



COMPARATIVE STUDY OF GOVERNMENT DISCOMs VS PRIVATE DISCOMs IN INDIA: A FIVE-YEAR PERFORMANCE ANALYSIS BASED ON PFC/REC INTEGRATED RATINGS, DUR FRAMEWORK, OPERATIONAL EFFICIENCY AND FINANCIAL SUSTAINABILITY (2020–2025)

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Abstract - The Indian power distribution sector plays a critical role in ensuring reliable electricity supply, financial sustainability, and consumer service delivery. This study presents a comparative analysis of Government-owned and Private Distribution Companies (DISCOMs) in India during FY2020–FY2025. The research utilizes secondary data collected from Power Finance Corporation (PFC), REC Limited, Ministry of Power reports, Integrated Rating & Ranking Reports, and the Distribution Utilities Ranking (DUR) framework. The analysis focuses on key performance indicators including AT&C losses, billing efficiency, collection efficiency, ACS-ARR gap, smart metering adoption, resource adequacy, renewable purchase obligation achievement, and consumer service ratings. The findings indicate that private DISCOMs such as TPDDL, BRPL, BYPL, and AEML consistently outperform many Government DISCOMs in operational efficiency, customer relationship management, digital integration, and financial sustainability. The study further highlights the importance of smart metering, AI-based billing analytics, demand-side management, and governance reforms for improving the performance of Government DISCOMs.

Keywords: DISCOM, PFC Ratings, DUR Framework, AT&C Losses, Billing Efficiency, Collection Efficiency, Smart Metering, CRM, Government DISCOMs, Private DISCOMs.

1. INTRODUCTION

India's power distribution sector has undergone significant reforms over the last decade through initiatives such as UDAY, RDSS, smart metering, and digital billing systems. Distribution companies act as the interface between power generation and consumers. Efficient DISCOM performance is essential for financial sustainability, reduction in power losses, and improvement in customer satisfaction.

2. OBJECTIVES OF THE STUDY

The study aims to compare Government and Private DISCOMs, evaluate operational and financial performance, analyze DUR and integrated rating trends, identify operational gaps, and suggest policy recommendations for improving power distribution efficiency in India.

3. RESEARCH METHODOLOGY

The research is descriptive and analytical in nature. Secondary data has been collected from PFC Annual Integrated Rating Reports, REC DUR Reports, Ministry of Power publications, and regulatory documents covering FY2020–FY2025. Comparative analysis, trend analysis, tabular analysis, and graphical interpretation methods have been applied.

4. PERFORMANCE ANALYSIS

National AT&C losses reduced from 21.2% in FY21 to approximately 15.04% in FY25. Billing efficiency improved from 84.8% to 87.59%, while collection efficiency increased from 92.9% to 97%. These improvements were driven by digitalization, feeder segregation, smart metering, and online payment systems.

5. COMPARATIVE ANALYSIS OF GOVERNMENT VS PRIVATE DISCOMs

Private DISCOMs demonstrate superior operational efficiency, better CRM systems, faster smart metering adoption, lower AT&C losses, and stronger financial sustainability compared to many state-owned DISCOMs. Government DISCOMs continue to face subsidy dependence, delayed tariff revisions, receivables, and high debt burden.



6. DUR FRAMEWORK ANALYSIS

The DUR framework introduced by the Ministry of Power evaluates DISCOMs across six parameters including Integrated Rating, Consumer Service Rating, Renewable Purchase Obligations, Communicable System Metering, Demand Side Response, and Resource Adequacy.

7. FINDINGS OF THE STUDY

The study reveals that digital transformation and consumer-centric governance significantly improve distribution utility performance. Smart metering and AI-based analytics reduce losses and improve collection efficiency. Private utilities maintain better accountability and operational flexibility.

8. RECOMMENDATIONS

The study recommends accelerated smart meter deployment, GIS-enabled energy accounting, AI-driven billing analytics, timely tariff revisions, improved subsidy discipline, and stronger anti-theft mechanisms to enhance Government DISCOM performance.

9. CONCLUSION

The study concludes that Private DISCOMs in India have demonstrated comparatively superior operational and financial performance during FY2020–FY2025. Long-term improvement in Government DISCOMs requires technological modernization, governance reforms, consumer-centric service delivery, and policy-driven accountability mechanisms.

COMPARATIVE TABLE: GOVERNMENT VS PRIVATE DISCOMs

Parameter	Government DISCOMs	Private DISCOMs
AT&C Losses	15–21%	7–10%
Billing Efficiency	82–87%	90–98%
Collection Efficiency	92–96%	98–100%
Financial Sustainability	Moderate/Weak	Strong
Smart Metering	Under Implementation	Advanced/Faster
Consumer Services	Moderate	Better CRM Systems
Subsidy Dependence	High	Low

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