Minutes of the 8th State Advisory Committee Meeting held on July 2, 2007 at 15.00 hrs at the 31st Floor, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai-400 005

The Chairman extended warm welcome to the Members to the 8th State Advisory Committee Meeting. It was explained that due to preoccupation of the Commission with the MYT proposals of various Utilities / Licensees the SAC meeting could not be convened earlier. It was expressed that such meetings will be convened regularly.

Taking up the main item of the Agenda, Chairman stated that in view of the critical position of demand-supply and increasing shortages in the State, the 8th State Advisory Committee Meeting has been convened to discuss how the issue of the power supply position can be addressed, partly, by laying emphasis on the need for conservation of energy. The Chairman urged the Members to offer their valuable comments / suggestions and to initiate discussion and asked Dr Vijay Deshpande, consultant of the Commission, to make a presentation on the subject. A copy of the presentation made by Dr. Deshpande is attached as Annexure to the minutes.

Thereafter, Advisory Committee deliberated at length on the various issues related to the Agenda item.

1. At the outset, Shri Ajay Pandey, M.D., MSEDCL said that, it needed to be considered if the distribution licensees should be planning and implementing demand side management (DSM) programmes involving energy conservation (EC) / energy efficiency (EE) as well as load shifting/peak load reduction activities at the consumer end. He further expressed that other agencies, such as MEDA, could be assigned the responsibilities of implementing DSM programme on behalf of MSEDCL. Shri. Pandey also mentioned that MSEDCL is engrossed with regular work of electricity distribution and associated situations / exigencies. This leaves no time and human resources for implementing other / additional projects. Explaining that MEDA did not have adequate capacity and skills to undertake such programmes, Chairman MERC pointed out that meeting consumer demand is very much the responsibility of the distribution licensees, and since demand management is its integral part, demand

management is as much a responsibility of the distribution licensees as meeting the consumer demand is. It was further mentioned that combining supply and demand side options under an integrated resource planning (IRP) regimen provided a least cost solution for meeting and/or management of consumer demand and hence it is imperative for distribution licensees to look at the demand side options such as conservation of energy and its efficient use at consumer premises for meeting consumer demand, including demand management. It was also mentioned that, since utilities have closer relationships with their consumers, the experience world over has shown that utilities are in a better position to influence consumer behaviour, and thus are also better suited for taking up DSM work. In this regard, Prayas observed that it is important for distribution licensees to play a main role in the CFL or any DSM programme to give due credibility to the energy efficient device, product or appliance being promoted under the DSM programme. Consumers do trust the quality of products endorsed by licensee. Chairman MERC clarified that distribution licensees can, if required, completely out-source all activities required for creating demand side resources but they will still have to play a central coordinating role to implement the demand side programmes. Clarifying further, it was also mentioned that the Commission had already allowed complete pass-through of the expenses related to DSM programmes, be it in the nature of expenses incurred towards salaries of employees working on DSM, or in the nature of expenses on consultants engaged for planning, designing or implementation of DSM programmes. It was further mentioned that, the Commission, if needed, could also provide for the DSM related cost upfront (similar to what is done with respect to working capital requirement). Elaborating further on the incentives, the Chairman MERC also explained that since DSM programmes defer or avoid the need to add capacity, the possibility very much existed for developing a mechanism to treat part or whole of the expenses incurred on DSM similar to any capital expenditure, with its attendant return on investment benefits.

2. Shri Dixit of Prayas enquired about the present status of the proposed state level CFL promotion project of MSEDCL. Shri Pandey of MSEDCL informed that procurement of CFLs by MSEDCL was a contentious issue and since it had not been resolved, State level CFL promotion project had not been taken up as yet. Shri. Pandey also mentioned that, if procurement and distribution of CFL programme is handled by some one else, it would be

much easier for MSEDCL to implement the CFL project as MSEDCL's role in this situation would come down to collecting the CFL rentals through its billing system, which is very much possible for MSEDCL to do. He further opined that group comprising representatives of consumer organisations could assist MSEDCL in preparing specifications and procurement of CFLs. Shri Dixit of Prayas suggested that joint team of licensees could undertake procurement of CFLs for State level programme. Chairman MERC while agreeing with MSEDCL that procurement of products for DSM programmes posed a major problem for public licensees such as MSEDCL, clarified that procurement through a joint team of licensees would not be possible as procurement policies of individual licensees varied to a large extent. Chairman MERC then mentioned that AES Inc. had informed MERC about a proposal sent to MSEDCL to implement state level CFL programme to capture Certified Emissions Reductions (CERs) under Clean Development Mechanism (CDM). The project envisages distribution of CFLs to consumers and measurement and verification of savings impact. The project does not envisage any expense to be incurred by MSEDCL. Shri Pandey of MSEDCL acknowledged that a proposal indeed had been received for a State level CFL programme to capture CERs under CDM and said that MSEDCL was considering allowing the project proponent to implement the State level CFL programme. The Chairman, MERC then observed that any expenses beyond the present scope of CFL project of AES Inc. such as automatic meter reading of a sample of consumers participating in the CFL programme would need to be allowed as pass-through as it would, apart from providing data on savings obtained as a result of the project, would also help the utility in getting data on use pattern of its various consumers.

