

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Review Petition No. 7/RP/2023

**in
Petition No. 157/GT/2020**

Coram:

Shri I.S Jha, Member

Shri Arun Goyal, Member

Shri Pravas Kumar Singh, Member

Date of Order: 19th October, 2023

In the matter of

Petition for review of Commission's order dated 20.9.2022 in Petition No. 157/GT/2020 pertaining to truing up of tariff of Indira Gandhi Super Thermal Power Project, Stage- I (1500 MW) for the period 2014-19.

And

In the matter of:

Aravalli Power Company Private Limited
NTPC Bhawan,
Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003

...Petitioner

Vs

1. Haryana Power Purchase Centre (HPPC)
Shakti Bhawan, Sector-VI, Panchkula,
Haryana-134109
2. Tata Power Delhi Distribution Ltd.
Grid Substation, Hudson Road, Kingsway Camp,
New Delhi- 110009
3. BSES Rajdhani Power Ltd. (BRPL)
BSES Bhawan, Nehru Place
New Delhi-110019
4. BSES Yamuna Power Ltd. (BYPL)
Shakti Kiran Building, Karkardooma
Delhi-110092

...Respondents



Parties present:

Ms. Swapna Seshadri, Advocate, APCPL
Ms. Ritu Apurva, Advocate, APCPL
Ms. Archita Kashyap, Advocate, APCPL
Shri Aniya Jain, Advocate, TPDDL
Shri Anand Kumar Shrivastava, Advocate, TPDDL
Shri Mohit K. Mudgal, Advocate, BRPL
Shri Sachin Dubey, Advocate, BRPL

ORDER

Petition No.157/GT/2020 was filed by the Review Petitioner, Aravalli Power Company Limited, for truing-up of tariff of Indira Gandhi Super Thermal Power Project, Stage- I (1500 MW) (in short ‘the generating station’) for the period 2014-19, in terms of Regulation 8(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short ‘the 2014 Tariff Regulations’) and the Commission vide its order dated 20.9.2022 (in short ‘the impugned order’) had approved the annual fixed charges as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	37154.82	38665.93	38430.49	39514.44	40339.43
Interest on Loan	49402.53	47523.17	45273.22	34501.00	31999.28
Return on Equity	45961.10	48233.48	49493.87	50784.49	51840.12
O&M Expenses	24922.37	26299.80	28243.05	29990.86	32272.71
Interest on Working Capital	18316.23	18464.81	18538.24	18784.09	18911.61
Annual fixed charges allowed	175757.04	179187.19	179978.87	173574.88	175363.14

2. Aggrieved by the impugned order dated 20.9.2022, the Review Petitioner has sought review of the same, on the ground that there are errors apparent on the face of the order, on the following issues:

- (a) Allow the exclusion of both positive and negative entries under inter-unit transfer; and
- (b) Error in calculation of the weighted average of coal ‘as received GCV’ after adjusting the total moisture.



Hearing dated 31.5.2023

3. The Review Petition was heard on 'admission' on 31.5.2023 and the Commission, after hearing the learned counsel for the Review Petitioner, 'admitted' the Review Petition' on the issues raised in paragraph 2 above, and notice was served on the Respondents. The Respondents BRPL and TPDDL have filed their replies vide affidavits dated 25.8.2023 and 18/20.7.2023 and the Review Petitioner has filed its rejoinder to the said replies, vide separate affidavits dated 8.9.2023.

Hearing dated 28.7.2023

4. The Review Petition was heard on 28.7.2023 and the Commission, after hearing the representative of the Review Petitioner and the learned counsel for the Respondents TPDDL and BRPL, reserved its order in the matter. Based on the submissions of the parties and the documents available on record, we proceed to examine the issues raised by the Review Petitioner in the subsequent paragraphs.

A. Allow the exclusion of both positive and negative entries under inter-unit transfer;

5. The Commission in paragraph 80 of the impugned order dated 20.9.2022 had disallowed the negative entry of (-) Rs 4494.78 lakh towards temporary inter unit transfer as under:

"80. The Petitioner has claimed exclusion of (-) Rs.2674.08 lakh in 2018-19(transfer of LP & HP Module to Mauda & Rihand of (-) Rs 4494.78 lakh and Inter unit transfer of HP Module from Vindhyachal of Rs 1820.70 lakh) on account of inter-unit transfer of assets to/from the generating station. In justification of the same, the Petitioner has submitted that temporary inter-unit transfer of assets, is not allowed for the purpose of tariff and accordingly, the same has been kept under exclusion. It is observed that the Petitioner is the joint venture company having only one generating station and hence, the inter-unit transfer is not to be allowed under exclusions. Accordingly, the Petitioner's claim for exclusion of (-) Rs 4494.78 lakh under this head is not allowed. However, the exclusion towards Inter unit transfer of HP Module from Vindhyachal of Rs 1820.70 lakh is allowed as claimed by the Petitioner."



