

Gist of Discussion at the fifth meeting of the Distribution Utilities Forum

Inaugural Session

1. **In the Chair: Mr. Gireesh B. Pradhan**, Honorary Chairman, Distribution Utility Forum (DUF)
2. **Co-Chair: Mr. Sanjeev Kumar**, Chairman and Managing Director, Maharashtra State Electricity Distribution Company Limited (MSEDCL).
3. The **fifth meeting of the Distribution Utilities Forum** was held on **27th September, 2019** at MSEDCL Prakashgad, Mumbai under the chairmanship of **Mr. Gireesh Pradhan**. The theme of the meeting was *Open Access: Stakeholders' Perspective*. List of participants and agenda are enclosed.
4. In his welcome address **Mr. Sanjeev Kumar**, Chairman and Managing Director, MSEDCL welcomed all the delegates to fifth meeting of the Distribution Utilities Forum to Mumbai. He emphasized the importance of balance in the reforms for proper implementation and uptake of new measures. He described the Distribution Utilities Forum as one of the needs which discusses about the reforms required in the power distribution sector. He also highlighted the need to address the challenges faced by various stakeholders for the uptake of open access (OA) in the electricity sector.
5. The Forum was introduced by **Mr. Gireesh Pradhan**, Hony. Chairman, DUF, as a **unique platform of distribution utilities, for the distribution utilities and by the distribution utilities**. He emphasized that this Forum is a place for Discoms, where they can share the challenges they face in key areas of work and improve their knowledge and understanding based on experience of the forum members. He briefly described the present scenario in regard to open access, which was identified as a matter of serious concern for the utilities in the previous DUF meeting. He highlighted the importance of considering different points of view and perspectives of all stakeholders concerned to address the complexities in open access in electricity distribution.
6. The context for the meeting was set by **Mr. Prasad Reshme**, Executive Director (Infrastructure), MSEDCL, by providing the overview of MSEDCL operations, the present scenario in the state in regard to open access and the challenges faced by them in implementing open access. He stressed the need to discuss the challenges faced by the Discoms and the need to address the same.

7. In his address, **Mr. Chinmaya Acharya**, Interim CEO, Shakti Sustainable Energy Foundation, welcomed all the delegates to the meeting. He described the journey of Distribution Utilities Forum from Delhi to Mumbai as **from India Gate to Gateway of India** and highlighted the journey as one of not only distance but of direction and intent. He thanked Mr. Sanjeev Kumar and his team at MSEDCL for hosting the meeting. He emphasized the importance of the theme as one of the principal central feature of the Electricity Act, 2003.

Discussion on Open Access

8. The TERI team made thematic presentation, *Open Access: Stakeholders' Perspective*, based on secondary research, analysis and stakeholder consultation. The presentation outlined the challenges faced by various stakeholders, including the Discoms, consumers, and system operators with regard to OA. The key points presented from the preliminary study carried out by TERI, were:
- (i) Growth in OA volume seems to have muted in recent years.
 - (ii) Key issues pertaining to OA identified by MoP in the Consultation Paper on Issues Pertaining to Open Access¹ (2017) and deliberated by FOR² (2017) were brought forward for deliberation.
 - (iii) From the **financial** considerations, determination of OA charges along with the waivers and concessions offered have been highlighted by the Discoms as a challenge. From the OA consumers' perspective, the lack of financial viability of power procurement via OA route has been a major financial challenge due to high OA charges being levied.
 - (iv) On the **operational** front, Discoms pointed out difficulties in power planning due to switching of OA consumers along with banking and effect on AT&C loss as key challenges faced due to OA. On the other hand, the consumers expressed their concerns in regard to lack of data availability to present their case against rejection of OA applications. Both, Discoms and consumers, conveyed that there is lack of awareness about OA and its application process, among the stakeholders.

¹ Consultation Paper on Issues Related to Open Access, August 2017, Ministry of Power, [https://powermin.nic.in/sites/default/files/webform/notices/Seeking Comments on Consultation paper on issues pertaining to Open Access.pdf](https://powermin.nic.in/sites/default/files/webform/notices/Seeking%20Comments%20on%20Consultation%20paper%20on%20issues%20pertaining%20to%20Open%20Access.pdf)

² Report on "Open Access", December 2017, Forum of Regulators, http://www.forumofregulators.gov.in/Data/WhatsNew/Open_Access.pdf

