

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 179/MP/2017**

**Coram:**

**Shri A.K. Singhal, Member**

**Shri A.S. Bakshi, Member**

**Dr. M.K. Iyer, Member**

**Date of Order: 16<sup>th</sup> February, 2018**

**In the matter of**

Petition under section 62 and 79 (1) (a) of the Electricity Act, 2003 read with Chapter-V of the CERC (Conduct of Business) Regulations, 1999 for relaxation of norms of Vindhyachal Super Thermal Power Station, Stage-II (1000 MW) for the period from 1.4.2014 to 31.3.2019

**And**

**In the matter of**

NTPC Ltd  
NTPC Bhawan  
Core-7, SCOPE Complex  
7, Institutional area, Lodhi Road  
New Delhi- 110003

**.....Petitioner**

**Vs**

1. Madhya Pradesh Power Management Company Ltd  
Shakti Bhavan, Vidyut Nagar,  
Jabalpur- 482008

2. Maharashtra State Electricity Distribution Company Ltd  
'Prakashgad', Bandra (East)  
Mumbai-400051

3. Gujarat UrjaVikas Nigam Limited  
Vidyut Bhavan, Race Course,  
Vadodara- 390007

4. Chhatisgarh State Power Distribution Company Ltd  
Dhagania, Raipur- 492013

5. Electricity Department  
Govt. of Goa, 3rd Floor, Vidyut Bhavan,  
Panaji, Goa

6. Electricity Department  
Administration of Daman & Diu  
Daman- 396210



**Parties present:**

Shri Ajay Dua, NTPC  
Shri Manish Jain Jain, NTPC  
Shri Parimal Piyush  
Shri Anurag Naik, MPPMCL

**ORDER**

This Petition has been filed by the Petitioner, NTPC has prayed for the following relief:

“In view of facts and circumstances submitted above, the Hon'ble Commission be pleased to relax the operating norms for AEC/APC ( % ) from 5.75% to 6.25% for control period of 2014-19 for the instant station based on actual AEC/APC achieved by invoking Hon'ble Commission's powers under Regulation 54 'Power to Relax.' And Regulation 55 'Power to Remove Difficulty”.

2. In support of the above prayer, the Petitioner in this Petition has submitted as under:

(i) The Petitioner is a Govt. company within the meaning of Companies Act, 1956 and is a 'generating company' as defined under section 2(28) of the Electricity Act, 2003 (the 2003 Act). Vindhyachal Super Thermal Power Station, Stage-II (referred to as "the generating station') comprises of two units of 500 MW each, is owned by the Petitioner and located in the State of Madhya Pradesh. Power from the generating station is supplied to the Respondents.

(ii) This Commission has the jurisdiction to regulate the tariff of generating companies owned or controlled by the Central Govt. under Section 62 of the Electricity Act, 2003. Accordingly, the Commission has notified the CERC (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as 'the 2014 Tariff Regulations') providing for the terms and conditions for determination of tariff, applicable from 1.4.2014.

(iii) The tariff of the generating station for the period from 1.4.2014 to 31.3.2019 was determined by the Commission by order dated 6.2.2017 in Petition No. 327/GT/2014 in accordance with the 2014 Tariff Regulations.

(iv) In the 2014 Tariff Regulations notified by the Commission, the Commission has revised the Operation & Financial norms of Thermal Power Stations. In respect of this generating station of the Petitioner, the norms for Auxiliary Power



Consumption (APC) were tightened from 6.5 % to 5.75% (applicable norms for 500 MW units having Induced draft cooling towers).

(v) At the time of framing of the 2014 Tariff Regulations, the CEA in its 'Recommendations on Operational norms for Thermal Power Stations for tariff period 2014-19' had recommended that the existing APC norms for coal fired units are considered adequate and may continue. However, APC for 500 MW and higher size units installed after 1.4.2009, may be reduced by 0.75% (three fourth percentage points). Thus, the normative AEC/ APC for 500 MW and higher size units installed after 1.4.2009 may be taken as 5.25% with Turbine driven BFPs and 7.75% for Moto driven BFPs. Additional APC of 0.5% may be allowed for the units with induced draught cooling towers for condenser water cooling. However, the APC norms for the existing unit got revised in the 2014 Tariff Regulations. The Petitioner is facing difficulty in achieving APC in the generating station with respect to the norm specified in Regulation 36 (c) of the 2014 Tariff Regulations.