Submissions of the Review Petitioner

6. The Review Petitioner has submitted that being Joint Venture (JV) company of NTPC, the management and operation of its plant is vested in NTPC itself. It has stated that the generating company being a 1500 MW Project with three 500 MW units of similar OEM specifications, as most of the 500 MW units of the NTPC stations, temporary Inter unit transfers are taken up from time to time as per need for ensuring economic, effective and reliable operation/ maintenance of the units. The Review Petitioner has further submitted that in principle, while dealing with the Review Petitioner's claim towards additional capital expenditure, the temporary inter-unit transfers that are made between the various generating stations of NTPC as well as its JV Companies, are excluded for the purpose of tariff. The Review Petitioner has also submitted that the Commission as a practice has been consistently excluding the inter unit transfers of temporary nature for the purpose of tariff. Accordingly, the Review Petitioner has submitted that the Commission's incorrect denial of its legitimate claims is causing grave financial loss to the Review Petitioner and also violates the statutory right of a reasonable recovery of returns.

Reply of the Respondents

Respondent TPDDL

7. The Respondent TPDDL in its reply affidavit has submitted that the Commission has passed the impugned order in due compliance to the 2014 Tariff Regulations and other applicable laws. It has also submitted that the exclusion of (-) Rs 4494.78 lakh should not be allowed as the Review Petitioner and the Mauda & Rihand Power plants are not the same company, and that the Review Petitioner is a Joint Venture of NTPC Ltd, HPGCL and IPGCL. The Respondent has further submitted that there has been no error apparent on the face of the order for invoking the right of review by the Review Petitioner and the issues agitated by the Review Petitioner is based on an incorrect/



misplaced/ erroneous reading of the impugned order and other orders passed by this Commission.

Respondent BRPL

8. The Respondent BRPL vide its reply affidavit has pointed out that this Commission had disallowed the inter-unit transfer exclusions after observing that the Review Petitioner is the JV company having only one generating station and hence, the inter-unit transfer is not to be allowed under exclusions. It has accordingly submitted there is no error apparent in the order and the Review Petition is liable to be rejected.

Analysis and Decision

9. The matter has been considered. It is observed that the claim of the Review Petitioner, was disallowed under para 80 of the impugned order dated 20.9.2022, on the ground that the Review Petitioner is the JV company having only one generating station. The Review Petitioner in this Review Petition has submitted that the Commission as a practice has been consistently excluding the inter unit transfers of temporary nature for the purpose of tariff. We agree with the submissions of the Review Petitioner. The Commission, in various other tariff orders had taken a view that both positive and negative entries arising out of inter-unit transfers of a temporary nature shall be excluded for the purposes of tariff. This aspect had escaped the attention of the Commission while passing the impugned order in the present case. Accordingly, the review on this count is allowed and the impugned order is to be rectified on review. The prayer of the Review Petitioner is therefore maintainable. Issue (A) is disposed of as above.



B. Error in calculation of the weighted average of coal 'as received GCV' after adjusting the total moisture

10. The Commission in paragraph 139 of the impugned order dated 20.9.2022 had considered the 'as received' GCV of coal of 4010.49 kcal/kg as under:

"139. Accordingly, the cost for fuel components in working capital has been computed considering the fuel details (price and GCV) as per Form-15 of the petition except for 'as received' GCV of coal, which is considered as 4010.49 kcal/kg as discussed above. All other operational norms such as Station Heat Rate Auxiliary Energy Consumption and Secondary Fuel Cost have been considered as per the 2014 Tariff..."

Submissions of the Review Petitioner

11. The Review Petitioner has submitted that the calculation of GCV at 4140.49 kcal/kg is an error apparent on the face of record, since it has not taken into account the moisture correction. It has also submitted that while filing the original petition and additional affidavits, the Review Petitioner had computed the GCV at 3630.86 kcal/kg, which was the simple average of the GCV for the period January-2014 to March 2014, after moisture correction, and thus, the Commission ought to have followed the same approach. The Review Petitioner has stated that the Commission, while considering the average GCV for January 2014 to March 2014, based on the net coal quantities as per Form 15, has not factored the moisture correction, which has led to the calculation of GCV at 4010.49 kcal/kg. The Review Petitioner has added that in all other cases where truing up had been done for various generating stations of NTPC, (the parent company of the Review Petitioner), the Commission had allowed the moisture correction while computing the GCV. Since in the present impugned order, the moisture correction has been left out, the same has resulted in a dichotomy, namely, for the same tariff period, on the very same issue, two different approaches are being followed by the Commission. Accordingly, the Review Petitioner has prayed that the review may be allowed on this ground.