- (v) In regard to **regulatory** aspects, certifying captive/ group captive consumers is a major issue for the Discoms. While, consumers pointed out that the deemed approval provision of applications is not being leveraged due to their apprehension of Discoms becoming displeased.
 - (vi) As a part of the preliminary study, the selected Discoms for stakeholder consultation were requested to rank the five key issues flagged by MoP in their consultation paper, based on the level of severity as per the Discom's perspective. Analysis carried out using the **weighted average ranking methodology**³ on the ranks obtained was presented. From the analysis, tariff design and rationalization came out to be the major challenge.
9. This was followed by presentations from representatives of the following stakeholders, highlighting their perspectives on OA, apart from the Discoms:
- (i) Power System Operation Corporation (POSOCO)
 - (ii) Indian Energy Exchange (IEX)
 - (iii) Open Access Users Association (OAUA)
10. Key points presented by POSOCO were:
- (i) Over 50,000 transactions are carried out annually, with transactions aggregating over 120 BU.
 - (ii) Inter-state OA transactions have witnessed a growth over the years; mainly due to the **dispute-free implementation** of the OA regulations at the inter-state level.
 - (iii) International trading of electricity is expected to grow over the next few years with the new cross-border trading regulations already in place.
 - (iv) Various measures have been adopted to ensure **smooth implementation**, such as conducive regulatory framework with well-defined checks and balances, ensuring availability of network information in a transparent manner (which is regularly updated and displayed on the POSOCO website), and non-discriminatory approval mechanism, amongst others.
 - (v) **Technology has been a key enabler** in promoting new reforms in the power sector. Efficient working of National Load Dispatch Centre (NLDC) along with five Regional Load Dispatch Centres (RLDCs) has helped in the growth

³ **Weighted average ranking methodology** is used to estimate weightage of each barrier based on the responses received. In this, weight points of each rank are multiplied by the number responses for each barrier and the weighted average is found out. The barriers are then ranked based on these weights according to their order of importance.

of OA at the inter-state level. The operations of these Load Dispatch Centres (LDCs) have become **paperless**, thus increasing overall efficiency.

- (vi) **National Open Access Registry (NOAR)** is another measure adopted to ease the implementation of OA by enabling availability of data regarding OA at one place. NOAR will act as a centralized electronic platform and will automate the administration of the short-term OA.
- (vii) OA transactions taking place at the intra-state level are more complicated and have witnessed greater challenges. There is an urgent need to address issues at this level.
- (viii) During the operationalization of OA, **network congestion** can take place at any time due to over-drawal or under-drawal of power. With the probable increase in OA transactions, the present congestion management mechanism needs to be more responsive and robust.
- (ix) Deviations are bound to happen as **scheduling and forecasting** cannot be carried out with high level of accuracy. It is important that the penalties incurred due to the deviations which are currently borne by the Discoms are carried forward to the defaulter. This would help ensure **discipline among consumers**.
- (x) From the infrastructure aspect, the underlying fundamental requirements, which form the basis of any market, are **scheduling, metering, accounting, and settlement systems**. For this, the Forum of Regulators (FOR) is pushing for the implementation of the **SAMAST**⁴ report, along with Deviation Settlement Mechanism (DSM) regulations
- (xi) There is a need to look into **risk management** related issues. The risks present must be equitably shared among stakeholders. There is a need to look into whether **risks have been allocated fairly** between the Discoms and consumers in the current system. These include:
 - a. Charges levied on the consumers to manage the risk of the Discoms.
 - b. Challenges created by frequent switching of OA consumers between supply from alternate source(s) of supply and Discom's supply.
- (xii) **Tools and mechanisms**, which can help in **hedging risks**, are required for all stakeholders who want to avail the benefits of OA.

⁴ Report on Scheduling, Accounting, Metering and Settlement of Transactions in Electricity (SAMAST), July 2016, Forum of Regulators, <http://www.forumofregulators.gov.in/Data/WhatsNew/SAMAST.pdf>

11. Key points presented by IEX:

- (i) OA trading on energy exchange accounts for about 1.2% of the total generation.
- (ii) Out of more than 4000 registered traders, only 500-600 are trading on a daily basis.
- (iii) OA provides the consumers with the right of choosing their supplier and it is perceived by Discoms as a threat of losing their consumers. There is a need for a **neutral ground** for OA consumers and Discoms in order to ensure the success of OA.
- (iv) For any short-term contract, consumers schedule for a firm supply. Thus, Discoms are aware of the number of consumers and quantum of power procured via OA route and can plan accordingly.