(vi) Each 500 MW unit of the generating station consists of 4 no. of pressurized double ended Ball & Tube Mills (BBD 4772 SI) supplied by M/s. BHEL. The design details of the Ball & Tube Mill is as under:

Type	Ball & Tube Mill BBD 4772 SI
Nos. per Unit	04
Speed (RPM)	16
Mill Outlet temperature	70-80 degree C
Weight of Ball Charge	118.5 Tonne
Maximum Coal Output	89.15 T / Hr.
Motor Supplier	BHEL
Voltage	11 KV
Power	2570 KW
Current	Full Load - 158 A/No load -55

The power consumption is around three times higher than the normal BHEL bowl mills.

(vii) For the operation of the 500 MW units of the generating station, 4 Ball & Tube mills (the average power consumption for each mill is around 1770 KW (1770 X 4 =7080 KW) are kept in service for achieving full load, under normal circumstances. Even with part load operation minimum 3 mills (1770X3 =5310 KW) are required to be kept in operation (irrespective of load) alongwith the mill auxiliary systems like lubrication unit, seal air fan etc.

(viii) The average power consumption for each tube mill is significant and mostly dependent on the ball loading. Whereas, the units with BHEL bowl mills, the average power consumption for each bowl mills is around 480 KW. Ball and tube mills are not designed to operate in idle conditions, as the working principle of grinding of these mills is Attrition and Hammering. The grinding inside the tube



mill starts after charging it with the balls in the presence of coal and Primary air flow through the mill and therefore running the mill in the absence of the coal and primary air shall be undesirable. On the other hand, Bowl mill can be run in idle conditions without coal elevation in service, as there is always a gap maintained between the bowl and its rollers, and the rollers rotate in opposite direction to the rotation of bowl, when coal feeding is started alongwith primary air and the gap is filled with coal. The Bowl mill is designed for single elevation coal mill burner in operation, whereas Tube mills normally cater two elevations. At full load operation, normally 6 bowl mills are kept in service, and the corresponding power requirement would be around 2880 KW (480x6) which is around 40% of power required for Ball & Tube mill at same capacity plant. At part load 5 mills operation are carried out without oil support and at partial loading of mill, milling power is depending upon tons of coal it feeds.

(ix) For the operation of 500 MW unit @ 85% PLF, running of 6 bowl mills and 4 tube mills have been considered for the purpose of comparison. The APC for Ball & Tube Mills of 500 MW units of the generating station vis-a-vis Bowl Mills of same capacity units is as under:

Type of Mill	Mill Average consumption (KW)	No. of mills for full load Operation (No.)	Power consumption (KW)	Energy consumption (MU / annum)	Contribution towards APC (%)
Ball & Tube Mills (BBD 4772)	1770	4	7080	52.72	1.42
Bowl Mills (XRP 1003)	480	6	2880	21.44	0.57

(x) In normal circumstances, for the operation of 500 MW unit at around the Technical Minimum load of 55% needs 3 tube mills in service, whereas the corresponding units with bowl mills keep 5 mills in service.

Type of Mill	Mill Average consumption (KW)	No. of mills at Technical Min. (55%) Operation	Power consumption (KW)	Energy consumption (MU / annum)	Contribution towards AEC/APC (%)
Ball & Tube Mills (BBD 4772)	1770	3	5310	46.52	1.93
Bowl Mills (XRP 1003)	480	5	2400	21.02	0.87

(xi) Thus, the contribution towards percentage AEC of the unit is significantly high on account of tube mills in comparison to the bowl mills.

(xii) In view of the above comparisons, it may be seen that Ball & Tube Mills contributes around 1.5% towards APC, whereas Bowl Mills consumes approx. 0.6 % of the total APC during full load operation.



