

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 451/GT/2020

Coram:

**Shri P. K. Pujari, Chairperson
Shri I. S. Jha, Member
Shri Arun Goyal, Member
Shri Pravas Kumar Singh, Member**

Date of Order: 16th April 2022

In the matter of:

Petition for revision of tariff of Korba STPS Stage-I&II (2100 MW) for the period from 1.4.2014 to 31.3.2019 after truing up

And

In the matter of:

NTPC Limited,
NTPC Bhawan,
Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi - 110 003

.....Petitioner

Vs

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Vidyut Nagar,
Jabalpur - 482 008
2. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, Bandra (East),
Mumbai - 400 051
3. Gujarat Urja Vikas Nigam Limited,
Vidyut Bhavan, Race Course,
Vadodara - 390 007
4. Chattisgarh State Power Distribution Company Limited,
P.O. Sundar Nagar, Danganiya,
Raipur – 492 013
5. Electricity Department of Goa,
Vidyut Bhawan,
Panaji, Goa
6. DNH Power Distribution Corporation Limited,
UT of DNH,
Silvassa – 396 230



7. Electricity Department,
Administration of Daman & Diu,
Daman - 396 210

.....Respondents

Parties present:

Shri Venkatesh, Advocate, NTPC
Shri Siddharth Joshi, Advocate, NTPC
Shri Abhiprav Singh, Advocate, NTPC
Shri Rishub Kapoor, Advocate, NTPC
Shri Parimal Piyush, NTPC
Ms. Anurag Naik, MPPMCL
Shri Arvind Banerjee, CSPDCL

ORDER

This petition has been filed by the Petitioner, NTPC Limited for truing up of tariff of Korba STPS Stage-I & Stage-II (2100 MW) (hereinafter referred to as ‘the generating station’) for the 2014-19 tariff period in terms of Regulation 8 (1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 hereinafter referred to as “the 2014 Tariff Regulations”).

2. The generating station with a capacity of 2100 MW comprises of three units of 200 MW each and three units of 500 MW each. The dates of commercial operation of the different units of the generating station are as follows:

	Capacity (MW)	Actual COD
Unit-I	200	1.8.1983
Unit-II	200	1.1.1984
Unit-III	200	1.6.1984
Unit-IV	500	1.3.1988
Unit-V	500	1.4.1989
Unit-VI	500	1.6.1990

3. The Commission vide its order dated 24.2.2017 in Petition No. 323/GT/2014, had determined the tariff of the generating station for the 2014-19 tariff period, considering the opening capital cost of Rs.178071.97 lakh, as on 1.4.2014. The capital cost and the annual fixed charges allowed by order dated 24.2.2017 are as under:



Capital Cost allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	178071.97	178071.97	178071.97	178043.97	178043.97
Add: Projected Additional Capital Expenditure allowed	0.00	0.00	(-)28.00	0.00	(-)36.00
Closing Capital Cost	178071.97	178071.97	178043.97	178043.97	178007.97

Annual Fixed Charges allowed

(Rs.in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	922.32	0.00	0.00	0.00	0.00
Interest on Loan	15.53	0.00	0.00	0.00	0.00
Return on Equity	17076.72	17159.45	17158.62	17157.79	17156.73
Interest on Working Capital	7374.06	7511.16	7663.86	7933.25	8113.52
O&M Expenses	45370.53	47785.53	50350.53	53080.53	55981.53
Compensation Allowance	500.00	500.00	0.00	0.00	0.00
Special allowance	11056.83	11758.94	16747.00	17810.43	18941.40
Total	82315.99	84715.08	91920.01	95982.02	100193.18

4. Regulation 8(1) of the 2014 Tariff Regulations provides as under:

“8. Truing up

(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2019, as admitted by the Commission after prudence check at the time of truing up:

Provided that the generating company or the transmission licensee, as the case may be, shall make an application for interim truing up of capital expenditure including additional capital expenditure in FY 2016-17.”

5. The capital cost and annual fixed charges claimed by the Petitioner for the 2014-19 tariff period are as follows:

Capital cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	178071.97	178142.83	178525.61	178955.51	178805.57
Add: Projected Additional Capital Expenditure allowed	70.86	382.78	429.90	(-) 149.94	(-) 696.79
Closing Capital Cost	178142.83	178525.61	178955.51	178805.57	178108.78

Annual Fixed Charges claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	954.21	215.10	391.79	0.00	0.00
Interest on Loan	21.87	3.16	3.01	0.59	1.40
Return on Equity	17079.33	17175.47	17199.50	17207.77	17228.00
Interest on Working Capital	8208.19	8458.41	8770.17	9083.85	9343.38



	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	47916.48	51987.74	51744.92	54670.49	58001.22
Compensation Allowance	500.00	500.00	0.00	0.00	0.00
Special allowance	11056.83	11758.94	16747.00	17810.43	18941.40
Additional O&M					
Impact of Pay Revision	0.00	75.15	5384.94	5486.45	6182.98
Impact of GST	0.00	0.00	0.00	296.27	437.28
Total Annual Fixed Charges	85736.90	90173.97	100241.33	104555.85	110135.65

6. The Respondent, MPPMCL and Respondent CSPDCL have filed their replies vide affidavits dated 14.8.2020 respectively. The Respondent MSEDCL has filed its reply vide affidavit dated 17.8.2020. The Petitioner has filed its rejoinder affidavits on 5.6.2021, 6.6.2021 and 16.6.2021 to the replies of the Respondents CSPDCL, MPPMCL and MSEDCL respectively. The Petitioner has also filed certain additional information vide affidavits dated 29.6.2021 and 16.7.2021. The petition was heard along with other tariff petitions through video conferencing on 27.7.2021 and the Commission reserved its order in the matter, after directing the Petitioner to submit certain additional information. In response, the Petitioner vide affidavit dated 18.8.2021 has filed the additional information after serving copies to the Respondents. Taking into consideration the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner, in this petition, on prudence check, as stated in the subsequent paragraphs.

Capital Cost

7. Regulation 9(3) of the 2014 Tariff Regulations provides as under:

“9. Capital Cost:

(3) The Capital cost of an existing project shall include the following:

(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;

(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and

(a) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

8. The Commission vide its order dated 24.2.2017 in Petition No. 323/GT/2014 had



allowed the closing capital cost of Rs.178071.97 lakh, as on 31.3.2014. The same has been considered as the opening capital cost as on 1.4.2014 for the purpose of trueing-up of tariff for the 2014-19 tariff period, in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

Additional Capital Expenditure

9. Regulations 14(3) of the 2014 Tariff Regulations provides as under:

"14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
- (ii) Change in law or compliance of any existing law;*
- (iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies or statutory authorities responsible for national security/internal security;*
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*
- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
- (vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal/lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*

10. Regulation 15 of 2014 Tariff Regulations provides as under:

"15. Renovation and Modernisation: (1) The generating company or the transmission licensee, as the case may be, for meeting the expenditure on renovation and modernization (R&M) for the purpose of extension of life beyond the originally recognised useful life for the purpose of tariff of the generating station or a unit thereof or the transmission system or an element thereof, shall make an application before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, and any other information considered to be relevant by the generating company or the transmission licensee."

11. Regulation 16 of 2014 Tariff Regulations provides for special allowance coal



based/ lignite for thermal generating station as under:

“16. Special Allowance for Coal-based/Lignite fired Thermal Generating station:

(1) In case of coal-based/lignite fired thermal generating station, the generating company, instead of availing R&M may opt to avail a "special allowance" in accordance with the norms specified in this regulation, as compensation for meeting the requirement of expenses including renovation and modernisation beyond the useful life of the generating station or a unit thereof, and in such an event, revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the special allowance shall be included in the annual fixed cost: Provided that such option shall not be available for a generating station or unit for which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms.

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(3) In the event of granting special allowance by the Commission, the expenditure incurred or utilized from special allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission as and when directed to furnish details of such expenditure.”

12. The projected additional capital expenditure allowed for the 2014-19 tariff period by order dated 24.2.2017 in Petition No. 323/GT/2014, is as under:

	<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19	Total
De-capitalization for Halon System	0.00	0.00	(-) 28.00	0.00	(-) 36.00	(-) 64.00

13. The Petitioner, in Form-9A, has submitted the actual additional capital expenditure (on cash basis), as stated below:

<i>(Rs. in lakh)</i>							
Sl. No.	Head of Work/ Equipment	2014-15	2015-16	2016-17	2017-18	2018-19	Total
A	Allowed Works						
1	Ash Handling system	0.00	0.00	0.00	0.00	0.00	0.00
B	New Claims						
1	Continuous Stack Emission Monitoring System (CSEMS)	0.00	194.84	0.12	20.99	0.81	216.76
2	Effluent Quality Management System	0.00	27.24	0.00	0.00	0.00	27.24
4	For Land Link Road	0.00	185.92	0.00	0.00	0.00	185.92
	Sub-total (B)	0.00	408.00	0.12	20.99	0.81	429.92
C	De-capitalization of Spares (part of capital cost)	(-)12.18	(-)28.99	(-)252.56	(-)172.97	(-) 711.09	(-)1177.78
D	Sub-total (A + B + C)	(-) 12.18	379.01	(-) 252.44	(-)151.98	(-) 710.28	(-)747.86
E	Discharge of liabilities	83.04	3.76	682.34	2.04	13.49	784.67



Sl. No.	Head of Work/ Equipment	2014-15	2015-16	2016-17	2017-18	2018-19	Total
	Total Additional Capital Expenditure claimed (D+E)	70.86	382.78	429.90	(-)149.94	(-)696.79	36.81

14. We now examine the actual additional capital expenditure claimed by the Petitioner:

A. Additional capital expenditure towards allowed works

a) Ash Handling System

15. The additional capital expenditure for Ash Handling system on cash basis, is 'nil' as shown above. However, the Petitioner has claimed additional capital expenditure of Rs.30.69 lakh in 2014-15, Rs.44.13 lakh in 2015-16, (-) Rs.156.67 lakh in 2016-17, Rs.0.61 lakh in 2017-18 and Rs.2.95 lakh in 2018-19 on accrual basis, towards FERV for Ash Handling system. In justification, the Petitioner submitted that this is restatement of liability on account of exchange rate variation for the admitted work during 2001-04 tariff period.

16. The Petitioner has also claimed the additional capital expenditure of Rs.84.00 lakh in 2016-17 on accrual basis towards Dry & Wet system AHP at Dhanras. In justification, the Petitioner has submitted that while reconciling the work executed by M/s Indure prior to 2003-04, it has accepted the works amounting Rs.84.00 lakh.

17. The matter has been considered. It is observed that the additional capital expenditure incurred towards FERV for Ash handling system is restatement of liability on account of exchange rate variation for the admitted work during the 2001-04 tariff period on accrual basis. Accordingly, the same shall be considered at the time of actual discharge of liability. As regards the additional capital expenditure of Rs.84.00 lakh in 2016-17 on accrual basis towards Dry and Wet system AHP at Dhanras, it is noticed that the Petitioner has not substantiated its claim with supporting documents and the reasons for holding such payments for a long time (since 2003-04). In view of



this, the claim is not allowed.

B. New Claims

b) Continuous Stack Emission Monitoring System (CSEMS)

18. The Petitioner has claimed actual additional capital expenditure of Rs.216.76 lakh (Rs.194.84 lakh in 2015-16, Rs.0.12 lakh in 2016-17, Rs.20.99 lakh in 2017-18 and Rs.0.81 lakh in 2018-19) on cash basis, towards installation of CSEMS based on the directions of the Uttar Pradesh Pollution Control Board (in short 'UPPCB') vide its letter dated 9.4.2014 under Regulation 14(3)(ii) of the 2014 Tariff Regulations.

