

# “DELICENSING OF ELECTRICITY DISTRIBUTION SECTOR”

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## ABSTRACT

Competition in power generation and transmission has resulted from steps taken by the Indian government and various states. However, in India's electricity distribution market, the spirit of competition and private participation is still in its early stages. Via open access and provisions for parallel licensees, the Electricity Act of 2003 laid the groundwork for introducing competition at the market level. The parallel licensee regime, on the other hand, has the potential adverse consequences on tariffs by requiring distribution licensees in a given region to deliver power "through their own distribution system within the same area." Each distribution licensee investing in its own network would result in network replication, and since capital investment is a pass-through expense, it would raise end-user costs/tariffs.

Also there were only few simpler form of documents and contents available for better understanding of power sector in detail for students, consumers, legal fraternity. Because power sector is very technical and each document contains several technological aspect and words that a rational man cannot able to understand, so the researcher here tries to provide a simplify mode of overview of Indian Power Distribution sector and retail electricity supply in India.

## INTRODUCTION

*“Democracy cannot succeed unless those who express their choice are prepared to choose wisely”*

□ -Franklin D Roosevelt

“Power is an important component of any country's infrastructure. India's electricity sector is one of the most diverse in the world. Traditional sources of power generation in India include coal, natural gas, oil, nuclear power, and hydropower, as well as less mainstream sources including wind, solar, and agricultural and residential waste. With India's fast rising electricity demand, there is a strong need to expand the country's power plant generation capacity. In 2017, India was rated 26th in the World Bank's list of countries with access to electricity. The Indian government has made "Power for All" a priority. As a result, capacity expansion in the country has accelerated.

“India's power sector is one of the world's largest and most complex power sector. The country has undergone a dramatic transformation during the last few decades. Almost every resident now has access to grid electricity, power shortages have dramatically lessened, and installed renewable energy capacity now accounts for a fourth of total capacity. The Electricity Act 2003 was essential in this transformation, allowing a predominantly state-

owned sector beset by losses and debt to transition to a more open and competitive system.”<sup>1</sup> Many new policy aspects were introduced by EA, including open access, multi-year tariff frameworks, distribution franchisees, de-licensing generation, renewable purchase obligations, and the development of independent regulatory agencies. The distribution sector, on the other hand, is nevertheless burdened by problems. Every year, most discoms lose a significant amount of money, and the situation is only growing worse. They have accrued significant debts due to their inability to pay generators on time, and they are unable to provide reliable and high-quality power to their clients.”

“The sector continues to encounter substantial obstacles. Every year, most discoms incur losses; in FY 2021, the overall loss is expected to reach Rs 90,000 crore.<sup>2</sup> Discoms are unable to pay for generators on time as a result of these accumulating losses; as of March 2021, a total of 67,917 crore was past due.<sup>3</sup> They're also unable to make the expenditures required to ensure reliable, high-quality power or to construct the infrastructure needed to ease the transition from fossil fuels to renewable (but intermittent) energy sources like solar and wind. To turn around the distribution sector, many efforts have been done. Most state energy boards have been split up into independent entities for generating, transmission, and distribution since the 1990s. The Electricity Act (EA) of 2003 brought in significant changes in the power sector, including generation delicensing, open distribution access, and independent regulators at the state and federal levels.”<sup>4</sup>

The federal and state governments initiated a number of programmes to upgrade distribution infrastructure and assist discoms in improving their finances. Ujjwal DISCOM Assurance Yojana (UDAY), Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), and Integrated Power Development Scheme (IPDS) are a few of these efforts. In this year's Budget, a new reform scheme with a budget allocation of 3.05 lakh crore was also announced. However, the strategies that have been put in place so far have not been able to guarantee a long-term turnaround of the discoms. In terms of both economics and operations, a turnaround is still required.<sup>5</sup>

<sup>1</sup> CEA, 2020. *Installed Capacity Report*. Retrieved from Central Electricity Authority: [www.cea.nic.in/wpcontent/uploads/installed/2020/11/installed\\_capacity.pdf](http://www.cea.nic.in/wpcontent/uploads/installed/2020/11/installed_capacity.pdf)

<sup>2</sup> ICRA, March 2021. Distribution sector reforms imminent with rising discom debt and dues to gencos. Retrieved from <https://www.icraresearch.in/Research/ViewResearchReport/3567>