(xiii) The generating station is not able to meet the norms of APC and is incurring financial loss on account of under recovery in AEC/APC. The details of actual APC achieved year-wise during the period 2014-15, 2015-16 & 2016-17 along with loss incurred is provided as under:

Parameter	2014-15	2015-16	2016-17
Scheduled PLF%	79.10	75.46	73.80
Scheduled Generation MU	6433.98	6170.42	6464.8
Loading Factor %	88.30	85.59	85.80
Normative ACE%	5.75	5.75	5.75
Actual ACE%	5.95	5.98	6.33
Under recovery in ACE in %	0.20	0.23	0.58

(xiv) The contribution of Ball & Tube mills towards Auxiliary Energy Consumption of the units is comparatively more than the Bowl mills for same capacity of Units.

(xv) In view of compliance to the revised environment norms, ESP at the instant station has been modified and on account of same, further increase in actual APC is envisaged.

(xvi) During the framing of norms for APC in the 2014 Tariff Regulations the higher APC in Tube mills has not been considered.

3. In the above circumstances, the Petitioner has prayed for relaxation of Regulation 36 (E) of the 2014 Tariff Regulations with respect to the APC norms for the generating station from 5.75% to 6.25% in exercise of the powers under Regulation 54 (Power to Relax) and Regulation 55 (Power to Remove Difficulty) of the 2014 Tariff Regulations.

4. The matter was heard on 11.1.2018 on 'admission'. During the hearing, the learned counsel of the Petitioner reiterated the submissions made in the Petition and prayed that the relief sought for may be granted. The Respondent No. 1 (MPPMCL) has filed its reply vide affidavit dated 8.1.2018. The Commission, after hearing the parties reserved its orders on the issue of 'maintainability'.

#### **Reply of MPPMCL**

5. The Respondent, MPPMCL in its reply affidavit has submitted as under:

(i) The Commission has notified the CERC (Terms and Conditions of Tariff) Regulations, 2014 in exercise of powers conferred upon it under section 178 of



the Electricity Act, 2003 read with Section 61 thereof and all other powers enabling it in this behalf and after previous publication. The Commission has observed all the procedures laid down in concerned Regulations and published Approach Paper and then floated draft Tariff Regulations for inviting comments/suggestions of all the stakeholder and Central Electricity Authority and after considering the submission of the various stakeholder the Tariff Regulations, 2014 has been notified. The Petitioner has also filed its comments/observations on the tariff approach paper as well as draft Tariff Regulation on Terms and Conditions of Tariff for the period 2014-19 and even made detailed presentation/submissions during the course of public hearing. However, on none of the occasions, the petitioner had raised the issue of higher consumption of power by BHEL make Ball and Tube Mills.

- (ii) The petitioner is fully aware of the power consumption of its ball and tube mills but this issue was never raised by the petitioner at any appropriate stage and now as an afterthought the petitioner is litigating this issue after completion of more than three and half years of the five year tariff control period when the all the process is well settled. This is an attempt to reopen the settled issues. It is humbly, submitted that Regulations cannot be amended by way of a miscellaneous petition. Seeking review of Tariff Regulations for its amendment through a miscellaneous petition is highly arbitrary, misconceived, and without any legal basis and as such the petition is not maintainable. It is, therefore, humbly prayed that the petition may be summarily rejected being without any legal basis.
- (iii) It is submitted that this issue was never raised by the petitioner at appropriate stage and when all the regulatory formalities like tariff determination, billing etc. is well settled, the petitioner is raising this issue, which is an afterthought and therefore, the petitioner may not be allowed to reopen all the settled issues at this stage of tariff control period.
- (iv) It is submitted that in its report on operation norms for 2009-14, CEA had recommended for reduction in AEC by 1 % based on the actual performance of the generating units. However, no changes were made in the allowable AEC as such; and thus the prevailing norms for AEC have been continuing for the last 20 years as indicated in para 8.1 of the CEA report on operational norms for thermal generating stations for the period 2014-19. Thus, there is no improvement in performance in so far it relates to the AEC, whereas, the Electricity Act, 2003 and Tariff Policy provides for improvement in performance in gradual manner and there appears no logic & justification in backtracking on this issue.
- (v) The APC of the generating station is continuously on an increasing trend and there appears no relationship between PLF and AEC for this generating station as AUX is 5.9% at a PLF of 88% and also at a PLF of 94%. The average APC of



the generating station for the period 2009-14 comes out to 5.8% which is inclusive of consumption of housing colony and other facilities at generating station and the power consumed for construction works of the generating station.