Consumers can still deviate from the scheduled demand as industrial load is not static and can vary despite scheduling. Therefore, there is a need to plan specific DSM charges for the consumer in a manner that the Discom are not at a loss due to deviation caused by consumer demand. This would help in ensuring **discipline in scheduling and managing deviations** both at the Discoms' and consumer ends.

- (v) **Real Time Market** provides benefit to both consumers and Discoms as it provides option to both to manage their power planning much closer to the real-time.

There is a need for an **innovative tool** to help in power planning and handle the deviations more efficiently as closer to the real-time.

- (vi) The **direct transfer of subsidy** to consumers by the government could help in creating awareness about the actual cost of supply and promote energy conservation among the consumers. This could have a direct impact on the cross subsidy. Thus, shifting to **Direct Benefit Transfer** can help in long run with the reduction of cross subsidy.

- (vii) No restrictions should be placed on the duration for which power is procured via OA route, as it leads to discriminatory treatment among various categories of consumers.

The **switching of OA consumers** due to volatility of market price can be controlled by setting OA transaction limits for a given day.

(viii) At present, there is **no structured formula** to determine **additional surcharge**. One of the aspects, which need to be looked into while determining the same, is the optimization of power procurement by Discoms. While ensuring optimal utilization of PPAs and assets, the additional surcharge must be determined by taking the continuous stranded capacity into account.

(ix) There is a need to **control the market-linked switching** of OA consumers.

(x) To look at the power sector from a competitive scenario, **preferential treatment** such as waivers and banking cannot go together, as it increases the burden on the Discoms.

12. Key points on the theme of open access that were presented by OAU at the Forum meeting via a presentation are as below:

(i) The present scenario of **OA status varies across states** and it is viable only in a few states. In the other states, it is either financially not favourable or not allowed.

(ii) Looking into the state-wise comparison of the OA scenario, state regulations vary as there is **no consistency in regulations**:

a. **Technology or infrastructure requirement** varies from state to state. For example, the consumer must have ABT meter of 0.2S class accuracy in Delhi, while the consumer must have 3 ABT meters of 0.2S class accuracy in Uttar Pradesh. This creates a hidden infrastructure cost to the consumers opting for OA.

b. **NOC requirement process** varies from state to state. In some states, it is cumbersome and time consuming.

c. **Time period for bill settlement and DSM settlement** is not consistent across states. In some states, the delayed settlement adds an additional financial burden on the OA consumers. One of the recommendations is to have the bill and DSM settlement in the same month.

d. There are other regulatory issues, such as restrictions on time slots for power trading and bidding quantum.

(iii) Looking at the trend of **cross-subsidy surcharge (CSS)** in various states, the present level of CSS being levied makes OA financially unviable.

13. Participating Discoms also presented their perspective on open access. Key points that came out of the discussion are:

- (i) Over the years, **OA transactions have decreased** in many states.
- (ii) Most OA consumers are **shifting to captive power** as they find it economically viable in the absence of surcharge levy.
- (iii) Almost all the Discoms raised the challenges faced in certifying captive/ group captive consumers; the key ones being the following:
 - a. There is no clarity in regard to the **competent authority** for certifying whether a consumer is a captive or group captive consumer.
 - b. Several Discoms also raised the issue of **changing shareholding of group captive consumers**. The group captive consumers declare their group captive status at the time of applying for OA, which is verified annually. But these consumers frequently change their shareholding within a year, in order to take the benefit of concessions available (as per Electricity Act 2003, the surcharges are not to be levied on the captive consumers). Discoms find it difficult to recover the reconciled outstanding amount of charges from such defaulters. Sometimes, Discoms also have to take recourse to legal action and incur litigation costs, to recover these charges.
- (iv) Discoms with fewer industrial consumers face fewer challenges in regard to OA.
- (v) Discoms said that the brunt of the **impact of OA** is faced by either the Discoms themselves or it is **passed on to the low tariff paying consumers**. This impact is more significant if there are a greater number of low tariff paying consumers in a utility's license area. For example, SOUTHCO (Odisha) has large number of consumers who are below poverty line but not enough industrial consumers to offset the impact of OA.
- (vi) **Determination of stranded capacity** of OA consumers is difficult in case of single buyer model, such as in the case of Odisha, where the GRIDCO handles the procurement of power on behalf of all four Discoms.
- (vii) Some Discoms raised the issue of **banking of power**. Settlement of banked power is carried out on annual basis. Discoms pointed out that consumers tend to bank unutilized energy during off-peak season when Discoms are usually in

a power surplus situation and settle it with energy consumed during peak season when Discoms are usually in a power deficit situation.

