

## **MINUTES OF THE MEETING**

### **A CONSULTATIVE WORKSHOP BY MERC HELD ON 13<sup>TH</sup> SEPTEMBER 2019**

- i) DRAFT REGULATIONS OF CERC ON 'REAL TIME MARKET'
- ii) FEEDBACK ON PILOT PROJECT 'SECURITY CONSTRAINED ECONOMIC DISPATCH' IMPLEMENTED BY POSOCO

**Venue: Conference Hall, 6<sup>th</sup> Floor, Prakashgad, MSEDCL, Bandra (E), Mumbai**

**Day/Date: Friday, 13<sup>th</sup> September, 2019**

**List of Participants: At Appendix-I (enclosed)**

The Chairperson, MERC in his opening address welcomed all the invitees and representatives of the Utilities for the Consultative Workshop. He specifically welcomed Chairperson, CERC under whose able leadership, National Electricity Market is being incubated. He stated that in recent past, MERC has taken several initiatives to align State regulatory framework with National level policies such as notification and implementation of RE Forecasting and Scheduling Regulations, DSM Regulations, power procurement through competitive bidding etc. He also welcomed Shri. S. K. Chatterjee, Chief of Regulatory Division, CERC and Shri. K. V. Baba, CMD, POSOCO, the experts and speakers on the two topics taken up in the workshop. He stressed the fact that Maharashtra having a huge and diversified consumer profile and power infrastructure was being served competently by public and private sector Licensees, IPPs, CPPs and Distribution Franchisees. Experience of these utilities, he said would provide wider perspective covering broad range of issues relating to draft Regulations on Real Time Market or implementation of SCED pilot project. He welcomed CMD/CEO of utilities and other representatives of utilities and exhorted them for constructive discussion on the subject matter.

The Chairperson, CERC appreciated MERC's initiative to arrange such a workshop on power sector issues of National importance. Being a progressive State, CERC always looked towards Maharashtra for constructive suggestions on different initiatives. He stated that like other sectors, electricity sector was also witnessing rapid changes in technology and behaviour of end users. Although, it would have some implications on utilities, one cannot avoid an idea/technology whose time had come. CERC is trying to develop regulatory framework for coping with such changes. While doing so, CERC would like to engage with stakeholders to understand their concerns so that effective Regulations could be notified. Security Constrained Economic Despatch and Real Time Market are being introduced to harness un-requisitioned surplus power for reducing cost of end consumers through economic efficiencies achieved. He requested the utilities to provide their feedback on these matters.

### **i) Feedback on Pilot Project ‘Security Constrained Economic Dispatch’**

A presentation was made by POSOCO elaborating the concept of ‘Security Constrained Economic Dispatch’. A copy of the presentation is enclosed (**Annexure-A**). The experiences and benefits of the Pilot Project which had been undertaken based on CERC Order dated 31 January, 2019 and implemented for the period of 6 months starting from 1 April, 2019 were discussed during the presentation.

It was informed that although every State follows MOD principles at State level, there is scope for nationwide optimization of generation cost on account of diversity in demand across the States. The basic intent is to harness cheaper power available on pan India level to the maximum extent possible before scheduling costlier power so as to bring out economy in dispatch of power. The SCED is subject to various factors such as meeting total load requisitions by States from ISGS, Transmission constraints, Technical Minimum of plant, Ramp up/down rates etc. SCED is based on optimization Software Tool which is robust enough to run continuously in real time without any manual user intervention. The software runs for each 15 minutes time block and there is a SCED dashboard for 24x7 monitoring of the important parameters such as optimal despatch and present schedule, transfer capability, system marginal price, reduction in cost and other parameters.

The pilot project was implemented with 49 Generating Stations covering 132 Generating Units. The pilot has resulted into saving of fuel cost of Rs. 3.3 Cr. per day with Rs. 196 Cr. reduction in fuel cost for April to May, 2019 which has translated into saving of 3 Paise per Unit to the consumers. As directed by CERC, such cost saving is being shared with Generator and Discom in the ratio of 50:50. Further, CERC has extended the period of this pilot project by 6 months.