- (vi) The petitioner has claimed that Ball and Tube Mills consumes more energy than Bowl Mills and contribute about 1.42% towards AEC @ PLF of 85%. Considering a share of 1.5% towards Ball and Tube Mills there still remains about 4.25% of normative AEC for operation of other plants activity, which has to be managed within this limit. As submitted in above paras, the petitioner was able to maintain AEC of 5.7% inclusive of housing colony consumption and other construction power consumption etc. during tariff control period 2009-14. It is therefore, humbly prayed that no relaxation may be allowed to the petitioner in the interest of justice and to avoid undue Financial burden on beneficiaries.
- (vii) The petitioner has sought relaxation in operating norms under Regulation 54 (Power to Relax) read with Regulation 55 (Removal of Difficulty) of the 2014 Tariff Regulations. In this regard it is humbly submitted that 'Power to Relax' and 'Power to remove Difficulty' Regulations has to be utilized by the Commission in the condition where no other alternative is available in implementing and giving effect to the provisions of these Regulations. It is humbly submitted that power to remove difficulties is basically an administrative power and it is not a legislative power. This power is exercisable only to ensure that Act is implemented and it is in furtherance of the Act that the power to remove difficulty/power to relax is conferred. It is only to give effect to the provisions of the Regulations that this power is exercised. The power to remove difficulty/power to relax does not contemplate removable of hardship that may arise as a result of giving effect to the Regulations. It is humbly submitted that, what is being prayed before the Commission through this petition, is not to rely on power to remove difficulty & power to relax, but what is being prayed is the amendment of Tariff Regulations, 2014 and therefore the plea of the petitioner Sans Merit and is not maintainable.

Accordingly, the Respondent, MPPMCL has submitted that the relief sought for by the Petitioner may be rejected.

6. We have considered the submissions of the parties and perused the documents on record. The Petitioner has prayed that the APC norms in respect of the generating station may be revised from 5.75% to 6.25% for the period 2014-19 in relaxation of Regulation 36(E) of the 2014 Tariff Regulations (not Regulation 36 (c) as stated in





Petition). In justification of this prayer, the Petitioner has submitted that the higher APC for this generating station is on account of the fact that the station is provided with Bowl Tube mills (BBD 4772 SI) supplied by M/s. BHEL and the consumption is higher than the normal Bowl mills. In addition to this the Petitioner has submitted that due to modification of ESP of the generating station for compliance with the revised environment norms, increase in actual APC is envisaged. Thus, the issue for consideration is whether the prayer of the Petitioner in this Petition is maintainable

### Maintainability

7. Regulation 36 (E) of the 2014 Tariff Regulations provides as under:

(a) Coal-based generating stations except at (b) below:	
	With Natural Draft cooling tower or without cooling tower
(i) 200 MW series -	8.5%
(ii) 300/330/350/500 MW and above	5.25%
Steam driven boiler feed pumps	
Electrically driven boiler feed pumps	7.75%
Provided further that for thermal generating stations with induced draft cooling towers, the norms shall be further increased by 0.5%:	

8. Regulation 54 of the 2014 Tariff Regulations provides as under:

*“54. Power to Relax. The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.”*

9. Regulation 55 of the 2014 Tariff Regulations provides as under:

*“55. Power to Remove Difficulty. If any difficulty arises in giving effect to the provisions of these regulations, the Commission may, by order, make such provision not inconsistent with the provisions of the Act or provisions of other regulations specified by the Commission, as may appear to be necessary for removing the difficulty in giving effect to the objectives of these regulations.”*

10. The power of relaxation under the Tariff Regulations is in general terms and its exercise is discretionary. It is settled law that exercise of discretion must not be arbitrary, must be exercised reasonably and with circumspection, consistent with justice, equity and good conscience, always in keeping with the given facts and circumstances of a case.