<sup>3</sup> Ministry of Power, PFC Consulting. (2020). Payment Ratification And Analysis in Power Procurement for Bringing Transparency in Invoicing of Generators (PRAAPTI). Retrieved from <http://www.praapti.in/>

<sup>4</sup> New Indian Express. 24 May 2021. “‘AP model’ saves Rs 2,342 crore in power expenses in last two years” Retrieved from <https://www.newindianexpress.com/states/andhra-pradesh/2021/may/24/ap-model-saves-rs2342-crore-in-power-expenses-in-last-two-years-2306746.html> 6 Prasanth Regy, Rakesh Sarwal, Clay Stranger, Garrett Fitzgerald, Jagabanta Ningthoujam, Arjun Gupta,

<sup>5</sup> Nuvodita Singh. 2021. Turning Around the Power Distribution Sector: Learnings and Best Practices from Reforms. NITI Aayog, RMI, and RMI India. Retrieved from <https://www.niti.gov.in/>

# INDIAN POWER DISTRIBUTION SECTOR

The most crucial link in the entire power industry value chain is distribution. It is the cash register for the whole sector because it is the only interaction between utilities and consumers. Power is a concurrent issue in the Indian Constitution, and the states are responsible for the distribution and supply of power to rural and urban users.<sup>6</sup> While the power sector as a whole is suffering from headwinds, such as energy demand dropping in sync with the current slowdown in economic growth, power distribution continues to fail, as it has for many years, owing mostly to the state-owned power distribution corporations (discoms).<sup>7</sup>

For the improvement of the distribution sector, the Government of India gives support to states through several Central Sector / Centrally Sponsored Schemes. Various government changes to improve the sector's commercial viability and performance have been implemented, but they have yet to make a significant impact. Discoms continue to lose a significant amount of money. Lack of competition, inefficient tariff-setting processes, and a lack of contemporary technology and infrastructure development are all contributing to the losses.

“India's electrical sector has set ambitious long-term goals, including 450 gigawatts (GW) of renewable energy by 2030, accounting for 55 percent of planned capacity. The country's wounded power distribution business must be made profitable if it is to meet its ambitious renewable ambitions and maintain its economic growth goals. Discoms are battling a massive debt owed to the thermal power sector.”<sup>8</sup> Discoms and the thermal coal- and gas-fired power plant industries are currently sharing upwards of US \$100 billion in non-performing or stranded assets. Because of their poor financial health, state-owned utilities lack the resources to invest in technology and the much-needed modernization of the national grid. Discoms are limiting the amount of power they receive from energy generators, including zero marginal renewable energy projects that they are legally obligated to take on. Some state-owned utilities are also forcibly renegotiating legally binding prices and, once again, failing to make long-overdue payments to renewable energy generators. This position puts renewable energy generators and their financial supporters at risk, limiting their participation in bids where they can boost the capital cost of building additional domestic energy capacity to satisfy rising demand.

## The Reforms to the Distribution Sector which have Failed

“The central government has issued financial packages to bail out distressed state power discoms from time to time in order to help them reduce their increasing losses. The Government of India (GoI) authorised the **Financial Restructuring Plan** wayback in 2012, with the goal of enhancing state discoms' financial long-term viability. The **Ujwal Discom Assurance Yojana (UDAY) scheme** was started in 2015 by the Ministry of Power of India to improve the transparency, operational, and financial performance of discoms with the explicit goal of minimising losses. In both FY2016/17 and FY2017/18, the UDAY scheme was successful in reducing discom financial losses and improving the national average AT&C losses. During this time, the gap between cost of

<sup>6</sup> <https://powermin.gov.in/en/content/overview-4>

<sup>7</sup> India's Power Distribution Sector Needs Further Reform, Vibhuti Garg , Energy Economist, march 2020 retrieved from [https://ieefa.org/wp-content/uploads/2020/03/Indias-Power-Distribution-Sector-Needs-FurtherReform\\_March-2020.pdf](https://ieefa.org/wp-content/uploads/2020/03/Indias-Power-Distribution-Sector-Needs-FurtherReform_March-2020.pdf)

<sup>8</sup> <https://powermin.gov.in/en/content/overview-4>

supplies and average revenue realised narrowed significantly.”<sup>9</sup> However, due to increased rural connection under the Saubhagya scheme and the state's inability to minimise high aggregate technical and commercial (AT&C) losses, the tariff gap reappeared in FY2018/19, and aggregate losses were nearly double those reported the previous year. Overall, the discom changes are insufficient. In 2019, total national discom losses resumed their increasing trend. The power generation sector is under tremendous financial strain as a result of state-owned discoms' inability to pay creditors on time in an increasing number of states. As a result, the Indian banking industry is in even more financial hardship, weakening fresh investment plans at a time when India desperately needs the economic stimulation that expanding infrastructure investment can provide.

