

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.197/GT/2017

and

Petition No. 364/GT/2020

and

Petition No.3/GT/2021

Coram:

Shri Jishnu Barua, Chairperson

Shri I. S. Jha, Member

Shri Arun Goyal, Member

Shri Pravas Kumar Singh, Member

Date of Order: 29th March, 2023

In the matter of:

Petition No.197/GT/2017

Approval of tariff of Feroze Gandhi Unchahar Thermal Power Station, Stage- IV (500 MW) for the period from the actual date of commercial operation of Unit-I (30.9.2017) to 31.3.2019

And

In the matter of:

Petition No. 364/GT/2020

Petition for truing up of annual fixed charges for the period 2014-19 in respect of Feroze Gandhi Unchahar Thermal Power Station Stage-IV (500 MW)

And

In the matter of

Petition No.3/GT/2021

Petition for approval of tariff of Feroze Gandhi Unchahar Thermal Power Station Stage-IV (500 MW) for the period 2019-24.

And

In the matter of

Implementation of the judgment dated 22.9.2022 of the Appellate Tribunal for Electricity in Appeal No.61/2020.



And

In the matter of

NTPC Limited,
NTPC Bhawan,
Core-7, SCOPE Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003

.... Petitioner

Vs

1. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg
Lucknow- 226001

2. Rajasthan Urja Vikas Nigam Limited,
(on behalf of DISCOMs of Rajasthan),
Vidyut Bhawan, Janpath, Jaipur 302 005

3. Haryana Power Purchase Centre,
Shakti Bhawan, Sector -VI,
Panchkula,
Haryana-134109

4. Power Development Department,
Govt. of J&K, Civil Secretariat,
Srinagar

5. Electricity Department,
Union Territory of Chandigarh,
Additional Office Building, Sector 9 D,
Chandigarh

6. Uttarakhand Power Corporation Limited,
Urja Bhavan, Kanwali Road,
Dehradun-248001

.... Respondents

ORDER

Petition No. 197/GT/2017 was filed by the Petitioner for approval of tariff of Feroze Gandhi Unchahar Thermal Power Station, Stage- IV (500 MW) (in short 'the generating station') for the period from anticipated date of commercial operation of



Unit-I (31.7.2017) to 31.3.2019, based on the projected additional capital expenditure till 31.3.2019. Thereafter, based on the actual date of commercial operation of the generating station i.e. 30.9.2017 and the opening capital cost of Rs. 226169.33 lakh (as on 30.9.2017), the Commission vide its order dated 6.12.2019 in Petition No. 197/GT/2017, approved the annual fixed charges of the generating station for the period from 30.9.2017 till 31.3.2019, as under:

	<i>(Rs. in lakh)</i>	
	2017-18 (30.9.2017 to 31.3.2018)	2018-19
Depreciation	12395.63	13615.11
Interest on Loan	10546.21	10942.13
Return on Equity	13601.06	14979.31
Interest on Working Capital	5108.65	5207.90
O&M Expenses	9794.51	10399.51
Total	51446.06	55143.97

2. Aggrieved by the above order dated 6.12.2019, the Petitioner had filed appeal (Appeal No.61/2020 before the Appellate Tribunal for Electricity (in short 'the Tribunal') on the issue of disallowance of time overrun of 157 days by the Commission.

3. During the pendency of the aforesaid appeal, the Petitioner had filed Petition No.364/GT/2020 before this Commission, for truing up of tariff of the generating station, for the period 2014-19 and the said petition was disposed of by order dated 16.3.2022. Accordingly, the capital cost and annual fixed charges approved by order dated 16.3.2022 are as under:

Capital Cost

Particulars	<i>(Rs. in lakh)</i>	
	2017-18 (30.9.2017 to 31.3.2018)	2018-19
Opening capital cost as on COD allowed vide order dated 6.12.2019 in Petition No. 197/GT/2017	226169.33	



Add: Adjustment for depreciation capitalized as IEDC	278.57	
Add: IEDC adjustment (towards time overrun) on account of revised details	(-) 2.38	
Add: Un-amortized finance cost	169.26	
Capital cost allowed as on COD/ Opening Capital Cost	226614.78	233950.01
Add: Addition during the year/ period	4489.60	6872.18
Less: De-capitalization during the year/ period	1.19	60.44
Add: Discharges during the year/ period	2846.82	6672.74
Closing Capital Cost	233950.01	247434.50
Average Capital Cost	230282.39	240692.25