11. The Commission vide order dated 7.6.2013 had initiated the process of framing the terms and conditions for determination of tariff, including the norms of operation applicable for the period from 1.4.2014 to 31.3.2019. Accordingly, it had directed various Central and State generating utilities to furnish the operational and performance data for the period from 2008-09 to 2012-13. The CEA was also requested to recommend suitable operational norms for the thermal generating stations. Thus, the Commission, after considering the said data and recommendations of the CEA, including the comments/responses of generating companies like the Petitioner, had notified the 2014 Tariff Regulations applicable for the said period. As regards APC, the submissions of the Petitioner (as per Para 37.72 of the SOR) were as under:

“37.72 NTPC submitted as under:

- a. Performance of Units cannot be sustained in the coming years as Unit loading is expected to be low in view of the inadequate fuel availability, lower demand/schedule by customers, ageing of units, renovation & modernisation, etc.
- b. Hence, the existing AEC norms should be continued with provision of additional AEC on account of new technologies like FGD, desalination plant, pipe conveyors, ash disposal system, etc.
- c. As gas stations are facing heavy partial loading due to low schedule, the existing AEC norms of gas stations need to be revisited with additional consideration for partial loading below 80% for all gas stations.
- d. Beneficiaries should share the energy bill paid by NTPC stations for drawing energy from grid during plant shutdown due to lower schedule in the proportion of their allocation.”

12. The Commission after considering the submissions of other stakeholders including the above submissions of the Petitioner had concluded (vide Para 37.83 & 37.84 of the SOR) as under:

“37.82 Most of the generating stations have suggested allowing the current norms as per tariff Regulation 2009 along with additional margin for various equipment's to be installed. The Commission while specifying the auxiliary energy consumption norms for 200/210/250 MW and 500 MW stations had retained the current norms. However, CEA in its report has recommended to reduce the auxiliary energy consumption for new 500 MW Units by 0.75% stating that though there is a scope of reducing the norm by 1%, however, with a view to allow some operational flexibility to the stations, 0.75% has been recommended by CEA. In view of the same, the Commission has reviewed the auxiliary energy consumption norm for existing as well as new 500 MW Units and has



reduced the current norm by 0.75%. As regards the norms for 200/210/250 MW Units, the Commission has retained the norms proposed in the draft Regulations.

37.83 In regard to increase in auxiliary consumption due to partial loading, the auxiliary consumption norms are in due consideration of historical power consumption furnished for various generating stations for the past five year period 2008-09 to 2012-13. This actual power consumption is an average consumption taking into account the partial loading of the generating stations. Thus, the additional consideration of power consumptions due to partial loading is not required. If the loading is decreased considerably, the generators opt to shutdown entire unit thereby on saving the auxiliary consumption. The argument of NTPC is that stations were operating at a low plant load factor for the last 2 years namely 2012-13 and 2013-14 implying that auxiliary consumption norms should have been specified based on last two years data. However, it is not desirable to specify norms based on two year performance. The approach of the Commission has been to specify norms based on past 5 years average consistently followed during previous tariff periods. This methodology ensures that generator if loses in one year then it should be possible for him to recover in other years”

13. It is therefore evident that the Commission after considering the comments / suggestions of the stakeholders, including the Petitioner, had specified the Terms and Conditions for determination of tariff, including the operational norms, applicable for the period from 1.4.2014. In our considered view, the operational norms (Regulation 36(E) specified by the Commission under the 2014 Tariff Regulations) cannot be categorized as unreasonable so as to justify resort to exercise of the power of relaxation. Moreover, the power of relaxation cannot be exercised in a manner so as to nullify the said provision of the Tariff Regulations and render them otiose or completely redundant. Accordingly, we find no merit in the prayer of the Petitioner for relaxation of the APC norms and the same is beyond the scope of Regulation 54 of the 2014 Tariff Regulations. The Petitioner is therefore not maintainable.

