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# *Proceedings of Seventh Meeting* Utility CEO Forum on Demand Side Management

November 2014



**SHAKTI**  
SUSTAINABLE ENERGY  
FOUNDATION





# Introduction and participant profile

The seventh meeting of the 'Utility CEO Forum on Demand Side Management' was held on 3 November 2014, in New Delhi. Anil Razdan, former Secretary, Ministry of Power, chaired the meeting, which was attended by officials and experts from the state electricity regulatory commissions, electricity distribution licensees (utility), and central nodal agencies. The agenda of the meeting was to discuss the key provisions of the '*Demand Side Management (DSM) Regulations*', and suggest ways to strengthen the same. The meeting was also designed to be interactive, stimulating conversation and exchange of ideas among the participants.

## Participant profile

<b>Honorary Chairperson</b>	Anil Razdan, IAS (retired), former Secretary, Ministry of Power
Electricity Regulatory Commissions (7)	<ol style="list-style-type: none"> <li>1. Umesh N Panjiar, Chairman, Bihar Electricity Regulatory Commission (BERC)</li> <li>2. Deepak Lad, Member, Maharashtra Electricity Regulatory Commission (MERC)</li> <li>3. K P Singh, Member, Uttarakhand Electricity Regulatory Commission (UERC)</li> <li>4. Abhishek Srivastava, Joint Director, Uttar Pradesh Electricity Regulatory Commission (UPERC)</li> <li>5. Sanjay Kumar Sharma, Joint Director, Delhi Electricity Regulatory Commission (DERC)</li> <li>6. Anish Garg, Director, Joint Electricity Regulatory Commission (JERC)</li> <li>7. Virendra Kumar Sarngal, Superintending Engineer, Jammu and Kashmir State Electricity Regulatory Commission (JKSERC)</li> </ol>
Utilities (9)	<ol style="list-style-type: none"> <li>8. M Sivasankar, Managing Director, Kerala State Electricity Board</li> <li>9. K K Verma, Managing Director, Jharkhand Bijli Vitran Nigam Limited</li> <li>10. Ganesh Das, Head of Department, Strategy and Business Relations, Tata Power Delhi Distribution Limited</li> <li>11. Shekhar Khadilkar, Head, Demand Side Management and Power Purchase, Tata Power Mumbai</li> <li>12. Rajesh M Bansal, Vice President, BSES Yamuna Power Limited</li> <li>13. N C Makwana, Superintending Engineer, Uttar Gujarat Vidyut Company Ltd. (UGVCL)</li> <li>14. Pravin P Pardeshi, Executive Engineer, Maharashtra State Electricity Distribution Co</li> <li>15. H V Shah, Executive Engineer, Madhya Gujarat Vij Company Limited</li> <li>16. Polash Das, DSM Consultant, Energy Efficiency Services Limited (EESL)</li> </ol>
BEE (1)	<ol style="list-style-type: none"> <li>17. Dr Ajay Mathur, Director General, Bureau of Energy Efficiency</li> </ol>
Secretariat (6)	<ol style="list-style-type: none"> <li>18. Krishan Dhawan, CEO, Shakti Sustainable Energy Foundation</li> <li>19. Saurabh Kumar, Managing Director, Energy Efficiency Services Limited</li> <li>20. Deepak Gupta, Senior Programme Manager, Power, Shakti Sustainable Energy Foundation</li> <li>21. Natasha Bhan, Senior Programme Associate, Electric Utilities, Shakti Sustainable Energy Foundation</li> <li>22. Kulbhushan Kumar, Senior Manager, PwC India</li> <li>23. Shuboday Ganta, Senior Consultant, PwC India</li> <li>24. Prabhat Kumar, Programme Manager (DSM), Energy Efficiency Services Limited</li> </ol>

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# 1 . Inaugural session

Krishan Dhawan, CEO, Shakti Sustainable Energy Foundation (Shakti), welcomed the gathering and provided brief overview of the forum's agenda, past meetings and associated activities. He also mentioned about the the Chairperson's initiative to solicit feedback from the participants on forum's activities and future direction. He thanked the dignitaries for their participation and encouraged them to provide feedback during the course of the meeting.

