4. Power Distribution Utilities - Economy

India's power distribution utilities have recorded a collective Profit After Tax (PAT) of ₹2,701 crore in FY 2024–25

DISCOM losses persisted after unbundling

Legacy structural issues continued even after corporatization- Many DISCOMs inherited weak metering, poor billing/collection, and political tariff constraints from erstwhile State Electricity Boards, so unbundling alone did not fix fundamentals.

Chronic "revenue gap" problem- The gap between Average Cost of Supply (ACS) and Average Revenue Realised (ARR) persisted due to delayed tariff revisions, under-recovery from subsidised categories, and delayed subsidy reimbursements.

High AT&C losses- Commercial losses (theft, unmetered supply) and technical losses (aged network, overloaded feeders) translated into a large portion of energy not yielding revenue.

Initiatives in the Distribution Sector

Revamped Distribution Sector Scheme (RDSS)- the "capex + accountability" reform lever

Objective- Improve DISCOM financial viability and service quality by reducing AT&C losses and ACS–ARR gap through targeted investments and reforms.

Core interventions

Infrastructure modernization- feeder segregation/strengthening, distribution transformer augmentation, HT/LT line upgrades, substation improvements.

Accelerated smart metering (AMI)- strengthens billing accuracy, reduces theft, enables remote disconnection/reconnection, and improves collection efficiency.

Design feature that matters for exams- Funding is linked to pre-qualifying criteria + performance trajectories (loss reduction, governance, service levels), pushing outcome-based reform.

Additional Prudential Norms- finance linked to performance discipline

Purpose- Stop the cycle where DISCOM losses are repeatedly refinanced without fixing root causes.

Mechanism- Lenders like PFC/REC apply prudential conditions to loans so that funding aligns with reform milestones and financial discipline.

Expected impact- Improves credit culture and nudges DISCOMs toward timely accounts, credible loss reporting, and realistic operational planning.

Amendments to Electricity Rules- enforce cost recovery and transparency

Problem addressed- Tariffs and subsidies often failed to reflect true cost; delays in tariff orders and subsidy payments created cash-flow stress and arrears.

Reform intent- Ensure timely tariff adjustments, prudent tariff structures, and clearer subsidy accounting so the DISCOM can aim for full cost recovery (and regulators/consumers can see the real picture).

Electricity Distribution (Accounts and Additional Disclosure) Rules, 2025- governance through uniform accounting

Introduces uniform accounting and enhanced disclosures for distribution utilities to improve transparency and financial governance.

1. Reduces "creative accounting" risk
2. Improves comparability across utilities/states
3. Strengthens regulator and lender confidence, thereby lowering risk premium over time

Late Payment Surcharge (LPS) Rules- enforce payment discipline across the power chain

Core idea- Strengthen contract enforcement by penalising delayed payments and creating structured mechanisms to liquidate legacy dues, improving sector liquidity.

crucial- Timely payments to generators and transmission entities restore investability, including for renewable projects where cash-flow certainty is critical.

India's power sector snapshot

Scale- India is among the world's largest electricity producers/consumers; capacity growth plus demand surges (summer peaks) increase stress on distribution and grid management.

Demand composition implications- Industry-led consumption means power quality and reliability affect competitiveness; agriculture and households raise subsidy and cross-subsidy issues, affecting DISCOM finances.

Key concerns in the power sector

High T&D / AT&C losses

Technical drivers- aging conductors, overloaded transformers, low-voltage networks, inadequate reactive power management.

Commercial drivers- theft, meter tampering, unmetered connections, weak enforcement, poor billing systems.

Reform link- RDSS + smart metering directly targets this structural loss pool.

Fuel supply and energy security

Coal logistics and import exposure- Shortages and global price volatility create cost shocks, which—if not passed through in tariffs—hit DISCOM balance sheets.

Renewable integration constraints

Intermittency + balancing needs- Higher RE share requires storage, flexible generation, forecasting, and grid modernization; otherwise, curtailment and congestion rise.

Reform link- Green Energy Corridor and storage support aim to reduce grid friction, but distribution readiness remains a binding constraint.

Inadequate transmission and evacuation

Mismatch problem- Generation (especially RE-rich zones) has grown faster than transmission build-out, leading to congestion and inefficient dispatch.

Rising peak demand and system adequacy

New drivers- urbanization, heat waves/cooling demand, industrial growth, EV charging.

Distribution-side stress- Peak coincident loads expose weak feeders/transformers, increasing outages and losses unless capex keeps pace.

Government initiatives

Renewables push (supply-side scale-up)

NSM + wind mission + RECs + ISA- expand renewable supply, markets, and global cooperation.

VGF + PLI solar PV- supports project viability and domestic manufacturing ecosystem.

Grid and distribution enablers (system-side readiness)

Green Energy Corridor- transmission for RE integration.

PM-KUSUM- solarisation of agriculture demand, potential reduction in DISCOM subsidy burden if designed with correct metering and feeder discipline.

RDSS- distribution strengthening—the "last mile" that determines whether sector finances stabilize.

Emerging technologies (flexibility + reliability)- Battery storage, hybrid, RTC power, offshore wind, floating solar, green hydrogen- improve system flexibility and decarbonization depth.

New chapter for distribution

Reforms are now converging on a single logic

1. Measure accurately (smart meters + uniform accounts)
2. Bill and collect efficiently (AMI + governance)
3. Recover costs transparently (tariff/subsidy discipline)
4. Enforce payment discipline (LPS rules)
5. Link finance to reform delivery (prudential norms + RDSS conditionalities)

Conclusion and way ahead

1. If sustained, these measures can convert DISCOMs from fiscally risky intermediaries into bankable utilities, enabling reliable supply and faster RE absorption.
2. **Next-step priorities**
    a. Reduce ACS–ARR gap through timely tariff orders and on-time subsidy payments.
    b. Rapid rollout of smart metering + feeder/DT metering to tighten energy accounting.
    c. Strengthen regulatory capacity for true-ups, loss audits, and subsidy transparency.
    d. Improve consumer service (outage response, billing grievance redressal) to raise willingness-to-pay.
    e. Build distribution-level flexibility (storage at substations/feeder level, demand response, time-of-day tariffs) for RE-heavy grids.

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