19. The Respondent MPPMCL and Respondent CSPDCL have submitted that the additional capital expenditure claimed is not admissible under Regulation 14(3)(ii) of the 2014 Tariff Regulations as the same is not applicable for the plants which have completed their useful life. The Petitioner has submitted that in terms of the 2014 Tariff Regulations and the judgments dated 9.5.2019 in Appeal No. 125 of 2017 (NTPC v CERC & ors) and dated 29.1.2020 in Appeal No. 93 of 2017 (NTPC v CERC & ors), the claim of the Petitioner is admissible.

20. The matter has been considered. It is observed from the judgment dated 9.5.2019 of the APTEL in Appeal No.125/2017 relied upon by the Petitioner that while Regulation 14 is a special provision, Regulation 16 is a general provision. Hence, the general provision of Special allowance as contemplated under Regulation 16 would yield to the specific provision of Regulation 14(3) of the 2014 Tariff Regulations. It is noticed that the additional capital expenditure incurred by the Petitioner is in respect of the asset/works which is mandatorily required for compliance to the statutory directions of the UPPCB. In view of this, we allow the claim of the Petitioner under Regulation 14(3)(ii) of the 2014 Tariff Regulations. Further, the corresponding undischarged liability of Rs.17.35 lakh in 2015-16 shall be considered at the time of actual discharge of liability and (-) Rs.0.72 lakh in 2016-17 has been adjusted against



the corresponding balance liabilities.

c) Effluent Quality Management System (EQMS)

21. The Petitioner has claimed actual additional capital expenditure of Rs.27.24 lakh in 2015-16 towards installation of EQMS based on the notification of the Uttar Pradesh Pollution Control Board vide its letter dated 9.4.2014 under Regulation 14(3)(ii) of the 2014 Tariff Regulations. Further, the Petitioner has submitted that EQMS is for monitoring of the various effluent parameters, such as pH, Total suspended solids (TSS), Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) before discharging the effluent water out of the generating station's premises to avoid environment and water pollution.

22. We have considered the matter. It is noticed that the additional capital expenditure incurred by the Petitioner is in respect of the assets/works which are mandatorily required for compliance to the statutory directions of the UPPCB. In view of this, we allow the claim of the Petitioner under Regulation 14(3)(ii) of the 2014 Tariff Regulations. Further, the corresponding un-discharged liability of Rs.7.28 lakh in 2015-16 shall be considered at the time of actual discharge of liability.

d) Forest Land Link Road

23. The Petitioner has claimed actual additional capital expenditure of Rs.185.92 lakh in 2015-16 towards Forest Land link road under Regulation 14(3)(ii) of the 2014 Tariff Regulations. The Petitioner has submitted that in order dated 11.1.2010 in Petition No. 128/2009, the capitalisation of Rs.776.01 lakh towards cost of 87.002 Hectares of Forest land diverted for construction of Oxidation Pond, Link road and Township was allowed. It has submitted that payment of Rs.185.92 lakh was made to Forest Department, of State of Chhattisgarh, against the demand of a differential amount, on the current rates, for the above said alternate afforestation of 87.002 Hectares, of the same forest land. In addition, to the above payment, the Forest



Department raised a new demand note for the above diverted land in 2015-16 for compensatory afforestation and penal compensatory afforestation. Accordingly, the Petitioner has submitted that it has deposited the said amount to the Forest Department of State of Chhattisgarh.

24. The Respondent, MPPMCL has submitted that the that the Petitioner has not explained the event of 'change in law' for construction of link road. The Respondent, CSPDCL has submitted that the Petitioner has claimed special allowance in terms of the 2014 Tariff Regulations, for meeting the requirement for expenses beyond the useful life of the generating station. It has stated that since the generating station has already completed its useful life, such expenses should be met from special allowance only.

25. The matter has been considered. It is observed that the additional capital expenditure of Rs.185.92 lakh has been made to the Forest Department, Chhattisgarh against the demand of a differential amount, on the current rates, for the above said alternate afforestation of 87.002 Hectares of Forest land. The Petitioner has also submitted the demand letter dated 29.6.2015 from the Forest Department and the challan in respect of the payment made. The Petitioner has further submitted that the claim for Rs.185.92 lakh is only against compensatory afforestation demand raised by the Forest Department and no claim has been made against penal compensatory afforestation. Since the additional capital expenditure of Rs.185.92 lakh incurred by the Petitioner is towards compensatory afforestation made to the Forest Department, as stated above, the same is allowed under Regulation 14(3)(ii) of the 2014 Tariff Regulations.

De-capitalisation of Spares (Part of capital cost)

26. The Petitioner has claimed the following de-capitalization of spares, which are



part of capital cost and the same is allowed under Regulation 14(4) of the 2014 Tariff Regulations.

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
(-)12.18	(-)28.99	(-)252.56	(-)172.97	(-)711.09

Discharge of liabilities

27. The Petitioner has claimed the discharge of liabilities as follows:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
83.04	3.76	682.34	2.04	13.49

28. The Respondent, MPPMCL has submitted that the additional capital expenditure towards discharge of liabilities is not covered under Regulation 14(3)(vi) of the 2014 Tariff Regulations, since Regulation 14(3) of the 2014 Tariff Regulations is not applicable in case of unit/plants which have completed their life.

29. The matter has been considered. The balance un-discharged liabilities as on 31.3.2014 corresponding to allowed assets/works, as considered in order dated 24.2.2017 in Petition No. 323/GT/2014 is Rs.1458.13 lakh (Rs.1064.32 lakh pertaining to liabilities deducted as on 1.4.2009 and Rs.393.81 lakh towards liabilities added after 1.4.2009). However, in Form-18, the Petitioner has furnished details of un-discharged liabilities of Rs.1458.18 lakh (Rs.1248.04 lakh pertaining to liabilities deducted as on 1.4.2009 and balance Rs.210.15 lakh towards liabilities added after 1.4.2009) corresponding to allowed assets as on 1.4.2014. Accordingly, the un-discharged liabilities of Rs.1458.13 lakh as on 31.3.2014, as considered in order dated 24.2.2017 has been retained as on 1.4.2014, and the balance differential liability of Rs.0.05 lakh has been treated corresponding to disallowed assets.

30. In view of above, the discharge of liabilities allowed as part of additional capital expenditure are as under:



(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
83.04	3.76	682.34	2.04	13.49

31. Further, the flow of un-discharged liability, corresponding to allowed assets/works, during the 2014-19 tariff period are as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
(A) Out of liabilities deducted as on 1.4.2009					
Opening liability (a)	1064.32	1064.32	1064.32	97.57	97.57
Addition during the year (b)	0.00	0.00	0.00	0.00	0.00
Discharges during the year (c)	0.00	0.00	622.18	0.00	13.49
Reversal during the year (d)	0.00	0.00	344.56	0.00	0.00
Closing liability (e) = (a+b-c-d)	1064.32	1064.32	97.57	97.57	84.08
(B) Other liabilities					
Opening liability (f)	393.81	340.71	405.01	187.46	183.04
Addition during the year (g)	30.69	68.76	(-) 157.39	0.61	2.95
Discharges during the year (h)	83.04	3.76	60.16	2.04	0.00
Reversal during the year (i)	0.75	0.70	0.00	3.00	0.00
Closing liability (j) = (f+g-h-i)	340.71	405.01	187.46	183.04	185.99
Total Closing liabilities (e+j)	1405.03	1469.33	285.04	280.61	270.07

Reconciliation of the actual additional capital expenditure

32. The Petitioner has furnished the reconciliation statement of the actual additional capital expenditure period, with books, the summary of which is as under:

(Rs. in lakh)

	Ref	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	A	208793.30	217368.36	* 55936.74	* 83294.32	* 108627.84
Closing Gross Block	B	217368.36	221326.88	* 83294.32	* 108627.84	* 113889.63
Total additions as per books	C=B-A	8575.06	3958.52	* 27357.58	* 25333.52	* 5261.79
Ind-AS adjustment	D	0.00	0.00	(-)4700.67	(-)2567.35	(-)799.18
Net additions as per IGAAP	E=C+D	8575.06	3958.52	22656.91	22766.17	4462.61
Exclusions (items not allowable / not claimed)	F	8556.54	3510.75	22982.73	22917.53	5169.94
Additional capital expenditure claimed (on accrual basis)	G=E-F	18.51	447.77	(-)325.82	(-)151.36	(-)707.33
Un-discharged liabilities included above	H	30.69	68.76	(-)73.38	0.61	2.95
Discharges during the year	I	83.04	3.76	682.34	2.04	13.49
Net Additional Capital Expenditure claimed	J=G-H+I	70.86	382.78	429.90	(-)149.94	(-)696.79

* As per Ind-AS

Exclusions

33. The summary of exclusions from books of accounts under different heads for the



purpose of tariff are shown as follows:

(Rs. in lakh)

Sl. No.	Head of Work /Equipment	Additional Capital Expenditure claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B1	Additional capital expenditures pertaining to renovation & Modernization	3308.09	0.00	0.00	0.00	0.00
B2	Disallowed additional capital expenditure	1739.80	2073.27	13323.12	16424.98	402.21
B3	Items not claimed	0.00	8131.34	4012.17	2136.13	42.65
B4	Loan ERV	0.00	58.70	(-)44.23	681.78	(-)76.98
B5	Adjustment - BHEL CST Case	(-)166.85	0.00	0.00	0.00	0.00
B6	Capital Spares Capitalization during 2014-19 tariff period	5482.73	2551.81	8373.86	3926.81	4280.83
B7	MBOA Capitalization during 2014-19 tariff period	0.34	250.45	493.31	231.14	1016.89
B8	Inter Unit Transfer	0.78	(-)16.65	(-)138.30	1.21	(-)215.03
B9	Liability Reversal	(-)6.06	(-)0.70	(-)349.86	(-)6.35	(-)8.43
B10	De-capitalization of other Asset's part of capital cost	(-)304.48	0.00	(-)311.94	(-)20.19	0.00
B11	De-capitalization of MBOAs: Part of Capital Cost	(-)5.08	(-)6478.21	(-)1717.70	(-)67.66	(-)59.26
B12	De-capitalization of Spares: Not Part of Capital Cost	(-)1385.59	(-)2930.44	(-)40.92	(-)261.12	(-)146.73
B13	De-capitalization of MBOAs: Not Part of Capital Cost	(-)107.13	(-)128.82	(-)616.76	(-)99.59	(-)66.21
B14	De-capitalization of other Assets not part of capital cost	0.00	0.00	0.00	-29.62	0.00
B15	Regrouping of assets-Capitalization	0.00	0.00	0.57	0.00	0.00
B16	Regrouping of assets-de-Capitalization	0.00	0.00	(-)0.57	0.00	0.00
	Total Exclusions	8556.54	3510.75	22982.73	22917.53	5169.94

a) Additional capital expenditure pertaining to Renovation & Modernization

34. The Petitioner has sought the exclusion of capitalization of Rs.3308.09 lakh in 2014-15 for additional capital expenditure pertaining to R& M details as under:



(Rs. in lakh)

	2014-15
R&M of OTIS Elevator	348.89
De-capitalization- R&M of OTIS Elevator	(-)40.00
Ren of OTIS Elev in the plant & Adm Building	95.32
De-capitalization - Ren of OTIS Elev in the plant & Adm Building	(-)26.32
R&M C&I system (DDCMIS) of stage-I	1,336.76
De-capitalization - R&M C&I system (DDCMIS) of stage-I	(-)523.75
R&M C&I system (DDCMIS & SWAS) of stage-II	2,179.83
De-capitalization - R&M C&I system (DDCMIS & SWAS) of stage-II	(-)860.88
Elevator for CR. House, stage-I	46.75
De-capitalization - Elevator for CR. House, stage-I	(-)7.00
R&M of Generator Protection System stage-I	76.14
De-capitalization - R&M of stage-I Generator Protect System	(-)14.55
Renovation of 400 KV CT stage-II	121.16
De-capitalization - Renovation of 400 KV CT stage-II	(-)18.59
Replacement of 400 KV SWYD ABCB stage-II	188.12
De-capitalization - Replacement of 400 KV SWYD ABCB	(-)26.65
Ren of Stage-I st gen feeder control system	388.47
De-capitalization - Ren of stage- I st gen feeder control system	(-)30.00
Proc of Elect Test instrument to carry PDM	50.85
Up-gradation of ECD Raw coal feeder stage-II	23.53
Total R&M works	3308.09