Instead of the prevailing yearly settlement system, Discoms recommended monthly or seasonal settlement of banked energy, with seasonal tariff and cap on the deemed purchased energy.

- (viii) Additional financial burden also accrues due to **litigations cost** for cases related to OA.
- (ix) The need to address **determination of charges** levied on OA consumers was also pointed out as important.
 - a. Standby charges are not levied at present in most states.
 - b. Fixed cost is not fully recovered due to the present retail tariff structure, when a consumer plans to shift to OA. Discoms recommended revising the demand charges to reduce this burden.
 - c. Restrictions on the determination of charges impact the Discoms financial health with the increasing OA consumers.

Break-out Sessions

14. In the post lunch session, the Forum meeting continued with two break-out sessions:

- I. Retail Tariff Design
 - Moderated by **Mr. S.K. Soonee**, POSOCO
- II. Restrictions on Determination of Cross Subsidy Surcharge
 - Moderated by **Mr. A.K. Saxena**, TERI

15. The representatives of various stakeholders were put into two groups for the break-out sessions.

16. After discussion on the topics of the break-out session, the participants reported back and highlighting the key points of discussion in their respective break-out session.

17. **Retail Tariff Design** break-out session:

- (i) Power industry is changing from a regulated to a competitive business. The marginal cost of electricity has been decreasing over the years.
- (ii) There is a need to shift the focus away from **‘volumetric tariff’ (i.e. per kWh) towards ‘capacity tariff’ (i.e. per kW)**. Volumetric tariffs charge consumers for the total volume of energy taken from the grid, while capacity

tariffs depend on contracted grid capacity or used power. At present, the retail tariff design is skewed towards energy charges.

- (iii) The **fixed charges** need to increase incrementally to recover the cost of investment for the utility, including fixed charges paid towards long-term PPAs, transmission and distribution network, etc. Fixed charges need to increase to make up for the tied capacity under long-term PPAs.
- (iv) Energy is no more an issue, **time and use of energy** has become more important. Variable energy charges should include Time of Use (ToU) charges.
- (v) Discoms are working towards ensuring reliability of power supply to all the consumers. There should be an appropriate '**reliability-charge**' which compensates for the additional cost that the Discoms have to incur in-order to provide this service.
- (vi) Discoms act as an '**insurance company**' and a backup power source for the OA consumers to meet their demand. The OA consumers must pay a charge akin to 'premium' to avail the benefit of the backup service from Discoms. This would help in reducing financial burden on Discoms due to OA.
- (vii) The **tariff structure** should be designed in such a way that it can accommodate any new development in the business and must be able to cover all investments.
- (viii) **Metering** is not a constraint anymore. Hence, it is important that data should be available for every time frame, ranging from 15-min time block to annual data. This would, help the Discoms in planning its power requirements in an efficient manner. One of the data set that is necessary for power planning is maximum demand and hence, meters should record the maximum demand of all consumers.
- (ix) Consumers must be sensitized towards their **actual cost of supply** through bills, etc.
- (x) Consumers should also be held **responsible for maintaining grid discipline**. The ones who are not adhering to grid discipline must be penalized.

18. Restrictions on Determination of Cross Subsidy Surcharge break-out session:

- (i) Cross-subsidy surcharge should be on a **declining trajectory**.
- (ii) Efforts should be made to bring the tariff for each category within +/- 20% of **Average Cost of Supply (ACoS)** as specified in Tariff Policy 2016.

- (iii) If the tariff is not within +/- 20% of ACoS, then the practice of **limiting CSS to 20% of tariff** of the respective consumer category will hamper the recovery of cross subsidy from the OA consumers by the Discoms. Such practice is followed by some SERCs, such as APERC, MPERC, OERC, thus affecting the recovery of cross subsidy by the respective Discoms.
- (iv) **Different CSS for peak and off-peak periods** would not give the right signal to all stakeholders. For example, if a high CSS is levied on consumers during peak duration, then the consumer would not consider OA as a financially viable option for power procurement. This will add to the peak load requirement of the Discom, which may already be a cause of concern for the Discom. In such cases, consumers should be incentivized to opt for OA during peak times. Hence, the formula for CSS should be determined taking this into consideration.
- (v) **Electricity subsidy**, if provided, should be on the basis of Direct Benefit Transfer.

