

**Before the Appellate Tribunal for Electricity  
(Appellate Jurisdiction)**

**Appeal No. 173 of 2008**

**Dated: 31<sup>st</sup> July, 2009.**

**Present: Hon'ble Mr. Justice M. Karpaga Vinayagam, Chairperson  
Hon'ble Mr. A.A. Khan, Technical Member**

**IN THE MATTER OF :**

Maharashtra State Electricity  
Distribution Co.. Ltd.  
Versus

....Appellant

Maharashtra Electricity Regulatory Commission,  
13<sup>th</sup> Floor, Centre No. 1,  
World Trade Centre, Cuffe Parade,  
Colaba, Mumbai-400 005.

... Respondent

Counsel for the Appellant : Mr. Vikas Singh, Sr. Advocate  
Ms Amrita Narayan,  
Mr. Ravi Parkash  
Mr. Raunak Jain  
Mr. Varun Agarwal  
Mr. Arpit Higgins  
Mr. Rahul Sinha  
Mr. Dongre, CE, MSEDCL

Counsel for the Respondents : Mr. Buddy A. Ranganadhan for Resp. No. 1  
Mr. Shantanu Dixit for Prayas

**JUDGMENT**

**Per Hon'ble Mr. A.A. Khan, Technical Member**

The present Appeal is filed by the Appellant, Maharashtra State Electricity Distribution Company Ltd. (MSEDCL for short) challenging the order dated 28.11.2008 passed by the Maharashtra Electricity Regulatory Commission (MERC or the State Commission) in the matter regarding revision of Principles and Protocols of Load

Shedding hours in the State of Maharashtra. Prayas Energy Group (Prayas) is a consumer representative body. Prayas had participated in the public hearing conducted by the State Commission when the petition for revision was filed before the State Commission.

**Prayas was allowed to join the proceedings before this Tribunal as an intervener.**

2. Brief facts leading up to the present appeal are as under:

- (a) The State Commission passed Tariff Order on 20.06.2008 on the tariff petition filed by MSEDCL. The said Tariff Order, inter-alia, included principles and protocols of load shedding (referred to as the Protocol) to be observed by the Appellant. For the sake of better appreciation of the controversy, relevant extracts from the said Tariff Order are produced below:

*The Commission approves MSEDCL's proposal for modification to the load shedding protocol, with the following basic changes, viz.,*

*a) Introduction of two more Groups taking the number of Groups identified on the basis of distribution losses and collection efficiency, to six.*

*b) Merger of the Categorisation of 'Urban and Industrial Agglomerations' and 'Other Regions'*

*c) The revised groups and classifications, created on the basis of the distribution losses and collection efficiency are given below:*

<b>Group</b>	<b>Weighted average distribution loss and collection efficiency level ( DCL 70/30)</b>	
	<b>Other Region</b>	<b>Agriculture dominated</b>
<b>A</b>	0% to 18%	0% to 21%
<b>B</b>	>18% to 26%	>21% to 29%
<b>C</b>	>26% to 34%	>29% to 37%
<b>D</b>	>34% to 42%	>37% to 45%
<b>E</b>	>42% to 50%	>45% to 53%
<b>F</b>	Above 50%	Above 53%

The approved ceiling hours of load shedding for different divisions grouped under the above load shedding matrix, for a demand-supply gap of around 4500 MW, are given below:

	<b>Other Regions</b>	<b>Agriculture dominated regions</b>
<b>Group</b>	<i>hours</i>	<i>Hours</i>
<b>A</b>	2.75	10.00
<b>B</b>	3.50	10.50
<b>C</b>	4.25	11.00
<b>D</b>	5.00	11.50
<b>E</b>	5.75	12.00
<b>F</b>	6.50	12.00

The modification to the load shedding protocol is in public interest, as the remaining differentiation between urban and other regions has been eliminated, while at the same time, rewarding regions with lower distribution losses and higher collection efficiency, with reduced load shedding. **The above load shedding matrix only indicates the ceiling hours of load shedding, and the actual number of hours of load shedding will depend on the demand-supply balance, and the timing of load shedding in different regions has to be formulated by MSEDCL, keeping in mind the local requirements.** Moreover, due to the above changes, divisions that were hitherto performing well on the aspect of distribution loss and collection efficiency will have either the

*existing level of load shedding or benefit from reduced load shedding, despite the merger of Urban and Industrial Agglomerations with Other Regions. MSEDCL should strive to reduce the load shedding to different regions and categories, by procuring the required quantum of power at reasonable rates through long-term power purchase agreements.*

***(emphasis supplied)***

- (b) Subsequently, the appellant realized that it is not able to implement the Protocol and filed a petition with the State Commission for revision in the said Protocol.
- (c) The State Commission vide its Order dated 28.11.2008 (impugned order) rejected the prayers of the appellant. While rejecting the appellant's case, the State Commission in the impugned Order stated that:

