-reflective tariffs, reducing the historical gap between Average Cost of Supply (ACS) and Average Revenue Realisation (ARR). Subsidies for farmers, low-income households, and vulnerable groups will continue through transparent, budgeted direct subsidies, rather than cross-subsidisation. It proposes elimination of cross-subsidy for Manufacturing Industry, Railways, and Metro networks within five years to –

1. Enhance industrial competitiveness
2. Reduce electricity cost burdens on logistics and public transport
3. Enable “Make in India” with lower energy inputs

The Bill emphasises tariff transparency, faster tariff determination, and reduction of political interference in pricing.

Network Efficiency and Infrastructure Modernisation

Appropriate Commissions are empowered to regulate wheeling charges to ensure fair compensation for shared use of existing distribution networks. Prevents network duplication, ensuring everyone uses a common network with regulated access—similar to telecom or gas pipeline frameworks. Introduces legal definitions for Energy Storage Systems (ESS), recognising them as critical infrastructure for –

1. Renewable energy integration
2. Peak load management
3. Grid stability
4. Ancillary services like frequency regulation

This aligns with India’s growing solar and wind capacity where storage is the “new backbone” of reliable supply.

Governance and Regulatory Strengthening

Proposes an Electricity Council—a federal platform involving Centre and States—for –

1. Policy coordination
2. Harmonisation of regulations
3. Consensus-building on structural reforms

SERCs empowered to –

1. Enforce performance standards
2. Penalise non-compliance by distribution companies
3. Suo motu determine tariffs when discoms delay applications, ensuring accountability and consumer protection

This reduces regulatory capture and strengthens independent oversight of the power sector.

Sustainability and Power Market Development

The Bill significantly enhances obligations for procurement of non-fossil energy, enabling India to meet RE targets and NDC commitments. Non-compliance with renewable mandates attracts stringent penalties, signalling a zero-tolerance approach. Promotes development of –

1. New power market instruments
2. Advanced trading platforms
3. Day-ahead, real-time, and green day-ahead markets

These reforms support a dynamic electricity market similar to global best practices.

Legal and Operational Clarity – Detailed legal provisions for the Electric Line Authority to –

1. Oversee installation, operation, and maintenance of power lines
2. Resolve disputes with landowners and local authorities
3. Provide fair compensation for Right of Way (RoW)

Grants the Authority powers equivalent to the Telegraph Authority under the Indian Telegraph Act, 1885, enabling efficient infrastructure expansion.

Electricity Sector in India

1. Economic Significance – Electricity is one of the eight Core Industries, contributing 19.85% to the Index of Core Industries—second only to Petroleum Refinery Products. The sector is a key enabler for –

1. Industrial growth
2. Agricultural modernisation
3. Urbanisation
4. Digital infrastructure
5. EV transition

2. Constitutional Framework – Electricity falls under the Concurrent List (Entry 38), enabling legislation by both Centre and States. This dual jurisdiction requires strong Centre–State coordination, making regulatory harmonisation essential.

India's Global Standing and Demand Trends

India is the 3rd largest producer and consumer of electricity globally.

Installed Capacity (June 2025) – 476 GW, comprising –

1. Thermal (coal, gas, diesel)
2. Renewable energy (solar, wind, bioenergy, small-hydro)
3. Large hydropower
4. Nuclear

Growing Consumption –

1. FY25 consumption – 1,694 billion units—33% growth over FY21
2. FY26 Peak Demand – projected 277 GW
3. Expected annual demand growth – 6–6.5% for next five years

Drivers –

1. Rapid electrification
2. Industrial growth
3. Digital economy
4. EV charging infrastructure
5. Urbanisation and rising incomes

Challenges Facing India's Electricity Sector

1. High AT&C (Aggregate Technical & Commercial) Losses – Persistently high losses due to –

1. Power theft
2. Poor billing and metering
3. Outdated infrastructure
4. Inefficient distribution systems

These losses weaken discom finances, causing debt accumulation and delayed payments to generators.

2. Lack of Competition in Electricity Supply – Consumers—especially industries and households—are tied to single discom monopolies. This reduces service quality, innovation, and consumer choice.

3. Cross-Subsidisation Distortions – Industrial and commercial users bear heavy tariffs to subsidise agriculture and households. Consequences include –

1. Reduced global competitiveness of Indian manufacturing
2. Increased operational cost of railways and metros
3. Pressure for industries to shift to captive power plants

Related Government Steps

1. Revamped Distribution Sector Scheme (RDSS) – Aims to reduce AT&C losses and modernise discoms. Over 20.33 crore smart meters sanctioned across 28 States/UTs. Smart meters help –

1. Improve billing and collection efficiency
2. Enable prepaid consumption
3. Detect losses
4. Improve financial viability of utilities

Inter-State Transmission System (ISTS) – Built on sharing of infrastructure allowing multiple players equitable access. Both public and private Transmission Service Providers compete under CERC oversight. Powergrid remains a major CPSU developer of transmission projects.

Renewable Energy Push

National Solar Mission and major RE policies boosted solar, wind, biomass, and small-hydro.

Strong focus on –

1. Rooftop solar
2. Solar parks
3. Green hydrogen
4. Storage solutions

Renewable Purchase Obligations (RPOs) enforce procurement of clean energy by discoms and industries.

Improving Transmission Infrastructure

Green Energy Corridor for integrating renewables. Strengthening of intra-state networks. National Grid synchronisation ensures smooth power flow across regions.

Universal Electrification Efforts

DDUGJY – rural electrification, feeder separation, agricultural load management.

Saubhagya – universal household electrification across India.

Prepaid smart meters – improving billing accuracy and preventing arrears.

Promoting Clean and Efficient Energy

Replacement of old subcritical plants with supercritical and ultra-supercritical technologies. Large-scale energy efficiency initiatives –

1. Standards & Labelling for appliances
2. PAT Scheme for industries
3. UJALA LED scheme—global success model

Innovation & Future Technologies – Smart grids, AI-driven load management, and predictive maintenance. ESS deployment and large-scale battery manufacturing. Accelerated EV charging network creation. National Green Hydrogen Mission to decarbonise steel, fertiliser, mobility, and power sectors.

Attracting Investments

100% FDI permitted in power sector segments. PPP models encouraged in –

1. Transmission
2. Renewable energy parks
3. Smart grid development

India aims to become one of the world's largest RE investment destinations.

Source – <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2192895#> –

[text=The%20Electricity%20\(Amendment\)%20Bill%2C%202025%2C%20introduces%20key%20reforms,direct%20power%20access%20for%20industries.](https://www.pib.gov.in/PressReleasePage.aspx?PRID=2192895#)