Despite considerable success as a result of the discom reform programmes, a number of challenges remain, including timely revenue collection, inconsistent electricity supplies, and mounting discom debt. Furthermore, the unfunded nature of government-provided energy crosssubsidies from industry to household and agricultural customers is degrading industry competitiveness and harming India's "Make in India" agenda. They are ineffectual because they provide a perverse incentive for discoms to sabotage and restrict power supply (the more they sell, the greater their losses). These unsustainable subsidies, which were supposed to compensate for low tariffs and offer electricity to many consumers at below-cost recovery levels, are acting against discoms' ability to recover costs or implement much-needed energy saving programmes. Subsidies to discoms for cost under-recovery are on an escalating trend.

## Discoms' Financial Illness Has an Impact on Power Generating Producers

“The financial plight of discoms has an impact on power generators. Between FY2016/17 and FY2018/19, the total outstanding dues owing by discoms to electricity producers increased by a factor of two. This new financial year, the unpaid sum has increased even more, reaching Rs74,900 crore as of December 2019. Renewable energy firms are owing Rs9.736 crore as of September 2019. To protect electricity producers, the government implemented a payment security system on August 1, 2019, requiring discoms to issue letters of credit in order to receive power supply. The Government of India is also openly urging generators to pursue discom payment through the legal system. Given the power imbalance between generators and the monopolistic position of the state government discom, this appears to be a costly, delayed, and impractical solution.”<sup>10</sup>

“Furthermore, the government is providing special loans to state power distribution corporations in order to assist them in paying off their mounting debts to power generators. To avoid any disruption in power supply, government-run lenders Power Finance Corporation (PFC), Rural Electrification Corp. Ltd (REC), and Indian Renewable Energy Development Agency (IREDA) can offer state-owned discoms loans at concessionary rates to settle immediate debts to generation companies, with priority given to payments provided to renewable energy

<sup>9</sup> Gandhi, Vimlesh B. 2017. “Presentation on AT&C Loss”. Retrieved from: [www.uday.gov.in/images/at\\_loss\\_workshop\\_sept2017/Mr\\_VB\\_Gandhi\\_from\\_MGVCL\\_Gujarat\\_on\\_Best\\_Practices.pdf](http://www.uday.gov.in/images/at_loss_workshop_sept2017/Mr_VB_Gandhi_from_MGVCL_Gujarat_on_Best_Practices.pdf)

<sup>10</sup> India's Power Distribution Sector Needs Further Reform, Vibhuti Garg, Energy Economist, march 2020 retrieved from [https://ieefa.org/wp-content/uploads/2020/03/Indias-Power-Distribution-Sector-Needs-FurtherReform\\_March-2020.pdf](https://ieefa.org/wp-content/uploads/2020/03/Indias-Power-Distribution-Sector-Needs-FurtherReform_March-2020.pdf)

generating companies. Such financial assistance and restructuring programmes are helpful intermediate measures, but they have had limited effectiveness in addressing the underlying reasons of large discom debt, necessitating government bailouts again and time again.”

The Government of India is preparing another reform initiative, the Atal Distribution System Improvement Yojana (ADITYA), that will spend cash in network infrastructure such as smart metres to reduce discom losses by 2020. While such changes benefit the whole power sector, it is critical to restore the profitability of state-owned utilities so that the much-needed energy system transformation can be carried out efficiently and at the lowest possible cost to India. It is critical that electricity generators do not face undue financial hardship during this transition, since this will stifle much-needed new investment (estimated at upwards of US \$500 billion by 2030 by the IEEFA).

## REFORMS NEEDED IN THE DISTRIBUTION SECTOR

“In India's generating and transmission industries, a significant amount of investment and reform has already taken place. Power generating and transmission, on the other hand, are increasingly at risk of becoming financially stranded, stifling much-needed new investment and technology development unless the distribution sector is likewise changed. “The'single-buyer' paradigm, in which a single buyer, in this case the state discoms, purchases electricity from generators and sells it to customers, is still strangling the power distribution industry and must be rectified as soon as possible. The existence of a chain of regional power distribution monopolies, often with no competition, as well as the non-separation of the distribution network as a whole from the electricity suppliers, with discoms currently responsible for both network strengthening and reliable power supply, remains a serious problem.”<sup>11</sup> A faulty regulatory framework, a lack of center-state coordination and collaboration, the use of discoms as a vehicle for unfunded political subsidies, and a cost plus year-to-year tariff fixing process are all impeding the sector's reform at the state and national levels. India has to undertake more reform measures, notably in the distribution sector, which is the backbone of the electrical business, to successfully transition from a developing to a more mature market twice the size of the current energy sector.”

