Trends and Way Forward in the State Electricity Sectors, 2018

An Experience Sharing Workshop

3rd & 4th September, 2018 | Hyderabad













1 Introduction

The second edition of the two-day workshop was organised by Prayas (Energy Group) (PEG) on 3rd and 4th September, 2018, at ASCI, Hyderabad. The workshop was a coming together of fifty-eight individuals working in the electricity sector- NGOs, grass-root organisations, policy think tanks, and consumer activists, representing around twelve states in India.

Similar to the workshop held in September, 2017, the idea of this workshop was to share experiences, discuss commonalities, differences, challenges, and strategies used in various states to engage with the sector. The previous workshop prioritised state level discussions, highlighting relevant issues in the state context. The workshop participants felt that there was a need to have more in-depth discussions on common issues and themes from the state experiences. With this consideration, this year's workshop was structured around the following themes:

- AT&C losses, agricultural consumption and subsidies: Based on regulatory and policy engagements related to unmetered agricultural consumption, and its link to AT&C losses and subsidies.
- Power Procurement: Focused on improving demand estimation, competitive bidding, power purchase contracts, fuel coordination and surplus management, based on intervention experiences.
- Quality of Supply and Service: Especially to small and rural consumers post achievement of universal access to grid power.
- *Improving effectiveness of regulatory processes:* Deliberations on experiences in safeguarding regulatory spaces and processes to ensure transparency and public participation.
- Future of distribution companies: Discussions recent trends such as cost of renewable energy and storage, migration of big consumers, scope of cross-subsidy and interests of small consumers.

The agenda for the workshop and the list of participants are enclosed in Annexure-I and Annexure II, respectively. The participants discussed and acknowledged the need for more fundamental changes in the sector. However, the participants also identified ideas that can be implemented within the existing framework and emphasised the need for action on the same. In this context, a *joint statement*¹ was signed by most participants, and subsequently by many others who are involved in the sector. It is intended to be circulated widely among various agencies in the power sector to further the cause of better electricity service delivery in India. Presentations, notes, and materials shared during the workshop are available here: http://www.prayaspune.org/peg/publications/item/390

¹ For more details, please see: http://www.prayaspune.org/peg/publications/item/387

2 Major Deliberations at the Workshop

This section of the report covers the major issues that were raised and discussed in the various sessions of the workshop.

2.1 Power Procurement

2.1.1 Rising cost of generation

It was recognised that the cost of power generation, especially for cost-plus thermal power projects has been increasing significantly. The participants discussed that the rise is not restricted to privately owned capacity but is also true of state or central sector capacity. Many suggestions were proposed to increase accountability for costs and increase efficiency which included benchmarking studies for capital costs, disallowance of interest during construction (IDC), where possible. Moreover, coordination between various actors in the power supply chain, as opposed to the existing silo based decision making, could result in better determination of costs.

2.1.2 Need for capacity addition planning based on detailed assessments and public processes

Some participants felt that power procurement processes in the recent past have led to stranded assets and idle high cost capacity due to poor planning with a top-down approach rather than a need based approach. Some participants also felt that the processes in states were sometimes driven by vested interests and myopic decision making. The growing share of intermittent and variable renewable energy in the power procurement mix poses a challenge of the DISCOMS' power requirement planning. Given uncertainty in future demand due to various trends such as migration of HT sales to open access and captive, growth of demand due to increased electricity access and electrification of transport, a need for capacity addition based on a comprehensive assessment of demand was deemed necessary. In fact, the participants agreed that no capacity addition should be allowed without a detailed procurement process with assessment of status of capacity in the pipeline, scientific assessment of sales and load growth, scenarios and estimates for sales migration, impact of energy efficiency and new demand growth is assessed. Further, capacity addition requirement should be assessed based on the consideration of least cost, flexibility and the nature of the shortages to be faced in the future. Thus, the capacity addition could be for peaking, medium-term or short-term contracts based on the requirement rather than for baseload contracts, as has been the practice in the past. In this context, participants agreed that nuclear power investments may result in lock-in of investments and should be discouraged. Given the power procurement accounts for 70% of the total cost of supply, it was felt that there is a greater need for informed public participation in the decision making process in this regard. Thus, the participants agreed that SERCs should ensure that capacity addition and power procurement processes include public hearings.