*a) The demand-supply gap has exceeded 4500 MW for only 97 hours over the period from April 1, 2008 to September 15, 2008, which comprises only 2.4 % of the total hours during this period. Hence, the load shedding protocol approved by the Commission was sufficient to mitigate the demand-supply gap, with very few exceptions.*

*b) There are several instances (around 11% of the total hours during the period from April 1, 2008 to September 15, 2008) wherein MSEDCL has under-drawn from its share of CGS power, while at the same time undertaking load shedding in the State. MSEDCL should have drawn its full share under such circumstances, and reduced the load shedding being undertaken.*

*c) The justification of critical grid conditions requiring MSEDCL to undertake additional load shedding also has no merit, since there are only 21 instances, amounting to 0.5% of the total hours during the period*

*from April 1, 2008 to September 15, 2008, when the grid could be stated to be in critical condition, i.e., when the frequency was less than 49 Hz and demand-supply gap was more than 4500 MW.*

*d) There are around 447 instances where MSEDCL has undertaken EHV opening, even though the grid frequency was above 49 Hz.*

*e) Documentary evidence of instructions from SLDC has been submitted for only three occasions of EHV opening, even though MSEDCL has undertaken EHV opening on several occasions.*

*f) All the reasons given by MSEDCL, viz., lower generation from MSPGCL, restriction of gas and waster usage, steep periodic rise in demand, etc., relate to lower supply availability, and will have meaning only if the actual demand-supply gap has exceeded 4500 MW, causing MSEDCL to undertake additional load shedding'.*

(e) Aggrieved with the above Order, the appellant has filed this appeal.

3. The Appellant has sought the following relief through the instant Appeal:
- (a) To permit the appellant to continue the same load shedding protocol which it is implementing as on the date of filing this appeal with the liberty to adjust it as per the various options given by the State Commission in the impugned order subject to stabilization of system and other exigency which may come on account of dynamic nature of operations.
  - (b) Refer the matter to Central Electricity Authority for the purposes of suggesting scientific method for determining load relief at the cost of the appellant.

4. After going through the submissions of the parties, the following issues emerge for consideration of this Tribunal:

- (a) Whether MERC committed error in rejecting appellant's case pertaining to achieving 80% Load Relief?
- (b) Whether MERC is justified in holding MSEDCL responsible for EHV openings or under drawl from central sector generating stations?
- (c) Whether MERC has exceeded its jurisdiction in providing day-to-day dispensation pertaining to the issue of load shedding; and has interfered with the day-to-day working of the utility, in gross derogation of the law laid down by this Tribunal and the Supreme Court.

5. Now, we take up the above issues:

**A. Determination of load shedding requirement considering 80% Load Relief**

6. The appellant submitted that:

- (a) During July 2008 to September 2008 it realized in the backdrop of the fact that no power was being sold by the appellant to any other entity, other than the consumers in its licensed area, that distribution loss level to be achieved as directed by the State Commission were being achieved and that without any allegation of any preferential supply to any other category, the appellant was not able to adhere to the load shedding Protocol as contained in the Tariff Order of 20.06.2008 of the State Commission. On detailed analysis of the situation, the appellant realized that there is no standard and scientific manner for determination of load relief obtained by putting a particular feeder off. The

appellant has submitted that assessment of load relief is empirical in nature; likely to vary on account of consumption pattern of consumers. On the basis of monitoring of consumer behavior, the appellant realized that approximately 80% load relief is obtained and accordingly to obtain load relief of 4500 MW, load shedding to the tune of 5625 MW would have to be done. Therefore, when the load shedding plan is scheduled for 4500 MW, MSEDCL actually receives only 3600 MW (being 80% of 4500 MW).

- (b) That this figure of 80% is also not sacrosanct as consumption pattern greatly varies depending upon quantum of load shedding and the appellant feels that the entire concept of load shedding is being addressed by trial and error method and that there cannot be any mathematical formula for calculating load relief.
- (c) The State Commission has rejected its petition for revision in the Protocol without actually dealing with the issues and contentions raised by the appellant.
- (d) There is no defined method to calculate the average load because of its dynamic nature and the calculation is usually done by estimation and through some amount of load analysis.
- (e) The State Commission has carried out the analysis on the basis of the hourly data, however the power system is dynamic in nature and therefore the hourly analysis does not give correct picture in view of the dynamism of the system.
- (f) The load shedding plan submitted by MSEDCL was prepared considering the availability by all constituents including the central sector generating stations.