### Increasing Competition –

“Increased competition through the separation of carriage and content (C&C) could be part of the solution to improve the distribution sector's performance. Instead of being liable for both, discoms may be just responsible for carriage (the distribution network). Electricity distribution businesses might then compete for consumers based on pricing, service, and quality in order to distribute content (electricity) through the discom's distribution network. The separation of C&C would provide transparency and responsibility to the distribution sector, which is now lacking. Furthermore, the Government of India could order discoms with substantial losses to either

<sup>11</sup> India's Power Distribution Sector Needs Further Reform, Vibhuti Garg , Energy Economist, march 2020 retrieved from [https://ieefa.org/wp-content/uploads/2020/03/Indias-Power-Distribution-Sector-Needs-FurtherReform\\_March-2020.pdf](https://ieefa.org/wp-content/uploads/2020/03/Indias-Power-Distribution-Sector-Needs-FurtherReform_March-2020.pdf)

privatise operations or enable sufficiently qualified and capitalised private distribution businesses prepared to invest in infrastructure upgrades to enter the market. Increased competition would encourage generators, distributors, and power supply businesses to develop technologies that would boost efficiency, reduce prices, and improve supply reliability.”<sup>12</sup>

### Smart Metering –

“Existing electricity metres should be gradually replaced by smart metres. This will aid discoms in better managing their load while also lowering metering, billing, and theft losses. Smart metres support the adoption of distributed rooftop solar and behind-the-meter storage systems by allowing for a varied time-of-day rate structure. Consumers would be able to choose and alter their provider and rate based on their needs if they were introduced. The Finance Minister asked state utilities to replace traditional energy metres with prepaid smart metres over the next three years in the current union budget for FY2020/21.”<sup>13</sup>

## DISTRIBUTION COMPANIES – RETAIL COMPETITION AND DELICENSING

“The Indian energy sector has changed dramatically in recent years as a result of changes aimed at supporting clean-generation technologies, increasing utility-level operational excellence programmes, and expanding customer access, among other things. It is on the cusp of implementing the next round of changes, which will focus on offering consumer choice, increasing supply-side competition, and unleashing massive potential spin-offs while pushing convergence across adjacent industries.

The most recent modification to the Electricity Act of 2003 proposes delicensing of the distribution business. Instead of getting a distribution licence, a firm must register with the SERC for electricity distribution in a specific state, according to the proposed revisions. If a company wants to distribute electricity across numerous states, it must register with the CERC. The SERC/CERC would have 60 days to process the application after receiving it. The eligibility criteria for becoming a discom will be announced separately by the Centre. Delicensing would also allow for competition in the retail supply market, letting numerous stores to operate in the same geographic area by either using an existing network with non-discriminatory access or creating their own network. Consumers will be able to get power from any discom that is licenced to do so in their region.

This will allow newer market entrants with strengths in services or technology to access servicebased models across value segments. The Smart Meter National Programme (SMNP) is already gaining traction, and pay-per-

<sup>12</sup> Daljit Singh and Ashwini K Swain, 2018. Fixated on Megawatts: Urgent Need to Improve Power Procurement and Resource Planning by Distribution Companies in India. Retrieved from:

[www.cprindia.org/system/tdf/policybriefs/CEER%20\(2018\)%20Fixated%20on%20Megawatts\\_Urgent%20Need%20to%20Improve%20Power%20Procurement%20and%20Resource%20Planning%20by%20Distribution%20Companies%20in%20India.pdf?file=1&type=node&id=8968&force=1](http://www.cprindia.org/system/tdf/policybriefs/CEER%20(2018)%20Fixated%20on%20Megawatts_Urgent%20Need%20to%20Improve%20Power%20Procurement%20and%20Resource%20Planning%20by%20Distribution%20Companies%20in%20India.pdf?file=1&type=node&id=8968&force=1)

<sup>13</sup> EESL, 2020. *National Smart Meter Program Dashboard*. Retrieved from Enery Efficiency Services Limited: [www.smdp.eeslindia.org/](http://www.smdp.eeslindia.org/)

use and lease methods are becoming more popular. Companies in the mobility, digital media and entertainment, home automation, telecom, and retail sectors, as well as other utility services providers such as gas and water, will investigate sectoral opportunities.”