The CMD, MSEDCL welcomed the concept of SCED. However, he suggested that 100% saving on account of SCED should accrue to the Discom/consumers as the Generating Stations are not required to put any extra effort for SCED and all costs of these Generators are being paid by Discom/Generators. He also suggested that impact of Point of Connection transmission charges (PoC) should be studied as saving might be wiped out due to increased PoC charges. The CEO, AEML also supported this concept which would bring efficiency in the system. He stated that Merit Order Dispatch principles and centralized scheduling have been followed in the State of Maharashtra since many years under FBSM mechanism for ensuring economics in the scheduling of generating units in Maharashtra. He also requested the Authorities to pursue Ministry of Coal, Government of India for dispatching more coal to the cheaper generating Units for achieving the objectives of SCED. Representative of the Tata Power Co also welcomed the concept and suggested that actual variable charges should be considered for scheduling purpose. Chief Engineer of BEST concurred with the views of other Mumbai utilities.

While sharing experience of FBSM mechanism implemented in Maharashtra, Shri Ajit Pandit (IDAM Infra, MERC’s Consultant) stated that some of key learnings were that to assure fair play, all participant utilities must be required to enter into enough contracts to ensure that such mechanism is not exploited at the cost of other Distribution Licensees. Specific mandates must be in place for reserve to meet grid emergencies otherwise disputes may arise among the pool

participants. Also the necessary infrastructures such as AMR system, Interface metering, communication and IT facilities etc. have to be in place for operationalizing the mechanism.

While responding to suggestions, Chairperson CERC stated that SCED was initiated with the objective to harness unutilized cheaper power available in the system. As this is a pilot project, Generators and Discoms need to participate to gain benefits. During phase-I of this pilot, participation of ISGS plants was made mandatory. But now when saving has been demonstrated, while granting 6 month extension to the pilot, participation has been made optional. Genco has to see benefits and take decision for participation. Regarding sharing of benefits accrued, he stated that it is just a pilot project to demonstrate benefits and hence benefits are being shared with all stakeholders to incentivise participation. At the time of framing Regulations on this aspect, this issue of sharing of benefits may be deliberated.

## **ii) Draft Regulations On 'Real Time Market'**

Dr. S. K. Chatterjee, Chief (Regulatory Affairs), CERC made presentation on 'Re-Designing the Real-Time Electricity Markets in India'. A copy of the presentation is enclosed (**Annexure-B**). He stated that currently 'energy' imbalances as well as the 'system imbalance' are managed through Deviation Settlement Mechanism (DSM) /Ancillary Services (AS) mechanism, and partly through rescheduling and intra-day market in the Power Exchanges. Over dependency on DSM is posing challenge to the Grid Security. Therefore, with an intention of creating an organized platform for the real time energy trade a discussion paper is prepared which has proposed a clear separation between 'energy trade' and 'system imbalance' management.

It was mentioned that there should be a sequential approach for RTM design. RTM is expected to be in the range of 2000-3000 MW. Liquidity of RTM can be increased by combining Day Ahead Market (DAM), Unscheduled Interchange (UI) market etc. Larger pool would provide greater efficiency in the price discovery. Overall System Margin Price (SMP) would go down with such RTM. There would be overall cost optimisation and total savings would be around Rs. 6000 Crore every year.

While there is an existing practice of continuous trade in the intra-day market, the proposed market would be based on double sided closed auction with uniform clearing price. Current market needs to be reviewed and a new concept of Gate closure is proposed to be introduced. In reply to the discussion paper various stakeholders including POSOCO, Power Exchanges, Trading Licenses, IPPs, State Utilities, State LDCs, Generators welcomed the need for creation of RTM. Such RTM would also integrate the intermittent RE into the grid. Surplus RE can be sold in RTM. RTM will be a half hourly delivery period market (as against the proposal in the discussion paper for an hourly market) Buyers/sellers would have the option of placing buy/sell bids for each fifteen-minute time block in the half hourly RTM (1.15 hours before delivery). The generators having long-term contract and participating in this market will be required to share the net gains (after accounting for the energy charge) with the Discoms in the ratio of 50:50. RTM would be financially and physically binding and if the utilities fail to follow the dispatch instruction post RTM, the charges under DSM would be levied.