35. The Petitioner, in justification of the same, has submitted that since the generating station has completed 25 years of commercial operation and is claiming Special Allowance, the additional capital expenditure pertaining to R&M are not being claimed and is kept under exclusion. The Commission observed that out of the total de-capitalisation of R&M works of (-) Rs.1547.73 lakh under exclusion for 2014-15, as claimed by the Petitioner, the de-capitalisation of (-) Rs.38.46 lakh only corresponds to assets not forming part of the allowed capital cost. Therefore, the de-capitalisation of R&M works under exclusion for 2014-15 to the extent of (-) Rs.1509.28 lakh is not allowed, as the same forms the part of the admitted capital cost of the generating station. Accordingly, we allow the exclusions of Rs.4855.82 lakh and de-capitalisation under exclusion of Rs.38.46 lakh for 2014-15.

b) Disallowed additional capital expenditure

36. The Petitioner has sought the exclusion of additional capitalization of Rs.1739.80 lakh in 2014-15, Rs.2073.27 lakh in 2015-16, Rs.13323.12 lakh in 2016-17, Rs.16424.98 lakh in 2017-18 and Rs.402.21 lakh in 2018-19. The details of the



exclusions are as under:

Sl. No.	Head of Work /Equipment	(Rs. in lakh) Additional Capital Expenditure Claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B2	Disallowed additional capital expenditure					
	Supply and Erection of Single Mode Optical Fiber Cable total	0.00	5.54	0.00	0.00	0.00
	3rd.Raising of Lagoon-II	7.28	0.00	0.00	0.00	0.00
	extension of OPD and LAB at hospital	5.55	0.00	0.00	0.00	0.00
	Strengthen / Buttress Dyke at Dhanras	1474.23	0.00	0.00	0.00	0.00
	ASH DISP LINE-TP9 TO WELL LG2	248.66	0.00	0.00	0.00	0.00
	Renovation of Fire water pipelines	0.19	0.00	0.00	0.00	0.00
	Fugitive Dust Suppression system at Dhanras	0.45	0.00	0.00	0.00	0.00
	Electrification of EDC extension	1.99	0.00	0.00	0.00	0.00
	Analog excitation system	1.46	0.00	0.00	0.00	0.00
	5 th Raising of Lagoon-1 after Its Buttressing	0.00	1522.38	0.00	0.00	0.00
	Dry Ash Filling in Fill-I area	0.00	32.37	0.00	0.00	0.00
	of	0.00	105.86	0.00	0.00	0.00
	Garlanding Work of 450NB PIPE OF LG-1	0.00	407.12	0.00	0.00	0.00
	5th Raising of Ash Dyke Lagoon - 1A&1B	0.00	0.00	213.65	0.00	0.00
	Renovation & Retrofitting of Electrostatic Precipitator Stage- I&II	0.00	0.00	13094.34	0.00	0.00
	Strengthening and Buttressing of Ash Dyke at Dhanras	0.00	0.00	15.13	0.00	0.00
	6th Raising of Lagoon 1 Total	0.00	0.00	0.00	1101.73	0.00
	FILL-2 Dry Ash Filling Dhanras	0.00	0.00	0.00	5.70	0.00
	Ren. & Retrofitting of ESP Stage- I&II	0.00	0.00	0.00	16179.95	0.00
	Strength / Buttress Dyke at Dhanras	0.00	0.00	0.00	1373.95	0.00
	Third Raising of Lagoon IA (344-347)	0.00	0.00	0.00	3.66	0.00
	De-capitalisation - R&M of ESP	0.00	0.00	0.00	(-)2240.00	0.00
	Civil Works for Dhanras Ash Dyke	0.00	0.00	0.00	0.00	253.41
	5th Raising of Lag-1A&1B after its Buttressing	0.00	0.00	0.00	0.00	6.47
	6th Raising of Lagoon 1	0.00	0.00	0.00	0.00	128.56
	Ash Discharge pipeline	0.00	0.00	0.00	0.00	1.28
	Dry Ash Filling Dhanras	0.00	0.00	0.00	0.00	0.86
	Strengthen / Buttress Dyke at Dhanras	0.00	0.00	0.00	0.00	11.64
	Sub Total	1739.80	2073.27	13323.12	16424.98	402.21

37. The Petitioner, in justification of the same, has submitted that these works were disallowed in order dated 25.1.2017 in Petition No. 345/GT/2014 and in order dated 24.2.2017 in Petition No.323/GT/2014. It was noted by the Commission that the



Petitioner had claimed de-capitalisation of R&M of ESP for (-) Rs.2240.00 lakh under exclusion for 2017-18, as these equipment (ESP) were part of the capital cost of the generating station and as these equipment were no more in service and were removed from the capital cost. Accordingly, the exclusions of Rs.18664.98 lakh only were allowed and the exclusions related to de-capitalisation of R&M ESP of Rs.2240.00 lakh for 2017-18 were disallowed. Further, the exclusions claimed for 2014-15, 2015-16, 2016-17 and 2018-19 are allowed.

c) Items Not Claimed

38. The Petitioner has sought the exclusion of capitalization/de-capitalisation of Rs.14322.29 lakh are as under:

(Rs. in lakh)

Sl. No.	Head of Work /Equipment	Additional Capital Expenditure claimed as Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B3	Items Not claimed	0.00	8131.34	4012.17	2376.40	42.65
	De-capitalisation due to R&M works	0.00	0.00	0.00	(-)240.27	0.00
	Sub Total	0.00	8131.34	4012.17	2136.13	42.65

39. The Petitioner, in justification of the same, has submitted that since the generating station has completed 25 years of commercial operation and claiming Special Allowance, additional capital expenditures and de-capitalisation pertaining to Renovation & Modernization are not being claimed and is kept under exclusion. It is observed that the Petitioner has also considered the de-capitalisation of R&M works of (-) Rs.240.27 lakh under this head in 2017-18 and this de-capitalisation includes assets of (-) Rs.24.70 lakh which do not form part of the capital cost allowed. Accordingly, we allow the exclusions of Rs.2376.40 lakh along with de-capitalisation of (-) Rs.24.70 lakh and disallow the de-capitalisation under exclusion to the extent of (-) Rs.215.57 lakh as the same forms the part of the admitted capital cost of the generating station and now becoming unserviceable. Further, the exclusions claimed for 2014-15, 2015-16, 2016-17 and 2018-19 are allowed.



d) Loan ERV

40. The Petitioner has sought the exclusion of Loan ERV of Rs.58.70 lakh in 2015-16, (-) Rs.44.23 lakh in 2016-17, Rs.681.78 lakh in 2017-18, (-) Rs.76.98 lakh in 2018-19. The Petitioner has submitted that it is required to bill loan ERV directly on the beneficiaries as per the 2014 Tariff Regulations. Hence, the exclusion of the said amount under this head is in order and is allowed.

e) Adjustment - BHEL CST Case

41. The Petitioner has claimed adjustment of (-) Rs.166.85 lakh towards M/s BHEL CST case in 2014-15 under exclusion. In justification, the Petitioner has submitted that the adjustment of CST amount is kept under exclusion, as the revision in capital cost is not envisaged in the 2014 Tariff Regulations. Hence, CST adjustment has been kept under exclusion and no revision in the capital cost is made on this behalf. It is observed that the Petitioner has not produced any supporting document (such as item against which CST is adjusted and put to use date of such items) in support of the said claim. In view of this, the exclusion of the said amount under this head for 2014-15 is not allowed.

f) Capitalization of Spares

42. The Petitioner has procured capital spares as under:

(Rs. in lakh)

Sl. No.	Head of Work/ Equipment	Additional Capital Expenditure claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B6	Capital Spares Capitalization	5482.73	2551.81	8373.86	3926.81	4280.83

43. The Petitioner has submitted that capitalisation of capital spares, after the cut-off date, are not allowed in terms of the 2014 Tariff Regulations and, therefore, the same has been kept under exclusion. As capitalization of spares over and above initial spares procured after the cut-off date of the generating station are not allowed for the purpose of tariff, as they form part of O&M expenses as and when consumed, the



Petitioner has excluded the said amount. Accordingly, the exclusion of the said amount under this head is in order and allowed.

g) Capitalization of Miscellaneous Bought out Assets (MBOA) Items

44. The Petitioner has capitalised MBOA items in 2014-19 tariff period as under:

(Rs. in lakh)

Sl. No.	Head of Work/ Equipment	Additional Capital Expenditure claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B7	Capitalization of MBOA items	0.34	250.45	493.31	231.14	1016.89

45. The Petitioner has submitted that MBOA items capitalized after the cut-off date are not allowed as per the 2014 Tariff Regulations and, therefore, the same has been kept under exclusion. The exclusion of the above-said amounts is found to be in order and is, therefore, allowed.

h) Inter-Unit Transfer (ITU)

46. The Petitioner has claimed exclusion of Inter-unit transfer in 2014-19 tariff period as under:

(Rs. in lakh)

Sl. No.	Head of Work/ Equipment	Additional Capital Expenditure claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B8	Inter Unit Transfer	0.78	(-) 16.65	(-) 138.30	1.21	(-)215.03

47. In justification of the same, the Petitioner has submitted that as per practice, the Commission has not considered Inter unit transfers for tariff and hence kept under exclusion. In view of the above, the exclusion of the said amounts is in order and allowed.

i) Reversal of Liability

48. The Petitioner has claimed exclusion of reversal of liabilities as under:

(Rs. in lakh)

Sl. No.	Head of Work/ Equipment	Additional Capital Expenditure claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B9	Reversal of Liability	(-) 6.06	(-) 0.70	(-) 349.86	(-) 6.35	(-) 8.43



49. In justification, the Petitioner has submitted that as tariff is determined on cash basis, the liability reversal has been kept under exclusion. In view of this, the exclusion of the said amounts is allowed.

j) De-capitalization of other assets - Part of capital cost

50. The Petitioner has claimed exclusion of de-capitalized other assets (Plant and Machinery, Construction equipment's etc.) amounting to (-) Rs.304.48 lakh in 2014-15, (-) Rs.311.94 lakh in 2016-17 and (-) Rs.20.19 lakh in 2017-18 which form part of the capital cost. The Commission observed that out of the total de-capitalisation of (-) Rs.304.48 lakh under exclusion for 2014-15 as claimed by the Petitioner, de-capitalisation of (-) Rs.66.80 lakh only is corresponding to assets not forming part of the admitted capital cost hence allowed under exclusion for 2014-15. Further, the de-capitalisation under exclusion for 2014-15 to the extent of (-) Rs.237.68 lakh, (-) Rs.311.94 lakh in 2016-17 and (-) Rs.20.19 lakh in 2017-18 is not allowed as the same forms the part of the admitted capital cost of the generating station.

k) De-capitalization of MBOA - Part of capital cost

51. The Petitioner has claimed exclusion of de-capitalized MBOA items as under:

(Rs. in lakh)

Sl. No.	Head of Work/ Equipment	Additional Capital Expenditure claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B11	De-capitalization of MBOA – Part of capital cost	(-) 5.08	(-) 6478.21	(-) 1717.70	(-) 67.66	(-) 59.26

52. It is observed from the submissions of the Petitioner that MBOA items were part of the capital cost allowed in tariff. Since these assets form part of the capital cost, the exclusion, for de-capitalization of these MBOA items, for the said amounts are not allowed.