Anil Razdan, Honorary Chairperson, thanked the participants for their continued association with the forum. He specifically acknowledged the active involvement of the regulatory commissions in the forum meetings. . He opined that there has been mixed progress in the evolution of DSM Regulations in different states of the country. While many states have notified DSM regulations, many have also remained without the draft form of the regulations. He also stressed on the need for strengthening the existing DSM Regulations by notifying targets for DSM resource

acquisition and further providing necessary guidance for development and appraisal of DSM programme proposals.



From left to right, Anil Razdan, The Chairperson  
Krishan Dhawan, CEO, Shakti Sustainable Energy Foundation

He finally explained the objectives of gathering participant feedback on the forum's activities and encouraged the participants to discuss their views openly during the course of presentations.



From right to left, Dr. Ajay Mathur, Director General, BEE-  
Saurabh Kumar, Managing Director, EESL





## 2 . Thematic presentation and discussions

### *Theme: DSM Regulations - Paving the way to action*

Kulbhushan Kumar, senior manager, PwC India, delivered the presentation, which focused primarily on the evolution of DSM regulations and review of its provisions.

He explained the evolution of DSM regulations that began with the state of Maharashtra in 2010, followed by 14 other Commissions until November 2014. He elaborated on the regulatory provisions under the four critical milestones in the DSM resource acquisition process viz. load and market research, DSM potential and target assessment, appraisal of DSM program proposal, measurement and verification. The presentation highlighted the need to strengthen the current regulatory framework and recommended concrete measures regarding the same. .



*Kulbhushan Kumar, PwC*

### *Discussions*

#### *Economic potential vs technical potential for assessment of DSM targets*

Kulbhushan explained the need for considering the economic potential instead of the technical potential for the assessment and notification of realistic DSM targets in the regulatory framework.

The Chairperson suggested that the economic potential estimates need to be accompanied with a specific timeframe or control period and periodically be updated in order to account for changing market dynamics that may affect the cost effectiveness of DSM measures.

Dr. Ajay Mathur, suggested that the MERC notified guidelines on the cost effectiveness of DSM programmes may be adopted by other state commissions to identify the cost effective DSM measures and thereby assess the economic potential in their state.

#### *Legal framework for promoting DSM targets*

Shuboday Ganta explained that the current legal framework (i.e., Electricity Act 2003) lacks provisions for enforcing DSM targets, in a framework similar to renewable purchase obligations (For example, as percentage of the total procurement of electricity in the area of electricity distribution licensee).

The Chairperson suggested that the electricity distribution licensees may be notified as designated consumers and brought under the obligatory framework of the Energy Conservation Act 2001 in order to enforce/levy DSM targets.

Umesh Panjiar stated that the state of California in the US has mandated that DSM resources will be the first option for resource acquisition in the loading order of utilities. Similar laws can be promulgated in India in order to promote DSM targets.

Dr. Mathur opined that it is necessary to study and ascertain as to which legislation (Electricity Act 2003 or the Energy Conservation 2001 or both) needs to be strengthened in order to promote DSM targets. He also stated that if the utilities are brought under the obligatory framework of the Energy Conservation Act 2001, they would have targets to reduce the energy consumed in their own distribution network (distribution losses). This may not necessarily promote DSM by the utilities as they could also resort to supply side measures to control and reduce the distribution losses. He suggested that strengthening the Electricity Act 2003 may objectively serve the purpose of promoting DSM targets in the country.

### *Lack of capacity in regulatory commissions*

Panjiar appreciated the efforts made by the Bureau of Energy Efficiency and Energy Efficiency Services Limited towards the capacity building of utilities to plan and implement DSM programmes under a national scheme approved by the Government of India. However, he also sought similar capacity-building assistance for regulatory commissions in undertaking DSM related activities, specifically to provide the necessary guidelines defined in the DSM regulations.