Reply of the Respondents

Respondent TPDDL

12. The Respondent TPDDL has submitted that the Commission has rightly placed reliance on the 2014 Tariff Regulations, for concluding that the weighted average GCV for three months, based on the net coal quantities for the preceding three months is to be taken into consideration for calculation of Interest on Working Capital (IWC). It has stated that the averment of the Review Petitioner that the adjustment of TM is an established principle/ methodology adopted by the Commission, is misplaced, as it will be opposed to law and as such cannot be made applicable. The Respondent has also submitted that the Commission has at all times followed the principles as envisaged under the 2014 Tariff Regulations and has never allowed the adjustment for TM, in the calculation of fuel component of IWC for fuel as the same is not envisaged under the 2014 Tariff Regulations. It has added that there is no error apparent on the face of the record on this issue for invoking the right of review by the Review Petitioner. The Respondent has stated that the issues agitated by the Review Petitioner is based on an incorrect/ misplaced/ erroneous reading of the impugned order and other orders passed by the Commission.

Analysis and Decision

13. We have examined the matter and the documents on record. It is noticed from records that the Commission, while computing the weighted average GCV, has inadvertently not considered the moisture adjustment. The non-consideration of the same is in our view, an error apparent on the face of the order and the same is required to be rectified. Thus, the review on this ground is maintainable and the GCV computation is corrected after considering the moisture correction. Issue (B) is disposed of as above.

14. Consequent upon review being allowed on issues (A) and (B) above, the tariff determined for the generating station for the period 2014-19, by impugned order dated 20.9.2022 is corrected/ modified, as stated in the subsequent paragraphs:

Exclusions

15. Accordingly, the summary of exclusions allowed/ not allowed for the period 2014-19 in paragraph 82 of the impugned order dated 20.9.2022 stands revised as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Exclusions claimed (A)	(-)113.63	(-)131.63	480.34	(-)5065.04	(-)1962.94
Exclusions allowed (B)	(-)113.63	(-)131.63	575.85	(-)5057.66	1936.40
Exclusion not Allowed (A-B)	0.00	0.00	(-)95.51	(-)7.38	(-)26.54

Additional Capital Expenditure

16. Accordingly, the additional capital expenditure allowed in paragraph 83 of the impugned order is revised as under:

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Sub Total (A)	23058.59	25020.00	7941.37	2787.46	3255.79	62063.21
B Decapitalization	(-) 1936.77*	(-) 1653.99	(-) 60.13	(-) 307.36	(-) 679.58	(-) 4637.82
C Assumed Deletion	0.00	0.00	0.00	0.00	(-)39.10	(-)39.10
D Liability Discharge	18916.88	5942.47	5547.76	27858.34	2663.10	60928.55
E Exclusion not allowed	0.00	0.00	(-)95.51	(-)7.38	(-)26.54	(-)129.44
F Total Additional capital expenditure allowed (E=A+B+C+D+E)	40038.70	29308.48	13333.49	30331.06	5173.66	118185.40

Capital cost allowed for the period 2014-19

17. Accordingly, the capital cost allowed vide paragraph 84 of the order dated 20.9.2022 stands revised and modified as under:

	<i>(in Rs lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	761233.37	801272.07	830580.56	843914.05	874245.10

	2014-15	2015-16	2016-17	2017-18	2018-19
Add: Net additional capital expenditure allowed	40038.70	29308.48	13333.49	30331.06	5173.66
Closing Capital Cost	801272.07	830580.56	843914.05	874245.10	879418.77
Average Capital Cost	781252.72	815926.32	837247.30	859079.58	876831.94

Debt-Equity Ratio

18. Accordingly, the details of debt-equity ratio approved vide paragraph 86 of the impugned order dated 20.9.2022 stands revised as under:

(Rs in lakh)

	Capital cost upto COD / 1.4.2014		Additional Capital Expenditure 2014-19		Capital cost as on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt (A)	532863.36	70.00%	82729.78	70.00%	615593.14	70.00%
Equity (B)	228370.01	30.00%	35455.62	30.00%	263825.63	30.00%
Total (C) = (A) + (B)	761233.37	100.00%	118185.40	100.00%	879418.77	100.00%