l) De-capitalization of spares (Not part of capital cost)

53. The Petitioner has excluded de-capitalized spares, not part of capital cost as



under:

(Rs. in lakh)

Sl. No.	Head of Work / Equipment	Additional Capital Expenditure Claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B12	De-capitalization of Spares – Not Part of capital cost	(-) 1385.59	(-) 2930.44	(-) 40.92	(-) 261.12	(-) 146.73

54. The Petitioner, in justification of the same, has submitted that capitalization of spares beyond the cut-off date is not admissible as per the 2014 Tariff Regulations. Accordingly, the capitalization of spares has been claimed under exclusion. Since capitalization of spares brought after the cut-off date is not allowed to form part of the capital cost for the purpose of tariff, the exclusion of de-capitalization of these spares is in order and allowed.

m) De-capitalization of MBOA items - Not part of capital cost

55. The Petitioner has claimed exclusion of de-capitalized MBOA amounting to (-) Rs.107.13 lakh in 2014-15, (-) Rs.128.82 lakh in 2015-16, (-) Rs.616.76 lakh in 2016-17, (-) Rs.99.59 lakh in 2017-18 and (-) Rs.66.21 lakh in 2018-19 which do not form part of the capital cost. As these MBOA items do not form part of the capital cost for the purpose of tariff, the exclusion for de-capitalization of these MBOA items for the said amounts are allowed.

n) De-capitalization of other Assets - Not part of capital cost

56. The Petitioner has claimed exclusion of de-capitalized of other assets (Wagons) amounting to (-) Rs.29.62 lakh in 2017-18 which do not form part of the capital cost. In justification, the Petitioner submitted that the exclusion of the capitalisation of the said item was allowed by the Commission in order dated 5.11.2014 in Petition No.230/ GT/ 2013. As the item do not form part of the capital cost for the purpose of tariff, the exclusion for de-capitalization of these items for the said amounts are allowed.



o) Regrouping of Assets - Capitalization

57. The Petitioner has regrouped assets amounting to Rs.0.57 lakh in 2016-17 and claimed the same as exclusion. As additional capital expenditure of Rs.0.57 lakh is due to re-grouping, the exclusion has been allowed.

p) Regrouping of Assets – De-capitalization

58. The Petitioner has claimed exclusion of de-capitalisation of assets amounting Rs.0.57 lakh in 2016-17 due to regrouping. As de-capitalisation is due to regrouping, the exclusion of de-capitalisation of (-) Rs.0.57 lakh is allowed.

59. Based on the above discussion, the summary of exclusions allowed/ not allowed for the purpose of tariff is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Exclusions Claimed (A)	8556.54	3510.75	22982.73	22917.53	5169.94
Exclusions Allowed (B)	10475.44	9988.96	25012.38	25460.95	5229.21
Exclusion not allowed (A-B)	(-) 1918.90	(-) 6478.21	(-) 2029.64	(-) 2543.41	(-) 59.26

60. Accordingly, the additional capital expenditure allowed on cash basis for the 2014-19 tariff period is summarised as follows:

(Rs. in lakh)

Sl. No.	Head of Work/ Equipment	2014-15	2015-16	2016-17	2017-18	2018-19	Total
A	Allowed Works						
1	Works FERV-Ash Handling system	0.00	0.00	0.00	0.00	0.00	0.00
B	New Claims						
	Continuous Stack Emission Monitoring System (CSEMS)	0.00	194.84	0.12	20.99	0.81	216.76
2	Effluent Quality Management System	0.00	27.24	0.00	0.00	0.00	27.24
4	For Land Link Road	0.00	185.92	0.00	0.00	0.00	185.92
	Sub-total (B)	0.00	408.00	0.12	20.99	0.81	429.92
C	De-capitalization of Spares (part of capital cost)	(-)12.18	(-)28.99	(-)252.56	(-)172.97	(-)711.09	(-)1177.78



Sl. No.	Head of Work/ Equipment	2014-15	2015-16	2016-17	2017-18	2018-19	Total
D	Sub-total (A + B + C)	(-)12.18	379.01	(-)252.44	(-)151.98	(-)710.28	(-)747.86
E	Discharge of liabilities	83.04	3.76	682.34	2.04	13.49	784.67
F	Exclusions not allowed	(-) 1918.90	(-) 6478.21	(-) 2029.64	(-) 2543.41	(-) 59.26	(-) 13029.43
	Total Additional Capital Expenditure Allowed (D+E+F)	(-) 1848.04	(-) 6095.44	(-) 1599.74	(-) 2693.35	(-) 756.05	(-) 12992.61

Capital cost allowed for the 2014-19 tariff period

61. Accordingly, the capital cost allowed for the purpose of tariff is as follows:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	178071.97	176223.93	170128.49	168528.75	165835.40
Add: Additional Capital Expenditure allowed	(-)1848.04	(-)6095.44	(-)1599.74	(-)2693.35	(-)756.05
Closing Capital Cost	176223.93	170128.49	168528.75	165835.40	165079.35
Average Capital Cost	177147.95	173176.21	169328.62	167182.08	165457.38

Debt-Equity Ratio

62. Regulation 19 of the 2014 Tariff Regulations provides as under:

“19.(1) For a project declared under commercial operation on or after 1.4.2014 the debt equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost equity in excess of 30% shall be treated as normative loan:

Provided that:

(i) where equity actually deployed is less than 30% of the capital cost actual equity shall be considered for determination of tariff:

(ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

(iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt-equity ratio.

Explanation - The premium if any raised by the generating company or the transmission licensee as the case may be while issuing share capital and investment of internal resources created out of its free reserve for the funding of the project shall be reckoned as paid up capital for the purpose of computing return on equity only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) The generating Company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation



made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014 debt equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered

(4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014 but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014 the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

63. The gross loan and equity of Rs.90990.26 lakh and Rs.87081.70 lakh, respectively as on 1.4.2014 as allowed in order dated 24.2.2017 in Petition No. 323/GT/2014 has been retained as on 1.4.2014. Further, the additional capital expenditure approved above has been allocated to debt and equity in debt-equity ratio of 70:30. Further also, for assets de-capitalised during the 2014-19 tariff period debt-equity ratio of 50:50 has been considered as these assets were originally allocated to debt and equity in the debt-equity ratio of 50:50 in respective tariff petitions. Accordingly, the details of debt-equity ratio in respect of the generating station as on 1.4.2014 and as on 31.3.2019 are as follows:

	Capital cost as on 1.4.2014 (Rs. in lakh)	(%)	Additional capital expenditure (Rs. in lakh)	(%)	De-capitalization (Rs. in lakh)	(%)	Total cost as on 31.3.2019 (Rs. in lakh)	(%)
Debt	90990.26	51.10	850.22	70.00	(-) 7103.61	50.00	84736.88	51.33
Equity	87081.70	48.90	364.38	30.00	(-) 7103.61	50.00	80342.48	48.67
Total	178071.97	100.00	1214.60	100.00	(-)14207.21	100.00	165079.35	100.00

Return on Equity

64. Regulation 24 of the 2014 Tariff Regulations provides as under:

“24. Return on Equity:

(1) Return on equity shall be computed in rupee terms on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations transmission system including communication system and run of river hydro generating station and at the base rate of 16.50% for the storage type



hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage: Provided that:

(i) in case of projects commissioned on or after 1st April 2014 an additional return of 0.50% shall be allowed if such projects are completed within the timeline specified in Appendix-I:

(ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

(iii) additional ROE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee / National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

(iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission if the generating station or transmission system is found to be declared under commercial operation without commissioning any of the Restricted Governor Mode Operation (RGMO) / Free Governor Mode Operation (FGMO) data telemetry communication system up to load dispatch centre or protection system:

(v) as and when any of the above requirement are found lacking in a generating station based on the report submitted by the respective RLDC ROE shall be reduced by 1% for the period for which the deficiency continues: (vi) additional ROE shall not be admissible for transmission line having length of less than 50 kilometres.”

65. Regulation 25 of the 2014 Tariff Regulations provides as under:

“25. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee as the case may be. The actual tax income on other income stream (i.e. income of non-generation or non-transmission business as the case may be) shall not be considered for the calculation of “effective tax rate”.

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t) Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business as the case may be and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT) “t” shall be considered as MAT rate including surcharge and cess.

Illustration.

(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 20.96% including surcharge and cess: Rate of return on equity = $15.50/(1-0.2096) = 19.610\%$

(ii) In case of generating company or the transmission licensee paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from generation or transmission business for FY 2014-15 is Rs 1000 crore.

(b) Estimated Advance Tax for the year on above is Rs 240 crore.

(c) Effective Tax Rate for the year 2014-15 = Rs 240 Crore/Rs 1000 Crore = 24%

(d) Rate of return on equity = $15.50 / (1-0.24) = 20.395\%$



(3) The generating company or the transmission licensee as the case may be shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty if any arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over recovery of grossed up rate on return on equity after truing up shall be recovered or refunded to beneficiaries or the long-term transmission customers/DICs as the case may be on year to year basis.”

66. The Petitioner is entitled for Return on Equity for the generating station in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed following effective tax rates for the 2014-19 tariff period:

Year	Claimed effective tax rate (in %)	Grossed up ROE [(Base Rate)/(1-t)] (in %)
2014-15	20.961	19.610
2015-16	21.342	19.705
2016-17	21.342	19.705
2017-18	21.342	19.705
2018-19	21.549	19.758

67. We have considered the matter. The Petitioner has claimed Return on Equity for the 2014-19 tariff period, after grossing up the base rate of 15.50% with Effective Tax rates (based on MAT rates) for respective years in terms of Regulation 25 of the 2014 Tariff Regulations and hence the same has been considered. Accordingly, ROE has been worked out as follows:

<i>(Rs. in lakh)</i>						
		2014-15	2015-16	2016-17	2017-18	2018-19
Normative Equity-Opening	A	87081.70	86141.08	83011.01	82074.64	80723.36
Addition of Equity due to additional capital expenditure	B	(-) 940.63	(-) 3130.07	(-) 936.36	(-)1351.28	(-) 380.89
Normative Equity-Closing	C=(A+B)	86141.08	83011.01	82074.64	80723.36	80342.48
Average Normative Equity	D=[(A+C)/2]	86611.39	84576.04	82542.82	81399.00	80532.92
Return on Equity (Base Rate)	E	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate	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=(DxG)	16984.49	16665.71	16265.06	16039.67	15911.69



Interest on Loan

68. Regulation 26 of the 2014 Tariff Regulations provides as under:

“26. Interest on loan capital:

(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalization of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system as the case may be does not have actual loan then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee as the case may be shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee as the case may be in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 as amended from time to time including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

69. Interest on loan has been computed as under:



- a. Gross normative loan amounting to Rs.90990.26 lakh as considered in order dated 24.2.2017 in Petition No. 323/GT/2014 has been retained as on 1.4.2014.
- b. Cumulative repayment amounting to Rs.90493.00 lakh, as considered in order dated 24.2.2017 in Petition No. 323/GT/2014, has been retained as on 1.4.2014.
- c. Accordingly, the net normative opening loan as on 1.4.2014 is Rs.497.26 lakh.
- d. The weighted average rate of Interest on loan, as furnished by the Petitioner is considered for the 2014-19 tariff period.
- e. The repayment for the respective years of the 2014-19 tariff period has been considered equal to the depreciation allowed for that year.