The separation of network management and customer service roles would result in the emergence of new institutions throughout the adjacencies, as well as increased accountability and transparency.

Distribution's financial health had damaged the sectoral value chain, reducing the ability to innovate, attract talent, and infuse technology. The final leg of reforms will boost sector investments and efficiencies in the areas of digitization, decarbonisation, and decentralisation.

Capital allocation will be more selective as a result of the segmentation, and efficiencies will have a favourable impact on retail tariffs. Discoms would be able to source cheaper and more efficient power, benefiting retail customers, thanks to the CERC's work on developing a more dynamic and efficient wholesale market mechanism. Convergence and bundling innovations will have an impact on capital allocation and the sharing of shared expenses. This can also help the utility accelerate the growth of other companies such as home automation, data monetisation, the selling of energy-efficient appliances, and energy-management services, to name a few.

While the proposal offers enormous potential for improving the existing condition of energy distribution, essential considerations for establishing the operational framework are required to ensure that the following issues are addressed.

- Strengthening ERCs to enable them to define appropriate baselines and evaluate supply and consumer service quality.
- Building a framework for accountability that clearly defines duties and responsibilities among various network, trade, and retail-supply participants in order to reduce disagreements.
- Creating institutions, processes, and systems inside State Load Dispatch Centers to create a transparent and equitable energy-accounting system for all retail consumers across voltage levels.
- The Universal Service Obligation (USO) fund is improving tariff determination and management of cross-subsidy surcharges.
- Building a system for assessing and analysing clients and their profiles so that specific needs, such as subsidies, may be addressed.
- Establishing a clear consumer switching mechanism, as well as policy and regulatory oversight.
- Recognising client concerns about data privacy and usage, providing a transparent framework for gathering, storing, and sharing customer and metering information among the multiple retail licences.
- Developing new methods for repurposing outdated power plants while balancing the procurement of efficient and clean green power and engaging into long-term power purchase agreements (PPAs) with inefficient plants.

- Developing recommendations for the creation of 'other business regulations' to create incentives for participants to leverage underlying assets and generate additional revenue streams.

## ANALYSIS OF ELECTRICITY AMENDMENT BILL 2022

The Electricity Amendment Act 2003 was introduced to regulate the electricity sector in India. Under the 2003 Act Central and State Electricity Regulatory Commissions (CERC and SERCs) were set up to regulate inter-state and intra-state matters, respectively. Recently on August 08 2022, a Electricity Amendment Bill of 2022 has been put forth in Lok Sabha. Here I analyse the current provisions of the Act and the proposed amendments in terms of benefits it'll have on the distribution sector and consumers.

### Current provisions of the Electricity Act 2003 and the proposed Amendments of 2022 Bill

#### Section 14. (Grant of licence)

The amendment to section 14 of the Act is in order to facilitate the use of distribution networks by all licensees under provisions of non-discriminatory open access with the objective of enabling competition, enhancing efficiency of distribution licensees for improving services to consumers and ensuring sustainability of the power sector.

**Section 42. (Duties of distribution licensee and open access):** --- (1) It shall be the duty of a distribution licensee to develop and maintain an efficient, co-ordinated and economical distribution system in his area of supply and to supply electricity in accordance with the provisions contained in this Act.

The amendment to this section suggests to provide non-discriminatory open access through its distribution system to all distribution licensees having licence within the same area of supply, subject to payment of wheeling charges and in accordance with the regulations specified by the Appropriate Commission.

#### Section 60. (Market domination):

The Appropriate Commission may issue such directions as it considers appropriate to a licensee or a generating company if such licensee or generating company enters into any agreement or abuses its dominant position or enters into a combination which is likely to cause or causes an adverse effect on competition in electricity industry.

The amendment proposes to add a **section 60A** through which it adds that a discom must provide non-discriminatory open access to its network to all other discoms operating in the same area, on payment of certain charges. The central government may prescribe the criteria for determining the area of supply.