Return on Equity

19. Also, ROE approved vide paragraph 90 of the impugned order stands modified as under:

(Rs in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Equity-Opening (A)	228370.01	240381.62	249174.17	253174.21	262273.53
Addition of Equity due to additional capital expenditure (B)	12011.61	8792.55	4000.05	9099.32	1552.10
Normative Equity-Closing (C) = (A) + (B)	240381.62	249174.17	253174.21	262273.53	263825.63
Average Normative Equity (D) = (A+C)/2	234375.82	244777.89	251174.19	257723.87	263049.58
Return on Equity (Base Rate) (E)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for respective years (F)	20.961%	21.342%	21.342%	21.342%	21.549%
Rate of Return on Equity (Pre-Tax) (G) = (E)/(1-F)	19.610%	19.705%	19.705%	19.705%	19.758%
Return on Equity (Pre-Tax) annualized (H) = (D)*(G)	45961.10	48233.48	49493.87	50784.49	51973.34



Interest on Loan

20. Further, the Interest on loan approved vide paragraph 93 of the impugned order stands revised as under:

	(Rs in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan (A)	532863.36	560890.45	581406.39	590739.83	611971.57
Cumulative repayment of loan upto previous year (B)	73600.88	110709.06	149146.71	187559.22	227009.47
Net Loan Opening (C) = (A) - (B)	459262.48	450181.40	432259.69	403180.61	384962.10
Addition due to additional capital expenditure (D)	28027.09	20515.94	9333.44	21231.74	3621.56
Repayment of loan during the period (E)	37154.82	38665.93	38430.49	39514.44	40443.09
Repayment adjustment on account of de-capitalization (F)	46.64	228.28	17.97	64.19	191.91
Net Repayment of during the year (G) = (E) - (F)	37108.18	38437.65	38412.52	39450.25	40251.18
Net Loan Closing (H) =(C) +(D) - (G)	450181.40	432259.69	403180.61	384962.10	348332.49
Average Loan (I) = (C+H)/2	454721.94	441220.54	417720.15	394071.36	366647.29
Weighted Average Rate of Interest of loan (J)	10.8643%	10.7708%	10.8382%	8.7550%	8.7451%
Interest on Loan (K) = (I)*(J)	49402.53	47523.17	45273.22	34501.00	32063.67

Depreciation

21. Accordingly, the Depreciation approved vide paragraph 95 of the impugned order is worked out and allowed as under:

	(Rs in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Average Capital Cost (A)	781252.72	815926.32	837247.30	859079.58	876831.94
Value of freehold land included in average capital cost (B)	54520.48	58107.36	58350.68	70674.64	83765.84
Aggregated Depreciable Value (D)= (A-B) *90%	654059.02	682037.06	701006.96	709564.45	713759.48
Remaining aggregate depreciable value at the beginning of the year (D) = (C) - Cumulative Depreciation (shown at J) at the end of the previous year]	579974.94	570844.80	551377.06	521522.03	486266.81
No. of completed years at the beginning of the year (E)	1.98	2.98	3.98	4.98	5.98
Balance useful life at the beginning of the year (F) = 25 - (E)	23.02	22.02	21.02	20.02	19.02
Weighted Average Rate of Depreciation (WAROD) (F)	4.7558%	4.7389%	4.5901%	4.5996%	4.6124%



	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation during the year/ period (G) = (A) * (F)	37154.82	38665.93	38430.49	39514.44	40443.09
Cumulative depreciation at the end of the year (before adjustment for de-capitalization) (H) = (G) + (Cumulative Depreciation (shown at J), at the end of the previous year)*	111238.90	149858.19	188060.39	227556.86	267935.76
Less: Depreciation adjustment on account of de-capitalization (I)	46.64	228.28	17.97	64.19	191.91
Cumulative depreciation at the end of the year (J) = (H) - (I)	111192.26	149629.91	188042.42	227492.67	267743.85

Interest on Working Capital

Fuel Components and Energy Charges in working capital

22. Paragraphs 138 and 139 of the impugned order dated 20.9.2022 stands revised as under:

“138.The Petitioner has calculated GCV of 3630.86 kcal/kg which represents the simple average of GCV of the preceding three months. The weighted average GCV for three months, based on the net coal quantities as per Form-15 after moisture adjustment of the petition and the monthly GCVs as submitted by the Petitioner as discussed earlier, works out to 3628.64 kcal/kg.