70. Interest on loan has been worked out as follows:

		<i>(Rs. in lakh)</i>				
		2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan	A	90990.26	90082.85	87117.49	86454.11	85112.04
Cumulative repayment of loan up to previous year	B	90493.00	89701.59	86447.99	86141.79	84783.60
Net Loan Opening	C=(A-B)	497.26	381.26	669.49	312.32	328.45
Addition due to additional capital expenditure	D	(-) 907.41	(-) 2965.37	(-) 663.38	(-) 1342.07	(-) 375.17
Repayment of loan during the year	E	90.70	0.00	406.88	0.00	196.11
Repayment adjustment on account of de-capitalization	F	882.11	3253.60	1141.10	1358.19	385.18
Repayment adjustment on a/c of discharges / reversals corresponding to un-discharged liabilities deducted as on 1.4.2009	F1	0.00	0.00	428.01	0.00	5.97
Net Repayment of loan during the year	G=(E-F+F1)	(-) 791.41	(-) 3253.60	(-) 306.21	(-) 1358.19	(-) 183.10
Net Loan Closing	H=(C+D-G)	381.26	669.49	312.32	328.45	136.38
Average Loan	I=[(C+H)/2]	439.26	525.38	490.91	320.39	232.41
Weighted Average Rate of Interest on loan	J	8.7947%	8.6498%	8.2344%	7.3026%	7.7407%
Interest on Loan	K=(IxJ)	38.63	45.44	40.42	23.40	17.99

Depreciation

71. Regulation 27 of the 2014 Tariff Regulations provides as under:

"27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication



system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that in case of hydro generating station the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be shall not be allowed to be recovered at a later stage during the useful life and the extended life.

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.

(7) The generating company or the transmission license as the case may be shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.”



72. The cumulative depreciation and freehold land amounting to Rs.158600.76 lakh and Rs.824.10 lakh, as on 1.4.2014, as considered in order dated 24.2.2017 in Petition No. 323/GT/2014 has been retained as on 1.4.2014. Depreciation has been worked out as follows:

		(Rs. in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19
Average Capital Cost	A	177147.95	173176.21	169328.62	167182.08	165457.38
Value of freehold land	B	824.10	824.10	824.10	824.10	824.10
Depreciable Value	$C=[(A-B)\times 90\%]$	158691.46	155116.90	151654.07	149722.18	148169.95
Remaining depreciable value at the beginning of the year	D= [(C)-(Cumulative Depreciation at the end of previous year)]	90.70	0.00	406.88	0.00	196.11
Number of completed years at the beginning of the year	E	25.90	26.90	27.90	28.90	29.90
Depreciation (annualized)	F=D	90.70	0.00	406.88	0.00	196.11
Add: Cumulative depreciation adjustment of discharges / reversals corresponding to un-discharged liabilities deducted as on 1.4.2009	G	0.00	0.00	818.50	0.00	11.42
Less: Cumulative depreciation adjustment on account of de-capitalization	H	1587.80	5856.48	2053.99	2444.74	693.32
Cumulative depreciation (at the end of the period)	I= [(Cumulative depreciation at the end of previous year) +F+G-H]	157103.66	151247.19	150418.59	147973.84	147488.06

Note: Cumulative depreciation as on 31.3.2014 is Rs. 158600.76 lakh.

Compensation Allowance

73. Regulation 17(1) of the 2014 Tariff Regulations provides as under:

“17. Compensation Allowance:

(1) In case of coal-based or lignite-fired thermal generating station or a unit thereof, a separate compensation allowance shall be admissible to meet expenses on new assets of capital nature which are not admissible under Regulation 14 of these regulations, and in such an event, revision of the capital cost shall not be allowed on account of compensation allowance but the compensation allowance shall be allowed to be recovered separately.

(2) The Compensation Allowance shall be allowed in the following manner from the year following the year of completion of 10, 15, or 20 years of useful life:”



74. The Petitioner has claimed compensation allowance (unit-wise) to meet expenses on new assets of capital nature including in the nature of minor assets as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
500.00	500.00	0.00	0.00	0.00

75. The Respondent, MPPMCL has submitted that the Petitioner has claimed compensation allowance amounting to Rs.1000 lakh in view of Regulation 17 of the 2014 Tariff Regulations. The compensation allowance is allowed in lieu of non-admissible additional capital expenditure up to the useful life of the generating unit. The Respondent has submitted that the generating unit of the plant is completing their useful life during the concerned financial year and therefore, the compensation allowance has to be allowed on pro-rata basis up to the useful life of the plant since after completion 25 years of service, there is no prescribed rate for allowing compensation allowance.

76. The Petitioner has submitted that the compensation allowance for a unit is admissible from the year succeeding the year of completion of 10 years from its COD, and accordingly it continues as annual claim in the year, unit completes its useful life. The Petitioner submitted that similar treatment is made with respect to the special allowance. It is submitted that Unit-6 has completed its useful life in 2015-16, and after completion of the same it is entitled for special allowance. But both the allowances are claimed separately for the same unit i.e., Compensation allowance during 2015-16 for this unit and special allowance from 2016-17 onwards. It is also submitted that the Commission has also decided the compensation allowance in order dated 24.2.2017 in Petition no. 323/GT/2014 for the 2014-19 tariff period for the generating station.

77. We have considered the submission of the parties. Unit-I to Unit-V have already completed useful life of 25 years, Unit-VI will be completing useful life of 25 years in



2015-16. Accordingly, the compensation allowance claimed by the Petitioner is allowed as under:

<i>(Rs. in lakh)</i>					
Compensation Allowed	2014-15	2015-16	2016-17	2017-18	2018-19
Unit Capacity (500 MW)	500.00	500.00	0.00	0.00	0.00

Special Allowance

78. In terms of Regulation 16 of 2014 Tariff Regulations, the Special Allowance claimed by the Petitioner is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
11056.83	11758.94	16747.00	17810.43	18941.40

79. The Respondent, MPPMCL in its reply has contended that the Petitioner has claimed Rs.76313 lakh towards Special Allowance in accordance with Regulation 16 of the 2014 Tariff Regulations in lieu of R&M expenses. The Respondent has also submitted that the additional capital expenditure claimed after completion of useful life may be disallowed in lieu of Special Allowance and prayed that the additional capitalisation expenditure claimed on R&M activities by the Petitioner may also be disallowed. The Petitioner submitted that the Respondent has sought to challenge the Regulations of the Commission which is not permissible in law.

80. The matter has been considered. As per Regulation 16(2) of 2014 Tariff Regulations, the Special Allowance for Stage-I and Stage-II of the generating station has been worked out and allowed as under:

<i>(Rs. in lakh)</i>								
Unit No.	Capacity (MW)	Date of COD	Year of completion of useful life of 25 years	Special Allowance as per Regulation 16				
				2014-15	2015-16	2016-17	2017-18	2018-19
1	200	1-Aug-83	2008-09	1328.51	1412.87	1502.59	1598.01	1699.48
2	200	1-Jan-84	2008-09	1328.51	1412.87	1502.59	1598.01	1699.48
3	200	1-Jun-84	2009-10	1328.51	1412.87	1502.59	1598.01	1699.48
4	500	1-Mar-88	2012-13	3321.28	3532.19	3756.48	3995.02	4248.70
5	500	1-Apr-89	2013-14	3750.00	3988.13	4241.37	4510.70	4797.13



Unit No.	Capacity (MW)	Date of COD	Year of completion of useful life of 25 years	Special Allowance as per Regulation 16				
				2014-15	2015-16	2016-17	2017-18	2018-19
#-6	500	1-Jun-90	2015-16	0.00	0.00	4241.37	4510.70	4797.13
Year wise Total for the generating station				11056.83	11758.94	16747.00	17810.43	18941.40

Operation & Maintenance Expenses

81. Regulation 29 (1) (a) of the 2014 Tariff Regulations provides the year-wise O&M expense norms for the generating station of the petitioner claimed as under:

Unit Size (MW)	<i>(Rs. In lakh/MW)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
200	23.90	25.40	27.00	28.70	30.51
500	16.00	17.01	18.08	19.22	20.43

82. Proviso to the Regulation 29 (1) (a) of the 2014 Tariff Regulations states as under:

“Provided that the above norms shall be multiplied by the following factors for arriving at norms of O&M expenses for additional units in respective sizes for the units whose COD occurs on or after 1.4.2014 in the same station:

200/210/250 MW	Additional 5th & 6th units	0.90
	Additional 7th & more units	0.85
500 MW above	Additional 3rd & 4th units	0.90
	Additional 5th & above units	0.85

83. The generating station has 3 (three) units of 200 MW capacity in Stage-I and 3 (three) units of 500 MW capacity in Stage-II and all these units have achieved COD prior to the period 2009-14. Hence, the proviso to Regulation 29(1)(a) of the 2014 Tariff Regulations are not applicable in this case. Accordingly, the normative O&M expenses claimed by the Petitioner in terms of the 2014 Tariff Regulations are allowed as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
38340.00	40755.00	43320.00	46050.00	48951.00



Water Charges

84. The first proviso to Regulation 29(2) of the 2014 Tariff Regulations provide as follows:

“29 (2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:

Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition...”

85. The Respondent MPPMCL and Respondent CSPDCL have submitted that as per MOEF&CC Notification dated 7.12.2015, the thermal power generating stations commissioned before 1.1.2017 have to meet specific water consumption up to maximum of 3.5 m³/ MW and further computed the water charges as shown below:

Item	2014-15	2015-16	2016-17	2017-18	2018-19
Units generated in MUs	15018	15380	15005	15373	14897
Water Consumption norm as per MoEF notification (in m ³ /MWh)	3.5	3.5	3.5	3.5	3.5
Water consumption worked out as per norm of MoEF notification in Million Cubic meter (MCM)	52.56	53.80	52.52	53.80	52.14
Rate in Rs / Cm (As claimed by the Petitioner)	12.25	12.25	12.25	12.25	12.25
Water charges to be allowed Rs Cr	64.39	65.94	64.33	65.91	63.87
Excess claim by petitioner Rs Cr	17.39	16.79	16.98	15.95	18.05

86. The Respondents have submitted the Petitioner has indicated the water consumption of Korba STPS Stage-I & Stage-II (this generating station) and Korba STPS Stage-III combined, instead of providing the details of actual water consumption in respect of Korba STPS Stage-I and Stage-II separately. The Respondents have requested to allow water charges based on the above said notification. In response, the Petitioner has submitted that it is entitled to claim water charges based on water consumption depending upon the type of plant, type of cooling water system, etc., in terms of proviso to Regulation 29(2) of the 2014 Tariff Regulations. The Petitioner has submitted that as the water charges are expenditure of revenue nature for successful operation of the unit/station, therefore, these charges form part of O&M expenditure,



and accordingly have been claimed as actual O&M expenditure for the purpose of tariff. The Petitioner has further submitted that the water charges depend upon actual water consumption as well as contracted water quantity, in line with the Water Agreement as signed with the State Water Resources Department. The Petitioner has further clarified that the agreement for water charges is entered into as per the rules/provisions of the respective state water boards/irrigation departments (as the case may be), wherein the generating station is situated. Accordingly, the generating station has to sign the agreement for its installed capacity in line with the same. It is also submitted that water is the raw material for any thermal generating plant like fuel. If a generating station is installed through long term PPA route, the generating station has to ensure water and coal corresponding to the ex-bus MCR capacity or at least the normative ex-bus capacity of the station so that it can offer its availability for supply of energy to the respective beneficiaries as per their entitlements. It is pertinent to mention that arrangement of raw materials is carried out on long term basis based on anticipated consumption for the same as per the contracted capacity of the station. As regards water, it is arranged in similar way, taking into account the peak requirements of the units in different season and the maximum demand envisaged, so that any loss in generation due to shortage of water during such periods may not be allowed to happen. The Petitioner has further submitted that the water agreement for the generating station including BALCO Captive Power Plant (BCPP) which is owned and operated by M/S Sterlite has been done based on allocation of water quantity on daily basis and the aggregated billing for water consumption is carried out on monthly basis. It is further submitted that if the actual drawl is less than contracted quantity, the minimum payment of water charges is made based on allocation equivalent to 90% of the monthly contracted quantity for Korba STPS Stage-I & Stage-II, Korba STPS Stage-III & BCPP and if the actual drawl exceeds the contracted quantity on monthly



basis, the water charges are payable @1.5 times of the applicable rate of water charges. As, the water agreement was done considering the full capacity of the generating station in view of serving the beneficiaries in a better way by utilizing the best generating station capacity in declaring the schedule, it is inappropriate to calculate the water charges based on PLF of the generating station because the Petitioner is liable to pay the charges as per relevant provisions of the Water Agreement entered with the State Water body. The Petitioner has, therefore, prayed to allow the water charges as claimed.