## Benefits

The distribution sector would be benefitted as all companies would be able to use one network all companies won't have to set up their own individual networks. Network distribution cost be less so this would in turn benefit the consumers as their tariff costs would be reduced. The bill seeks to introduce an array of legislative steps aimed at ending distribution monopolies. It covers several critical issues, the most important of them being the major structural change to allow multiple distribution companies to function in any territory. This is a step aimed at giving consumers the option to choose their electricity supplier.<sup>14</sup>

## PRIVATE DISCOMS DEMONSTRATE SUPERIOR OPERATING EFFICIENCY

In contrast to the poor performance of state-owned discoms, the performance of private-sector distribution utilities has remained stable throughout time. This is backed up by higher-than average operating efficiencies, as seen by lower-than-average distribution losses and strong collecting efficiencies. The distribution losses in the licence area operations of Tata Power Delhi Distribution Limited (TPDDL) (Delhi), Torrent Power Limited (TPL) (Ahmedabad, Gandhinagar & Surat), and CESC Limited (Kolkata & Howrah), as shown in the exhibit here, have remained less than 10%, compared to the all-India AT&C loss level of more than 20%. In reality, in FY2020, Torrent Power Limited's distribution losses in Ahmedabad, Gandhinagar, and Surat are expected to be less than 5.0 percent. Over time, these utilities have been able to reduce distribution losses by improving metering, billing, and collection mechanisms, as well as updating distribution equipment.<sup>15</sup>

However, it is important to highlight that these utilities generally serve urban areas, benefiting from a diverse customer base that includes residential, commercial, and industrial customers. The consumer mix for TPPDL is concentrated towards home, industrial, and commercial consumers in that order, as shown in the graph. Similarly, TPL's customer base is dominated by industrial, household, and commercial customers. Furthermore, these discoms have relatively little contact with agriculture customers. The consumer mix in India, on the other hand, is evenly spread across home, industrial, and agricultural users. As a result, these privately owned discoms' cross-subsidisation requirements and subsidy dependence remain minimal. In addition, under the cost-plus tariff principles of the distribution industry, these discoms have been able to pass on variations in cost structure to consumers in a timely way, compared to state-owned discoms, allowing for sustained profitable operations.

<sup>14</sup> <https://economictimes.indiatimes.com/industry/energy/power/what-electricity-amendment-bill-2022-seeks-to-do-and-why-it-is-raising-concerns/articleshow/94789824.cms>

<sup>15</sup> Ibid

## DESPITE STATE GOVERNMENT RESISTANCE, PRIVATISATION OF DISCOMS IS BEING PROPOSED TO ENCOURAGE PRIVATE SECTOR PARTICIPATION. DELICENSING OF THE DISTRIBUTION SECTOR IS ALSO BEING PROPOSED TO ENCOURAGE PRIVATE SECTOR PARTICIPATION.

The Union Government proposed privatisation of discoms as a measure to revive the distribution segment, along with other measures like direct benefit transfer for subsidy and the smart metering programme, due to the less-than-satisfactory progress shown by most of the state-owned discoms in improving the operational and financial performance of discoms. As a result, the Indian government announced in May 2020 that discoms in Union Territories (UTs) would be privatised. Tenders for the privatisation of discoms in the UTs of Daman and Diu (D&D), Dadra & Nagar Haveli (DNH), and Chandigarh were then announced. According to industry insiders, Torrent Power has emerged as the highest bidder for a majority ownership in D&D and DNH discoms, quoting a bid of Rs. 555 crore for a 51 percent stake. The discoms in these two UTs have exceptional operating efficiencies, with distribution losses of less than 5.0 percent and a C&I customer proportion of more than 90%. Odisha's state government recently privatised its four discoms to The Tata Power Company Limited under a public-private partnership (PPP) model. Tata Power will own 51 percent of the new licensee under this deal, with the government of Odisha owning the remaining 49 percent. Given the large current AT&C losses of more than 30%, loss reduction remains one of the primary goals of the privatisation process. The AT&C loss trajectory pledge offered by the winning bidder for one of the discoms in Odisha is shown in the exhibit, with losses predicted to drop from more than 35 percent to less than 15 percent over a 10-year period. Aside from the AT&C loss reduction, bidders cited a premium over the reserve price for obtaining a 51 percent ownership in the new licence. A comparison of the quoted equity value for a 51 percent ownership in DNH plus D&D and Odisha's new licensees.

