Distribution Sector Reforms in India: Past Reforms and Best Future Model

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ABSTRACT

Indian power sector has undergone varied reforms since 1991. The slew of reforms has led to increased electricity generation capacities, but the electricity distribution sector is still in disarray owing to losses on account of tariff cross-subsidies and asset idling. This study analyses past reforms targeted to resurrect the distribution sector and also analyses existing private privatisation model in electricity distribution. Expert opinions are studied by conducting in-depth interviews with industry stakeholders on the subject. It emerges that while the best immediate solution to the distribution sector crisis lies in increased privatisation, limits to the same are inevitable. This study concludes by presenting recommendations that help draft Public Private Participation (PPP) models in distribution business, thereby creating a more conducive private investment atmosphere.

Keywords

Power sector reforms, Distribution sector, Privatisation.

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Introduction

The ownership of the Indian power sector has changed hands from private to public to back to private. The private sector mainly focussed on the urban areas and areas around them. Things changed when the Electricity Supply Act of 1948 was enacted which led to the establishment of State Electricity Boards (SEBs) wherein the public entities took control on the licensees which operates within the sector of private companies and started catering to rural areas and enlarged its customer base. But the performance of these SEBs suffered due to various reasons like monetary damages, extreme transmission & distribution costs, shortages in electricity, irrational and inremunerated rate chart, losses in collection as well as load factor of plant.

To surmount these issues, the Government of India, in 1991, amended the Indian Electricity Act (1910) as well as the Electricity Supply Act (1948) to let in the private sector in the power industry. Mega power policy, capacity reinforcement via Mega Projects (1000 MW) and cutthroat tendering were touted as probable solutions. This also enabled access to the inland as well as overseas capital market promising higher yields on investment and the private companies could operate as licensees in the distribution segment hitherto controlled only by the state electricity boards. Private energy enterprise in production dependent on longer power purchase agreements. The state-run electricity boards showed meagre chances in longer sustainability. Reforms in power segment & improved governing structure were proposed to improve the state of SEBs as the Independent Power Producers (I`PP) generated only a fraction of the required power, neglecting the prevalent management issues, specifically in the distribution segment, making it less lucrative for investments

In the mid 1990s the government understood the urgent need of the power sector reforms and hence started with the unbundling of the SEBs. Separating the SEBs into smaller segments of generation, transmission and distribution, Government thought, would help in resolving the management issues. Orissa was the first state in 1996, to unbundle its SEBs with assistance from the World Bank. Haryana, Andhra Pradesh and Rajasthan followed suit. The Common Minimum National Action Programme (CMNAP) was also introduced in the year 1996. The foundation of the Electricity Regulatory Commissions (ERC) was another significant change in the time of 1998-99. The ERC had the power to set levies and looked to excuse the levy structure and raise recuperation proportions.

During the late 1990s, the Central Government took the initiative of creating a power sector general reform environment across the country. So as to lessen business failures, the Indian Government began the Accelerated Power Development and Reform Program (APDRP) in 2002, an activity to give the state governments assets for meter establishment and other foundation enhancements and to energize change by giving extra budgetary help to the more change situated states.

Following these endeavours, the Electricity Act 2003 implemented in June 2003 cancelled the entirety of the current power laws and made power reform mandatory. The point of this demonstration was to a) Introduce management reforms in the power distribution sector and promote competitive bidding b)Transitioning from single purchaser model to multi-purchaser and multi-seller model c) Unbundling of the SEBs and constitution of state regulatory commissions in a period bound way.

The institution also promoted deregulation of licensing for business in generation sector, open access in distribution sector and trading of power to grow capacity of generation sector in India and make it easy for business purposes.

The Power Ministry, Indian Government, as an element of improvements in the Electricity Sector, launched R-APDRP as a Union sector program in July 2008. The primary intent of this programme was on real provable execution with respect to sustained loss minimisation. Creation of independent, trustworthy and programmed systems for

perpetual collection of correct baseline information and integration of Digital Technology in the domains of energy accounting was necessary prior to taking up usual distribution enhancement projects.

Power Ministry, Indian Government also introduced Ujwal Distributed Companies Assurance Yojana (UDAY) on 5th November, 2015. This scheme primarily focuses on easing the difficulties of the DISCOMs through reducing the gap between average supply cost and revenue realisation, making leverage for such companies cheap, improving operational efficiency and reducing aggregate transmission and commercial loss.