Annual Fixed Charges

(Rs. in lakh)

Particulars	2017-18	2018-19
Depreciation	12388.83	12841.01
Interest on Loan	10512.06	10572.87
Return on Equity	13613.14	14266.79
Interest on Working Capital	5231.15	5293.78
O&M Expenses	9629.99	10279.25
Total	51375.17	53253.71

4. Thereafter, in Appeal No.61/2020 filed by the Petitioner, as stated above, the Tribunal disposed of said appeal, vide its judgment dated 22.9.2022, condoning the delay of 157 days, as prayed for by the Petitioner. The relevant portion of the order is extracted below:

“14. In contrast, in the case at hand, the Central Commission has allowed only 26 days, earlier envisaged in IA dated 30.07.2013 as the sufficient period prior to COD. We agree that not only in the light of the above norms under Connectivity Regulations, 2009, as explained in 2015 by the Central Commission itself, but also, and particularly in the face of unforeseeable force majeure events which have led to substantial disruption in major activities, the delay of further 157 days (beyond 31.03.2017) also deserves to be condoned.

15. For the above reasons, the appeal succeeds. The delay of 157 days for which the Central Commission has declined to grant relief is condoned. The consequential order shall be passed by the Central Commission.

16. The appeal is disposed of in above terms”

5. The matter was considered by the Commission and it has been decided to implement the said judgment of the Tribunal. Accordingly, in terms of the directions of the Tribunal in its judgment dated 22.9.2022, and considering the impact of allowance



of the time overrun of 157 days, the tariff of the generating station, (approved vide order dated 6.12.2019), which was trued-up vide order dated 16.3.2022 in Petition No. 364/GT/2020, is required to be revised, as stated in subsequent paragraphs.

Capital Cost

6. Consequent upon condonation of delay of 157 days, the capital cost, as approved in the table under Paragraph 46 of the order dated 16.3.2022 in Petition No. 364/GT/2020 is revised as under:

Particulars	(Rs. in lakh)	
	2017-18 (30.9.2017 to 31.3.2018)	2018-19
Opening capital cost as on COD allowed vide order dated 6.12.2019 in Petition No. 197/GT/2017	226169.33	
Add: Adjustment for depreciation capitalized as IEDC	278.57	
Add: Un-amortized finance cost	169.26	
Add: IDC & FC disallowed due to disallowance of time overrun of 157 days	4531.26	
Add: IEDC disallowed due to disallowance of time overrun of 157 days	2472.31	
Capital cost allowed as on COD/ Opening Capital Cost	233620.74	240955.97
Add: Addition during the year/ period	4489.60	6872.18
Less: De-capitalization during the year/ period	1.19	60.44
Add: Discharges during the year/ period	2846.82	6672.74
Closing Capital Cost	240955.97	254440.46
Average Capital Cost	237288.35	247698.21

Debt-Equity Ratio

7. Accordingly, the table under Paragraph 48 of the order dated 16.3.2022, pertaining to debt-equity ratio is revised as under:

	(Rs. in lakh)					
	As on 30.9.2017		Net additional capitalization during 2014-19		As on 31.3.2019	
	Amount	%	Amount	%	Amount	%
Debt	163534.52	70.00%	14573.80	70.00%	178108.32	70.00%
Equity	70086.22	30.00%	6245.92	30.00%	76332.14	30.00%
Total	233620.74	100.00%	20819.72	100.00%	254440.46	100.00%



Return on Equity

8. The table under Paragraph 51 of the order dated 16.3.2022, pertaining to Return on Equity is revised as under:

(Rs. in lakh)

Sl.No.		2017-18 (30.9.2017 to 31.3.2018)	2018-19
A	Normative Equity – Opening	70086.22	72286.79
B	Addition due to additional capital	2200.57	4045.35
C	Normative Equity – Closing (C) = (A+B)	72286.79	76332.14
D	Normative Equity – Average (D) =	71186.51	74309.46
E	Base Rate for return on equity	15.500%	15.500%
F	Effective Tax Rate for respective years	21.342%	21.549%
G	Rate of Return on Equity (Pre-tax)	19.705%	19.758%
H	Return on Equity (H) = (D x G)	14027.30	14682.06

