Minutes of the 21st Meeting of the State Advisory Committee held on 30 March, 2012 at 11.00 Hours in the Centrum Hall, World Trade Centre, Cuffe Parade, Mumbai-5

The 21st meeting of the State Advisory Committee (SAC) constituted by the Commission under Section 87 of the Electricity Act, 2003 was held on Friday, 30 March, 2012 in Mumbai. Shri V.P. Raja presided over the meeting. Shri V.L. Sonavane, Member and Shri Kuldip Khawarey, Secretary MERC, were present. The meeting commenced with a warm welcome by the Chairman. Leave of absence was granted to those who could not attend the meeting. The Chairman informed the Committee that Dr. Omprakash G. Kulkarni, Mentor, Advisor, Consulting Engineer in Automation, Instrumentation, Energy Management and IPR CDM and Renewable Energy will be Permanent Invitee of the SAC. List of Members / Special Invitees who attended the meeting is enclosed.

Agenda Item No. 1 Preliminary Remarks by the Chairman:

At the outset, the Chairman stated that the EA 2003 expects us to reach a certain goal in the future, i.e., taking this entire electricity sector to a situation where there would be multiple players in generation, distribution, there would be a well developed wholesale as well as retail market in electricity, and prices would get determined by the markets. That would lead to a competitive situation which would be in the interest of consumers. It would bring efficiency, cost consciousness. It would provide better customer service and would be able to move forward. The market would keep on supporting people whose performance is better in terms of customers' service, reliable supply and would punish those who don't come to that level. Some notable progress has been made, more generators have come in, more investments have taken place, a wholesale market has been evolved.

The Chairman further stated that open access continues to be the central pivot of reforms under EA 2003. It is also related to reduction of cross subsidy because open access hurt existing discoms commercially. In the implementation of open access, there is a need to find a middle path so that we can take it forward. Shri R.B. Goenka, Member SAC, has sent an e-mail along with a copy of the Gujarat ERC Terms and Conditions of Intra State Open Access Regulations, 2011 (notification no. 3 of 2011) to all the Members of the SAC and all the utilities. The utilities in particular that have more knowledge in the matter are required to go in depth and identify the operational issues, if any. The operational issues, pertaining to metering, effect on distribution losses and various other things are required to be brought out. If these things are not brought to the notice of the Commission, the Commission on its own does not have the time and the resources to look into it. Each of the utility is required to take a call on this and some initiatives on this.

Agenda Item No. 2 **Confirmation of the Minutes of the 20th SAC Meeting**

The Chairman stated that copy of the minutes of the 20th meeting of the SAC held on 30 December, 2011 was circulated to all the SAC Members / Special Invitees. Shri Zalte, Director (Operations), MSETCL pointed out that in the said minutes on page no. 6, his designation was mentioned as “Executive Director, MSETCL” which needs to be corrected as “Director (Operations), MSETCL”. The Commission noted this change and confirmed the minutes of the last meeting with the corrections as pointed out by Shri Zalte.

Agenda Item No. 3 **Action Taken Report on the Earlier Meetings**

The SAC Members / Special Invitees noted the Action Taken Report on the decisions of earlier meetings, circulated along with the Agenda Items.

Agenda Item No. 4 **Demand Response Potential for Mumbai City**

Shri Shekhar Khadilkar from Tata Power, Mumbai DSM Cell stated that all DSM activities are only for the customers and are carried out at the customers' premises in co-ordination between the customers and the utilities. Any utility which is implementing a DSM project should try to shift the load from peak to off-peak load so that both customers and the utilities benefit. Further, any DSM activity has to have strong regulatory support. MERC has been very proactive in this direction and several steps have been taken towards DSM. Maharashtra is the only state where the DSM regulations have been defined, and a .inter-utility DSM conservation committee has been formed. He also mentioned that more than 40% of the load is from air conditioners in Mumbai. With active participation of the consumers in demand response scheme, the cost of procuring peak power can be reduced significantly. Shri Shekhar made a presentation on demand response in Mumbai on the following points–

- Mumbai needs to purchase 600 to 800 MW power in day time peak
- Load duration curve shows large distortion in peak and off-peak power requirement
- Regulatory support for DSM in Maharashtra
- Residential consumers' load profile based on market survey
- Load research conclusions
- Peak load challenge
- Demand response - An innovative DSM programme and smart grid solution
- Load management with demand response
- How demand response works for consumers
- Demand response call – decision matrix based on peak power purchase, transmission constraint, power shortage
- Load shifting technologies – thermal storage programme
- Real time measurement of AC plants

Dr. Mahesh Patankar, LBNL Consultant made a presentation on demand response possibilities in Mumbai suburbs and large towns in Maharashtra. He *inter alia* covered the following points –