It is, although necessary to have in place reliable and automated systems for baseline data collection and integration of data technology in fields of energy accounting before moving to the reformation and strengthening of the distribution sector.

In 2014 Government of India passed the Electricity Amendment bill, 2014 which focused on the following issues: to bifurcate technical and commercial losses, to set aside network business from electricity business, switching suppliers by giving consumers the decision making choices, taking actions for grid securation, increased simplicity, affectivity and responsibleness within the regulatory system, strengthening the establishments for providing non-discriminatory open access, to boost the use of non-conventional energy for usage of clean power as well as healthy tariff policy, reorganization of tariff structure.

The ministry of power at that point came out with the draft of Electricity Amendment Bill, 2020. It looks to make an arrangement of Electricity Contract Enforcement Authority (ECEA) having powers like that of a common court to settle disagreements identified with purchase of power agreements among distribution companies and power generation companies. The ECEA will have total position to mediate issues identified with explicit contract performance identified with power purchase or power sale, between generators and distributors. The draft law accommodates the initiation of power distribution sub-licensee or franchisee, which would not require a different permit from state commission. It recommends making a National Renewable Energy Policy by the focal government in close discussion with state governments. The bill empowers state just as central power regulators to indicate transmission charges under open access (prior the two capacities were with the central commission).

This paper takes a holistic overview of the state of Indian Power sector, the past reforms, distresses of huge losses faced by the distribution sector and future privatisation model.

The paper specifically delves deeper into the following research objectives:

- Which privatisation models have been introduced in the Indian distribution sector, and why?
- Which privatisation model is the most optimum and recommended, and reasons for the same

This study is a qualitative investigation and was conducted through in-depth interviews held with industry experts from the electricity distribution segment and past policy

Literature Review

This section gives a brief overview of the research findings of six research papers published in different journal concerning the Electricity distribution sector in India and its challenges. It discusses the research objectives and the summary of the papers' findings. It also mentions the research gaps in those papers.

The first research paper is titled "Electricity Distribution Companies in India: Preparing for an Uncertain Future" by (Ann Josey, Shantanu Dixit, Aswini Chitnis, 2018), published in the year 2018 with a research objective to find emerging trends in the electricity sector and the changing roles of DISCOMS in India and their future. This paper primarily talks about the future of DISCOMS as mainly a supplier to LT consumers and a wires utility for HT and LT consumers. There needs to be a considerable shift in the planning and the operating of the DISCOMs which would be influenced by policy frameworks or else DISCOMs would suffer from very high losses and redundant capacity. The paper, however, does not include past reforms in the distribution sector.

The second research paper is titled "Major Issues and Challenges for Urban Customers Satisfaction in Indian Electricity Distribution Sector - A Review" by (Holmukhe & Scholar, 2016) published in the year 2016. This research paper focusses on the outline of problems and questions for energy supply maintenance quality and customer happiness in Indian power supply segment. The paper identifies key issues in distribution sector: high investment into power infrastructure & Indian budget allocation, Incomplete electrification & urban-rural dichotomy in supply, uneconomic tariffs, Majority of losses in sub transmission & supply systems, bad management, political & governmental Interference, electricity misuse and Subsidies and gives solutions for better performing distribution sectors: Efficient use of augmented power growth and restructurings programme, Utilization of latest digital technologies, Governance and institutional autonomy, Implementation of an enterprise resource planning (ERP) system and Privatization. But this paper only focusses on the urban customers and neglects the rural customers and does not provide a framework recommendation for the privatisation model for the distribution sector.

The third research paper is titled "A critical review of the franchisee model in the electricity distribution sector in India" by (Thakur et al., 2017) published in the year 2017. The research purpose of this paper stands to deliberate about the current standing of distribution sector in India, and recognition of the reasons for the sub-standard financial, technical and managerial performance, to lay out most important prevailing distribution models, to look at in facet the distribution franchisee model, involving its administration methodology and issues stood up to by leaving DF utilities and to fundamentally break down the difficulties looked by the DF display and propose a route forward. This paper has utilized a contextual analysis technique to distinguish the difficulties for different various models with auxiliary sources of information used to help the realities in the article. This paper discusses the Bhiwandi distribution franchisee model that has been examined dependent on certain evaluation boundaries and the reaction

has been seen as positive and energetically grasped by partners. In spite of the fact that the DF model at this point has scripted enough examples of overcoming adversity in both urban as well as provincial bays to exhibit that private interest in the electricity distribution sector is possible, DF usage has not picked up energy as a result of numerous difficulties to the model and disappointments in strategy confining. Over the more drawn out term, it is suggested that the contemptible privatization endeavor by means of the DF model isn't an answer, yet an open/private association model like Delhi is progressively alluring. This paper although does not include past reforms in the distribution segment.