139. Accordingly, the cost for fuel components in working capital has been computed considering the fuel details (price and GCV) as per Form-15 of the petition except for ‘as received’ GCV of coal, which is considered as 3628.64 kcal/kg as discussed above. All other operational norms such as Station Heat Rate Auxiliary Energy Consumption and Secondary Fuel Cost have been considered as per the 2014 Tariff Regulations for calculation of fuel components in working capital.”

Fuel Cost and Cost of Liquid stock for Working Capital

23. The fuel components approved vide paragraph 140 of the impugned order stands revised, based on the revised weighted average GCV as received of 3628.64 Kcal/Kg of coal as under:

	(in Rs lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal - 30 days (non-pit head) (A)	26927.89	26927.89	26927.89	27576.76	27576.76
Cost of Coal - 30 days (B)	26927.89	26927.89	26927.89	27576.76	27576.76
Cost of secondary fuel oil - 2 months (C)	595.97	597.61	595.97	610.33	610.33



24. The Energy Charge Rate (ECR) approved vide paragraph 142 of the impugned order dated 20.9.2022 stands revised, based on the revised weighted average GCV as received of 3628.64 Kcal/Kg of coal as under:

	Unit	2014-19
Capacity	MW	1500
Gross Station Heat Rate	Kcal/kWh	2362.99
Auxiliary Energy Consumption	%	5.25
Weighted average GCV of oil (As received)	Kcal/lit	9450.00
Weighted average GCV of coal (As received)	Kcal/kg	3628.64
Weighted average price of oil	Rs./KL	65574.46
Weighted average price of Coal	Rs./MT	4622.23
Rate of energy charge ex-bus	Rs./kWh	3.205

Working Capital for Receivables

25. Receivable component of working capital approved allowed vide paragraph 145 of the impugned order dated 20.9.2022 stands revised as under:

	<i>(Rs in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - for two months (A)	55198.78	55350.01	55198.78	56528.87	56528.87
Fixed Charges - for two months (B)	29530.59	30102.61	30234.23	29172.63	29522.04
Total (C) = (A+B)	84729.37	85452.62	85433.01	85701.49	86050.90

26. Accordingly, Interest on working capital, as approved in paragraph 149 of the impugned order dated 20.9.2022 stands revised as under:

	<i>(Rs in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for Cost of Coal towards Stock - (30 days - non-pit head - generation corresponding to NAPAF) (A)	26927.89	26927.89	26927.89	27576.76	27576.76
Working Capital for Cost of Coal towards Generation – (30 days generation corresponding to NAPAF) (B)	26927.89	26927.89	26927.89	27576.76	27576.76
Working Capital for Cost of Secondary fuel oil - (2 months generation corresponding to NAPAF) (C)	595.97	597.61	595.97	610.33	610.33



	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M expenses - 1 month (F)	2076.86	2191.65	2353.59	2499.24	2689.39
Working Capital for Maintenance Spares @ 20% of O&M expenses (D)	4984.47	5259.96	5648.61	5998.17	6454.54
Working Capital for Receivables – (45 days of sale of electricity at NAPAF (E)	84729.37	85452.62	85433.01	85701.49	86050.90
Total Working Capital (G) = (A+B+C+D+E+F)	146242.46	147357.61	147886.96	149962.75	150958.68
Rate of Interest (H)	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital (I) = (GxH)	19742.73	19893.28	19964.74	20244.97	20379.42

Annual Fixed Charges for the period 2014-19.

27. Based on the above discussions, the annual fixed charges approved vide paragraph 150 of the impugned order dated 20.9.2022 stands revised as under:

	<i>(Rs in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation (A)	37154.82	38665.93	38430.49	39514.44	40443.09
Interest on Loan (B)	49402.53	47523.17	45273.22	34501.00	32063.67
Return on Equity (C)	45961.10	48233.48	49493.87	50784.49	51973.34
O&M Expenses (E)	24922.37	26299.80	28243.05	29990.86	32272.71
Interest on Working Capital (D)	19742.73	19893.28	19964.74	20244.97	20379.42
Total AFC allowed (G) = (A+B+C+D+E)	177183.55	180615.66	181405.37	175035.76	177132.22
AFC allowed vide impugned order dated 20.9.2022	175757.04	179187.19	179978.87	173574.88	175363.14

28. The difference between the tariff determined by this order and the tariff recovered by the Review Petitioner in terms of the impugned order dated 20.9.2022 in Petition No. 157/GT/2020, shall be adjusted in terms of Regulation 8(13) of the 2014 Tariff Regulations.

29. Review Petition No. 7/RP/2023 (in Petition No. 157/GT/2020) is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(I.S. Jha)
Member