CMD, MSEDCL stated that RTM is welcome step for reforming the energy market. However such Regulations should quantify the objectives such as 'reduction in power purchase cost' and should have provision to undertake regular review whether such objective has been achieved. He stated that concept of gate closure will take away flexibility of rescheduling the contracted generating sources by Discoms, based on variation in consumer demand. Although, Discoms are undertaking demand forecasting exercises, environmental changes, agricultural consumption, variability of RE sources are creating major hurdles in accuracy of such forecast. He further suggested that Generators which have long term contract with Discoms should not be allowed to participate in RTM as it will take away Discom's flexibility in annual power planning. To elaborate this aspect, he stated that for stocking sufficient coal for running contracted generators during peak seasons, MSEDCL may not give schedule to such contracted generators during off-peak seasons by sourcing power from other cheaper sources. However, if these Generators are allowed to participate in RTM, objective of stocking coal cannot be achieved. He further stated that sharing of benefit accrued from RTM shall be left to be decided by Discom and Generator as they have valid PPA for that capacity.

AEML stated that since Bidding, clearing & scheduling etc. is done through electronic platform, time taken for these activities can be optimized. Schedule preparation & communication may be brought down to 1-time block. This will ensure more flexibility and lesser deviation. AEML-D stated that operational philosophy of RTM is like DAM and will attract POC Charges and Losses for quantum traded, irrespective of power flow on Inter State Transmission System (ISTS). POC Charges & Losses should be applicable on net power drawal / injection by State entities on Market Platform. Application fee, Scheduling & Operating charges may be waived off. Alternately these charges may be applied only once in a day irrespective of number of transactions / blocks.

TPC welcomed the RTM initiative and stated that there should be standard operating procedure among all the stakeholders. TPC also highlighted issue of cyber Security and communication issues. TPC requested to clarify the aspect of Generator being participant of RTM as EA, 2003 does not allow Generator to trade electricity. Further OA consumers need to be factored in under RTM. MSPGCL raised an issue of Fuel security without which generator cannot participate in RTM.

Chairperson, CERC stated that CERC is coming out with new methodology for computing PoC charges which will provide much needed predictability of transmission charges to the users. He assured the participants that he has noted the concerns raised by utilities and would deliberate on it while finalising RTM Regulations.

Shri. Mukesh Khullar, Member, MERC in the concluding remarks stated that this Workshop has provided an opportunity of cross learning amongst various State and Central level participants. By referring to the introductory remarks of Chairperson, CERC, he further stated that electricity sector was witnessing rapid changes in technology and behaviour of end users. Disruptive technologies such as Renewable Energy, Rooftop Solar, battery storage are being adopted at a

rapid pace. Although, there are legacy issues such as prices, availability, reach, challenges and constraints, there is need for appropriate regulations for better market operations in order to address the emerging issues particularly relating to RE and Distributed Energy Resources. CERC is trying to develop regulatory framework in this regard, which need to be responded with constructive suggestions. While finalising the regulations, legitimate concerns of Discoms would be addressed in a balanced manner. As stated by the Generators, the concept of RTM is invariably depending upon the availability of fuel(coal) to low cost Generators, which is to be assured by Ministry of Coal, (MoC). Therefore, MoC would be playing a pivotal role in the recent developmental steps of the power sector. He urged all stakeholders to take a note of the developments on electricity market reforms taking place at national level and gear up for its implementation at State level.