14. The Petitioner has prayed for relaxation of the APC norms under Regulation 36 (E) of the 2014 Tariff Regulations on account of usage of Ball & Tube Mills (BBD 4772 SI) in the generating station. This submission of the Petitioner is not maintainable. It is noticed that in Petition No. 327/GT/2014 filed by the Petitioner for determination of the tariff of the generating station for the period 2014-19, the Petitioner had claimed APC of 5.75 for the period 2014-19 in terms of the 2014 tariff Regulations.



Though the Petitioner had prayed for relaxation of operating norms with regard to the Plant Load Factor (PLF), no prayer was made by the Petitioner in the said petition seeking relaxation or for Removal of Difficulty of the APC norms specified under the 2014 Tariff Regulations. Accordingly, the Commission in order dated 6.2.2017 had considered the APC of 5.75% while determining the tariff of the generating station. In this background there is no justification for the petitioner to seek APC norms from 5.75% to 6.25% in this petition on the ground of usage of Ball and Tube mills in the generating station. In our view the application though termed as an application for relaxation, is an application for review of order dated 6.2.2017 in disguise. The Petitioner cannot be permitted to unsettle the settled issue. In this background, the relief sought by the Petitioner for relaxation of APC of the generating station is not maintainable.

15. The Petitioner has further submitted that due to modification of ESP at the generating station for compliance with revised environmental norms, the increase in APC of the generating station is envisaged. This submission of the Petitioner is not maintainable. The Petitioner has not submitted any details or documents regarding revised environment norms warranting the modification of ESP in the generating station. Moreover, the modification of ESP by the Petitioner during the period 2014-19 cannot be a ground for relaxation of APC norms specified under Regulation 36 (E) of the 2014 Tariff Regulations. As stated the Commission while specifying the operational norms under the 2014 Tariff Regulations had taken into consideration the operational and performance data furnished by the generating utilities for the period from 2008-09 to 2012-13, i.e prior to the period 2014-19. Hence, the modification of ESP during the period 2014-19 cannot be factor for relaxation of the APC norms for the generating station. In case the Petitioner felt aggrieved with the said norm, it was at liberty to challenge the same before the appropriate forum. Having not done



so, the Petitioner cannot, under the guise of seeking relaxation, render the said regulation redundant. In our view, the submissions of the Petitioner do not justify the need to exercise the said power. Accordingly, the prayer of the Petitioner for relaxation of APC norms under Regulation 36 (E) of the 2014 Tariff Regulations is rejected. The Petition is therefore not maintainable.

16. The Petitioner has also submitted that it is facing difficulty in achieving APC norm in terms Regulation 36(E) of the 2014 Tariff Regulations in respect of this generating station. Accordingly, it has prayed that the Commission may exercise the Power to remove difficulty under Regulation 55 of the 2014 Tariff Regulations and grant the prayer for increase in APC norms from 5.75% to 6.25%. This prayer of the Petitioner is also not maintainable. It is settled law that power to remove difficulty is to be exercised only to give effect to the provisions of the regulations and it does not contemplate the removal of hardship that may arise as a result of giving effect to the regulations. Thus, the difficulty faced by the Petitioner in achieving APC norm cannot be a factor to exercise the power to remove difficulty. In our view, there is no merit in the submissions of the petitioner to grant the relief prayed for and the same is beyond the scope of Regulation 54 of the 2014 Tariff Regulations. Based on the above discussions, the prayer of the Petitioner is rejected and the Petition is therefore not maintainable.

17. Accordingly, Petition No. 179/MP/2017 is disposed of at the admission stage.

**-Sd/-**  
**(Dr. M.K.Iyer)**  
**Member**

**-Sd/-**  
**(A. S. Bakshi)**  
**Member**

**-Sd/-**  
**(A. K. Singhal)**  
**Member**