87. The Petitioner has submitted that the contracted quantity for Korba STPS (all Stages) including BCPP was 110 MCM/year, which was inadvertently mentioned in petitions (Petition No. 451/GT/2020 and Petition No. 395/GT/2020) that the contracted quantity was reduced to 101 MCM/year from 2016-17 onwards. The Petitioner has submitted that based on the request of BALCO, BCPP's contracted water quantity was reduced by State Water Body from 18 MCM to 9 MCM, thereby reducing the contracted annual water quantity for Korba STPS including BCPP from 110 MCM to 101 MCM with effect from 1.2.2018 onwards and in support of its claim has submitted the letter from Hasdeo Barrage Water Resources Department, Korba dated 2.2.2018. The Petitioner has also submitted that it has tied up the contracted quantum of water based on station peak requirement on account of various considerations including seasonal peak demand, so that any loss in generation due to shortage of water during such periods may not be allowed to happen. The Petitioner has further submitted the yearly detailed computation of water charges for the period 2014-19 indicating contracted quantity of water, actual water consumption, rate of water charges, payment made to Water Body based on 90% of contracted quantity/actual consumption, etc. The Petitioner, in addition, has submitted that water charges for this generating station and Korba STPS Stage-III are derived from the water charges



pertaining to Korba STPS (all Stages) on pro-rata basis, of installed capacity of the respective stations. The consolidated summary sheet indicating the water charges for Korba STPS (all Stages) and prorated water charges for Korba STPS Stage-I & Stage-II (this generating station) and Korba STPS Stage-III submitted by the Petitioner is as follows:

	2014-15	2015-16	2016-17	2017-18	2018-19
Water Allocation/ Contracted Qty (Korba STPS including BCPP) (MCM)	110	110	110	109	101
Actual water Consumption (Korba STPS including BCPP) (MCM)	82.48	81.22	86.19	75.98	64.97
Actual water Consumption (Korba STPS all Stages) (MCM)	64.59	63.28	69.81	59.53	55.97
Rate of Water Charges (Rs. /Cu.M)	12.25	12.25	12.25	12.25	12.25
Total Water Charges Paid (Korba STPS including BCPP) (Rs. lakh)	12109.65	12248.56	12127.51	11967.11	11135.24
Total Water Charges Paid (Korba STPS) (Rs. lakh)	10126.02	10243.14	10067.49	10135.54	10142.97
Total Water Charges paid for Korba STPS Stage-I & Stage-II (pro-rata on installed capacity) (Rs. lakh)	8178.71	8273.31	8131.44	8186.40	8192.40
Total Water Charges paid for Korba STPS Stage-III (pro-rata on installed capacity) (Rs. lakh)	1947.31	1969.84	1936.06	1949.14	1950.57

88. It is noticed from records that the Petitioner, in response to ROP dated 27.7.2021 has submitted that the contracted annual water quantity for Korba STPS including BCPP ranges from 110 MCM to 101 MCM. Thus, the water allocation/contracted quantity for 2017-18 above has been considered 109 MCM, instead of 1.09 MCM, which appears to be an inadvertent typographical error.

89. It is observed that the water agreement has been done considering the full plant capacity and also, the Petitioner is liable to pay for 90% of the monthly contracted quantity, even if the actual drawl is less than contracted quantity. In view of the above, the water charges as per actual in terms of Regulation 29 (2) of the 2014 Tariff



Regulations, are allowed separately for this generating station as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
8178.71	8273.31	8131.44	8186.40	8192.40

Capital spares

90. The last proviso to Regulation 29(2) of the 2014 Tariff Regulations provides as under:

“29(2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:

xxxx

Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization.”

91. The Petitioner has submitted that in order to meet the customers demand and to maintain high machine availability at all times by the generating station, units/ equipment's are taken under overhaul/ maintenance and inspected regularly for wear and tear. During such works, spares parts of equipment which became damaged/ unserviceable are replaced/ consumed so that the machine continue to perform at expected efficiency on sustained basis. Further, the Petitioner submitted that the capital spares consumed are not funded through compensatory allowance or special allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization. The Petitioner has submitted the year-wise details of the capital spares consumed by the generating station during the 2014-19 tariff period in terms of the last proviso to Regulation 29(2) of 2014 Tariff Regulations, in Form 17, as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1397.77	2959.43	293.48	434.09	857.82

92. We have examined the list of the capital spares consumed by the Petitioner. The capital spares comprise of (i) spares which form part of the capital cost and (ii) spares



which do not form part of the capital cost of the project. In respect of capital spares which form part of the capital cost of the project, the Petitioner has been recovering tariff since their procurement and, therefore, the same cannot be allowed as part of the additional O&M expenses. Accordingly, only those capital spares, which do not form part of the capital cost of the project, are being considered. It is pertinent to mention that the term 'capital spares' has not been defined in the 2014 Tariff Regulations. The term capital spares, in our view, is a piece of equipment, or a spare part, of significant cost that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt. Keeping in view, the principle of materiality and to ensure standardised practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs.1 (one) lakh, on prudence check of the details furnished by the Petitioner in Form-17 of the petition, has been considered for the purpose of tariff. The Commission is also of the view that spares of value less than Rs. 1(one) lakh would normally form part of normal repair and maintenance expenses. Based on this, the details of the allowed capital spares considered for 2014-19 tariff period is summarized as under:

	<i>(Rs in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Capital spares not part of capital cost claimed	1385.59	2930.44	40.92	261.12	146.73
Value of spares Rs.1(one) lakh and below are disallowed on individual basis	5.22	17.38	24.55	33.68	15.16
Net total value of capital spares considered	1380.37	2913.06	16.37	227.44	131.57

93. Further, we are of the view that spares do have a salvage value. Accordingly, in line with the practice of considering the salvage value, presumed to be recovered by the Petitioner on sale of other capital assets, on becoming unserviceable, the salvage value of 10% has been deducted from the cost of capital spares considered above, for the 2014-19 tariff period. Therefore, on prudence check of the information furnished by



the Petitioner in Form-17 and on applying the said ceiling limit along with deduction of the salvage value @10%, the net capital spares allowed in terms of Regulation 29(2) of 2014 Tariff Regulations is as under:

	<i>(Rs. In lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Net total value of capital spares considered	1380.37	2913.06	16.37	227.44	131.57
Less: Salvage value @ 10%	138.04	291.31	1.64	22.74	13.16
Net Capital spares allowed	1242.33	2621.76	14.73	204.69	118.41

94. Based on the above, the total annualised O&M expenses allowed for 2014-19 tariff period in respect of the generating station, is summarized as under :

	<i>(Rs. In lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses as per Regulation 29(1)	38340.00	40755.00	43320.00	46050.00	48951.00
Additional O&M Expenses under Regulation 29(2)					
Water Charges	8178.71	8273.31	8131.44	8186.40	8192.40
Capital Spares	1242.33	2621.76	14.73	204.69	118.41
Total O&M Expenses allowed	47761.04	51650.07	51466.17	54441.10	57261.81

Impact of wage revision

95. The Petitioner has claimed an amount of Rs.17129.52 lakh (Rs.75.15 lakh during 2015-16, Rs.5384.94 lakh during 2016-17, Rs.5486.45 lakh during 2017-18 and Rs.6182.98 lakh during 2018-19) as impact of wage revision of employees of CISF and Kendriya Vidyalya Staff from 1.1.2016 and employees of the Petitioner posted at the generating station with effect from 1.1.2017. However, it is noticed that the said claim of the Petitioner includes the impact on account of the payment of additional PRP/ ex-gratia to its employee's consequent upon wage revision. As such, as per consistent methodology adopted by the Commission of excluding PRP/ex-gratia from actual O&M expenses of past data for finalization of O&M norms for various tariff settings, the additional PRP/ ex-gratia paid, as a result of wage revision impact, has been excluded from the wage revision impact claimed by the Petitioner in the present case. Accordingly, the claim of the Petitioner in respect of wage revision impact stands



reduced to Rs.15271.51 lakh with the following year-wise break-up

(Rs. in lakh)

	2015-16	2016-17	2017-18	2018-19	Total
Wage revision impact claimed excluding PRP/ ex-gratia	75.15	5384.94	5114.84	4696.58	15271.51

96. The Petitioner vide affidavit dated 29.6.2021 has submitted the following:

- (a) Comparative table indicating the actual O&M expenses incurred at this generating station versus the normative O&M expenses allowed for the 2014-19 tariff period for the whole generating station (i.e., all Stages of KSTPS);*
- (b) Actual impact of pay revision duly certified by Auditor, Expenses after comparing salaries wages before and after pay revision; and*
- (c) Detailed break-up of the actual O&M expenses booked by the Petitioner on gross basis*

97. The Respondent, MPPMCL has submitted that the paragraph 33.2 of SOR of the 2014 Tariff Regulations the impact of wage revision shall only be considered after seeing impact of one full year and if it is found that O&M norms provided under Regulations are inadequate/insufficient to cover all justifiable O&M expenses for the particular year including employee expenses then balance amount may be considered for reimbursement but in the absence of the complete information provided by the Petitioner, the claim is not justifiable. The Respondent has requested the Commission to disallow the claim of the Petitioner in the absence of complete details of head-wise year-wise actual O&M expense incurred vis-à-vis allowed O&M on normative basis.

98. The Respondent, MSEDCL has submitted that the Commission in Statement of Reasons to the 2014 Tariff Regulations, has held that the O&M expenses incurred by the Central generating stations were broadly classified by the Commission into three heads namely (i) Repair and Maintenance Expenses (ii) Administrative & General Expenses and (iii) Employee Expenses. Accordingly, in the draft Tariff Regulations, the Commission had provided for a normative percentage (40%) of Employee Expenses to total O&M expenses for different type of generating stations. The Respondent has further submitted that the Commission, while deciding the normative



O&M expenses for the Petitioner’s generating stations for the 2014-19 tariff period under the 2014 Tariff Regulations had considered the actual expenditure incurred during the period from 2008-09 to 2012-13. The Respondent has stated that the Commission before approving the Tariff Regulations for any control period, seeks data (including data in respect of O&M expenses) in pre-defined templates from all generating companies and the norms for O&M expenses are approved after giving due consideration of the requirements of various generating companies. It has stated that the normative O&M expenses specified under Regulation 35 of the 2019 Tariff Regulations were approved after giving due consideration to the requirement of various generating companies. The Respondent has requested the Commission to assess the actual O&M expenses based on audited accounts of all the NTPC thermal stations to verify if there is any difference between the audited O&M expenses and the normative O&M expenses of the stations and accordingly, allow or disallow the impact of pay revision as claimed by the Petitioner.

99. The Respondent, CSDPCL has submitted that Commission has determined the norms for O&M charges for the generating sets of different sizes which includes employee expenses as well. The Respondent has further submitted that there is no provision in the 2014 Tariff Regulations for any additional O&M charges. It has also submitted that the claim of the Petitioner is not supported by law and thus the claim may be disallowed.