2.1.3 Nature and duration of power procurement contracts

Many states are grappling with the fixed cost burden due to surplus power. As many of these are long term, take or pay contracts, DISCOMs continue to pay fixed costs, even when they surrender the power. The participants debated changes in the nature and duration of PPAs to avoid such a predicament in the

future. One suggestion was to extend the term of PPAs of existing plants as consumers can benefit from the lower cost of such depreciated units. The other suggestion was for DISCOMs to consider peak, off-peak, short-term or medium term contracts instead of RTC contracts. It was felt that the DISCOM department handling power contract is currently weak and should be strengthened. Other participants felt than PPAs termination of PPAs should be made easier future contracts. Further, contracts can also be designed to limit the criteria for applicability of change in law and force majeure. Participants also suggested that there should be better coordination between power evacuation and generation. It was also felt that financial institutions that finance unviable power projects must also be held accountable for poor investment decisions.

Even though there is significant influence by the state government in capacity addition, there are regulatory spaces to improve the process. Examples include recent MERC orders asking for power purchase planning before PPA approvals and MERC order on increasing transparency in coal procurement by the generation company.

2.2 AT&C losses, agricultural consumption and subsidies

2.2.1 Agricultural Demand and Loss Estimation

Some participants raised concerns about how DISCOMs tend to show lower distribution losses inflating their unmetered (especially agricultural) sales and thus claim greater subsidy. The methodologies used by various states were discussed and actions by SERCs, CSOs and research organisations to estimate unmetered consumption were deliberated upon. As feeder separation has taken place in many states, it was felt that the use of automatic meter reading technology at the agricultural feeder can provide a better estimation of agricultural demand. Further as and when possible, installing meters to Distribution Transformers was also suggested. Some participants remarked that, AT&C losses should be broken-up into technical and commercial so that they can be dealt with accordingly. There was unanimous agreement on the need for standardisation in formats and reporting of losses.

While issues persist with unmetered consumption estimation, it was also recognised that several challenges remain with already existing meters which need to be addressed. For example, meters are mounted at a height on distribution transformers makes reading meters difficult. In this context, participants felt there was a need for attention on such issues and pilots to understand impacts of possible solutions such as installation of smart meters or DBT before large scale implementation. Some participants also suggested awareness campaigns to tackle resistance towards installation of meters.

2.2.2 Quality of Supply and service to agricultural consumers

Participants shared that while the revenue from agricultural consumers and subsidy to agriculture has been increasing; agricultural consumers continue to receive poor quality of supply (mostly off-peak, low cost power at night) and are subject to poor service. In order to provide day time supply, grid connected tail-end solar plants at the feeder level were suggested in states with feeder separation and low ground water levels and individual solar pumps were suggested in areas with high groundwater levels and poor access to electricity grid. It was also suggested that surplus power from such solar generation could be fed back into the grid. Another suggestion to deal with poor supply and service quality was to institute a

separate utility for supply to agricultural consumers. There was a lot of debate on this solution as it was felt that this measure might not be able to address deeper governance challenges. Participants also highlighted that there are many inter-linkages between agriculture demand, crop production, water use and environmental impacts and that any solution should consider all these aspects. The depletion of the ground water table which is aggravated by the provision of electricity was discussed with grave concern. Thus proposals to provided extended hours of supply to agriculture should also be seen in the light of water availability.

2.2.3 Issues with subsidy and disbursement

Despite the mandate under Section 65 of the Electricity Act, there are significant delays in subsidy payments across states which affect DISCOM operations and losses. The quantum of subsidy is interlinked with the estimation of agricultural consumption, the applicable tariffs and the extent of cross subsidy. Going forward, with increased sales migration and rising cost of supply, the reduction of cross subsidy is inevitable which will further increase the need for government subsidy. Thus there is a strong need for transparent reporting of subsidy amount allocated and subsidy amount actually paid and accountability for delayed subsidy payments. The case of Punjab, where there are delays in subsidy payment, despite several accountability measures and its impacts on distribution finances was discussed by the participants.

It was pointed out by some participants that agriculture subsidy should be looked upon as food subsidy, since the farmer does not directly gain from it. Hence there is limited point in the debate on skewed distribution of subsidy. But some others felt that subsidy should not be provided to corporate farmers.

2.3 DISCOM role, operations and its future

Discussions revolved around the fact that the average cost of supply is currently Rs. 7/unit and has been growing at 6% per annum. Further, 70% of consumers pay energy charges more than Rs. 5/unit. At the same time, power from renewable sources is becoming more competitive and is below Rs. 5/unit. This indicates a migration choice for consumers with energy charges greater than Rs. 5/unit and opt for open access or captive power consumption. This shift has resulted in significant sales migration in many states.