### *Time of day tariffs*

Deepak Lad stressed on the need for 'time of day' (TOD) tariffs in domestic and commercial consumer categories apart from the industrial category already active in most states.

Dr. Mathur mentioned that during consultations convened by BEE for promoting TOD tariffs in the domestic consumer category, it was discussed that the current status of the reliability of power in many states could pose a challenge in implementing this provision. Domestic consumers are wary of reduced energy use during peak hours because of the unavailability of power at other times. However, he clarified that this issue may not be relevant for commercial consumers as they generally have sufficient back-up systems.

The forum also debated on the need for relevant legislations and regulations on the reliability of power supply to ensure that the proposed benefits of DSM stand vindicated.

### *Benefits of DSM consultation committee*

Lad highlighted that the DSM consultation committee set up under the purview of MERC DSM regulations held many meetings with eminent experts from the industry, academia (IIT Bombay) and the utilities in order to recommend potential DSM measures and regulatory interventions. He further appreciated that the MERC DSM consultation committee had recommended that open access consumers in Maharashtra should also be brought under the purview of DSM targets, if notified under the existing DSM regulatory framework.

### *Rank of DSM cell officials*

Kulbhushan stated that DSM regulations need to clearly specify the rank of the official, heading the DSM cell established within the utility to plan and implement DSM programmes.

The Chairperson supported these views and the forum agreed that ensuring the rank of DSM cell officials will provide the necessary authority for a coordinated approach towards DSM with other departments within the utility.

### *Monitoring and verification (M&V) of DSM programmes*



Kulbhushan expressed the need for defining the M&V principles, guidelines and protocols for utility driven DSM programmes and also initiated a debate on who (utility or regulator) should develop and implement M&V plans associated with the programmes.

The forum debated that the M&V guidelines and protocols cannot be generalized as they are programme-specific. The forum also identified 'Utilities' as the appropriate institutions to take up the development and implementation of M&V plans for DSM programmes, whereas, the regulatory commissions can broadly define the M&V principles for major DSM programmes together envisaged by the utilities.

## ***Soliciting feedback on forum's activities and future direction***

Natasha Bhan, briefly explained the objectives of soliciting participant feedback on the forum's activities and highlighted that such a feedback will be used in confidence to assess the forum's performance and future direction. She further explained the significance of the questions in the feedback form to guide participants in providing their opinions.



*Natasha Bhan, Shakti Sustainable Energy Foundation*

### 3 . Presentations

#### ***BEE's DSM Capacity-Building Programme for Utilities***

Prabhat Kumar, briefly explained the key features and progress of the BEE DSM Capacity Building Programme. He highlighted that about 30 utilities from different parts of the country have currently signed an MoU with BEE under this programme. One of the key outcomes expected is a concrete DSM action plan for utilities to implement and manage large scale DSM programmes.

Under the programme, BEE is providing consultancy services for load and market research activities, which will support utilities to assess their DSM potential and further make strategic decisions on selection and prioritization of DSM measures for implementation. Under this programme, BEE is also providing skilled manpower resources to continuously support utility staff in developing and implementing the DSM action plan.

The Chairperson welcomed this initiative and appreciated that the programme objectives clearly align with the capacity building needs to advance utility driven DSM programmes in the country. He also stressed the need for establishing a comprehensive evaluation framework for the BEE DSM Capacity Building Programme, so that the programme administrators can continuously monitor the value (outputs and outcome indicators) of the activities provided under this programme.



*Prabhat Kumar, Energy Efficiency Services Limited*

#### ***JERC supported DSM based efficient lighting programme (DELP) in Puducherry***

Anish Garg, Director at Joint Electricity Regulatory Commission (JERC), delivered this presentation, which focused on the JERC's appraisal of DSM based efficient lighting programme (DELP) in Puducherry.

