

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 167/MP/2017

Coram:

Shri A.K. Singhal, Member

Shri A.S. Bakshi, Member

Dr. M.K. Iyer, Member

Date of Order: 16th 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 APC norms of Talcher Super Thermal Power Station, Stage-I (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. West Bengal State Electricity Distribution Co. Ltd.
Vidyut Bhawan, Block-DJ, Sector-II,
Salt Lake City, Kolkata- 700091

2. Bihar State Power Holding Company Ltd.
Vidyut Bhawan, Bailey Road
Patna-800001

3. Jharkhand Urja Vikas Nigam Ltd
Engineering Bhawan
Heavy Engineering Corporation
Dhurwa, Ranchi-834004

4. Grid Corporation of Orissa Ltd.
Vidyut Bhawan, Janpath
Bhubaneswar - 751007

5. Damodar Valley Corporation
DVC Towers, VIP Road, Kolkata - 700054



6. The Energy & Power Department
Govt, of Sikkim, Kazi Road ,
Gangtok Sikkim -737101

7. Assam Power Distribution Company Ltd
Bijulee Bhawan, Paltan Bazar
Guwahati-781001

8. Tamil Nadu Generation & Distribution Co. Ltd
NPKRP Maaligail, 800, Anna Salai,
Chennai - 600002

.....Respondents

Parties present:

Shri Ajay Dua, NTPC
Shri Shailendra Singh, NTPC
Shri R.K.Mehta, Advocate, GRIDCO
Ms. Himanshi, Advocate, GRIDCO
Shri S.Vallinayagam, Advocate, TANGEDCO
Shri Sanjay Sen, Senior Advocate, WBSEDCL

ORDER

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

“In view of the fact and circumstances mentioned above, it is submitted that the petition may please be admitted and NTPC TSTPS Stage-I may be allowed relaxed operating norms for APC/ AEC from 5.75% to 7.5% for 2014-19 period by invoking Hon’ble Commission’s powers under Regulation 54 ‘Power to Relax’”.

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). Talcher Super Thermal Power Station, Stage-I (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 Odisha. 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 29.7.2016 in Petition No. 281/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). But, the Commission under the 2014 Tariff Regulations, reduced the APC norms by 0.75% even for units commissioned before 1.4.2009.

(vi) Although the units of this generating station were commissioned before 1.4.2009, the APC norms were reduced to 5.75% from 6.5%. The actual APC indicated by CEA of the generating station for the period 2008-13 is 6.7% to 7.4% (average 6.9%). Thus, this generating station has never in the past achieved APC of 5.75% which is a norm for the period 2014-19. However, the achieved APC of the generating station during the subsequent period is as under:

	2014-15	2015-16	2016-17	Average
PLF % (gross generation)	85.48	89.42	87.06	87.32
Availability% (running hrs)	88.85	91.62	91.59	90.69
Loading factor%	96.21	97.6	95.06	96.29
APC%	7.18	7.30	7.80	7.43

(vii) One of the main reasons for higher APC of this generating station is that the station is provided with Ball & Tube Mills (BBD 4772 SI) supplied by GEC Alstom, which are highly power intensive. The power consumption is significantly higher than the normal BHEL bowl mills. The design details of the Ball & Tube Mill is as under:

Type	Ball Tube Mill BBD 4772 SI
Nos. per Unit	05
Speed	16 r. p. m
Mill Outlet temperature	90 degree C
Weight of Ball Charge	118.5 Tonne



Maximum Coal Output	89.15 T / Hr.
Motor Supplier	GEC Alsthom
Voltage	11 KV
Power	2400 KW
Current	145 A

(viii) Normally a full unit load is achieved by running of 4 tube mills. However, depending on coal quality and other conditions, sometimes 5 tube mills are required for achieving full load. The average power consumption for each tube mill is in the range of 1800-1900 KW. In comparison, the units with Bell bowl mills, the average power consumption for each bowl mill is around 475-500 KW. For achieving full unit load, running of 6 mills in case of bowl mills and 4 mills in case of tube mills has been considered. A comparison of APC of Tube Mills (Stage-I) vis-a-vis Bowl Mills of similar 500 MW units is as under:

Type of Mill	Mill Loading	Number of mills for full load	Total power consumption	Energy consumption @ 0.85 pf	Contribution towards APC at 85% PLF
	(KW)		(KW)	(MU / annum)	(%)
Tube Mills (BBD 4772 SI)	1900	4	7600	56.59	1.52
Bowl Mills (XRP 1003)	500	6	3000	22.34	0.60

(ix) Thus, a total of 1.52% (approx.) is contributed from the Tube Mills towards APC of the units as compared to 0.60 % as in case of BHEL supplied mills. There is a percentage increase in APC of 0.92% on account of tube mills. In addition, the power consumption of auxiliaries associated with tube mills is higher in comparison to bowl mills. A comparison of associated auxiliaries corresponding one tube mill and bowl mill is as under:

Tube Mill	Power Rating (KW)	Energy consumption @ 0.85 pf MU/annum.	Bowl Mill	Power Rating (KW)	Energy consumption @ 0.85 pf MU/annum
Mill Main motor	2400	17.87	Mill Main motor	525	3.91
Mill seal air fan	75	0.56	Mill seal air fan	12.5	0.09
Reducer Oil p/p for mills	30	0.22	Lub oil p/p mills	3.7	0.03
LP lub oil p/p for mills	5.5	0.04			
HP lub oil p/p for mills	7.5	0.06			
Ball & Socket oil p/p	3.0	0.02			
Grease p/p for mills	0.55	0.00			
Total KW	2521.55	18.78		541.2	4.03

It can be inferred from the above table that the one Tube Mill along with its auxiliaries has power consumption of around 4.65 times energy as compared to bowl mill.