3. Chairman MERC referred to the high level of tariff for certain categories of consumers especially for commercial consumers and observed that such a high tariff is a signal and an incentive to induce these consumers to implement efficiency or conservation measures. However, since such consumers are likely to be unaware of the measures to be adopted for conservation of energy and its efficient utilisation, the Chairman suggested that the licensees themselves should now approach such consumers and provide them solutions for reducing electricity consumption on commercial basis.

4. The Chairman MERC mentioned that, apart from tariff incentives, there was need to explore if consumers needed to be incentivised by offering direct cash rebates for purchase of energy efficient equipment and appliances. Referring to Bureau of Energy efficiency's appliance labelling scheme, Chairman mentioned that distribution licensees needed to consider projects/programmes providing cash rebates to consumers for purchase 5 star labelled window/split air-conditioners (to partially compensate for the higher initial cost of 5 star air-conditioners as compared to say 1 or 2 star air-conditioners). In response, Shri Pandey, of MSEDCL suggested that, instead of direct cash rebate by distribution licensee, suitable tax incentives by government should be considered for energy efficient products.

5. Shri Kelkar of Institution of Engineers (India) suggested that better way to incentivise domestic consumers to adopt demand reduction and EE/EC measures would be to bill them on KVAH basis instead of kWh basis. Shri Kelkar further mentioned that billing on KVAH basis would incentivcise consumers to reduce amperage and improve power factor. Elaborating further, Shri Kelkar mentioned that conversion of existing kWh meters to KVAH meters is easy and not very costly and hence it would be easy to introduce KVAH billing.

6. Dr. Pendse of Mumbai Grahak Panchayat submitted that as per surveys undertaken by them, industrial and commercial consumers are not willing to adopt EC/EE measures unless cost of energy is more than 3 % of the total cost of production. He further submitted that, for target consumers in Mumbai, namely offices and office buildings, the cost of energy is likely to be as low as 0.5 to 1 % of total cost and hence this could act as a major barrier for capturing EC/EE potential in Mumbai, unless suitable incentives are provided to consumers.

7. The meeting discussed the dearth of entities to not only deliver EC/EE, but also to undertake several DSM related tasks such as load research, DSM plan preparation, DSM project / programme design, DSM programme implementation and evaluation. Recognising this as a major barrier for capturing EC/EE potential, the meeting recognised the need for encouraging and facilitating energy service companies (ESCOs) for DSM, EC and EE programme delivery.

8. There was some discussion and references to experiences of licensees in implementing DSM projects including those on a pilot scale. Shri Pandya of REL informed that under the pilot project REL distributed (sold on instalments) more than 5.5 lac CFLs. However, REL found it difficult to measure actual benefits at systems level through measurements. Shri Pandya further mentioned that, at the individual consumer level, however, there was good perception about REL's CFL pilot project. Dr. Pendse of Mumbai Grahak Pachayat referred to the Bangalore CFL experiment and indicated that one of the manufacturers (Osram) has stated that recovery of rentals through utility billing was only about 70%, and hence the said manufacturer has indicated that it would not be interested in participating in programmes that involved recovery of rentals through utility billing. In response to Dr. Pendse's submittal, Shri Pandya of REL and Shri Pandey of MSEDCL, both of whom had made similar arrangement for recovery of rentals in their pilot CFL projects in Mumbai and Nashik respectively, mentioned that they had not faced any such problem in their respective pilot projects. Shri. Kuldeep Jain, Central Railways, submitted that EC/EE initiatives have been adopted in the railway sector to minimize traction load. Efficient rakes have been introduced. A particular type of energy saving locomotive – WLG 9 - has been put to use and the DC-AC traction conversion project has been started. It was observed that there are other technical areas beyond traction where DSM initiatives may be targeted.

9. Referring to initiatives to capture EE/EC potential in lighting by replacing existing elctro-magnetic ballasts with electronic ballast, Shri Mule of BEST mentioned that the Undertaking has commenced efforts to implement efficient lighting programme which envisaged replacement of existing ballasts with efficient electronic one. In this connection, BEST explored possibility of working with electrical contractors to, eventually, launch programme for wider consumer cross-section including residential. However, BEST could not get appropriate response. BEST is in the process of preparing for implementation of pilot projects internally.

10. It was observed that principal contribution to the peak load in Mumbai was by commercial offices / premises. Majority electricity load requirement is towards air-conditioning (cooling and dehumidifying) of space, which needed attention. Shri. Jayant Deo

suggested that existing chillers could be replaced by vapour absorption chillers which could use heat generated with the help of natural gas. Such an arrangement could reduce electricity load substantially. However, there are certain issues such as pricing and permission to use natural gas other than domestic cooking and transportation which need careful evaluation. Chairman MERC requested MCCIA to prepare cost-feasibility study in the replacement/switching over to vapour absorption systems in the commercial establishments of the Mumbai-Pune area and submit it to MERC.