The fourth research paper is titled "Power sector reform in India: current issues and prospects" by (Singh, 2006). The principal research objective of this paper is that the paper assesses pre-change circumstance electricity sector in India & distinguishes core problems that prompted inception of the procedure of change. There are significant arrangement and administrative changes embraced from mid 1990s. The paper additionally shows how the market changes as we follow the change procedure. The paper likewise talks about a portion of the significant arrangements of the as of late established Electricity Act (2003) that plans to supplant the predominant demonstrations that oversee the working of the electricity sector in the nation. In this specific situation, two issues emerged, in particular open access and multi-year duty that has a critical bearing on the performance of the area. The paper likewise assesses the change procedure in the light of a portion of the administrative changes attempted. At last, the paper quickly talks about the issues associated with presentation of rivalry in the power sector principally through improvement of a business opportunity for mass force. The exploration strategy utilized by this paper is to examine every authentic issue researcher has picked a writing survey approach technique in this examination. The paper pictures ongoing changes in the power sector that are relied upon in accomplishing such targets. Although the fundamental target of the power segment change in first world nations is towards upgradation of rivalry in that particular area, the necessity to develop & enhance the budgetary affirm and to draw in private venture to the electricity segment, was the primary core thrust for carrying out change in Indian setup. This includes functional separation of generation, T&D, setting up of central government and state administrative commissions and specific privatization of distribution fragments in a couple of states. Administrative changes have had the option to realize duty justification, and straightforwardness and purchaser investment in the administrative procedure. The Electricity Act (2003) holds numerous guarantees in lieu of segment. Without licensee thermal generation, non-biased entree to the transmission framework & the steady presentation of open access for the dissemination framework would go far in building up a electricity segment market. These, alongside various licensees, may well aid introduce serious condition in the Indian electricity segment. Notwithstanding, the paper doesn't concentrate on various privatization model in distribution division, empowering increasingly private interest in dissemination area and their adequacy to control DISCOM misfortunes.

The fifth research paper is titled "Future of Indian Power Sector Reforms: Electricity Amendment Bill 2014" by (Agrawal et al., 2017) published in the year 2017. The research objective of this paper is that the paper basically assesses the remarkable highlights of the Indian Electricity Act (2003), present situation of Indian Electricity Segment with exceptional prominence on misfortunes in distribution sector as well as the distressed zones that are tormenting this sector. The audit additionally anticipates the job of Electricity (Amendment) Bill (2014) in the initiation of retail in India by isolating distribution business from supply business. The paper talks about Introduction of the Electricity (Amendment) Bill (2014) has upraised desires for each and every partners of Electricity System in India. Whenever passed, this bill might be the path forward to turn out up and coming age of changes in Indian Power Sector which are essential so as to upgrade effectiveness. Despite the fact that the Electricity (Amendment) Bill (2014) promotes the initiation of division of carriage and content towards building rivalry yet it is quiet on the subject of different realistic viewpoints relating to rules, method of treatment, usage of bifurcation and the executives of isolated organizations. The bill needs to visualize and plan rules relating to level and way of isolation, classification of supply licensees, job as well as work of transitionally organization, franchisee and distribution licensee. The bill is additionally quiet on the subject of management of losses and cross-subsidies at the hour of isolation, nitty gritty obligation of supplier after all other options have run out and his responsibility towards power distribution. The bill needs to take into its domain the point by point procedure and boost at all the degrees of execution. An audit of isolation actualized across globe gives us an understanding that the maintainability of retail rivalry misleads an extraordinary degree on the after usage the handling of the bifurcation. The Electricity Amendment Bill (2014) is abstruse on the subject of the administration of metering and charging, collection, provider switch, exchanging bunks, timeline of changing over of frequency and other consumer related necessities. A profound report relating to the bifurcation involvement with different nations may give us an outline to strategy and ground level procedure plan. But the paper mainly focuses on electricity amendment bill 2014 and its implications. And does not focus on DISCOM privatisation and phasing out of cross-subsidy so that commercial users don't migrate to off-grid.