Interest on Loan

9. Based on the above, the table under paragraph 54 of the order dated 16.3.2022, pertaining to interest on loan is revised as under:

(Rs. in lakh)

Sl. No.		2017-18 (30.9.2017 to 31.3.2018)	2018-19
A	Gross Normative Loan	163534.52	168669.18
B	Cumulative Repayment	0.00	6400.36
C	Net Normative Loan – Opening (A-B)	163534.52	162268.82
D	Addition due to additional capital expenditure	5134.66	9439.14
E	Repayment of Normative Loan	6400.36	13214.78
F	Repayment adjustment on account of decapitalization	0.00	3.01
G	Net Repayment of Normative Loan (E-F)	6400.36	13211.77
H	Net Closing Loan (C+D-G)	162268.82	158496.19
I	Normative Loan – Average [(C+H)/2]	162901.67	160382.51
J	Weighted Average Rate of Interest	6.649%	6.784%
K	Interest on Loan (I x J)	10831.88	10880.07

Depreciation

10. Thus, the table under Paragraph 56 of the order dated 16.3.2022, pertaining to depreciation is revised as under:



(Rs. in lakh)

Sl. No.		2017-18 (30.9.2017 to 31.3.2018)	2018-19
A	Average capital cost	237288.35	247698.21
B	Freehold land included in above	0.00	0.00
C	Depreciable value@ 90% [(A-B) x 90%]	213559.52	222928.39
D	WAROD	5.3798%	5.3350%
E	Remaining depreciable value (C- Previous Year's K)	213559.52	216528.04
F	Balance useful life of the asset	25.00	24.50
G	Depreciation (Annualized) (AxD)	12765.74	13214.78
H	Depreciation for the period	6400.36	13214.78
I	Cumulative depreciation (at the end of the year/period)	6400.36	19615.14
J	Less: Cumulative Depreciation reduction due to decapitalization	0.00	3.01
K	Cumulative depreciation (at the end of the year/period)	6400.36	19612.13

Receivables

11. Also, the table under paragraph 108 of the order dated 16.3.2022, pertaining to the receivable component of working capital, is revised as under:

(Rs. in lakh)

Particulars	2017-18	2018-19
Variable Charges - two months	15217.05	15217.05
Fixed Charges –two months	8751.65	9062.24
Total	23968.70	24279.29

Interest on Working Capital

12. Accordingly, the table under paragraph 111 of the order dated 16.3.2022, pertaining to the interest on working capital allowed, is revised as under:

(Rs. in lakh)

S. N.		2017-18	2018-19
A	Cost of coal for 30 days towards stock	7447.19	7447.19
B	Cost of coal for 30 days towards generation	7447.19	7447.19
C	Cost of secondary fuel oil for two months	114.64	114.64
D	Maintenance spares	1926.00	2055.85
E	Receivables for two months	23968.70	24279.29
F	O&M expenses for one month	802.50	856.60
G	Total Working Capital	41706.20	42200.75
H	Rate of interest	12.60%	12.60%
I	Interest on working capital (I) = (G X H)	5254.98	5317.29



Annual Fixed Charges for the period 2014-19

13. Based on the above discussion, the table under paragraph 112 of the order dated 16.3.2022 in Petition No.364/GT/2020, pertaining to the annual fixed charges approved are revised and allowed as under:

	<i>(Rs. in lakh)</i>	
	2017-18	2018-19
Depreciation	12765.74	13214.78
Interest on Loan	10831.88	10880.07
Return on Equity	14027.30	14682.06
Interest on Working Capital	5254.98	5317.29
O&M Expenses	9629.99	10279.25
Total	52509.88	54373.46

Note: 1) All figures are on annualized basis. 2) All the figures under each head have been rounded. The figure in total column in each year is also rounded. Because of rounding of each figure the total may not be arithmetic sum of individual items in columns.