(x) The generating station could not meet the norms of APC and incurring a financial loss on account of under recovery in APC. The details of actual APC achieved during the period 2014-17 along with the loss incurred is as under:

Parameter	2014-15	2015-16	2016-17	Average
Scheduled PLF%	83.65	91.05	85.08	86.59
Normative APC%	5.75	5.75	5.75	5.75
Scheduled Generation MU	6906	7517	7023	7148.67
ECR (₹/Unit)	1.46	1.34	1.66	1.49
Actual APC%	7.18	7.3	7.8	7.43
Under recovery in APC in %	1.43	1.55	2.05	1.68
Impact due to under-recovery in APC in ₹/unit.	0.022	0.022	0.037	0.03
Financial loss incurred (in crore)	15.53	16.84	25.92	19.43
Total financial loss due to under-recovery in APC in 2014-17 (₹ in crore)			58.30	

(xi) Thus, the contribution of ball and tube mills towards APC of the units is comparatively much more than the bowl mills for same capacity units.

(xii) While framing the APC norms under Regulation 36 (E) of the 2014 Tariff Regulations, the design aspects such as type of cooling tower, type of BFPs etc had been considered. However, the higher APC in the “tube mills” in the units has not been considered. Also, in the generating station some of the new schemes have been planned and executed to meet the various statutory directives for pollution control and safety and security of the generating station. These additional power intensive systems are expected to be put to service during 2017-18. Accordingly, the APC will further increase due to these additional power intensive systems added by the Petitioner to meet statutory requirements. The details of these additional systems are as under:

S. No.	System	Expected KW contribution in APC.	Energy consumption @ 0.85 pf MU/annum.	% APC contribution at normative PLF of 85%.	Remark
1	ESP R&M (Retrofitting of ESP with additional field)	4937	36.8	0.49	Capitalization allowed by the Commission vide order dated 29.7.2016.
2	Firefighting system booster and foam pump house.	54	0.4	0.01	To be considered by the Commission in Truing-up.
3	4 th ash slurry series.	1382	10.3	0.14	Capitalization allowed by the Commission vide order dated 29.7.2016
4	Dry ash handling system	1912	14.2	0.19	To be considered by the Commission in Truing-up.
	Total	8285	61.7	0.83	



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 7.5% in exercise of the power under Regulation 54 (Power to Relax) of the 2014 Tariff Regulations.

4. The matter was heard on 16.1.2018 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. 8 (TANGEDCO) has filed its reply vide affidavit dated 12.1.2018. The Commission, after hearing the parties reserved its orders on the issue of 'maintainability'.

Reply of TANGEDCO

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

(i) Unit I had achieved COD on 1.1.1997 and Unit II of the generating station achieved COD on 1.7.1997 and therefore have completed the useful life of 20 years as on 31.12.2017. The CEA in its recommendations for the Operational norms of the thermal power stations for the period 2014-19 had stated that the Commission may review the existing APC norms based on actual performance. Accordingly, the Commission has reviewed APC norms for existing as well as new 500 MW units and specified Regulation 36 (E) of the 2014 Tariff Regulations.

(ii) The 2014 Tariff Regulations notified by the Commission is guided by the principles of CEA, National Electricity Policy and Tariff Policy and is based on the norms and not on actuals. Moreover, the Petitioner has not raised any issues before the Commission on the Statement of Reasons and Explanatory Memorandum for the 2014 Tariff Regulations and has raised issue now after a huge delay, which is not permitted in law. If the Petitioner is aggrieved by the 2014 Tariff Regulations, they should have approached the High Court challenging the Regulations. Having failed to do so, the Petitioner is now trying to challenge the 2014 Tariff Regulations, which is not maintainable.

(iii) If the Petitioner is aggrieved by the Commission's order dated 29.7.2016 in Petition No. 281/GT/2014 (determination of tariff of the generating station for 2014-19), it should have filed review petition before the Commission or appeal before the APTEL. Therefore, this Petition is liable to be dismissed at the admission stage.



(iv) The operational norms determined by the Commission while specifying the 2014 Tariff Regulations are based on the operational data furnished by the generators for the previous tariff block (2009-14). However, the data furnished by the Petitioner in the present petition relates to the period 2014-17 and not prior to 2014.

(v) The terms and conditions specified under the 2014 Tariff Regulations cannot be categorized as unreasonable to resort to the exercise of general Power of Relaxation in the manner sought for by the Petitioner. The prayer for relaxation is therefore beyond the Regulation 54.