Additionally, the Ministry of Power recently released proposed bidding procedures for the privatisation of distribution licensees. The bidders should be given a clean balance sheet free of accumulated losses or unserviceable liabilities, according to these rules. The guidelines also recommend AT&C loss trajectory as the bidding requirements for discoms with AT&C losses of more than 15% now, given the emphasis on improving operating efficiency. This is also evident in Odisha's most recent bid. The accuracy of baseline data relating to metering, billing, and current loss levels, on the other hand, is critical. In addition, the liabilities kept by the bidding authority in the opening balance sheet play an essential role in recruiting bids. Furthermore, given the delays and inadequacy of previous subsidy payments from the state government, clarity on the method of post-privatization subsidy payments from the state government is essential.

However, some governments and employee unions are opposed to privatisation, as evidenced by protests and the filing of a petition against privatisation by the Chandigarh UT employee union before the Hon'ble Supreme Court. In March 2021, the High Court of Bombay suspended the tendering procedure for the UT of DNH and D&D due to a PIL filed. Given these obstacles, the government is now proposing to delicense the distribution sector by permitting many operators in a single distribution area, thereby moving toward a market-based approach to reform. This was declared in the Union Budget for Fiscal Year 2022, and it was also mentioned by Hon'ble Power Minister. Under this setup, the existing state-owned discoms would continue to operate alongside the other private electricity suppliers. This would necessitate changes to the Electricity Act, as well as appropriate policy and regulatory measures to define the wires and supply business division, including a mechanism to compensate existing discoms for distribution infrastructure and a tariff determination process in the event of multiple operators. Furthermore, the rules must include a method for sharing AT&C losses, subsidy payments, cross-subsidy charges, and an additional surcharge. While delicensing would benefit customers in the long run by giving them a choice of providers and enhancing operational efficiencies and customer service, the initiative's implementation would necessitate the backing of state governments.

## CONCLUSION AND RECOMMENDATIONS

### Structural Reforms

**Greater autonomy for state-owned discom:** A strong distinction between utility and state is necessary for a state-owned utility to succeed. The utility should be self-contained in terms of operations and finances. Separation of powers can be achieved through good corporate governance measures, such as the use of independent directors. The competence of the relevant SERC to update tariffs regularly and appropriately determines the performance of state-owned discoms.

**Distribution franchise :** There are several different types of distribution franchisees, ranging from those that only outsource revenue collection to those who handle all distribution responsibilities (including capital injection) in a certain area. Private investors may not be interested in becoming licensees in remote areas, but a franchisee model may be. This methodology has been applied successfully in Bhiwandi, with quick improvements in metering, billing, and collection, as well as a reduction in loss. Even with a huge agricultural and rural load, the franchisee model was able to produce a significant improvement in performance in Odisha.

**Distribution licensee/company :** The latest Budget statement delicens distribution and proposes nondiscriminatory access to the distribution system for businesses. While the licensee strategy necessitates a substantial financial commitment from the private investor, the distribution business model may not. The success of the licensee model in Delhi was influenced by characteristics such as the private investor's financial capacity, the homogeneity of the consumer mix, and their significantly higher capacity to pay.

**Increasing Competition :** Discoms have a monopoly in their respective areas of operation. Delicensing distribution can increase competition and provide customers with more retail options. This is a difficult reform that should be accompanied by careful market design. The viability of competition will be determined by the size of the market, the nature of the demand, the incumbent's efficiency, growth potential, and other factors.

**Vertical Unbundling :** Even though state-owned electricity utilities have been de jure unbundled, they may continue to operate as de facto integrated utilities. Vertical unbundling allows the discom's activities to be more transparent. It can draw attention to the areas of the utility that need reform (generation, transmission, or distribution). Unbundling was a critical step in enhancing the performance of discoms in places like Gujarat. If desired, vertical unbundling can also be used as a first step toward privatisation or a franchisee model.

**PPP Models :** can be beneficial in loss-making areas where a commercial business would be impossible without government help in the form of Viability Gap Funding (VGF). In a remote area with significant losses, for example, the government could allow private businesses to submit bids and stipulate the minimum service level they must deliver.

## Regulatory Reforms

A well-functioning distribution sector requires a well-functioning SERC. The SERC's autonomy, competency, and transparency should be promoted by state governments. Tariffs should be reviewed on a regular basis to ensure that they accurately reflect fixed and variable costs. Gasoline surcharges decided through a transparent method should be used to compensate rapidly changing fuel costs. There should be no new regulatory assets produced. Through suitable tariff modifications, the existing regulatory assets should be cleared over the next 3-5 years on a predetermined timeline. Creating regional electrical regulatory commissions has been recommended as one approach to shield regulatory duties from political constraints.

