Memorandum regarding Electricity (Amendment) Bill, 2022

1. Background

The Union cabinet has approved the Electricity (Amendment) Bill in July 2022. It has been referred to the Parliamentary Standing Committee on Energy which has invited views and suggestions from the public. This memorandum represents the views and suggestions of a common citizen who has worked hands-on in the power distribution sector for past 20 years.

The Amendment seeks to introduce competition in the distribution sector by allowing multiple licensees to serve consumers within the same area. It is anticipated that this would allow consumers to opt for power from a competitor licensee operating within that area. Although PPP models have been successful to a large extent in improving performance standards, this amendment brings forward a new licensee model which is asset-less[1] in nature. The model appears to have certain inherent demerits – based upon stakeholders' perspectives discussed in this memorandum.

2. Important stakeholder perspectives

While the bill aims to strengthen the competitive framework first proposed in Electricity Act 2003, however, the amendment in its current form appears to have missed the perspectives of important stakeholders – a) Consumers, b) DISCOMs and c) private investors. These are summarized in the sections below.

2.1 Voice of consumers

Electricity consumers have three basic needs[2] irrespective of geography, economic profile, or category. Whether it is an industrial establishment or a rural household, the most basic requirements of a consumer are – 1) Safe and reliable power supply at 2) affordable rates with 3) customer centric approach. However, the currently tabled amendment may not be adequately addressing these aspects as discussed below.

2.1.1 Safety and reliability

Section 42 (4) of the amendment provides non-discriminatory open access of the existing licensee's network to competitors on payment of a 'wheeling charge'. This means that the same network would be used by existing as well as competitor

[1] Presumably to prevent duplicate asset creation

[2] Validated through focused group discussions with various consumers during customer engagement surveys

licensees. Therefore, consumers would find practically no difference in terms of safety and reliability as these are primarily network-related attributes.

The only difference a new licensee can bring in terms of reliability is by negotiating additional Power Purchase Agreements (PPAs). These would necessarily kick in only after exhausting their allocated PPAs. Even in such a scenario, consumer-wise supply availability cannot be effectively regulated on a common network unless last-mile feeders are separated for each licensee.

2.1.2 Affordability

Government initiatives and schemes such as RGGVY, DDUGJY and Saubhagya under Power for All[3] have done well to provide access to electricity to most Indian households. However, the flip side is that these schemes have swiftly added subsidized category of consumers to the grid which has associated financial consequences. Besides mounting cross-subsidization burden on the industrial category, the tariff rates of Street Lights, Water Works and Institutional categories are also heavily loaded with cross-subsidy. Payment of dues for these categories as well as state government subsidy contribution is supposed to be made through direct and indirect taxes. Besides, for industrial consumers, the manufacturing cost increases resulting in increased cost of indigenous products. In all cases, it is the common citizen who ends up footing the bill in terms of high product prices, taxes, and duties, etc.

It is anticipated that the amendment would result in removal of subsidizing category consumers from the existing DISCOM's billing fold – pushing state DISCOMs even more towards financial deficiency. In such a scenario, it is expected that cross-subsidization surcharges would increase. Even in case the competitor offers the minimum tariff rate with surcharge, the burden of increased deficiency of the existing DISCOMs would still be borne by taxpayers.

2.1.3 Customer services

Perhaps the only differentiating factor between existing DISCOMs and competitors can be better customer service. Customer oriented DISCOMs strive to reduce unplanned outages, provide proactive planned outage information to customers, improve supply restoration time, and provide timely and accurate bills with multiple payment options, amongst other finer aspects of customer engagement. However, as the onus of maintaining the network lies with the existing licensee under the amendment, only a marginal difference in customer service can be achieved by competitor licensees. This marginal difference may not be significant enough for consumers to port their connection to a new licensee.

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[3] State-wise details of Power for All scheme - https://powermin.gov.in/en/content/power-all

2.2 DISCOM's perspective

State DISCOMs are often referred to as the weakest link in the power sector value chain. However, a closer look reveals that the poor financial health of state DISCOMs is deeply rooted in systemic deficiencies. DISCOMs do not have direct control on cost of power, nor do they have control over category-wise tariff rates which are fixed by SERCs – often under close guidance from state government.

