

**Before the  
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION  
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**CASE No. 15 of 2017**

**Dated: 20 June, 2017**

**CORAM: Shri Azeez M. Khan, Member  
Shri Deepak Lad, Member**

**Petition of MSEDCL seeking directions for optimization of power generation in the  
State of Maharashtra by reducing the technical minimum limit of Generating Units as  
per CERC norms**

Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) : Petitioner

Maharashtra State Load Despatch Centre (MSLDC) : Respondent No.1

Maharashtra State Power Generation Co. Ltd. (MSPGCL) : Respondent No. 2

JSW Energy Ltd. : Impleaded Respondent No. 3

RattanIndia Power Ltd. (RPL) : Impleaded Respondent No. 4

Adani Power Maharashtra Ltd. (APML) : Impleaded Respondent No. 5

Representative of the Petitioner : Shri Paresh Bhagwat (Rep.)

Representatives of the Respondent No. 1 : Shri D.K. Rokade (Rep.)

Representatives of the Respondent No. 2 : Shri V.P. Rathod (Rep.)

Representatives of the Respondent No. 3 : Shri Prafull Katiyar (Rep.)

Representative of the Respondent No. 4 : Shri Nilesh Thakur (Rep.)

Representative of the Respondent No. 5 : Shri Jignesh Langalia (Rep.)

Authorized Consumer Representative: : Dr. Ashok Pendse, TBIA

**Daily Order**

Heard the representatives of the Petitioner, Respondents and Authorized Consumer Representative.

1. Representative of the Petitioner stated that the Petition has been filed under Sections 33(1), 33(4) and 86 of the Electricity Act, 2003 (EA, 2003) seeking direction to set the technical minimum limit at a uniform level of 55% in line with the recent amendment in Indian Electricity Grid Code for all Generating Units coming under the Commission's jurisdiction and having PPA with MSEDCL. MSEDCL highlighted the background of the Petition and stated that:
  - i. As per the CERC (Indian Electricity Grid Code) (Fourth Amendment) Regulations 2016, notified on 6 April, 2016, the technical minimum for Generating Units of Central Generating Stations and Inter-State Generating Stations has been fixed as 55% of Maximum Continuous Rating (MCR) loading or installed capacity of the unit, irrespective of age and design of the Generating Units.
  - ii. All the Inter-State Generating Stations, including NTPC Stations, are following this revised technical minimum since April, 2016.
  - iii. Technical minimum of 55% is based on the Control Load (i.e. 50% of MCR) as specified in CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010, and that has been retained in its subsequent amendments.
  - iv. The reduction in technical minimum upto 55% for Thermal Generating Units in Maharashtra will reduce MSEDCL's power purchase expenses. It will also provide additional flexibility of 1703 MW in real time operations, which in turn will help in accommodating generation from renewable energy sources and maintaining grid stability.
  - v. As per PPAs executed under Section 63 of EA, 2003, the IPPs such as JSW Energy Ltd., APMIL and RPL need to follow the amendment in IEGC.
2. In response, MSPGCL made a presentation and stated that:
  - i. The term "technical minimum" is neither defined in the EA, 2003 nor in any Regulations of CERC or MERC.
  - ii. The approach adopted by the CERC of specifying 55% as technical minimum on the basis of CEA recommendations is more idealistic than practical.
  - iii. Vide Order dated 2 August, 2012 in Case No. 109 of 2011, the Commission had appointed Central Power Research Institute (CPRI) for ascertaining the technical minimum of Generating Units in Maharashtra.
  - iv. Out of the 31 currently operating Thermal Units of MSPGCL, the technical minimum for 18 Units is actually tested by CPRI.
  - v. MSEDCL's prayer for ad-hoc fixation of technical minimum lower than that scientifically measured should not be accepted as such an ad-hoc fixation will have obvious adverse impact on Plant performance and Unit stability.

- vi. MSEDCL has stated that the dynamics of the power sector has changed and thus the earlier set norms by the Commission regarding technical minimum should be changed. There is no merit in MSEDCL's submission as the technology and critical equipments for the MSPGCL Units, which were in service during the CPRI study are still the same, and thus the practical difficulties envisaged at that time are still prevailing.
  - vii. The low load operation has its obvious impact on plant performance parameters such as Heat Rate, % Auxiliary Consumption and Secondary Fuel Oil Consumption, which increases the fuel cost of the Plant. Also, coal quality and coal mill combination available at the time of such low load operation is also critically important in deciding the Unit's stability and impact on Plant performance parameters.
  - viii. Nothing has been mentioned by MSEDCL about the compensation to be provided to the Generating Stations towards deterioration of performance parameters, especially of the Generating Stations supplying power under Section 62 of EA, 2003.
  - ix. MSEDCL has estimated saving in power purchase expenses for December, 2016, amounting to Rs.14.68 Cr. due to reduction in technical minimum to 55%. However, the compensation on account of adverse impact on performance parameters, due to backing down up to 55 %, may be approximately Rs. 17.31 Cr. and the additional cost to be borne by the consumers would be Rs. 2.63 Cr.
  - x. Therefore, the Petition filed by MSEDCL needs to be rejected. However, if the Commission is of the opinion that, considering the renewable energy integration problems, the Thermal Generators need to run at lower load and hence allows SLDC to back down Thermal Units below the "technical minimum" loading, adequate compensation must be provided to the Generators in line with the IEGC Fourth Amendment.
3. JSW Energy stated that :
- i. As per CPRI test results, the technical minimum of JSW Unit No. 1 is 66%.
  - ii. Each Generating Unit, depending on various factors, would have a different technical minimum limit and MSEDCL's suggestion of 55% technical minimum for all Generating Units would be arbitrary.
  - iii. However, if the Commission is inclined to revise the technical minimum, suitable provision to compensate the Generating Companies for the efficiency and operational loss on account of such revision has to be in place.
  - iv. Responses of MSPGCL and APML have not been received by JSW Energy Ltd.