14. The annual fixed charges allowed as above, shall be adjusted in terms of Regulation 8(13) of the 2014 Tariff Regulations

15. Consequent upon the revision of capital cost and annual fixed charges, for the period 2014-19, as above, the tariff of the generating station for the period 2019-24 in Petition No.3/GT/2021, is also revised as under:

Petition No. 3/GT/2021

16. In Petition No.3/GT/2021 filed by the Petitioner for determination of tariff of the generating station, for the period 2019-24, the Commission vide order dated 15.4.2022 had approved the capital cost and annual fixed charges as under:

Capital Cost:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	247434.50	272195.31	281945.35	282736.55	283136.55
Add: Additional capital expenditure	24760.81	9750.04	791.20	400.00	0.00
Closing Capital Cost	272195.31	281945.35	282736.55	283136.55	283136.55
Average Capital Cost	259814.91	277070.33	282340.95	282936.55	283136.55



Annual Fixed Charges

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	13854.99	14775.16	15056.23	15087.99	15098.65
Interest on Loan	10785.34	10628.32	9831.30	8744.08	7552.68
Return on Equity	14639.53	15611.81	15908.78	15942.34	15953.61
Interest on Working Capital	4307.48	4067.95	3813.83	3825.15	3833.59
O&M Expenses	12544.88	13061.16	13604.50	14176.09	14772.25
Total	56132.22	58144.40	58214.64	57775.65	57210.78

17. On account of above revision of tariff of the generating station, for the period 2014-19, based on the judgment of the Tribunal, as above, the tariff of the generating station, for the period 2019-24 (as approved vide order dated 15.4.2022 in Petition No. 3/GT/2021) is also revised, as stated in subsequent paragraphs.

Capital Cost

18. The capital cost as allowed at paragraph 27 of the order dated 15.4.2022 is revised as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	254440.46	279201.27	288951.31	289742.51	290142.51
Add: Additional capital expenditure	24760.81	9750.04	791.20	400.00	0.00
Closing Capital Cost	279201.27	288951.31	289742.51	290142.51	290142.51
Average Capital Cost	266820.87	284076.29	289346.91	289942.51	290142.51

Debt-Equity Ratio

19. Accordingly, the table under paragraph 29 of the order dated 15.4.2022, pertaining to debt-equity ratio, is revised as under:

(Rs. in lakh)

	As on 1.4.2019		Net additional capitalization during 2019-24 tariff period		As on 31.3.2024	
	Amount	%	Amount	%	Amount	%
Debt	178108.32	70.00%	24991.44	70.00%	203099.76	70.00%
Equity	76332.14	30.00%	10710.62	30.00%	87042.75	30.00%
Total	254440.46	100.00%	35702.06	100.00%	290142.51	100.00%



Return on Equity

20. Also, the table under paragraph 32 of the order dated 15.4.2022, pertaining to return on equity, is revised as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Normative Equity - Opening (A)	76332.14	83760.38	86685.39	86922.75	87042.75
Addition of Equity due to additional capital expenditure (B)	7428.24	2925.01	237.36	120.00	0.00
Normative Equity - Closing (C) = (A + B)	83760.38	86685.39	86922.75	87042.75	87042.75
Average Normative Equity (D) = (A+C)/2	80046.26	85222.89	86804.07	86982.75	87042.75
Return on Equity (Base Rate) (E)	15.50%	15.50%	15.50%	15.50%	15.50%
Effective Tax Rate (F)	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre-tax) (G) = [E/(1-F)]	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity (Pre-tax) – annualized (H) = (D x G)	15034.29	16006.56	16303.54	16337.10	16348.37

Interest on Loan

21. Further, the table under paragraph 35 of the order dated 15.4.2022, pertaining to interest on loan, is revised as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan (A)	178108.32	195440.89	202265.92	202819.76	203099.76
Cumulative repayment of loan upto previous year (B)	19612.13	33840.72	48989.49	64419.32	79880.91
Net Loan Opening (C)=(A-B)	158496.19	161600.17	153276.43	138400.44	123218.85
Addition due to additional capital expenditure (D)	17332.57	6825.03	553.84	280.00	0.00
Repayment during the year (E)	14228.60	15148.77	15429.83	15461.59	15472.26
Net Loan Closing (F)= (C+D-E)	161600.17	153276.43	138400.44	123218.85	107746.59
Average Loan (G)=(C+F)/2	160048.18	157438.30	145838.44	130809.64	115482.72
Weighted Average Rate of Interest of loan (H)	6.918%	6.917%	6.903%	6.843%	6.694%
Interest on Loan (I) = (GxH)	11072.77	10889.85	10066.50	8951.70	7730.76