(vi) The 2014 Tariff Regulations have been specified by the Commission in exercise of its power under section 178 of the 2003 Act and thus form part of the said Act. This has been laid down by the Hon'ble Supreme Court in State of UP & ors v/s Babu Ram Upadhyaya (1961) 2SCR 679. In WBSEB v/s Patel Engg Co. Ltd (2001) 2SCC 451, the Hon'ble Supreme Court held that where power to relax or waive a rule or a condition exists under the rule, it has to be done strictly in compliance with the rules.

Accordingly, the Respondent, TANGEDCO 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 7.5% for the period 2014-19 in relaxation of Regulation 36(E) of the 2014 Tariff Regulations. 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 Ball & Tube Mills (BBD 4772 SI) supplied by GEC Alstom which are highly power intensive and the consumption is higher than the normal BHEL bowl mills. In addition to this, the Petitioner has submitted that due to the addition of power intensive systems for the generating station towards statutory compliances for pollution control and safety & security during the year 2017-18, the APC will further increase. 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. 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.

10. 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.”

11. 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”

12. 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 Petition is therefore not maintainable.

13. 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. 281/GT/2014 filed by the Petitioner for determination of the tariff of the generating station for the period 2014-19, the Petitioner had sought for relaxation of APC norms from 5.75% to 7.25%, under Regulation 54 of the 2014 Tariff Regulations, based on the actual operating data. The relevant portion of the submissions of the Petitioner in the said Petition is extracted as under:



“11.(i)The design details of the Ball & Tube Mill is as under:

Type	Ball Tube Mill BBD 4772 SI
Nos. per Unit	05
Speed	16 r. p. m
Mill Outlet temperature	90 degree C
Weight of Ball Charge	118.5 Tonne
Maximum Coal Output	89.15 T / Hr.
Motor Supplier	GEC Alsthom
Voltage	11 KV
Power	2400 KW
Current	146 A

(ii)A comparison of APC of Tube Mills (Stage-I) vis-a-vis Bowl Mills of similar 500 MW units is as under:”

Type of Mill	Mill Loading	Number of mills for full load	Total power consumption	Energy consumption @ 0.85 pf	Contribution towards APC at 85% PLF
	(KW)		(KW)	(MU / annum)	(%)
Tube Mills (BBD 4772 SI)	1750	4	7000	52.12	1.40
Bowl Mills (XRP 1003)	475	7	3325	24.76	0.67

14. Accordingly, the Commission after considering the submissions of the Petitioner, by order dated 29.7.2016 had rejected the prayer of the Petitioner for relaxation of APC norms and held that the APC of 5.75% in terms of the 2014 Tariff Regulations shall be made applicable for the generating station. The relevant portion of the order is extracted as under:

“Auxiliary Energy Consumption

73. The petitioner has claimed Auxiliary Energy Consumption at 5.75% during 2014-19 period. Further, the petitioner has submitted that the Auxiliary Energy Consumption has increased significantly due to deterioration in coal quality during the last two years and in view of increased Auxiliary Energy Consumption on account of usage of Tube Mills, the Commission is requested to allow the Auxiliary Energy Consumption norm of 7.25% under Regulation 54 & 55 of the Tariff Regulations, 2014.

74. Regulation 36(E)(a) of 2014 Tariff Regulations, provides for the Auxiliary Energy Consumption of 5.25% for coal based generating stations of 500 MW sets with Natural Draft cooling tower or without cooling tower with steam driven BFP. It further provides that for thermal generating stations with induced draft cooling towers, the norms shall be further increased by 0.5%. Accordingly, the Auxiliary Energy Consumption to be considered is 5.75% as per the norms and the same is allowed for the purpose of tariff computations.”



15. It is therefore evident that the prayer of the Petitioner for relaxation of APC norms from 5.75% to 7.25% on the ground of usage of Tube Mills etc., had been rejected by the Commission by order dated 29.7.2016. The Commission having rejected the prayer of the Petitioner for relaxation of APC norms in order dated 29.7.2016, there is no justification for the Petitioner to seek the relaxation of the APC norms now from 5.75% to 7.5% in this Petition, on the same grounds. The Petitioner cannot be permitted to unsettle the settled issue. In our view, the application, though termed as an application for relaxation, is an application for review of order dated 29.7.2016 in disguise. In this background, the relief sought by the Petitioner for relaxation of APC of the generating station is not maintainable.

16. The Petitioner has further submitted that due to addition of some power intensive systems like Retrofitting of ESP (ESP R & M), 4th Ash Slurry Series, Dry Ash Handling System and Fire Fighting system to meet various statutory directives for pollution control and safety & security during 2017-18, there is increase in APC of the generating station. This submission of the Petitioner is also not acceptable. In our view, the planning and addition of power intensive schemes for the station during the period 2017-18 cannot be a ground for relaxation of the APC norms specified by the Commission 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 addition of power intensive systems during the year 2017-18 cannot be a factor for relaxation of the APC norms



for the generating station for the period 2014-19. Accordingly, the prayer of the Petitioner for relaxation of the APC norm specified under Regulation 36(E) is not maintainable and is therefore rejected.

17. Accordingly, Petition No. 167/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