Demand response strategies

- **As defined by the Lawrence Berkeley National Laboratory report:**
  - **Demand response (DR)** is a set of time-dependent programme ***activities and tariffs*** that seek to reduce or shift electricity usage to improve electric grid reliability and manage electricity costs.
- Possible regulatory mechanism driven interventions include:
  - Introduction of (seasonal/summer-specific) critical peak pricing (CPP)
- Manual or auto DR events to influence:
  - **Air-conditioning:** temperature adjustments in zones, adjustments in air-distribution in specific zones
  - **Lighting:** Zone switching, stepped dimming, continuous dimming

- **Feasible options for Maharashtra and system benefits**

- **Aggressive CPP** for summer months:
  - Develop seasonal TOD structure beginning this summer apportioning high-cost power to large users coincident with the peak
  - This is one-time (yearly) activity

- **Demand Response triggers** similar to the Tata Power programme:
  - Set-up a Rs/kWh monetization level for demonstrated savings when a DR-event is called
  - Licensees to jointly shortlist curtailment service providers and let the market forces take this on
  - Need to evaluate the pass-through of investments towards metering/communication in the ARR (DSM budgets)
  - Involve SLDC to develop system-wide triggers
  - Licensees/MERC to reach out to 200 large consumers

- Possible implementation models

- Role for a common service provider enrollment programme

Immediate questions to be answered –

- During the past three summers, how many times Mumbai and the suburban system peaked that got closer to transmission constraints? Based on the load growth patterns, do the licensees expect serious transmission congestion?
- Do the peak demands of the top 25 consumers in each of the licensee systems coincide with the Mumbai and licensee system peaks?
- What is the level of savings (arbitrage) distribution licensees should and can share with the consumers and the aggregators/CSPs?

Agenda Item No. 5 **Any Other Item with the Permission of the Chair**

A) Transmission Plan for MMR Region

Shri U.G. Zalte, Director (Operations), MSETCL and Member Secretary of the Standing Committee which was formed as per the directives of the Hon'ble Commission to look into the matter of the transmission planning for Mumbai region made a presentation on transmission plan for the MMR Region. In his presentation, he highlighted the following points –

- Present power scenario in Mumbai
- Load forecast upto 2014-15
- Constraints in the MMR transmission system
- STU plan
- Implementational issues
- Status

Shri Zalte pointed out that –

i) The maximum demand registered in the Mumbai region on 2 June, 2011 was 3420 MW. As against that generation in Mumbai was 2380 MW. There was a load generation gap of 1040 MW.

ii) It is expected that by 2015, load generation gap in the Mumbai region will reach more than 2000 MW.

iii) Sufficient 400 kV network is coming up to the Mumbai region but no 400 kV network is available within the region. There are issues related to creek, salt-pan, CRZ, mangroves clearances from development authorities such as MMRDA, CIDCO, MIDC, Greater Mumbai Municipal Corporation, hutment dwellers, private land, etc.

iv) In order to resolve the power requirement of the Mumbai region in the years to come, the STU has planned 5 short-term schemes, 5 medium-term schemes and 5 long-term schemes.

Out of the five short term schemes for MMR, two are completed. work on the medium term schemes is in progress. Long-term schemes would be completed by the respective licensees. The STU is closely monitoring the progress of these schemes.

Shri Zalte mentioned the recommendation of the Standing Committee as under -

1. The stranded units of Tata Power (Trombay unit no. 4, 150 MW and unit at Lodhivali, 40 MW) may have to be taken into service to meet the load for ensuing summer season. The issue needs to be taken up at the Central Government level for gas allocation.
2. Various Government agencies, viz., MMRDA, SRA, CIDCO, Airports Authority, SEZ, Railways & MCGM, etc. need to be involved at the planning stage for MMR so that necessary support can be obtained in implementing the project. A task force may be constituted under the aegis of Principal Secretary (Energy)/ Chief Secretary, GoM for effective co-ordination and facilitating implementation of transmission projects with various government agencies.

3. All the 110 kV lines in the MMR are to be necessarily converted from overhead to underground and the same ROW can be used for 220 kV with insulated cross arms.

4. VSC based HVDC to be planned in the heart of north Mumbai (Aarey) for wheeling power from the outskirts of MMR (Nagothane). Issue of availability of land at Aarey needs to be addressed.
5. A co-ordination committee may be formed under STU comprising of MSETCL, Tata Power Transmission & R-Infra Transmission to closely monitor the implementation of these projects so that any problems, difficulties could be brought ot the notice of the higher authorities.
6. For all identified long-term transmission schemes, the model of competitive bidding through private sector participation should be explored. GOM may formulate appropriate guidelines and appoint an empowered committee and bid process co-ordinator to take up identified long term transmission schemes on urgent basis, as has been undertaken in other states for development of transmission schemes.

Shri Zalte stated that as per Commission's request, the GoM is kind enough to provide support at the Secretariat level. Principal Secretary (Energy) held three meetings with the local bodies, authorities and also with the Tata, RInfra, MSETCL in order to resolve issues and critical issues are being solved after the initiatives of the Principal Secretary (Energy).