Depreciation

22. Accordingly, the table under paragraph 37 of the order dated 15.4.2022, pertaining to depreciation, is revised as under:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Average Capital Cost (A)	266820.87	284076.29	289346.91	289942.51	290142.51
Value of freehold land included in average capital cost (B)	0.00	0.00	0.00	0.00	0.00
Value of software and IT equipment included in average capital cost (C)	0.00	0.00	0.00	0.00	0.00
Depreciable Value (D) = [(A-B-C) x 90%+C]	240138.78	255668.66	260412.22	260948.26	261128.26
Remaining depreciable value at the beginning of the year (E) = [D - Cumulative depreciation at the end of the preceding period i.e. 'J']	220526.65	221827.94	211422.73	196528.94	181247.35
No. of completed years at the beginning of the year (F)	1.50	2.50	3.50	4.50	5.50
Balance useful life at the beginning of the year (G) = (25-F)	23.50	22.50	21.50	20.50	19.50
Weighted Average Rate of Depreciation (H)	5.333%	5.333%	5.333%	5.333%	5.333%
Depreciation during the year (I) = (AxH)	14228.60	15148.77	15429.83	15461.59	15472.26
Cumulative depreciation at the end of the year (J) = (I + 'J' of previous period i.e. Cumulative depreciation at the end of previous period)	33840.72	48989.49	64419.32	79880.91	95353.17

Receivables

23. Accordingly, the table under paragraph 76 of the order dated 15.4.2022, pertaining to working capital for receivables, is revised as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges - for 45 days	11966.99	11966.99	11966.99	11966.99	11966.99
Fixed Charges - for 45 days	7033.27	7297.25	7302.50	7244.93	7152.00
Total	19000.26	19264.24	19269.49	19211.92	19118.99

Interest on Working Capital

24. Based on the above, the table under paragraph 80 of the order dated 15.4.2022, pertaining to interest on working capital allowed, is revised as under:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Working capital towards cost of coal for stock - 20 days	5270.70	5270.70	5270.70	5270.70	5270.70
Working capital towards cost of coal for generation - 30 days	7906.05	7906.05	7906.05	7906.05	7906.05
Working capital for cost of secondary fuel oil - 2 months	147.07	146.67	146.67	146.67	147.07
Working capital for Maintenance Spares - 20% of O&M expenses	2508.98	2612.23	2720.90	2835.22	2954.45
Working Capital for Receivables - 45 days	19000.26	19264.24	19269.49	19211.92	19118.99
Working Capital for O&M expenses - 1 month	1045.41	1088.43	1133.71	1181.34	1231.02
Total Working Capital	35878.46	36288.32	36447.51	36551.89	36628.28
Rate of Interest	12.05%	11.25%	10.50%	10.50%	10.50%
Interest on Working Capital	4323.35	4082.44	3826.99	3837.95	3845.97

Annual Fixed Charges for the period 2019-24

25. Accordingly, the table under paragraph 81 of the order dated 15.4.2022, pertaining to the annual fixed charges allowed, is revised as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	14228.60	15148.77	15429.83	15461.59	15472.26
Interest on Loan	11072.77	10889.85	10066.50	8951.70	7730.76
Return on Equity	15034.29	16006.56	16303.54	16337.10	16348.37
Interest on Working Capital	4323.35	4082.44	3826.99	3837.95	3845.97
O&M Expenses	12544.88	13061.16	13604.50	14176.09	14772.25
Total	57203.89	59188.78	59231.36	58764.42	58169.60

Note: 1) All figures are on annualized basis. 2) All the figures under each head have been rounded. The figure in total column in each year is also rounded. Because of rounding of each figure, the total may not be arithmetic sum

26. The annual fixed charges approved as above, is subject to truing up in terms of Regulation 13 of the 2019 Tariff Regulations.

27. In view of the above, the directions of the Tribunal, in its judgment dated 22.9.2022 in Appeal No.61/2020, stands implemented.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(I.S.Jha)
Member

Sd/-
(Jishnu Barua)
Chairperson