Decisions such as bill waivers, subsidies, etc. are primarily driven by short-term political gains. Tariff hikes proposed by DISCOMs are often disallowed on account of slippage from performance targets or to avoid tariff shock to consumers. Further, state governments have historically defaulted on payment of dues as well as subsidy disbursements to their own power DISCOMs[4]. The resulting increase in carrying cost has led DISCOMs into a vicious debt cycle. The situation even leads to overflow of the financial stress to the banking sector. In such an unviable and unsustainable financial situation, removal of subsidizing category consumers from the existing DISCOM's billing fold by competition shall further exacerbate the financial stress.

Moreover, DISCOM employees need to be taken into confidence, trained for sectoral transition, and be made aware of their prospects.

2.3 Private partners' perspective

There are two prevalent business models in power distribution which attract private investors. These are – 1) Asset ownership-based licensee model and 2) asset-light, input-based franchisee model. The licensee model provides 15.5% RoE on the allowed[5] capital expenditure. This gives a significant leverage to enhance the bottom line of efficient DISCOMs. It is a big factor for business sustenance besides per unit margins between retail tariff and cost to serve.

However, as per the amendment, return on capex is out of question[6] since network would still be under existing licensee's purview. Therefore, success of the resultant business model shall primarily hinge on the ability to squeeze bigger margins between revenue and cost to serve. Mathematically, this is possible only if a) PPAs are allocated favorably towards the competitor licensee or b) Operating expenses are minimized which would invariably result in compromising on the customer experience.

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[4] Refer news article - https://timesofindia.indiatimes.com/business/india-business/unpaid-power-subsidy-govt-department-bills-keep-discoms-in-red/articleshow/93120067.cms

[5] Prudent costs allowed by state regulatory commissions for technology infusion, network modernization etc.

[6] Anticipating capex on billing and Customer Relationship Management (CRM) systems would be minimal compared to network related expenses

A simplified equation for calculation of ‘cost to serve’ and ‘margin’ for a competitor licensee under the current amendment scenario is given below for reference –

Cost to serve = Cost of allocated PPAs + Wheeling charges[7] + Operating Expenses + Surcharge[8]

Margin = Revenue from sale of power – Cost to serve

Cost of allocated PPAs = Σ (Fixed charges + Input units allocated x Per unit cost of corresponding GENCO)

Revenue from sale of power = Σ (Weighted Fixed charges + Units sold x Weighted Retail tariff) + Surcharge

Private investors would also keenly observe treatment of existing private licensees based on the amended act – especially, treatment of recently awarded licenses through competitive bidding. For instance, licenses have been recently awarded to M/s Eminent Electricity Distribution (CESC’s wholly owned subsidiary) for Chandigarh, M/s Tata Power Company Ltd. for Odisha and to M/s Torrent Power for Dadra and Nagar Haveli. Some other areas have also invited bids or are currently under bid evaluation stage. At this juncture, the amendment threatens to erode consumer base of existing private licensees. This would affect their financial projections as this threat never existed at the time of bidding. Therefore, the amendment is likely to shake investor confidence on the continuity and predictability of government policies.

3. Suggestions

While the intention of the amendment is to shift the power distribution sector from a natural monopoly towards competition, the proposed model may not be well suited for Indian scenario yet. The asset-less licensee model may be seen as a baby step towards content and carriage separation. Content and carriage separation has indeed worked well in foreign countries. In the UK, for instance, the network service provider, meter provider and electricity providers are separate entities. However, unlike in India, their network is in good shape with high reliability[9]. Besides, failure / delays by provincial governments to clear their dues and subsidies is unheard of in other

[7] It is assumed that wheeling charges would cover the T&D loss as well as maintenance cost of part of the network used by competitor licensee

[8] Any surplus with a distribution licensee on account of cross subsidy or cross subsidy surcharge or additional surcharge shall be deposited into cross subsidy balancing fund (Section 60A of amendment)

[9] Refer UKPN data - http://annualreview2020.ukpowernetworks.co.uk/annualreview2020/operational-performance/network-reliability

countries. We stand at 22 % AT&C loss whereas the world average is just 8 %. These challenges make the amendment unsuitable for implementation. Infact, Niti Aayog's own report has cautioned on DISCOM delicensing and separation of content and carriage[10].

In India, power is a concurrent subject. With the current amendment and anticipated state – centre tussle, the situation might lead to an implementation deadlock. Moreover, it is expected that the amendment may invite a deluge of litigation, putting unnecessary pressure on the justice delivery system.

