

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
13th Floor, Centre No.1, World Trade Centre, Cuffe Parade, Mumbai 400 005.
Tel. 22163964 / 22163965, Fax No. 22163976
E-mail mercindia@mercindia.com
Website: www.mercindia.com

CASE No. 4 of 2005

In the matter of
Directions to Distribution Licensees under Section 23 of Electricity Act, 2003
to curb demand.

Dr Pramod Deo, Chairman,
Shri A. Velayutham, Member

ORDER

Dated: 4th May, 2005.

Under their Application dated 9th April, 2005, the Maharashtra State Electricity Board (MSEB) have sought directions under Section 23 of the Electricity Act (EA), 2003 to all Distribution Licensees in the State to take certain measures for a limited period of time to restrict electricity demand, particularly during the evening peak hours, considering the serious demand-supply gap prevailing in the State as a result of which MSEB are having to undertake load shedding on an extensive scale. The measures proposed are:

- i. Restricting and limiting the usage of electricity between 17.00 hours and 23.00 hours of Cinema Houses, major commercial establishments, and commercial complexes and other commercial hubs for at least 2 days in a week on a rotational basis.
 - ii. Restricting the timings of industrial units operating on single or double shift basis so as to avoid usage of electricity between 17.00 and 23.00 hours.
 - iii. Banning use of neon-signs and heavy lighting, illuminated hoardings and flood lightings of buildings in April and May 2005
 - iv. Restricting electricity supply to shops only upto 5 pm.
 - v. Restricting use of agricultural pumps only to non-peak hours.
 - vi. Any other directions to reduce energy consumption during the whole day, and particularly between 17.00 and 23.00 hours.
2. In support of their proposal, MSEB have stated that, at present, the system demand of MSEB during evening peak hours is about 12,500 MW on average basis. The online capacity of MSEB during the evening peak hours being around 9400 MW, the demand-supply gap is about 3100 MW, which is met through load shedding. MSEB have stated further that the peak hours situation in the month of April and May 2005 is expected to worsen for the following reasons:
- There is likely to be a further rise in demand due to increase in temperature, by about 200 to 300 MW.
 - There is likely to be reduction in the generation from Koyna Hydro Power Station due to restriction on usage of water.



- Due to the sudden spurt in demand from October 2004 onwards, additional Koyna water has to be used to avoid distress load shedding to some extent. Further, more water had to be used when the Koradi Power Station was not able to generate any energy due to a fire in the Switchyard. As a result, with the balance water available for generation from now onwards till the end of the water year, i.e. till 31st May, 2005, only about 4 MUs can be generated every day, representing about 800 MW of generation during evening peak hours as against the average Koyna generation of about 1300 MW throughout the year.
- Reduced bilateral purchases during the evening peak time.
- In the short term power purchase agreements for April, May and June, 2005, MSEB have been able to procure only about 100 MW of power for the evening peak hours as against the previous agreements of 390 MW from January to March. (Details have been annexed to the Application.)
- As a result of the above, the shortage during the evening peak time is likely to go up from the current 3000 MW to about 3500 MW.

3. MSEB's Application states that the following measures are proposed to be taken to increase availability:

- a) Requesting other riparian States to allow use of more water for Koyna generation.
- b) Requesting Govt. of India to increase allocation of gas for the Uran plant, and for more power from the unallocated quota.
- c) Exploring the possibility of getting more power from Captive Generators in the Western Grid.

4. According to MSEB, the Minister (Industries) has interacted with Associations for changing the timings of single and double shift operating industries so as to restrict the use of power by such industries between 17.00 to 23.00 hours. Govt. of Maharashtra (GoM) would be requested to follow this up with necessary orders under the Shops and Establishments Act. MSEB have mentioned that the GoM had earlier issued such orders under the Bombay Electricity (Special Powers) (BESP) Act, 1946 on 16th November, 2002. However, with the coming into force of EA, 2003, the powers to issue such directions are vested with Commission under Section 23.

5. The Commission heard MSEB, other Distribution Licensees and authorised consumer representatives on 26th April, 2005. After considering the various submissions made and the critical situation arising on account of the prevailing demand supply gap, the Commission believes that it has become necessary to take emergent measures to curb electricity demand, primarily during the evening peak hours but also during the rest of the day. Hence, considering the urgency, the Commission issued a summary Order on 26th April, 2005 directing in exercise of its powers under Section 23 of the EA, 2003, all Distribution Licensees in Maharashtra, (viz. MSEB, the Brihanmumbai Electric Supply and Transport Undertaking (BEST), the Mula Pravara Electric Co-operative Society (MPECS), Tata Power Company Ltd. (TPC) and Reliance Energy Ltd. (REL)) as follows:

- (a) A 'Load Management Charge' shall be levied on all electricity consumers in Maharashtra (including Mumbai) whose consumption exceeds 500 units per month in the billing months of May and June, 2005 (billing months of June and July in the case of BEST). This charge will be levied at the rate of Re. 1 per unit for the electricity consumed in excess of 80% of the consumption recorded in the corresponding billing months of 2004. Similarly, those whose consumption is less than 80% as compared to the corresponding



period in 2004 will be given a 'Load Management Rebate' of 50 paise per unit. This Charge and Rebate will be applicable to all metered consumers.