To a query of the Commission, JSW Energy Ltd. expressed its inability to confirm safe operation of its Unit at 55% technical minimum and stated that performance parameters may not be maintained.

4. Representative of RPL stated that the hearing Notice was issued to RattanIndia Nashik Power Ltd. (RNPL). Since no PPA exists between RNPL and MSEDCL, no Reply has been filed. To a query of the Commission, it was stated that RPL will submit its Reply shortly. The Commission directed RPL to make the submission within one week with copy served on all parties.
5. APML suggested that an Approach Paper may be published covering all the issues involved and seeking comments from stake-holders. Thereafter, new Regulations may be framed. The Commission observed that the CERC Regulations are already in place and, while applying these Regulations, machine specific technical issues may require consideration.
6. MSLDC stated that:
  - i. Generating Companies such as Tata Power Company, Reliance Infrastructure Ltd. and Vidarbha Industries Power Ltd. along with other Generating Companies in the State, should also be impleaded as Parties.
  - ii. Flexibility in grid operations would be improved if technical minimum is set at 55%.
  - iii. MSLDC has no objection to the revision in technical minimum as proposed by MSEDCL, and that it would follow the directions of the Commission.
7. The Commission asked whether MSLDC has ever directed MSPGCL to operate its Generating Units below the CPRI certified technical minimum limit. MSLDC replied that no such direction was given and further stated that, in extreme surplus situations, MSLDC adopts zero scheduling or reserve shutdown to maintain grid stability.
8. Dr. Ashok Pendse on behalf of Thane Belapur Industries Association (TBIA), an Authorized Consumer Representative, stated that:-
  - i. Revision in technical minimum is necessary to address the issues of renewable energy integration and maintain the grid stability.
  - ii. In some countries like Germany and Norway, the technical minimum limit for Thermal Generating Units is as low as 25 to 30%.
  - iii. The technical minimum limit for MSPGCL's new Generating Units and also for other IPPs needs to be ascertained, if not done so far.
9. In response, MSEDCL stated that:
  - i. Vide Order dated 5 May, 2017, technical minimum has been duly defined by the CERC with specific norms.
  - ii. From MSPGCL's presentation made during the hearing, it appears that operation of MSPGCL's Units at technical minimum of 55% is possible.
  - iii. NTPC is following the norms of 55% technical minimum for its Generating Units since April, 2016.

10. The Commission observed that changes adopted, if any, by NTPC to achieve the above norms in respect of operating parameters, Unit/system modifications or other procedural changes may require to be examined, and MSEDCL may discuss and obtain the above details from NTPC.
11. MSEDCL stated that MSPGCL's new units need to follow the CEA Regulations, 2010. The Commission observed that reduction in technical minimum may result in economic benefits. However, technical minimum being an operational parameter for Generating Units, it may require technical consideration also. The Commission also observed that, if grid stability is the prime consideration for filing the present Petition, then ideally MSLDC should have approached the Commission and not MSEDCL.
12. To a query of the Commission about compensating the Generating Companies towards deterioration of performance parameters, MSEDCL did not respond. The Commission observed that there are other options such as zero scheduling or reserve shutdown available for optimization of power purchase expenses. The Commission also observed that demand forecasting by MSEDCL, if improved, may mitigate the issue to a greater extent.
13. The Commission directed that Tata Power Company- Generation Business, Reliance Infrastructure Ltd.- Generation Business, Vidarbha Industries Power Ltd.- Generation Business , Sai Wardha Power Ltd., EMCO, Ideal Energy Projects Ltd., Abhijeet MADC Nagpur Energy Pvt. Ltd., BEST, Tata Power Company- Distribution Business and Reliance Infrastructure Ltd.- Distribution Business be impleaded as Parties in the matter and MSEDCL shall serve copies of the Petition to them for their response within one week. The impleaded parties shall submit their replies within two weeks with copies to all the Parties.

**The next date of hearing will be communicated by the Secretariat of the Commission.**

**Sd/-  
(Deepak Lad)  
Member**

**Sd/-  
(Azeez M. Khan)  
Member**