19. Concluding remarks for the session were provided by **Mr. Ajay Shankar**, Distinguished Fellow, TERI.

20. Exercise for Stakeholders

- (i) A survey questionnaire on the OA issues underlined by MoP was circulated to all the participants.
- (ii) Based on the responses received, analysis using **Analytic Hierarchy Process**⁵ (AHP) was carried out to rank the issues.
- (iii) From the results, **tariff design and rationalization** was identified as the most important issue with **rank number 1**, followed by cross subsidy surcharge, additional surcharge, frequent switching of open access consumers and lastly, standby charge.

⁵ **Analytic Hierarchy Process** is one of multi criteria decision making method that was originally developed by *Prof. Thomas L. Saaty*. It is an effective tool for dealing with complex decision making, and may aid the decision maker to set priorities and make the best decision. By reducing complex decisions to a series of pairwise comparisons, and then synthesizing the results, the AHP helps to capture both subjective and objective aspects of a decision.

Discussion about the Next Meeting and Forum

21. Topic for next Forum Meeting

- (i) After the discussion on open access study was concluded, the topic for the next Forum meeting was agreed to be ***Electric Vehicles***. This topic was underlined by the Discoms in the initial Forum meetings and was accepted by all the Discoms in the fifth meeting as well.
- (ii) The Discoms expressed that the perspective of various stakeholders must be considered to be a part of the study.
- (iii) **Mr. Gireesh B. Pradhan** requested for the support and cooperation of all the Discoms to carry out the next study, like in the past.
- (iv) **Representatives from Bangalore Electricity Supply Company (BESCOM) offered to host the next Forum meeting at Bangalore.** Further details of the meeting will be finalized in due course.

22. Presentation of Impact of Decentralized Solar PV near Rural End

- (i) **Mr. Sunil Dhingra** and **Mr. Kapil Muddineni** of TERI presented the findings of study “*Study on impact of Decentralized Solar PV near the rural user end*” carried out by TERI with the support of MacArthur Foundation.
- (ii) **Mr. Gireesh B. Pradhan** suggested that this type of study can be viewed as a way forward and may help the Discoms in reducing their losses at the rural end.

23. Way Forward for DUF

- (i) **Mr. Gireesh B. Pradhan** discussed the possible way forward for Distribution Utilities Forum. He said that Discoms should come forward and take up DUF on their own, with continued support from TERI and Shakti Sustainable Energy Foundation.
- (ii) “*Memorandum and Rules and Regulations for Distribution Utilities Forum*” was circulated among the Discoms present. This document will also be emailed to other Discoms that were not present at the Forum meeting.

(iii) Discoms were requested to provide their comments or suggestions to **Ms. Gayatri Ramanathan**, Shakti Sustainable Energy Foundation by 1st December, 2019.

Conclusion

The meeting was concluded by **Mr. Gireesh Pradhan**, who also provided Vote of Thanks to all the participants of the fifth meeting of Distribution Utilities Forum.



List of Participants - Stakeholders

<u>S.NO.</u>	<u>NAME</u>	<u>DESIGNATION</u>	<u>ORGANIZATION</u>
1	Mr. Gireesh B. Pradhan	Honorary Chairman	Distribution Utilities Forum (DUF)
2	Mr. Sanjeev Kumar	Chairman and Managing Director	Maharashtra State Electricity Distribution Company Limited (MSEDCL)
3	Mr. Satish Chavan	Director (Commercial)	Maharashtra State Electricity Distribution Company Limited (MSEDCL)
4	Mr. Bhalchandra Khandait	Director (Projects)	Maharashtra State Electricity Distribution Company Limited (MSEDCL)
5	Mr. Pavan Kumar Ganjoo	Director (HR)	Maharashtra State Electricity Distribution Company Limited (MSEDCL)
6	Mr. Prasad Reshme	Executive Director (Infrastructure)	Maharashtra State Electricity Distribution Company Limited (MSEDCL)
7	Mr. Tushar Arjunwadkar	Deputy General Manager HR - Protocol	Maharashtra State Electricity Distribution Company Limited (MSEDCL)
8	Mr. Vishal N. Pande	Assistant Engineer (TA to ED Infra)	Maharashtra State Electricity Distribution Company Limited (MSEDCL)
9	Mr. S.K. Soonee	Advisor	Power System Operation Corporation (POSOCO)
10	Mr. S.C. Saxena	General Manager (Market Operations)	Power System Operation Corporation (POSOCO)
11	Mr. Nitin Sabhiki	Vice President, Business Development	Indian Energy Exchange (IEX)
12	Mr. Nishant Singhal	Assistant Vice President	Manikaran Power Limited/ Open Access Users Association (OAUA)
13	Mr. Baljeet Singh Khanooja	General Manager (Commercial)	Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company