MSEDCL has a total share of 3047 MW in the central sector. However, the actual power received by MSEDCL depends upon the auxiliary consumption, transmission losses, outages, frequency in the grid and voltage profile for the entire grid, which is monitored on real time basis by the State Load Dispatch Centre (SLDC).

- (g) The actual demand supply gap for majority of the period was more than 4500 MW.
- (h) There is no scientific and accurate method for determination of load relief and in such circumstances, in the larger public interest, the appellant is open if the matter is referred to the Central Electricity Authority (CEA). The appellant has already requested the CEA to issue necessary guidelines in this respect.

7. Per contra, the State Commission has submitted the following:

- (a) Regarding the contention of the appellant that only 80% of the load relief is obtained, the State Commission has submitted that relevant data/information was not available to the State Commission at the time of deciding the matter. Further no basis and justification that only 80% load relief is obtained, has been submitted by MSEDCL;
- (b) The Protocol approved by the State Commission on 20.06.2008 envisaged a load relief of 4500 MW and MSEDCL is seeking to revise the said Protocol in spite of the fact that the demand supply gap has been around 4500 MW or less during the period; hence there is no justification in the revision sought by MSEDCL.



- (c) As regards hourly analysis, the State Commission has submitted that while it is true the system demand fluctuates every minute, the data is compiled by MSEDCL on an hourly basis.
8. Prayas submitted that applying factor of 80% would imply double counting as the same is taken into consideration while forecasting the demand supply gap.
9. We observe from the order of 20.06.2008 that the State Commission while approving the load shedding Protocol had stated that the load shedding matrix only indicates the ceiling hours of load shedding and the actual number of load shedding hours would depend upon the actual demand-supply gap. Basically, the load shedding Protocol approved by the State Commission is based upon the data for demand and supply projected by the appellant before the State Commission. If there is wide variation in the expected demand or supply in the given period, there is a need for appellant to improve upon its functioning so that variation between the actual and forecast demand is within a narrow band. Till such time, the appellant may find itself in situations when it will be making only adhoc attempts to manage its demand supply equilibrium. This situation leads to a situation where the end user is also disabled from planning their usage timing. In a situation it is true that the load management would become a trial and error exercise. The result of this would be that no consumer in the licensed area of the appellant would be able to plan for his consumption timing and would be left at the complete mercy of the appellant. It is true that load management approach is dynamic in nature taking into consideration the instantaneous demand and supply in the network of the appellant and

making load management strategies on the basis of hourly data may not serve the real purpose. But this dynamic feature becomes irrelevant when the demand forecast is wide off the mark. However, if there is sudden fall in supply of power in a scenario where there is continuous shortage of power, there is little the appellant can do to comply with the Protocol approved by the State Commission. For such exigencies the appellant may approach the State Commission giving reasons for non-compliance. However, there cannot be a blanket freedom to the appellant to operate its network without observing desired transparency in its operations. Hence, we are not inclined to grant any relief to the appellant in this regard.

**B. Responsibility of MSEDCL in EHV openings**

10 The appellant submitted that the decision of EHV opening is taken by SLDC. SLDC after taking decision gives directives to MSEDCL and therefore MSEDCL has no role in respect of EHV openings.

11. As regards holding MSEDCL responsible for EHV openings, the State Commission has submitted that it did not hold MSEDCL solely responsible for EHV openings as explained at para 87 of the Order. Para 87 of the Order is reproduced below:

*'87. Further, the Commission rules that the load shedding protocol approved by the Commission vide its Operative Order dated May 31, 2008 and detailed Tariff Order dated June 20, 2008, in Case 72 of 2007, will continue to be in force for a demand-supply gap of around 4500 MW, since MSEDCL has not been able to produce any evidence of the demand-supply gap being projected to reach levels of 6500 MW. Further, in view of*

*the concerns expressed by the stakeholders, MSEDCL is advised to undertake EHV and emergency EHV opening, only when directed by RLDC/SLDC and when the grid security is at risk. However, EHV Opening and UFR operations in the MSEDCL system at the time of underdrawal by MSEDCL may have to be taken up with the RLDC/SLDC’.*  
*(emphasis supplied)*

12. From the above, we observe that the State Commission made it clear that emergency EHV opening is to be undertaken only when directed by RLDC/SLDC and when the grid security is at danger. The State Commission also advised the appellant to get in touch with RLDC/SLDC in this regard. We feel that there is no indication of the State Commission holding MSEDCL solely responsible with regard to EHV opening and find no force in the arguments of the appellant that it was solely held responsible for EHV openings.

**C. Jurisdictional Issue**

13. It is the contention of the appellant that the State Commission has gone beyond its jurisdiction in providing details to the extent of day to day implementation of load shedding in the licensed area of MSEDCL.