Amendment of Electricity act by Centre must therefore guide states and DISCOMs at strategic policy level rather than taking a tactical approach. Strategic policy intervention must consider the perspective of all stakeholders.

Therefore, it is suggested to bring about policy thrust towards renewable microgrids, solar agri-pumps and DERs. This will systematically reduce dependance on subsidization and facilitate localized competitive entry by state policy guidance.

3.1 Climate effects as central theme

India has committed to become a carbon-neutral economy by 2070. Therefore, any central government policy regarding electricity cannot ignore climate change. The current amendment risks leading to greater subsidization as seen in section 2 of this memorandum. Subsidization of electricity does not align with the climate action goals of our country. Free grid connected electricity not only makes small rooftop solar financially unviable for common domestic and agricultural consumers, it also encourages wastage and deters energy efficient measures. It brings about tariff disbalance and poor utilization of taxes.

On the other hand, past efforts of central government to promote cost-reflective tariffs did not prove to be effective. For instance, the Electricity Act 2003 in its original form aimed to progressively do away with cross subsidy. However, subsequent amendments had to be made to restore cross-subsidization.

Furthermore, in terms of climate action, our country's policies and actions are rated "Insufficient" as per the climate action tracker[11]. Therefore, it is suggested that central government may usher a transition from grid-connected supply to hybrid microgrids, especially for our rural and agricultural consumers. This can be made possible by effective implementation of Distributed Energy Resources (DERs) in 'connected' and

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[10] Refer article on Niti Aayog report - https://timesofindia.indiatimes.com/business/india-business/niti-report-cautions-on-discom-delicensing-separation-of-content-and-carriage/articleshow/85015992.cms

[11] Updated as on 15th Nov 2022 - https://climateactiontracker.org/countries/india/

'island' mode on case-to-case localized basis. Policy-push towards renewable microgrids and storage will also decrease dependance on coal-based capacity addition – thereby ensuring energy security.

A TERI report projects that by 2030, the cost of wind and solar will be between INR. 2.3 - 2.6 per unit and INR. 1.9 -2.3 per unit respectively, while the cost of storage will have fallen by about 70 %[12]. Therefore, the benefit to cost ratio of a one-time expenditure on setting up DERs will far outshine increased dependance on recurring subsidies, cross-subsidization, bailout packages, etc. The former strategy has multiple merits including affordability and increased energy security, while the latter would continue to strain the taxpayers' purse every year.

3.2 Framework to reduce dependance on state finance

The biggest challenge for the power sector is restoration of the financial viability of the DISCOMs[13]. The government can help overcome this challenge if DER promotion policy outlined in 3.1 above is implemented. The centre may guide the states on a financial framework for its implementation. This may be based on reduced dependance on state finances as going forward, states would not have to provide regular agricultural and 'kutir jyoti' subsidies associated with grid connected electricity.

As cross-subsidization levels recede, it would rationalize the cost of grid supply for urban and industrial sector. DISCOMs will be able to focus resources on performance and sustainability. This will enable better models of localized private participation on a much more manageable and customizable scale – for O&M of local DER microgrids, batteries, metering, billing, collection, and customer care.

3.3 Integration with other schemes

The current amendment is precariously at cross purposes with the RDSS[14] – a 3 Lakh Crore rupee scheme which aims to install 25 crore smart meters. It is obvious that states and DISCOMs would not support implementation of the amended act which threatens to give the advantage of this recent investment to private players or competitors.

Whereas under the strategy suggested in this memorandum, the states and DISCOMs would be free to leverage not only RDSS but other schemes such as PM Kusum for energy efficient solar pumps, 'Har Ghar solar scheme', while targeting CO_2 emissions

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[12] Refer news article - https://www.business-standard.com/article/news-ians/solar-energy-cost-to-fall-to-rs-1-9-per-unit-by-2030-in-india-teri-study-119021301189_1.html

[13] Interview with Mr. Alok Kumar published in powerline magazine - https://powerline.net.in/2022/10/11/interview-with-alok-kumar-2/

[14] About RDSS - https://recindia.nic.in/revamped-distribution-sector-scheme

in the process. It will also bolster investor confidence while allowing current and potential PPP contracts to fructify and flourish.

This way, the central government may ensure progress of the power sector taking maximum stakeholders' needs into consideration.

The author of this memorandum is available for detailed discussion on the guidance of the committee.

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