			Ltd. (MPMKVVCL)
14	Mr. Anil Khatri	Deputy Chief General Manager (Commercial)	Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Ltd. (MPMKVVCL)
15	Er. Vardeep Singh Mander	Deputy Chief Engineer	Punjab State Power Corporation (PSPCL)
16	Ms. S.R. Shanthamma	Deputy General Manager (Finance & Commercial)	Bangalore Electricity Supply Company (BESCOM)
17	Ms. Umamashwari	Deputy General Manager (Electrical)	Bangalore Electricity Supply Company (BESCOM)
18	Mr. T. Sripal	Assistant Engineer (Technical)	Telangana State Northern Power Distribution Company Limited (TSNPDCL)
19	Mr. Sabyasachi Padhi	General Manager (Technical)	Southern Electricity Supply Company Of Odisha Limited (SOUTHCO)
20	Mr. Manmaya Kumar Sahu	A.E.E.(Electrical)	Southern Electricity Supply Company Of Odisha Limited (SOUTHCO)
27	Mr. Umesh Parikh	Deputy Engineer	Madhya Gujarat Vij Company Limited (MGVCL)
28	Mr. S. Nageswara Rao	Executive Engineer - Solar	Andhra Pradesh Eastern Power Distribution Company Limited (APEPDCL)
29	Mr. U. Kumar Gowri Prasad	DEE – Energy Billing Cell	Andhra Pradesh Eastern Power Distribution Company Limited (APEPDCL)
30	Mr. V. T. Patel	DE (Commercial)	Gujarat Urja Vikas Nigam Limited (GUVNL)
31	Mr. Kuballi Nagaraj	Assistant Executive Engineer	Hubli Electricity Supply Company Limited (HESCOM)
32	Mr. C A Parmar	Chief Engineer	Dadra And Nagar Haveli Power Distribution Corporation Ltd (DNHPDCL)
33	Mr. R B Chanbal	Assistant Engineer	Dadra And Nagar Haveli Power Distribution Corporation Ltd (DNHPDCL)

34	Mr. N N Chogule	Chief Engineer	Brihanmumbai Electric Supply and Transport (BEST)
35	Mr. Sanjay Adhlinge	Superintending Engineer	Brihanmumbai Electric Supply and Transport (BEST)
36	Mr. Nitin Nikumbh	Chief - Distribution Supply Management Group	Tata Power
37	Mr. Sunil Joglekar	Chief - Distribution Network Management Group	Tata Power
38	Mr. Shailesh Dandriyal	Business Development Manager	Manikaran Analytics Ltd



Distribution Utilities Forum

List of Participants - TERI and Shakti Sustainable Energy Foundation

<u>S.NO.</u>	<u>NAME</u>	<u>DESIGNATION</u>	<u>ORGANIZATION</u>
1	Mr. Chinmaya Acharya	Interim-CEO	Shakti Sustainable Energy Foundation (SSEF)
2	Mr. Vivek Sen	Program Manager (Power)	Shakti Sustainable Energy Foundation (SSEF)
3	Ms. Gayatri Ramanathan	Programme Manager (Projects)	Shakti Sustainable Energy Foundation (SSEF)
4	Ms. Akanksha Golchha	Programme Associate (Electric Utilities)	Shakti Sustainable Energy Foundation (SSEF)
5	Mr. Ajay Shankar	Distinguished Fellow	The Energy and Resources Institute (TERI)
6	Mr. A.K. Saxena	Senior Director, Electricity and Fuels Division	The Energy and Resources Institute (TERI)
7	Mr. Sunil Dhingra	Associate Director, Renewable Energy Technologies	The Energy and Resources Institute (TERI)
8	Mr. Thomas Spencer	Fellow	The Energy and Resources Institute (TERI)
9	Mr. Balaji Raparathi	Associate Fellow	The Energy and Resources Institute (TERI)
10	Mr. Kapil Muddineni	Associate Fellow	The Energy and Resources Institute (TERI)
11	Ms. Rashi Singh	Research Associate	The Energy and Resources Institute (TERI)
12	Mr. Rishabh Sethi	Research Associate	The Energy and Resources Institute (TERI)
13	Mr. Robin Mazumdar	Consultant	The Energy and Resources Institute (TERI)