The sixth research paper is titled "Performance of Private Electricity Distribution Utilities in India: Need for In-depth Review and Benchmarking" by (Dixit, Shantanu; Sant, Girish; Wagle, Subodh; Sreekumar, 2003) published in the year 2003. The research objective of this paper is to aggregate and compare the effectively accessible (open) information of the six longstanding private utilities (that have been in presence before the present period of changes). viz. BSES, Calcutta Electricity Supply Company (CESC), Tata Power Company (TPC), Ahmedabad Electric Company (AEC), NOIDA Power Corporation (NPC) and Surat Electric Company (SEC).The target of this report is to illustrate certain 'first-cut' perceptions on the subject of exhibition of utilities, and accentuate requirement for a definite presentation survey. The report additionally recognizes the potential forms of such an examination. The

findings don't mean to either rank private utilities or to reach widespread inferences in regard to the possession banter. The exploration expresses that Privatization of distribution sector is being proclaimed as the primary segment of changes in electricity distribution segment. Delhi and Orissa have just finished privatization of distribution sector & hardly any other states, for example, Karnataka is additionally thinking about the equivalent. Major structural, administrative, managerial and governing modifications are being worked out to encourage this. In any case, no itemized presentation survey of prevailing private utilities (that have been working for more than 50 years) has been completed up 'til now. Such an examination is basic to draw exercises that can extraordinarily help us in maintaining a strategic distance from auxiliary and authoritative unproductive aspects in the rising power sector.

Methodology

As previously specified in the earlier section, the research purpose of this paper is to scrutinize the past reforms in the electricity segment and also to analyze and recommend the best privatization model. In order to go deeper into a comprehensive understanding of the research objective, the grounded theory method was used for this sample, which relies on the extensive interviewing method for the purpose of qualitative investigation. The grounded theory approach was selected as opposed to the hypothetic deductive model because this approach included construction of theory through methodical gathering and analysis of data using inductive reasoning derived from the data gathered through the qualitative survey. Qualitative interview scripts were collected for all the interviews conducted with selected respondents. The respondents consisted of domain experts from distribution sector private companies, energy efficiency sector and researchers. The data collection process was terminated after conduct of 3 in-depth interviews, following which data saturation was observed. The qualitative survey was restricted to 3 interviews due to time constraints. Although, at the beginning 5 to 6 interviews were planned, some unforeseen circumstance in the form of unavailability of respondents in the given time period led to this restriction. However, these 3 interviews were exhaustive and supplemented the research analysis. For a better understanding of the sample, the socio demographic profile of the respondents is presented below.

Table 3-1: Socio demographic profile of respondents interviewed for qualitative study:

Respondent No.	Industry
P1	Research
P2	Power sector
P3	Educational institute

Analysis And Discussion

Privatization in the distribution sector, its models and suitability

Privatization model in the power sector as a whole including the generation, the private participation is more dominant in the generation sector than the distribution sector especially when it comes to India whether in form of greenfield or in form of brownfield investment or whether in form of PPP or IPP. In the distribution sector, there are three dominant models: privatisation, PPP, and distribution franchisee. PPP model is similar to privatisation model but in privatisation the state transfers the complete ownership and in the PPP model the government also has a say and government support is there. In privatisation hundred percent of the utilities are owned by the private party and there is no government intervention in terms of financial assistance, capital investments, and maintenance. But in PPP there could a majority stake sale or a minority stake sale. In the PPP model, there are two categories Build Operate & Transfer and Build Operate Own & Transfer. PPP models are for a very long period for about 25 to 40 years. Earlier, the government was providing annual subsidy but privatisation took place in the year 1999 government stopped providing any kind of financial assistance. In the PPP model, there is potential to address most of the concerns regarding the policy matters and regarding the political class. More versatility and flexibility can be incorporated in the PPP model. As the PPP model have both the public sector component and private sector component, so this public and private parties together decide plans and operations based on the situation and have flexible terms & conditions which are agreed by both the parties, then they can optimize their efficiencies. So that is how PPP models can be more successful in mixed demographic regions which are not urban or rural areas, especially in countries like India where one needs political influence.