“DBT can aid in the improvement of efficiency and the reduction of leaks. Parts of Madhya Pradesh have recently implemented it. The details of the DBT scheme should be prescribed by the relevant state government. Consumers should not be subjected to DBT. Instead, consumers should have the option to choose whether or not to use it. Subsidized power should continue to be available to people who do not choose it. For example, the DBT system might be constructed so that users do not lose their current benefits but are compensated for more efficient usage of power, similar to Punjab's Paani Bachao Paise Kamao scheme. Consumers will be less at risk as a result of this. Consumers will be persuaded to embrace the DBT programme as they observe others benefiting over time. ”

## Operational Reforms

**Reducing Power Procurements Costs :** Discoms should optimise their power purchases by sourcing from markets when appropriate, and they should be rewarded for gaining efficiency through market use. Discoms should establish the human resources and everyday liquidity needed to take advantage of this relatively new option. Discoms should not sign new pricey longterm thermal PPAs as long as the markets continue to deliver low-cost power. New thermal PPAs are prohibited in states like Chhattisgarh, Gujarat, Maharashtra, and Uttar Pradesh until 2022. ToD tariffs should be used by discoms to encourage changes in demand patterns. Dynamic tariffs, enabled by advanced metering and a smart grid, can help manage peak loads and reduce power purchase costs.

**Billing Efficiency :** Many discoms need to increase their billing efficiency by using more accurate metres. They should make full use of the restructured central government reform strategy to accomplish 100 percent metering with prepaid/smart metres while also being wary of cybersecurity dangers.

**Collection Efficiency :** Discoms should aim for a collection efficiency of 100 percent. Theft can be reduced if the discom and the government work together. Prepaid metering, as seen in Manipur, can assist prevent pilferage and enhance collection. Many state government offices and municipalities are likewise notorious for not paying their bills on time. Discoms should pursue current invoices as well as arrears with tenacity.

**Reduce Technical Losses :** Discoms can cut their technical losses by investing in their grid (upgrading conductors, high-tension lines, and right-sizing transformers, for example) and using proper monitoring technology, as Gujarat did successfully. This is intended to be a key component of the restructured central government reform scheme announced in the Budget, and state discoms should take use of it to update their distribution infrastructure.

**“Agricluture Demand Management :** Separating agricultural and non-agricultural feeders has helped states with large rural or agricultural consumer bases, such as Rajasthan, Andhra Pradesh, Gujarat, Karnataka, and Maharashtra. The government at the centre, through DDUGJY, has supported investment in feeder separation. Solar pump deployment has also gotten a boost thanks to the PM-KUSUM programme. Encourage the use of solar pumps for agricultural, and discoms can greatly improve their financial status. “

## Managerial Reforms

Discoms should work to improve customer relations on a proactive basis. Call centres that are easily accessible, bill payment options that are simple, and correct billing can all assist to reduce customer unhappiness and improve income.

Employees who are energetic and enthusiastic are critical to a discom's financial and operational success. Employees should be aligned with the organization's interests through performance incentives. Discom zones or circles could be viewed as profit centres, with personnel given appropriate autonomy and responsibility. Employees will feel more invested in running the business profitably as a result of this.

The power distribution business is highly complicated in terms of operation and administration. Engineering, finance, billing and collection, human resources, administration, and other professions are all needed. To provide training, some organisations have been founded (such as the National Power Training Institute, and the Tata Power DDL Learning Centre). It is necessary to increase the capability for providing training in these disciplines.

## Conclusion

The Power sector of India is one of the world's largest & most complex. External knowledge, structural frameworks, and new technology are all necessary, but they are insufficient to propel India's power sector transformation. Similarly, a push for retail choice via content and carriage separation may not always yield the whole set of potential benefits advertised.

The history of India's electricity sector has shown us that the country is far too huge and diverse for a one-size-fits-all solution. The effectiveness of changes will be determined by a flexible and homegrown approach to reform that is supported by state and central political will and allows for 'learning by doing.'

And above all these Delicensing will become a cherry picking process for the Private Discom where they will only choose to provide the electricity in better revenue generating areas and in cities, no private player ever want to give electricity to the agricultural or remote area (lower revenue generating areas). And because of this only the government entity will be the sole player left at the lower revenue generating areas and they will then face more and more losses, currently a balance is managed between the lower revenue generating areas and the higher generating revenue area. So in order to cope up with this the government also needs to come up with strong rules and applicable laws before implementing the law.

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