100. In response, the Petitioner has furnished the comparative table indicating the actual O&M expenses versus normative O&M expenses recovered in tariff for Korba STPS (all Stages combined) (2600 MW) for the 2014-19 tariff period as follows:

<i>(in Rs. lakh)</i>						
Sr. No.		2014-15	2015-16	2016-17	2017-18	2018-19
1	Actual O&M	53814.62	57633.45	59457.85	58868.26	63723.54



Sr. No.		2014-15	2015-16	2016-17	2017-18	2018-19
	expenditure for Korba STPS excluding water charges (2600 MW)					
2	Total Normative O&M recovery excluding water charges in tariff for Korba STPS (2600 MW)	45540	48409.50	51456	54699	58144.5
3	Difference (Normative – Actual) for Korba STPS (2600 MW)	(-8274.62)	(-9223.95)	(-8001.85)	(-4169.25)	(-5579.04)

101. The Petitioner has further submitted the actual O&M expenses prorated, in terms of the MW ratio and compared to the Normative O&M expenses allowed by the Commission as follows:

<i>(in Rs. lakh)</i>						
Sr. No.		2014-15	2015-16	2016-17	2017-18	2018-19
1	Actual O&M expenditure incurred for Korba STPS Stage-I and II (2100 MW) excluding water charges (Pro rata in the ratio of installed capacity)	43465.65	46550.09	48023.65	47547.44	51469.01
2	Normative O&M recovery in tariff of Korba STPS Stage-I and II (2100 MW) allowed vide order dated 24.2.2017 in Petition No. 323/GT/2014	38340.00	40755.00	43320.00	46050.00	48951.00
3	Difference (Normative – Actual)	5125.65	5795.09	4703.65	1497.44	2518.01

102. The Petitioner has submitted that the O&M expense norms for the 2014 Tariff Regulations were decided on actual O&M expenses for 2008-09 to 2012-13 period. However, 3rd Pay Revision Committee for CPSU's were not in existence and/ or incorporated while the 2014 Tariff Regulations were being specified by the Commission. The Petitioner has further submitted that the implementation of recommendations of 7th Pay Commission and Office Memorandum of Department of Public Enterprises ("DPE") were communicated in 2016/2017 whereas the 2014 Tariff



Regulations were notified much prior to 3.8.2017. Accordingly, the Petitioner has prayed that the impact thereof, ought to be made pass through in terms of Regulation 54 and Regulation 55 of the 2014 Tariff Regulations.

103. The Commission, while specifying the O&M expense norms under the 2014 Tariff Regulations, had considered the actual O&M expense data for the period from 2008-09 to 2012-13. However, considering the submissions of the stakeholders, the Commission in the Statement of Object and Reasons (SOR) to the 2014 Tariff Regulations had observed that the increase in employees cost due to impact of pay revision impact will be examined on a case-to-case basis balancing the interest of generating stations and the consumers. The relevant extract of SOR is extracted as follows:

*"29.26 Some of the generating stations have suggested that the impact of pay revision should be allowed on the basis of actual share of pay revision instead of normative 40% and one generating company suggested that the same should be considered as 60%. In the draft Regulations, the Commission had provided for a normative percentage of employee cost to total O&M expenses for different type of generating stations with an intention to provide a ceiling limit so that it does not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission would however, like to review the same considering the macroeconomics involved as these norms are also applicable for private generating stations. In order to ensure that such increase in employee expenses on account of pay revision in case of central generating stations and private generating stations are considered appropriately, **the Commission is of the view that it shall be examined on case-to-case basis, balancing the interest of generating stations and consumers.***

*33.2 The draft Regulations provided for a normative percentage of employee cost to total O&M expenses for generating stations and transmission system with an intention to provide a ceiling limit so that the same should not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission shall examine the increase in employee expenses on case to case basis and shall consider the same if found appropriate, to ensure that overall impact at the macro level is sustainable and thoroughly justified. Accordingly, clause 29(4) proposed in the draft Regulations has been deleted. **The impact of wage revision shall only be given after seeing impact of one full year and if it is found that O&M norms provided under Regulations are inadequate/insufficient to cover all justifiable O&M expenses for the particular year including employee expenses, then balance amount may be considered for reimbursement.***

104. It is observed that above methodology as indicated in SOR suggests comparison of normative O&M expenses with actual O&M expenses, on year-to-year basis. However, in this respect, the following facts need consideration:



- a) The norms are framed based on the averaging of the actual O&M expenses of past five years to capture the year-on-year variations in sub-heads of O&M expenses;
- b) Certain cyclic expenditure may occur with a gap of one year or two years and as such adopting a longer duration i.e. five years for framing of norms also captures such expenditure which is not incurred on year to year basis;
- c) When generators find that their actual expenditure has gone beyond the normative O&M expenses in a particular year, they put departmental restrictions and try to bring the expenditure for the next year below the norms.

105. In consideration of above facts, the Commission finds it appropriate to compare the normative O&M expenses with the actual O&M expenses for a longer duration so as to capture the variation in the sub-heads. Accordingly, it is decided that for ascertaining that whether the O&M expense norms provided under the 2014 Tariff Regulations are inadequate/ insufficient to cover all justifiable O&M expenses including employee expenses, the comparison of the normative O&M expenses and the actuals O&M expenses incurred shall be made for four years i.e. 2015-19, on combined basis which is commensurate with the wage revision claim being spread over these four years.

106. The matter has been examined on the basis of the submissions of the parties and the documents available on record. The Petitioner has furnished the detailed break-up of the actual O&M expenses incurred during the 2014-19 tariff period for combined stages i.e. Stage-I, Stage-II and Stage-III of the generating station (2600 MW). It is noticed that the total O&M expenses incurred is more than the normative O&M expenses recovered during each year of the 2014-19 tariff period. The impact of the wage revision could not be factored by the Commission while framing the O&M expenses norms under the 2014-19 Tariff Regulations since the pay/ wage revision came into effect from 1.1.2016 (CISF & KV employees) and 1.1.2017 (employees of the Petitioner) respectively. As such, in terms of relevant provisions of SOR of the 2014 Tariff Regulations, the approach followed for arriving at the allowable impact of



pay revision is given in the subsequent paragraphs.

107. First step is to compare the normative O&M expenses with the actual O&M expenses for the period from 2015-16 to 2018-19, commensurate to the period for which wage revision impact has been claimed. For like to like comparison, the components of O&M expenses like productivity linked incentive, water charges, filing fees, ex-gratia, loss of provisions, prior period expenses, community development, store expenses, ash utilization expenses, RLDC fee & charges and others (without breakup/ details) which were not considered while framing the O&M expenses norms for the 2014-19 tariff period, have been excluded from the yearly actual O&M expenses of the generating station as well as corporate centre. Having brought the normative O&M expenses and actual O&M expenses at same level, if normative O&M expenses for the period 2015-19 are higher than actual O&M expenses (normalized) for the same period, the impact of wage revision (excluding PRP and ex-gratia) as claimed for the period is not admissible/ allowed as the impact of pay revision gets accommodated within the normative O&M expenses. However, if the normative O&M expenses for the period 2015-19 are less than the actual O&M expenses (normalized) for the same period, the wage revision impact (excluding PRP and ex-gratia) to the extent of under recovery or wage revision impact (excluding PRP and ex-gratia), whichever is lower, is required to be allowed as wage revision impact for the period 2015-19.

108. The details as furnished by the Petitioner for actual O&M for Stages-I and Stage-II for the period from 1.4.2014 to 31.3.2019, and wage revision impact (excluding PRP and ex-gratia) for the generating station i.e., Korba STPS Stage-I and Stage-II is shown in the table as follows:



(Rs. in lakh)

Year	Actual O&M expenses for Korba STPS I and STPS II (excluding water charges & Capital Spares)	Wage Revision impact claimed for Korba STPS I and STPS II excluding PRP/Ex-gratia
2014-15	43465.65	0.00
2015-16	46550.09	75.15
2016-17	48023.65	5384.94
2017-18	47547.44	5114.84
2018-19	51469.01	4696.575
Total	237055.80	15271.51

109. As stated, for like-to-like comparison of the actual O&M expenses and normative O&M expenses, the expenditure against O&M expenses sub-heads as discussed at above, has been excluded from the actual O&M expenses to arrive at the actual O&M expenses (normalized) for the combined Stage-I, Stage-II and Stage-III of the generating station (2600 MW). Accordingly, the following table portrays the comparison of normative O&M expenses versus the actual O&M expenses (normalized) along with wage revision impact claimed by the Petitioner for the generating station (Stage-I and Stage-II 2100 MW) for the period 2015-19 commensurate with the wage revision claim being spread over these four years:

(Rs. in lakh)

Sl. No.		2015-16	2016-17	2017-18	2018-19	Total for 2015-19
1	Actual O&M expenditure (excluding water Charges) for Korba STPS (Combined for stage-I, Stage-II and Stage-III)	57633.45	59457.86	58868.26	63723.54	239,683.11
2	Actual O&M expenditure (normalized) for Korba STPS (Combined for stage-I, Stage-II and Stage-III) (a)	50853.83	41925.48	40197.05	43508.06	176484.41
3	Actual O&M expenditure (normalized) for Korba STPS Stage -I and Stage-II prorated based on capacity (b)	41074.25	33862.89	32466.85	35141.13	142545.11
4	Normative O&M Expenses for Korba STPS Stage-I and Stage-II (c)	40755.00	43320.00	46050.00	48951.00	179076.00
5	Under-recovery (d) = [(b)-(c)]	319.25	(-)9457.11	(-)13583.15	(-)13809.87	(-)36530.89

110. It is observed from the table above that for the years of wage revision impact i.e.,



2015-16 to 2018-19, the normative O&M expenses allowed on a combined basis, are in excess of the actual expenses incurred by the Petitioner. As such, the Commission is not inclined to allow the recovery of impact of wage revision through additional O&M expenses, since the normative O&M expenses allowed to the generating station in terms of the Regulations, is sufficient to cater to the requirement of the impact of wage revision

Impact of Goods and Service Tax (GST)

111. The Petitioner has claimed the impact of GST as a change in law under Regulation 3(9) read with Regulation 14(3) of 2014 Tariff Regulations. The Petitioner stated that the impact of increase in rate of indirect tax from 15% to 18% has been calculated on all taxable services and being claimed for the period 1.7.2017 to 31.3.2019. The Petitioner has claimed Rs.733.55 lakh towards impact of GST for the period 1.7.2017 to 31.3.2019.

112. The Respondent, MPPMCL has submitted that through enactment of GST Act the Government of India has rationalized the tax regime by subsuming various taxes/cess/duties like excise duty, service tax, VAT, sales tax etc. and have also reduced various tax slabs which has generally resulted in reduction of overall applicable tax rate in the country and therefore the claim of the Petitioner does not appear to be just and proper. A generalized statement that the impact of increase in rate of indirect taxes from 15% to 18% shall not be considered as a proof of additional burden on the Petitioner. Thus, the claim against GST based on mathematical calculation shall not be allowed as it should be based on difference of actual indirect taxes paid by the Petitioner and the amount of indirect taxes already covered in normative O&M expenses. In view of the above, the Respondent has requested that the Petitioner may be directed to submit the item-wise details of the amount of GST paid vis-à-vis the amount which might have been paid considering old tax regime to



evaluate the impact of GST and the claims based on assumptions shall be rejected. The Respondent, CSPDCL has submitted that Petitioner has claimed GST to the tune of Rs.7.34 Cr under “Change in Law” on account of increased expenditure for the O&M activities without providing documentary proof for such claims. Therefore, the same may be disallowed. The Respondent, MSEDCL has submitted that the claim of GST Expenses towards O&M Expenses will lead to additional burden on the consumers. Also, the GST Expenses towards O&M Expenses is applicable only if a service is outsourced, which reflects the lack of expertise within the Company. The cost of doing that job internally will be lower than outsources. Further, O&M operating norms are the ceiling norms and generating companies are required to manage within these limits. Respondent MSEDCL has requested that as the O&M expenses are already claimed by the Petitioner under Regulation 29(1) of the 2014 Tariff Regulations, the additional expenditure of GST expenses towards O&M activities may be disallowed.