In distribution franchisee ownership is not transferred, only the management is transferred for a shorter period. Distribution franchises are for 10 to 15 years and if their performances are satisfactory only then their contracts are extended at max. for 5 years. In all the models' tariff is always fixed by the regulatory commission of each state. Distribution franchisee does not have any rights to file for tariffs to the regulators and the distribution companies are not very transparent about the performance of franchisees. Distribution franchisees are classified into input-based and collection-based. The input base distribution franchisee model is that the incumbent distribution licensee will procure the power from generating stations and give it to the franchisee and the franchisee will then carry out the distribution. In the input model, there is a base tariff been fixed means how much is the realisation per unit of the input. Once the realisation per unit of the input is fixed and one licensee is finalised and the area which is suffering losses and the realisation per unit is very less is selected and given to the private company who will give a commitment that they will give an incremental base of the realisation per unit of input. In case of metering and collection, the private company will provide the manpower but the materials in terms of infrastructure and meters are to be taken from the licensee.

And the collection-based franchisee has a shorter responsibility of metering, billing, and collection activities. The distribution franchisees cannot have technology change after having adopted for a particular technology, they don't have a regulatory policy so as to apply for a change in technology so as to improve its efficiency further. This hampers the distribution franchisee model while the

privatisation model and PPP model does not have such a limitation. Each model has its pros and cons and each and every model is needed actually but it has to be seen in which area which model is best suited. A single model for the entire country will not work. The government recently has approved privatisation of union territories. In privatisation model and PPP model, the companies can file their own tariffs. These companies can decide and put forward their own cost. Private companies will do the filing of tariffs and would represent the cost of supply for tariff revision. To file the tariff, the private companies ARR i.e. annual revenue requirement to State Regulatory Commission. Then the tariff will be determined and fixed by the State Regulatory Commission after considering both sides of private companies filing annual revenue requirements and users purchasing power & willingness to pay. For example, the state of Maharashtra and Gujarat are the highest paying tariff state. But these things cannot be done by distribution franchisee because distribution franchisees are given for a shorter period and they just transferred the management of a distribution under the jurisdiction of distribution government. Franchisees can work better in rural areas because franchisees have to operate smaller areas and their earnings are directly linked to their performance so that franchisees can achieve realistic targets. The consumer mix is the key factor in the cost of supply as well as revenue. For example, a Noida distributor who is distributing power to an industrial area in Noida will take care of the distribution costs, which will depend on your transmission lines, which will depend upon the other operational cost and accordingly ask for a revenue realization through status representation. There is a need for a push of privatisation in the distribution sector as private companies can work efficiently by reducing repairs and maintenance costs, administrative costs, and by adopting the latest technology to bring down the losses and increase the revenues. The fully privatisation model is the most successful model and should be promoted more while the distribution franchisee model is less successful, and many franchisee models have failed with some of the exception being torrent power in India. Even then distribution franchisees can be successful, for that rate at which they are taking should be properly calculated with proper projections at the time of the bidding. Another important thing is that the companies should be capital-rich so that they can invest in the system upfront. And upfront investment should be done correctly with the proper expertise. Also, distribution franchisees should be given a longer tenure of more than five years in duration.

Lowering the average cost of supply

One of the primary goals of privatisation in power distribution segment in India is to lower the average supply cost so that the profitability of distribution companies can be increased. The following are the points which can be implemented to lower the average supply cost.

(1) Restructuring of power purchase agreements

To lower the average supply cost, long term power purchase agreement should be restructured regularly. Or the distribution companies should be allowed to enter into short term or medium-term power purchase agreement. The standard duration of power purchase agreements should be brought down from 20 - 25 years to renegotiable contracts of 7 - 8 years duration which essentially means that after 7 - 8 years of power purchase agreement execution, the distribution companies and generator will renegotiate on the tariffs which will be in the interest of distribution companies. So, this can bring down the average cost of supply.

(2) Manpower and skill development

In an organization, people who are professionally equipped and people who have the right degree should be employed. If not so the employees in the distribution company who are working at the ground level or at the divisional level all come under the political influence who is the power. So, these employees are not professionally equipped or manageable to share or to bring the required changes. As they don't have that kind of knowledge or that kind of ability, they don't care to bring in new managerial changes. This is leading to an increase in administrative costs. So, this a very important factor which is contributing to inefficiency because of which the rate of supply is increasing. By appointing competent administration, manpower, and managerial people and having continuous skill upgradation, the average cost of supply can be brought down which will result in reduced losses or higher profits.