Shri Sajeev Kumar, CMD, MSEDCL informed about MSEDCL's digital initiatives on Billing, Operational and Financial front over last four years and compilation of the same has been prepared in the form of "DIGITAL MSEDCL" booklet. They have also simplified all its process for Consumers services and prepared booklet in the form of "CITIZEN CHARTER" book. CMD, MSEDCL requested to release both these books. Accordingly, both these books, "DIGITAL MSEDCL" & "CITIZEN CHARTER", were released by the dignitaries by Shri P. K. Pujari Chairperson, CERC, Shri Anand Kulkarni, Chairperson, MERC, Shri. Mukesh Khullar, Member, MERC, Shri I. M. Bohari, Member, MERC, Shri Sajeev Kumar, CMD, MSEDCL, Shri Abhijit Deshpande, Secretary, MERC, Dr. S. K. Chatterjee, Chief (Regulatory Affairs), CERC, Shri. K.V.S. Baba, CMD, POSOCO and Shri Satish Chavan, Director (Commercial), MSEDCL.

Shri Abhijit Deshpande, Secretary, MERC, thanked Chairperson, CERC, Chief (Regulatory Affairs), CERC, CMD POSOCO for their valuable time in sharing with the State Utilities the concept RTM and SCED. He also thanked CMDs of MSEDCL and MSETCL, CEO of AEML and Sr. Officers of MSPGCL, TPC, BEST and other Officers of Utilities for their active participation in the Consultative Workshop which would help in improving the regulatory framework.

**List of Participants**

1. Shri P. K. Pujari, Chairperson, CERC
2. Shri Anand B. Kulkarni, Chairperson, MERC
3. Shri Mukesh Khullar, Member, MERC
4. Shri I. M. Bohari, Member, MERC
5. Shri Abhijit Deshpande, Secretary, MERC
6. Dr S. K. Chatterjee, Chief (Regulatory Affairs), CERC
7. Shri. K.V.S. Baba, Chairman & Managing Director, Power System Operation Corporation Ltd. (POSOCO)
8. Shri. Sajeev Kumar (IAS) , Chairman & Managing Director, MSEDCL
9. Shri. Parrag Jaiin Nainutia (IAS) , Chairman & Managing Director, MSETCL
10. Shri.C. S. Thotwe, Director (Project), MSPGCL
11. Shri Santosh Amberkar, Director (Finance), MSPGCL
12. Shri Kandarp Patel, Chief Executive Officer, Adani Electricity Mumbai Ltd.
13. Shri Saxena, GM, NLDC POSOCO
14. Shri Anil Kolap, Chief Engineer, MSLDC
15. Shri Rajendra Ambekar, Executive Director, MERC
16. Shri Prafulla Varhade, Director (EE), MERC
17. Shri G. D. Patil, Director (Tariff), MERC
18. Shri Ganesh S., Tata Power
19. Shri Rajendra Patsate , Chief Engineer, BEST
20. Shri Ajit Pandit, Idam Infra Consultant
21. Shri Shashank Jewalilar, Chief Engineer, STU, MSETCL
22. Shri Paresh Bhagwat, Chief Engineer (Power Purchase), MSEDCL
23. Shri Kapil Sharma, COO, AEML
24. Shri Sunil Joglekar, Tata Power
25. Shri S. K. Soonee, Advisor, POSOCO
26. Shri Popat Khandare, Dy. Director (Technical), MERC
27. Shri Rakesh Guhagarkar, Dy. Director (Technical), MERC
28. Mrs Rujuta Gadgil, Dy. Director (Technical), MERC
29. Shri Balu Ugale, Dy. Director (Technical), MERC
30. Shri Pravin Ganvir, Dy. Director (Technical), MERC
31. Shri Siddarth Arora, Sr. Regulatory Officer, MERC
32. Shri T. K. Bhaskaran Tata Power
33. Shri Peyush Tandon Chief Regulation, Tata Power
34. Shri P. Devanand Tata Power
35. Shri S. B. Soni MSPGCL
36. Shri S. A. Nikalje MSPGCL
37. Shri Abaji Naralkar, AEML
38. Shri N. N. Choughule BEST CERC
39. Shri E. T. Dhengale , MSLDC
40. Shri Peeyush Sharma , SE MSLDC,

41. Shri Satish Jadhav, MSETCL
42. Shri Ravindra Kadam, Advisor, CERC
43. Shri Rajat Seth, KPMG
44. Shri Dheer Patel, RAP
45. Mrs. Hemlata Moti, Section Officer, MERC
46. Shri Tushar Murudkar, Clerk, MERC