- (b) In the case of consumers having Time of Day (ToD) meters, however, the above benchmark period, Charge and Rebate will apply only to consumption recorded from 1800 to 2200 hours.
- (c) In the case of new consumers, the past reference period for comparison of consumption will be the last bill period.
- (d) The Charge and Rebate will not be applicable to (i) electricity sales from one Distribution Licensee to another, (ii) Railways, and (iii) unmetered consumers.
- (e) The net amount recovered from the Charge/ Rebate will be kept separately by the Licensees to be used for energy conservation and other programmes, for which separate instructions will be issued.
- (f) MSEB and the other Distribution Licensees will ensure that electricity is not supplied for neon signs, illumination of hoardings and flood lighting of buildings (except heritage structures) between 1800 hrs to 2200 hrs from 1st May, 2005 to 30th June, 2005.

It was clarified that these directions are applicable to the whole of Maharashtra, including Mumbai. MSEB and other Licensees were asked to give wide publicity to them so that all concerned consumers are aware of the directions. The Commission is now elaborating on that summary Order in this detailed Order.

6. At the hearing on 26th April, 2005, Shri Jayant Kawale, Chairman, MSEB, elaborated on the situation prevailing in the State. There was general agreement that, considering the critical position, emergent measures were necessary to restrict electricity demand, though Prayas and other consumer representatives also stressed that programmes to improve efficiency, and other such measures which had been mandated by the Commission, should not be lost sight of. Licensees supplying to Mumbai also pointed out that a substantial part of any surplus which may become available for purchase by MSEB from out of savings in Mumbai would be lost as a result of high T&D losses, etc. The Commission noted that many of the measures suggested by MSEB might not be effective because of difficulties in enforcement. The impact on day-to-day life, for example in the case of the proposal to restrict supply to shops during the evening, also had to be taken into account. There was a general consensus that, as far as possible, price signals would be a more appropriate mechanism for effecting reduction in demand. Chairman, MSEB submitted that the importance of the psychological impact of such measures could not be minimized, particularly in the context of perceptions of consumers in other parts of Maharashtra, who are facing the brunt of extensive load shedding, vis-a-vis consumers in Mumbai. Moreover, surplus generation in Mumbai would become available for the State as a whole. It was also felt that, to the extent possible, the measures should not be discriminatory, although small consumers should be protected.

7. Section 23 of EA, 2003, under which MSEB have sought directions, provides that:

"If the Appropriate Commission is of the opinion that it is necessary or expedient so to do for maintaining the efficient supply, securing the equitable distribution of electricity and promoting competition, it may, by order, provide for regulating supply, distribution, consumption or use thereof."

Although, in the normal course, the price signals introduced through the summary Order dated 26th April, 2005 in the form of Load Management Charge and Rebate would have been the subject of a regular tariff determination process, Section 23 provides the Commission with powers to regulate the supply, distribution or consumption of electricity in emergent circumstances such as these. Accordingly, the summary Order was passed, considering the submissions made by MSEB and the deliberations at the hearing.



8. The Commission notes that ToD metering is presently available only in respect of some categories of consumers of certain Licensees in the State. In the case of these consumers, therefore, it is possible to fine-tune the price signals so as to reduce electricity demand during the evening peak hours (1800 to 2200 hours, which is the slab applicable to MSEB). For other metered consumers, such fine-tuning is not possible at present. However, the Commission also notes that, in the prevailing circumstances, it is necessary to restrict demand, not only during these hours but also during the rest of the day. From MSEB's submissions, it is seen that such restriction is necessary for the time being for a period of around 2 months, particularly as compared to the consumption in the same period (i.e. May and June) last year.

9. With a view to protecting small consumers while otherwise making the dispensation non-discriminatory, the benchmark for the incentive/ disincentive in the form of a Load Management Charge and Rebate is in respect of those consumers with electricity consumption exceeding 500 units per billing month. An exception has been made in the case of Railways, who have no scope for adjustment, and also considering the nature of their services towards the public. In the absence of individual measurement of consumption, unmetered consumers have not been brought within the ambit of the directions dated 26th April, 2005. As far as neon signs and illumination of hoardings and buildings (excluding heritage structures) is concerned, it is expected that the restrictions for a short period will not only save energy, but also have a positive psychological impact and visibly stress the need for energy conservation.

10. The directions at para. 5 above apply throughout Maharashtra, including Mumbai, and not only to the MSEB area. Not only are the Licensees in Mumbai interlinked inasmuch as REL obtain a part and BEST all of their supply from TPC, but there is also regular exchange of power between TPC and MSEB, and also a standby arrangement with MSEB. This is apart from the fact that MSEB themselves supply power to consumers in some parts of the Mumbai suburbs. Similarly, MPECS are provided electricity entirely by MSEB.