14. Per contra, the State Commission has submitted that it is empowered to direct MSEDCL to follow the protocol citing the provisions of Section 23 of the Electricity Act (the Act), which is reproduced below:

*“Directions to licensees.*

*23. 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.”*

15. As regards the grievance relating to day-to-day monitoring, the State Commission has submitted that it has only issued the protocol and that the actual load shedding implementation depends on the internal circulars issued by MSEDCL. The State Commission has submitted that this aspect has been clarified in its order of 28.11.08 at para 79.

*“79. As regards adherence to the load shedding protocol approved by the Commission, MSEDCL has been using the terms Load Shedding Protocol, when it actually means Load Shedding Schedule. It needs to be clarified that the Commission only approves the load shedding protocol, wherein the ceiling hours of load shedding for specific Regions and Groups is stipulated, for a particular level of demand-supply gap. Based on this approved protocol, as per current procedure followed by MSEDCL, it issues corresponding Load Shedding Circulars to its field offices. The field offices in turn, prepare the Load Shedding Schedule, which specifies the exact hours of load shedding in the local hours, the duration, etc., and which needs to be publicized adequately through local media and through Divisional offices of MSEDCL. It is upto MSEDCL to implement the Commission’s Order through its administrative machinery. The above analysis clearly reveals that MSEDCL itself has not complied with the load shedding protocol approved by the Commission, since its Load Shedding Circulars have not been in accordance with the matrix specified by the Commission and the hours of load shedding have also been higher than that permitted by the Commission (even though MSEDCL’s Circulars incorrectly claim to be in accordance with the load shedding protocol approved by the Commission). Further, deviations have occurred because the field officers have not adhered to the stipulated Load*

*Shedding Schedule, for which MSEDCL claims to have taken disciplinary action. Hence, these two levels of non-compliance have to be seen distinctly and should not be used interchangeably.”*

16. Prayas has justified the protocol issued by the State Commission and has submitted that through the present appeal, MSEDCL is attempting to avoid transparency and accountability regarding load shedding and is in fact questioning the right of the State Commission and the consumers to undertake any kind of scrutiny of the load shedding by MSEDCL.

17. We observe that the State Commission had given broad guidelines for the appellant to operate, which cannot be called interferences in its day-to-day affairs. Further, section 23 of the Act quoted gives adequate powers to the State Commission to pass necessary orders for securing equitable distribution of electricity. Further, we need to keep in mind various provisions of the Act, which try to make a balance between the interests of various stakeholders. Protection of interests of the consumers has been given prominence in the overall scheme of the Act. The preamble of the Act, reproduced below, contains specific reference to protection of consumer interest and measures conducive to development of the electricity industry:

*“An Act to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally **for taking measures conducive to development of electricity industry**, promoting competition therein, **protecting interest of consumers and supply of electricity to all areas**, rationalisation of electricity tariff, ensuring transparent policies regarding subsidies, **promotion of efficient** and environmentally benign **policies**, constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto.”*

18. Further, section 79 (1) (i) reproduced below, specifically requires the State Commission to specify and enforce standards with respect to quality, continuity and reliability of service by the licensees.

79. (1) The *Central Commission shall discharge the following functions,*

*namely:-*

*(a)..*

...

*(i) to specify and enforce the standards with respect to quality, continuity and reliability of service by licensees.*

19. Directions by the State Commission to adhere to the load shedding protocol can also be treated as in the nature of standard with respect to continuity and reliability of service by the appellant.

20. In view of the above, we do not find any substance of the argument of the appellant that the State Commission has exceeded its jurisdiction by issue load shedding Protocol.

21. Accordingly, the appeal is dismissed.

22. While we have dismissed the appeal, we feel that the State Commission may adopt a more participative approach. Regulatory proceedings are designed to operate more on participative basis and less on adversarial system. To have in place a proper reliable and workable load shedding programme, it is essential that adequate data, which can be relied upon is available. As the appellant suggested that one hourly data may not be of much help while working out a load shedding programme, data may be

prepared of shorter time cycle, may be for a 15 minute cycle. The State Commission may also identify its data-related needs which it would be requiring to analyse for future load shedding programme. This data can be further used for deliberation amongst various stakeholders. We, therefore, advise the State Commission to set up a Committee with representatives from the Commission, MSEDCL, State Load Despatch Centre and consumer representative etc. to go over the load shedding programme with intent to make it implementable in all scenario of shortage of power and submit a report to the Commission. The Commission can then decide to revise the protocol for load shedding appropriately. We feel that a load shedding programme which will emerge through the process will have much higher acceptability for enforcement.

**( A.A. Khan )**  
**Technical Member**

**(Justice M. Karpaga Vinayagam)**  
**Chairperson**

**Dated: 31<sup>st</sup> July, 2009.**

**Reportable/Non-reportable.**