(3) Increasing operational efficiency

Operational efficiencies should be brought up by reducing the AT&C losses. AT&C losses can be reduced when the billing and collection improves. Billing and collection can improve only when there is 100 % metering. For this purpose, regular consumer indexing and keeping the record of defective meters is very essential. As the AT&C losses reduces, the average cost of supply also gets reduced. Technological upgradation is also necessary for increasing the operational efficiencies and also to bring down the maintenance cost. Best practices should be adopted so as to give the best service possible and having a customer centric approach. So private participation is very important to bring down such kind of inefficiencies. The private companies should be able to provide efficient output at the lowest cost with the highest service support with the highest efficiency. As the efficiencies increase the quality improves and the power shortages also get reduced. By increasing the privatisation percentage in distribution sector, this issue is automatically addressed at some level.

Phasing out cross subsidy surcharges and implementing cost reflective consumer tariffs

The phasing out cross subsidy surcharges and implementing cost reflective consumer tariffs can be achieved by promoting and implementing collection based distribution franchisees in rural areas with the assistance of government by segregating into categories of needy, very needy and can afford so as to provide adequate subsidy and then the subsidies should be slowly phased out. By bringing privatisation in rural areas the electrification of every household with continuous electricity supply and better quality of electricity and services can be achieved.

Off grid electricity in rural areas is another way of phasing out cross subsidy surcharges and implementing cost reflective consumer tariffs. The first concern today is that battery is expensive and village communities cannot afford

it. Therefore, there is a need to identify a business investor who will invest in the system, get the project started, get the power generated and then act as a distributor to the village. The second concern is that villagers don't have the paying capacity that a urban consumer has; so in off grid applications, there is a need of anchor consumer or a bulk consumer within a village community like a school or an industry or a factory. Off grid is definitely a solution but it will take 5-10 years as battery technology improves and cost of batteries becomes cheap and it becomes commercially viable and feasible.

Adoption and implementation of certain schemes such as universal supply obligation (USO) and direct benefit transfer (DBT) will also help in phasing out cross subsidy surcharges. Also, transparency at state level, specific action plans at state level, intervention at national act level as when necessary, collaborative efforts both at ministry of power & at state level, stagewise monitoring of review plan with proper feedbacks and continual improvements are necessary to be implemented for phasing out cross subsidy surcharges

The key variables that private companies look into before investing

The private players when are looking to invest look into the subsequent political environment and political will. The political environment needs to be stable. The government should provide enough time to private companies to reduce losses with realistic targets and there should be financial incentives for private companies. Gradually it should be looked into whether the private companies are improving or deteriorating, but they should be given a freehand. Then private companies look for business opportunities which is a very important determinant. Then they look at the regulatory environment whether tariffs are revised or whether the policies are business friendly. The losses suffered by the distribution companies is also very important, the greater losses the better because losses can be reduced, and their collection and revenue generation can be more. The socio-demographics is a very key element in investment, as urban, residential, commercial and industrial sectors are more lucrative. The reachability for private companies in case of urban areas which are densely populated is much more as compared to rural areas where the population is scattered and the private companies don't the required realisation per unit for them to be enough profitable and industrial sector is the most profitable sector for the private companies.

Growth of private participation in distribution sector

Even after more than 2 decades of liberalization, there is not a lot of participation from private companies in the Indian distribution sector. A measure reason for this is an upfront investment and for this purpose, the private distribution companies should be capital rich, but funds is not the only thing which is important. Even if the private distribution companies have funds, distribution is not an easy sector to step one's foot into. These companies need proper domain expertise and experience to make proper investments i.e. where to invest and how much to invest in this sector and function & handle the operations efficiently to sustain in this difficult and harsh sector and there is not a lot of companies who have this required domain expertise and experience. Another reason why privatisation percentage in the distribution sector has not increased is because of the vote bank politics. Privatisation will try to make distribution in a community or society systematic by making collections where collection does not take, identify and catching electricity theft and false metering and giving penalties to late-paying consumers and cutting supply to the non-paying consumers, this at times adversely affects the vote bank because of which the local political leaders do not encourage or does not show any interest in privatisation in distribution sector. High transmission and distribution losses, power theft, different tariff structure depending up on the states, low tariffs due to cross subsidies, restrictions to adoption of latest technology, high cost of supply and poor recovery structure also constitutes to discouraging reasons for private companies to enter into distribution sector in India. The tariff structure is also very complex and completed and certain tariff regulations change with the states. For this the tariff structure should be simplified based on end user, energy consumption pattern, socio economic profile, load factor and the voltage levels. By tackling all these areas one by one the system can be improved which will encourage more private participation in distribution sector.