11. Since the Commission has provided for a Charge as well as a Rebate, consumers will be incentivised to reduce demand through better planning and utilization of electricity, rather than by fiat. In case the net effect of this Charge and Rebate is a reduction in the corresponding revenue of the concerned Distribution Licensee, such reduction will be adjusted by the Commission at the time of determination of its Annual Revenue Requirement in the subsequent period and for consideration during tariff revision.

12. As directed in the summary Order, any net surplus from the Charge/Rebate will be kept and accounted for separately by the Licensees for utilizing for energy conservation and other programmes, according to instructions to be issued separately by the Commission. In this connection, it will be recalled that, in its Order dated 4th March, 2005 (on a compliance Petition filed by the Maharashtra Rajya Veej Grahak Sanghatana concerning load shedding and related issues), the Commission had stressed the need to undertake Demand-Side Management and energy conservation and efficiency programmes. MSEB are expected to submit their proposals in this regard to the Commission shortly.

13. The Commission notes that, although it accepts broadly that an emergent situation has arisen in terms of the demand-supply gap, the present Order does not necessarily imply that the precise demand and load shedding numbers set out by MSEB in their Application are fully accepted. MSEB do not appear to have reconciled the load shedding figures furnished in these proceedings with those assessed by the Commission in its Order dated 4th March, 2005. It also appears from MSEB's submissions that one of the reasons for the increase in load shedding is the release of 80,000 new agricultural connections in the recent past at a time when there is already a shortfall in supply. Analysis of the Circle-wise energy audit data submitted by MSEB also seems



to indicate that the Transmission and Distribution (T&D) losses in some Circles has increased, rather than reduced as was mandated by the Commission.

14. In their Application, MSEB have referred to the Bombay Electricity (Special Powers) (BESP) Act, 1946. The Commission had asked the State Govt. some time ago to review the validity of that Act since many of its provisions were inconsistent with the new legal framework of the EA, 2003 and the jurisdiction of the Commission. The Commission notes that GoM, through the Maharashtra Electrical Energy (Regulation of Distribution, Supply, Consumption or Use) Order, 1995 dated 1st December, 1995 issued under the BESP Act, had specified, inter alia, a rostering schedule of weekly-off in different areas. In order to remove any doubt or uncertainty, the Commission directs that the contents of that Order, as amended to date, will remain protected and shall continue to be in force until further orders.

15. At its hearing on 26th April, 2005, the Commission also considered the principles that should be adopted for undertaking load shedding by MSEB, as a part of separate proceedings flowing from directions given in its Order dated 4th March, 2005. In addition to the various points suggested by MSEB, the Commission directed that the T & D losses and collection efficiency in different areas need to be taken into account while deciding the load shedding protocol. MSEB should revert to the Commission with its further submissions in this regard. The Commission will pass Orders on the principles and protocol for load shedding separately later. In the meantime, MSEB should publish their load shedding programme on their website.

16. In order to facilitate an assessment of the impact of the directions at para. 5 above, the responsiveness to price signals, and the net quantum from the Charge/Rebate, MSEB and the other Distribution Licensees should submit data in the format annexed to this Order immediately after the billing for May and June, 2005 is completed.

Sd/-
(A. Velayutham)
Member

Sd/-
(Dr Pramod Deo)
Chairman, MERC

(A.M. Khan)
Secretary, MERC

ANNEXURE TO ORDER DATED 4.05.2005 IN CASE NO. 4 OF 2005 (REF PARA 16 OF ORDER)

Billing Month*	April 2004	May 2004	June 2004	April 2005	May 2005	June 2005
Particulars						
Total Sales in MU						
Total revenue in Rs. Cr						
Sanctioned / Connected Load (kW)						
Neon Signs / Illumination Hoardings / Flood Lighting (Building)						
Street Light						
Sales to above group of consumers (MU)						
Neon Signs / Illumination Hoardings / Flood Lighting (Building)						
Street Light						
System peak load in MW						
Morning peak (0900 to 1200 hours)						
Evening peak (1800 to 2200 hours)						
Half Hourly Energy Exchange between TPC and MSEB Grid (MU) during target period (18:00 Hours to 22:00 Hours) ##						
Sales to consumers above 500 units per month (MU)						
LT Category						
<i>Domestic</i>						
<i>Non-domestic/Commercial</i>						
<i>LT Industrial</i>						
<i>Public Water Supply</i>						
<i>Streetlighting</i>						
HT Category						
<i>HT Industrial</i>						
<i>Public Water Supply</i>						
<i>HT Agricultural</i>						
<i>Public Water Supply</i>						
Total Revenue from above sales (Rs. Cr)						
Amount collected under Load Management Charge (Rs. Cr)						
Amount disbursed under Load Management Rebate (Rs. Cr)						
Net Amount collected under Load Management Charge (Rs. Cr)						

Note: 1. * Billing Month for BEST is June and July respectively.
2. ## Data to be furnished by TPC only.