11. Chairman MERC observed that converting existing traffic signals to LED signals could result in load reduction. He further mentioned that because of the lower load of LED signals, they could be operated using solar energy. This would not only ensure that signals remain operational during load shedding but would also provide load relief. This area needed further attention. Dr. Deshpande mentioned that adequate data in respect of exact amount of load and consumption was not readily available with utilities. Such a data is needed to undertake basic cost-benefit analysis.

12. It was mentioned that utilities needed to initiate DSM programmes to capture energy and load saving potential in municipal water pumping systems. Shri. Anil Kelkar, Institution of Engineers (India), submitted that variable speed drives are very expensive and mechanical drives, which are much more effective, should be used for tapping the energy saving potential in municipal water pumping systems. Shri. Pandey of MSEDCL, submitted that various local and governmental bodies (zilla parishads) are not aware of EE/EC possibilities in their respective pumping systems since it is the Maharashtra Jivan Pradhikaran that conceptualises and implements the water supply schemes in rural Maharashtra. He further stated that, it may therefore be feasible for Maharashtra Jivan Pradhikaran to take charge of DSM activity so far as minimizing the load for municipal water pumps is concerned. Chairman, MERC observed that availability of finance for undertaking EC/EE in water pumping systems was a major constraint for municipal and local bodies, and hence utilities had to come in to provide the financing in the same way as utilities would do for any DSM project/programme that they out-source. Discussing the municipal corporations that could possibly be targeted for capturing EE/EC potential, it was suggested that water supply

pumping systems of Aurangabad and Ahmednagar municipal corporations be studied. Chairman, MERC thereafter requested MCCIA to prepare an energy efficiency improvement scheme for the water pumping systems of these two municipal corporations.

13. Mentioning about its new initiatives in DSM, Shri Pandya informed that REL is in the process of preparing a DSM Plan preparation, conduct energy audits and carry out load research work. Under load research, REL proposes to survey about 10,000 households, and the survey is expected to be completed within a period of six months. Shri. Pandya also mentioned that REL is hiring external agencies for the purpose.

The Chairman concluded by thanking all the participants with a remark that wide scope is available for entrepreneurs/ chambers to submit proposals to collaborate with utilities in the filed of EC/EE. These proposals could be submitted to the MERC. However, the utilities may initiate the implementation of EC/EE on their own.

The SAC meeting concluded thereafter.

List of participants is annexed hereto.

List of Persons attended the 8th Meeting of the State Advisory Committee Meeting held on 2nd July, 2007 at 15.00 hours.

S.No.	Name of person	Institution / Organisation
1.	Shri Rahul Asthana	Secretary (Energy), GoM
2.	Shri Ajoy Mehta	MD, MSPGCL
3.	Shri Ajay B. Pande	MD, MSEDCL
4.	Shri Subrat Ratho	MD, MSETCL
5.	Shri J.D. Kulkarni	DGM, Tata Power Co. Ltd.
6	Shri P.S. Pandya	Reliance Energy Ltd.
7	Shri Arvind A. Mule	BEST Undertaking
8.	Shri Shantanu Dixit	Prayas (Energy Group)
9.	Dr Ashok Pendse	Mumbai Grahak Panchayat
10	Shri K.V. Kuldeep Jain	Central Railway, Mumbai
11	Shri Jayant Deo	Mahratta Chamber of Commerce, Industries & Agriculture, Pune.
12	Shri Anil Kelkar	Institution of Engineers, Pune
13	Shri S.C. Singh	Central Railway
14	Shri V. H. Wagle	Tata Power Co. Ltd.
15	Shri N.V. Bhandari	BEST Undertaking
16	Shri R.D. Uchil	Reliance Energy Ltd.
17	Shri Pratit Godbole	Reliance Energy Ltd.
18	Dr Vijay Deshpande	Consultant, MERC
19	Shri M. Palaniappan	Consultant, MERC
20	Shri Sanjeev Tamhane	Consultant, MERC

ANNEXURE 1

Presentation on Conservation of Energy & Its Efficient Utilisation: Why and How?

Note:

Subject: **Minutes of the 8th Meeting of the SAC held on 2nd July, 2007**

Draft Minutes of the 8th Meeting of the State Advisory Committee Meeting held on 2nd July, 2007 were sent for circulation/approval of the Members and the Chairman on 12th July 2007. Member (Finance), however, has suggestions about the structure and contents of the draft minutes. The draft minutes have now been revised as per the suggestions and discussions with Member (Finance), and the same is placed below for approval. On approval, a copy of the same, after incorporating all comments / corrections, will be sent to all Members / Special Invitees.

(Vijay M. Deshpande)
19/07/2007

Secretary, MERC

Member (Finance)

Member (Technical)

Chairman, MERC