Conclusion

The Indian power sector has gone through many upheavals during the past few decades with its ownership changing hands from private to public to back to private. Private sector and public sector have historically catered to different customers. Private sector has always focused on the urban market as they want to maximise their profits and they have very less incentives in the rural market. Also, the rural market is maligned by other problems as lack of infrastructure, electricity thefts and private players are not trusted with their services by the rural people in certain parts of the country adding to the woes of Private DISCOMs. Public DISCOMs too suffer from various problems like overcapacity and under utilisation. Privatisation model has been proven to work in certain markets but it still needs various policy impetuses which incentivises Private players to go beyond the highly industrialised and sound socio-demographic urban markets In 1991 Government of India amended the Electricity Act (1910) and Electricity Supply act (1948) to make it easy for the private players to enter this sector. Enhancement of capacities and Mega power projects seemed probable incentives for Private companies to enter the industry. The foreign investments were made more accessible to this sector thereby guaranteeing higher returns for the private players. Also Licences given out to the private companies increased their autonomy and long term purchase agreements locked these private players in the industry for a longer run. The recently launched Ujwal DISCOM Assurance Yojana (UDAY) in 2015 also is a pivotal step in the reforms concerning the DISCOM sector. It helps a great deal in reducing the losses by minimising the gap between supply costs and the revenues generated, making credit cheaper and helping improve the operational efficiency and minimise transmission and commercial losses. The Private-Public Partnership models can also prove to be beneficial in the longer run but for private

players to participate they need to be given sufficient freedom and authority with minimal interference from the public entity. The Electricity Contract Enforcement Authority (ECEA) has suggested a formation of National Renewable Energy Policy by the central government but in close consultation with the state government. This will enable states as well as the central power regulators to decide on the transmission charges under open access. To summarise the government needs to take the following actions such as taking actions for grid securation, increased simplicity, affectivity and responsibleness within the regulatory system, strengthening the establishments for providing non-discriminatory open access, to encourage the use of renewable energy for usage of clean power as well as healthy tariff policy, reorganization of tariff structure and also integration of Information technology, adoption of state of the art infrastructure, sustainable energy accounting and robust policy frameworks to help revive the dying DISCOMs in India.

More accentuation ought to be given to privatization in country zones. Progressing changes in the power sector are relied upon to accomplish the predetermined goals. Even though the principle target of the electricity segment change in first world nations has always been to upgrade rivalry in the part, the need to improve monetary state and to pull in private speculation to the force segment, has been the fundamental core thrust for carry out change in India. Administrative changes have had the option to realize tax defense, and straightforwardness and customer interest in the administrative procedure. Continuous decrease in the cross-sponsorship trouble on the division and enhancement in operational and business proficiency, remembering decrease for T and D misfortunes, would aid progress the budgetary state of the Indian influence part. Be that as it may, change the executives may end up being the most troublesome errand while attempting to adjust the business objectives and social commitments confronting the part. This requires adjusting business judiciousness toward one side and the social agreeableness of the change at the other, which is connected to the political aftermath of the change procedure.

Income supportability is a basic for progressing in the power distribution network, as well as guaranteeing the manageable development in the Indian distribution segment demands a huge spotlight on private division interest. This aids to make distribution companies monetarily sustainable, however empowers them to put resources into brilliant advances to develop well turned out utilities. Through acknowledgment of this requirement for diversifying in both urban and rural territories with a primary goal of diminishing aggregate technical and commercial losses and expanding consumer loyalty, it currently is imperative to engage vigorously in this movement in a deliberate and incorporated way because of which different tiers of development are appropriately managed and comprehended by each and every partners: controllers, the franchisor and the franchisee (private business organization).

In summary, Privatisation needs more impetus and needs to be encouraged in the distribution sector. The reforms by the government need to also incentivize the private players to enter the rural market. The Electricity Act amendment of 2020 has favoured only the union territories and should also include rural areas when it comes to attract the private players in the distribution sector. The distribution franchisees should expand into the rural market. These factors will eventually add up to minimize the transmission and commercial losses of the distribution sector.

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