With loss of cross subsiding revenue due to sales migration and rising costs, the DISCOMs would largely become a provider of wires and supplier of last resort for most consumers and be responsible for supply to small consumers. In this context, the role of the utility as a commercial organisation versus a welfare organisation was debated. Most participants agreed that despite having universal supply obligations especially for poor and small consumers, the utility operations can be sustained with a focus on efficiency improvement and agile planning needed for changing times. Participants also stated that DISCOMs also have issues with respect to understaffing, reliance on third party agencies for important functions such as metering and billing, and low capacity and competencies for modelling, power procurement planning etc. It was felt that some tasks such as ensuring inspections for safety, auditing metering and billing systems needs to be outsourced to a third party. However, for crucial functions such as metering, power purchase planning the DISCOMs need to invest in improving their internal capabilities.

Planning for an uncertain future needs to be agile and thus it is important to ensure less political interference in decision making. At the same time, state government buy-in and support is a pre-requisite for the DISCOMs to initiate measures in this direction. It was agreed that the transition for the DISCOMs will play out in different states differently, based on state realities. Thus it is important for policy makers, CSOs and researchers to identify the states where it will play out sooner and states where unique characteristics of the states will need to be addresses with innovative solutions. Participants also debated the contours of such a transition in the role of the proposed amendment of the Electricity Act in initiating actions and changes in the sector.

2.4 Quality of Supply and Service

2.4.1 Supply and service quality for new connections

While the provision of electricity connections to millions of rural, poor households in the past decade needs to be celebrated, participants felt that attention and focus needs to be there for the supply and service quality for these newly electrified households. Such focus will ensure that the investment in ensuring last mile connections is not wasted and the benefits of electrification can be enjoyed by the beneficiaries. In order to ensure this the participants suggested that the quality of materials used while providing new connections needs to be ensured for safety. Towards this end, third party evaluations could be advocated for. It was also perceived that rationalising tariff design such that small domestic, commercial and industrial consumers pay similar tariffs could facilitate growth of small businesses and reduce harassment of home-based enterprises.

2.4.2 Accountability for better supply and service quality

The standards of performance regulations and the complaint handling regulations notified by all regulators provide an important space to ensure accountability for various parameters of supply and service quality. The Standards of Performance Regulations also have provisions for compensations in case the DISCOMs do not meet guaranteed standards of performance. Participants felt such compensation should take place automatically rather than based on a consumer appeal and therefore, consumer helplines could be integrated with SoP frameworks and cases of non-compliance could be tracked through phone call complaints and payments could thus be automated to some extent. Participants also felt that there should be regular (possibly daily) and disaggregated reporting of the performance of the DISCOMs as per parameters identified in the regulations. Further, there should be weekly reporting of the activities of the CGRF. Based on these reports, the Commission and release a quarterly report with analysis of major parameters to ensure accountability. Participants discussed that CGRFs would be more effective if members who are appointed at not only from the utilities.

The participants stated that the information on power portals could have more disaggregated details on quality of supply. Utilities, regulators and CSOs need to play an active role for dissemination of knowledge regarding SoP regulation provisions and complaint mechanisms. Electricity bills, online portals and mobile apps could be used by DISCOMs for this purpose.

Besides better implementation of existing regulations and provisions, participants also felt that there need to be annual public hearings dedicated to quality of supply and service issues as these issues do not

get adequate attention during the annual tariff revision processes.

There was a presentation by participants from Kerala on efforts by Kerala State Electricity Board (KSEB) to restore supply post the floods in August, 2018. "Mission Reconnect" of KSEB, to restore supply and repair substantial damage to the electrical system, resulted in charging of 98.69% distribution transformers restoration of 99.88% service lines. This was appreciated by all participants.

2.5 Increasing Regulatory Effectiveness

2.5.1 Capacity of Regulatory Institutions

The participants felt that the appointment of members and chairpersons of the electricity regulatory commissions should be carried out in a planned and timely manner as per provisions of the Electricity Act, 2003. Participants also discussed the need for appointment of regulators from a wider pool of candidates as currently majority of the regulators are recently retired from the regulated utilities or have recently retired as state level bureaucrats. Participants also felt there significant investments are needed to increase capacity and strength of regulatory staff. They were that was overdependence on consultants by regulators which is a problematic practice as these agencies are not publicly accountable for their inputs. There is an urgent need to sufficiently create staff capacity of the SERCs and reduce dependence on consultants. In addition, it was also suggested that certain Key Performance Indicators be identified to evaluate the performance and effectiveness of each ERC in India. The rankings based on the KPIs can be published as a measure to demand more effectiveness from commissions.

2.5.2 Access and use of regulatory processes by consumer groups

It has been noticed that public hearing as a process is being compromised within various states, where hearings are either not being held at all or are being shortened. The ERC in West Bengal does not conduct public hearings, while most hearings in Odisha are conducted in the state capital. This diminishes the space for public decision making. Many participants were of the view that there is little space for action when SERCs are unresponsive. Further, appealing to the higher authority of the Appellate Tribunal for Electricity (APTEL) is challenging as both financial and geographical access is difficult. Many participants share accounts of interventions and engagements using writ petitions and Public Interest Litigations in order to ensure impacts.