The Commission congratulated both Shri Zalte and Principal Secretary (Energy) Shri Vidyadhar Kanade for pursuing the matter and getting things done through the Greater Mumbai Municipal Corporation and the Forest Department and I hope the same momentum will be kept up. The Commission also suggested that if any matters pertaining to bringing additional power in Mumbai region are pending with MERC, the same may be brought to the Commission's notice; and the Commission will try to put the matter on fast track.

B) Renewable open access

Shri Harry Dhaul of IPPAI made a presentation on *Renewable Open Access: Perceived Concerns and Way Out*. In his presentation, he mentioned that renewable

energy generator's concerns primarily are i) risk of losing out on excess generation and no commercial benefit to generator and ii) exposure to UI. Renewable energy consumer's concern are i) losing out on incentives if they buy RE ii) reduced contract demand iii) tariff implications iv) what happens in case of overdrawal temporary tariff and v) regulatory gap. The discom's concerns are basically centered around revenue loss which are i) whether planned ARR get affected; ii) unscheduled power buying iii) system burden due to constant flip flop and iv) universal service obligation.

He mentioned perceived concern and made suggestions as under:

Open access for renewable energy

- Establish transparent process for grant of RE open access including defined time-frames, consumer change options, energy credit settlement, etc.
- Need for determination of suitable admin/operating & wheeling charges linked to generating capacities.
- Setting up of a special cell under the aegis of MERC for fast-track redressal.

Banking of renewable energy

- Inevitable for in-firm, unpredictable, uncertain generation
- *Must be allowed* for units upto 10MW
- Could be made optional, provided RE developers are ready to pay a mutually agreed *banking charge* set by MERC
- Differential energy between over-generated and under-consumed must be considered as *deemed banked unit*
- Deemed banked units to be paid to generators @ APPC by host DISCOM

Contract demand reduction

- Need to link contract demand with CUF.
- Protocols may be formulated for contract demand restoration upon completion of OA tenure without any documentation.

- Reduced contract demand may be kept under suspension during approved OA tenure.

Stand-by supply

- Temporary tariff as concept is universally acceptable
- Needs to be rationalized, i.e., 1.5 times of applicable HT tariff.
- Option for arranging back-up power may also be allowed from intra/inter-state or intra state discom by paying a mutually agreed rate to the host discom.

Scheduling of renewable energy

- To be allowed as per TOD band instead of 15mins block
- Settlement procedures to be made in line with CERC proposed mechanism
- Clarity on the legal entity responsible for scheduling must be provided, i.e.,

    - Who will be held responsible for scheduling - project developer, O&M operator, owner or pooling sub-station operator?

The Chairman suggested that there is a need for special provisions as far as renewable energy is concerned as the present regulations do not address the issue.

C. Dr. Omprakash Kulkarni made a presentation on *Revolutionizing the Energy Scenario of Rural India*. In his presentation, he mentioned that smart grid is essential for RE. He further mentioned that sincere efforts will have to be made for seeking forest clearance for micro/ mini and small hydro projects.

D. The Chairman read out letter dated 16 March, 2012 received from the Institution of Engineers (India) Pune local centre. The Chairman further read out e-mail dated 29 March, 2012 received from Shri R.B. Goenka, Vidarbha Industries Association, Nagpur requesting necessary corrections in MSEDCL's commercial circular nos. 154, 155 and

156 dated 23 January, 2012. The Chairman stated that these matters are currently sub judice with the Commission.

E. The Chairman read out letter dated 29 March, 2012 received from RInfra and mentioned that so far as point no. 1 of the said letter is concerned, the required note may be given by RInfra to Principal Secretary (Energy), GOM and point no. 2 and 3 may be considered in the agenda to be discussed in the today's meeting of the Co-ordination Committee.

Copies of the presentation were circulated to the Members/ Special Invitees who attended the meeting. The copies of the same are also sent along with the minutes to all the SAC Members / Special Invitees.

The meeting ended with a vote of thanks.

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Encl: Copies of Presentations

a) Presentation made by Shri U.G. Zalte, Director (Operations), MSETCL
b) Presentation made by Shri Harry Dhaul, IPPAI
c) Presentation made by Shri Shekhar Khadilkar, Tata Power DSM Cell
d) Presentation made by Dr. Mahesh Patankar

List of Persons who attended the SAC Meeting held on 30th March, 2012

Members

Shri P.K. Biswas, Central Railway

Shri Anil Rajvanshi, Nimbkar Agricultural Research Institute

Special Invitees

Shri U.G. Zalte, Director (Operations), MSETCL

Shri Ashok Sethi, Vice President, Tata Power Company Ltd.

Shri R.R. Mehta, Vice President, Reliance Infrastructure Ltd.

Shri G.J. Girase, Director (Finance), MSPGCL

Shri A.G. Patil, Dy. Gen. Manager, BES&T Undertaking

Shri Palash Das, Power Exchange India Ltd.

Shri Harry Dhaul, Independent Power Producers Association of India

Shri S.A. Patil, Maharashtra Energy Development Agency

Dr. Omprakash Kulkarni