He highlighted that this exercise was unique and possibly the first such programme, in the country, for which the regulator determined standard offer rates, which are reflective of the tariffs for DSM resources acquired under the DELP program.

Dr. Mathur highlighted that the prices of LED bulbs procured in this programme and another recent one in Guntur, Andhra Pradesh have seen significant reductions from the retail price, with the latter witnessing bidding price as low as INR 204 per bulb. He opined that if the retail prices of LED bulbs reached such limits, then the simple payback period



*Anish Garg, Joint Electricity Regulatory Commission*

for consumers could be anywhere between 2 and 3 years, which the consumers are generally willing to accept for energy efficient products. He further highlighted that the major achievement of the DELP has been to bring down the prices of LED bulbs through bulk procurement. He also mentioned that the BEE would initiate star labeling for the LED self ballasted lamps in the near future

Rajesh Bansal, mentioned that his organization is planning to roll out a DSM programme that aims to replace CFLs with LED bulbs in households consuming less than 200 units per month. The programme provides LED bulbs at CFL price, thereby overcoming the high cost barrier perceived by the domestic consumers. He mentioned that the current tariff subsidy for this consumer category is around INR 3 per unit and transition to LED bulbs would typically save one unit per month. So the annual savings in the tariff subsidy should be able to self finance this initiative, which could be a win-win situation for the consumer, government and the society as a whole. He further stressed that the government should channel its subsidy fund to subsidize energy efficient appliance purchases instead of electricity bills and phase out the tariff subsidy completely in the process.

M Sivasankar, also mentioned about similar efforts driven by his organization to channel the state government subsidy funds as capital subsidy for demand side solutions rather than revenue subsidy for electricity costs of consumers. He highlighted that such models could have the dual impact of achieving the cost neutrality for consumers and eradicating power tariff subsidies in the society. He further pointed out the need for availability of funds at the central level for funding DSM programmes.

The Chairperson appreciated the ideas of BYPL and KSEB and further supported the views that the state governments should aim to channel the subsidy funds to subsidize demand side solutions and the central government should create a funding mechanism to support the state governments in this novel idea.

## ***EESL implementing DSM programmes for UGVCL***

Polash Das, DSM Consultant deputed at Uttar Gujarat Vit Company Limited (UGVCL) by EESL, talked about DSM activities by UGVCL and DSM regulations for advancing utility driven DSM programmes in Gujarat. He highlighted that the Gujarat Electricity Regulatory Commission (GERC) had allocated INR 25 crores/year in the ARR for two control periods for funding the DSM activities. This allocation had mandated the utilities in Gujarat to develop and seek approval of DSM programme proposals of value INR 50 crores. He also mentioned that the GERC has currently approved four DSM programme proposals developed by UGVCL in partnership with EESL. He then explained the key features and EESL's models for implementing the DSM programmes proposed by UGVCL.

Umesh Panjiar sought to know the key features of DSM programme proposal approved for energy efficient ceiling fans.

Polash Das responded by mentioning that the DSM programme allowed consumers to purchase for 4 or 5 star rated ceiling fans at the cost of conventional ones. He also highlighted that the part of the price differential was allowed to be recovered through on bill financing and another part was financed using the approved DSM fund.



*Polash Das, Energy Efficiency Services Limited*



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## *Conclusion and way forward*

The Chairperson concluded the session by appreciating the value of inputs, ideas and knowledge shared by the participants during the course of the meeting. He also stressed upon the importance of feedback solicited by the participants to assess the forum's performance.

The following action points summarize the way forward to advance the recommendations of the forum that emerged in this meeting:

- Recommendations (agreed by the forum) towards strengthening the legal framework to promote DSM and related targets will be submitted to the BEE for further deliberation.
- Recommendations (agreed by the forum) towards strengthening the current regulatory framework for DSM will be submitted to all the regulatory commissions in the country for further deliberation.
- A note will be developed in consultation with participants to promote the novel idea of managing the state electricity subsidies by leveraging demand side solutions.