Given the increasing number of matters before the commissions which have impact on the tariffs and supply quality of consumers it is important that consumer groups active in the sector are party to crucial matters. In order to institutionalise such a process, regulatory commissions should appoint consumer representatives under Section 94 (3) of the Electricity Act, 2003. Unfortunately, very few SERCs have made such appointments. Some participants also suggested appointment of such consumer representatives under the aegis of the Ministry of Consumer Affairs.

Along with regulatory engagements, influencing public discourse on important matters is key. Regional media can be utilised to raise concerns within the public sphere. Providing consumers and local members of the legislative assembly (MLAs) with information (for example- the burden of fixed costs of stranded assets as a proportion of consumer tariffs) and existing knowledge could help in publicising such issues.

3 Way forward

At the end of the workshop, participants deliberated on the work that they would like to engage in, and were signatories to the joint declaration. A summary of the action items proposed in the workshop is discussed below:

- a. Compile case studies from learnings through CSO interventions to guide future involvements. These future involvements could, for example, be in exploratory work on PPA designs to minimise costs and inefficiencies. The outcome of such studies could then be disseminated through media avenues.
- b. Prepare material to inform consumers about amendments to the Electricity Act, 2003.
- c. CSOs could petition DISCOMs and ERCs to publish reliability indices more frequently. DISCOMs could also be held accountable with independent supply quality monitoring (such as ESMI). In order to function more efficiently, utilities must aim to better their employee-consumer ratio.
- d. Increased utilisation of RTIs to obtain information from public utilities and create avenues to improve access to data of private utilities. This contributes to making DISCOM financial transactions more transparent.
- e. Advocate for minimising staff vacancies in CEA. There is also a need for appointing members who are experts in energy transitions and can look into the challenges of capacity addition.
- f. Coordinated efforts towards addressing issues in the agriculture sector, such as- addressing the scale of the problem, building evidence, improving agricultural estimations, integrated resource planning, and arriving at combined strategies- are necessary.
- g. CSOs can collaborate to highlight substantive issues beyond consumer awareness, through mediums such as model regulations and discussion papers. Work can also be carried out towards building technical, commercial, and legal expertise. Such collaborative efforts can also bring out shared challenges, which can be further presented before CERC.
- h. Conduct studies on performance and cost norms as per tariff regulations in various states.

In keeping with current practice, hosting the next annual event in a different city was encouraged. It was observed that, next year, it would be helpful to have focus on action agendas as conclusions, following the discussions in each session. Additionally, participants would benefit from sessions dedicated to data availability, its quality, and the role CSOs can play to improve the same.









4 Annexure I: Agenda for the workshop

Trends and Way Forward in the State Electricity Sectors, 2018 An Experience Sharing Workshop on 3rd & 4th Sept 2018, Hyderabad

Organised by Prayas (Energy Group), Pune

Day 1: 3rd Sept, Monday	Session		
10:00-11:00	Welcome, introduction to workshop, agenda setting		
11:15-13:15	AT&C losses, agricultural consumption and subsidies Regulatory and policy engagements related to unmetered agricultural consumption, its link to AT&C losses and subsidies. Lead Discussants: Thimma Reddy, People's Monitoring Group on Energy Regulation Ashwini Swain, Centre for Policy Research, CEER		
14:15-15:45	Power Procurement Focus on the need for improving demand estimation; competitive bidding, power purchase contracts, fuel coordination and surplus management. Lead Discussants: Padamjit Singh, All India Power Engineers' Federation Daljit Singh, Centre for Energy, Environment & Resources (CEER)		
16:00-18:00	Quality of Supply and Service Focus on quality of supply and service, especially to small and rural consumers post achievement of universal access to grid power. Introductory Presentations: Vivek Velankar, Sajag Nagrik Manch Manabika Mandal, Prayas (Energy Group)		
Day 2: 4th Sept, Tuesday	Details of Session		
9:00-11:00	Improving effectiveness of regulatory processes Discussions on experiences in safeguarding regulatory spaces and processes to ensure transparency and public participation Lead Discussants: Pratap Hogade, Maharashtra Veej Grahak Sanghatana Shantanu Dixit, Prayas (Energy Group)		
11:15-13:15	Future of distribution companies Focus on recent trends such as cost of renewable energy and storage, migration of big consumers, scope of cross-subsidy and interests of small consumers. Introductory Presentation: Ann Josey, Prayas (Energy Group)		
14:15-16:15	Discussions on way forward		

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