113. In response, the Petitioner has clarified that it has already furnished a detailed Auditor Certificate with respect to impact of GST on O&M expenses. The Petitioner has clarified that GST being a change in law, falls under Regulation 3 (9) read with Regulation 14 (3) of the 2014 Tariff Regulations. The Petitioner has further provided the details pertaining to the claims. The Petitioner has submitted that O&M expenses comprises of Employee Wages and General Administration and Other expenses (Renamed as “Other Expenses” in the books of the company after introduction of IND AS). These inter alia include Repair and Maintenance and other Overheads of the generating station. The Petitioner has bifurcated the General Administration and Other expenses into Material consumed, Taxable services and Exempt Services. The Petitioner has further submitted that the amount claimed by the Petitioner is only on account of differential in rate of tax for Taxable services (i.e., Under Erstwhile Service



Tax 15% and in GST 18%). Furthermore, the details pertaining to the claim of Rs.7.33 Crore as additional O&M charges on account of GST, a change in law' event, are tabulated below:

Nature		2017-18 (Q2-Q4)	2018-19
		Post GST period Claimable (Rs. lakh)	GST Claimable (Rs. lakh)
Material	A	4829.30	8059.02
Services- Taxable	B	14428.01	21294.68
Services- Exempt	C	22182.71	29961.58
Total General Administration Expenses	D=(A+B+C)	41440.02	59315.28
Impact of 3% additional tax on Taxable Services due to GST	$E=[(B*0.03)/(1.18)]$	366.81	541.39
Equated Capacity of Korba STPS(MW)	F	2600	2600
Equated Capacity of Korba STPS I & STPS II (MW)	G	2100	2100
Amount claimed in Tariff petition	(E*G/F)	296.27	437.28
Total Claim			733.55

114. We have considered the submissions of parties. While framing the 2014 Tariff Regulations, the variation in taxes and duties have been captured in the normative O&M expenses allowed and any change in taxes is not admissible separately. Further, the 2014 Tariff Regulations has not specifically mentioned any consideration for allowing taxes separately. The escalation rates considered in the normative O&M expenses is only after consideration of the variations during last five years, which also takes care of variation in taxes also. It may be noted that in case of reduction of taxes or duties, the Petitioner is not required to reimburse any taxes in tariff. Therefore, for any increase in taxes and duties, the Petitioner is not entitled to claim any additional expenses. As such, additional O&M expenses on account of GST are not admissible separately.

Operational Norms

(a) Normative Annual Plant Availability Factor



115. The Normative Annual Plant Availability Factor of 83% for 2014-15 to 2016-17 and 85% for 2017-18 and 2018-19, in accordance with the provisions of Regulation 36 (A) of the 2014 Tariff Regulations as approved by Commission's order dated 24.2.2017 in Petition No. 323/GT/2014 has been allowed.

(b) Auxiliary Energy Consumption

116. The Petitioner has submitted Auxiliary Energy Consumption (AEC) of 6.68% as per Regulation 36(E)(a) of the 2014 Tariff Regulations as approved in order dated 24.2.2017 in Petition No. 323/GT/2014 has been allowed.

(c) Station Heat Rate

117. The Gross Station Heat Rate of 2396.43 Kcal/ kWh which is in accordance with the provisions of Regulation 36(C)(a) of the 2014 Tariff Regulations and approved in order dated 24.2.2017 in Petition No. 323/GT/2014 for the 2014-19 tariff period has been allowed.

(d) Specific Oil consumption

118. The secondary fuel oil consumption of 0.50 ml/kWh, which is in accordance with the provisions of Regulation 36(D)(a) of the 2014 Tariff Regulations and approved in order dated 24.2.2017 in Petition No. 323/GT/2014 for the 2014-19 tariff period has been allowed.

Interest on Working Capital

119. Sub-section (a) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as follows:

"28. Interest on Working Capital:

(1) The working capital shall cover:

(a) Coal-based/lignite-fired thermal generating stations:

(i) Cost of coal or lignite and limestone towards stock if applicable for 15 days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;

(ii) Cost of coal or lignite and limestone for 30 days for generation corresponding to the normative annual plant availability factor;



(iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor and in case of use of more than one secondary fuel oil cost of fuel oil stock for the main secondary fuel oil;

(iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29;

(v) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and

(vi) Operation and maintenance expenses for one month.

(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this regulation shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period.

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof as the case may be is declared under commercial operation whichever is later.

(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”

(a) Fuel Cost for Working Capital calculations

120. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of cost of fuel as a part of Working Capital is to be based on the landed price and gross calorific value of the fuel as per actuals, for the three months preceding the first month for which the tariff is to be determined. Regulation 30 (6) of the 2014 Tariff Regulations provides as follows:

“30. Computation and Payment of Capacity Charge and Energy Charge for Thermal Generating Stations:

(6) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formula:

(a) For coal based and lignite fired stations

$$ECR = \frac{\{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100}{(100 - AUX)}$$

(b) xxxxx

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF=(a) Weighted Average Gross calorific value of coal **as received**, in kCal per kg for coal based stations

(b) Weighted Average Gross calorific value of primary fuel **as received**, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations.



(c) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio.

CVSF = Calorific value of secondary fuel, in kCal per ml.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LC = Normative limestone consumption in kg per kWh.

LPL = Weighted average landed price of limestone in Rupees per kg.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month. (In case of blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio)

SFC = Normative Specific fuel oil consumption, in ml per kWh.

LPSFi = Weighted Average Landed Price of Secondary Fuel in Rs./ml during the month

121. Therefore, in terms of the above regulation, for determination of the Energy Charges in working capital, the GCV on 'as received' basis is to be considered.

122. Regulation 30 (7) of the 2014 Tariff Regulations provides as follows:

“(7) The generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., as per the forms prescribed at Annexure-I to these regulations:

Provided that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels as received shall also be provided separately, along with the bills of the respective month:

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months.”

123. The issue of 'as received' GCV specified in Regulation 30 of the 2014 Tariff Regulations for computation of energy charges was challenged by the Petitioner and other generating companies through various writ petitions filed before the Hon'ble High Court of Delhi (W.P. No.1641/2014-NTPC v CERC). The Hon'ble Court directed the Commission to decide the place from where the sample of coal should be taken for measurement of GCV of coal on 'as received' basis on the request of Petitioners. In terms of the directions of the Hon'ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 (approval of tariff of Kahalgaon STPS for the 2014-19 tariff period), decided as under:



“58. In view of the above discussion, the issues referred by the Hon’ble High Court of Delhi are decided as under:

“(a) There is no basis in the Indian Standards and other documents relied upon by NTPC etc. to support their claim that GCV of coal on as received basis should be measured by taking samples after the crusher set up inside the generating station, in terms of Regulation 30(6) of the 2014 Tariff regulations.

(b) The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic Auger in accordance with provisions of IS 436(Part1/Section1)-1964 before the coal is unloaded. While collecting the samples, the safety of personnel and equipment as discussed in this order should be ensured. After collection of samples, the sample preparation and testing shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436(Part1/Section1)-1964 which has been elaborated in the CPRI Report to PSERC.”

124. The Review Petition No.11/RP/2016 filed by the Petitioner against the aforesaid order dated 25.1.2016 in Petition No. 283/GT/2014 was rejected by the Commission vide order dated 30.6.2016. The Petitioner has also filed Petition No.244/MP/2016 before this Commission inter alia praying for removal of difficulties in view of the issues faced by it in implementing the Commission’s orders dated 25.1.2016 and 30.6.2016 with regard to sampling of coal from loaded wagon top for measurement of GCV. The Commission by order dated 19.9.2018 disposed of the preliminary objections of the respondents therein and held that the petition is maintainable. Against this order, some of the respondents have filed appeal before the APTEL in Appeal Nos. 291/2018 (GRIDCO v NTPC & ors) and the same is pending adjudication.

125. In Petition No. 323/GT/2014 filed by the Petitioner for determination of tariff of this generating station for the 2014-19 tariff period, had not furnished GCV of coal on ‘as received’ basis for the preceding 3 months i.e. for January 2014, February 2014 and March 2014 that were required for determination of Interest on Working Capital (IWC). Therefore, the Commission vide order dated 24.2.2017 in Petition No. 323/GT/2014 had considered GCV of coal on as ‘billed basis’ and provisionally allowed adjustment for total moisture while allowing the cost of coal towards generation & stock and two months’ energy charges in the working capital.



126. The Petitioner, in this petition, has furnished average GCV of coal as 3648.97 kCal/kg on “as received” basis for the period from October 2016 to March 2019. Also, as per the order dated 25.1.2016 in Petition No. 283/GT/2014, the Petitioner, in Form-13 F, has considered the average GCV of coal on “as received basis” i.e. from wagon top, for the period from October 2016 to March 2019, for the purpose of computation of working capital for the 2014-19 tariff period. The Petitioner has further submitted that CEA vide letter dated 17.10.2017 has opined that a margin of 85-100 kCal/kg for pit-head station and a margin of 105-120 kCal/kg for non-pit head station is required to be considered as loss of GCV of coal on “as received” and on “as fired basis respectively. Accordingly, the Petitioner has considered a margin of 100 kCal/kg on average GCV of coal for the period from October 2016 to March 2019 for computation of working capital of the generating station. Accordingly, the cost of fuel component in the working capital of the generating station claimed by the Petitioner is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (15 days of Generation)	4784.06	4784.06	4784.06	4899.34	4899.34
Cost of Coal towards Generation (30 days of Generation)	9568.12	9568.12	9568.12	9798.68	9798.68
Cost of Secondary fuel oil (2 months of Generation)	554.20	555.72	554.20	567.56	567.56

127. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of 84.037 paise/kWh for the generating station based on GCV and price of fuel (coal and secondary fuel oil) as indicated above.

128. The Respondent, MPPMCL has submitted that the Petitioner has failed to furnish the information of GCV of primary fuel on as received basis and in the absence of information regarding GCV of primary fuel on as received basis, the Commission decided to compute the GCV in accordance with the formula given in tariff order dated 21.3.2017 and only the Petitioner is liable to bear the burden, if any, of its inaction to comply with the 2014 Tariff Regulations. Respondent submitted that Interest on



Working Capital is not a subject of true-up, the prayer for consideration of GCV for Interest on Working Capital purpose is not tenable. The Respondent has further submitted that the claim of the Petitioner of margin of about 100 kCal/Kg in GCV for calculation of working capital is beyond the scope of the 2014 Tariff Regulations and same may be disallowed.

129. The Respondents, MSEDCL and CSPDCL have submitted that the Clause 28(2) of the 2014 Tariff Regulations, provides for the cost of fuel in cases covered under sub-clauses (a) and (b) of clause 28(1) of the 2014 Tariff Regulations for consideration of the working capital, shall be based on the gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined. Further, even in the 2019 Tariff Regulations, the GCV of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined for computing working capital. In view of provisions of both the Regulations, the Respondents have requested to disallow consideration of any such loss in GCV for computing working capital. The Respondents have submitted that for calculation of Energy Charge for coal based and lignite fired stations, Weighted Average GCV of coal as received needs to be considered as per Regulation 30(6) of the 2014 Tariff Regulations. The Respondent further submitted that there is no such provision to consider GCV of coal after adjusting GCV loss due to storage in the 2014 Tariff Regulations and requested to disallow consideration of any such loss in GCV and energy charges calculated thereof.

130. In response, the Petitioner has clarified that it has provided the monthly GCV on as received basis from October 2016 to March 2019 in the petition and average of the same, after applying margin for GCV loss due to storage, etc., has been used for IOWC purpose. It has further submitted that GCV on as received basis for the months



of January 2014 to March 2014, has also been provided. The Petitioner has clarified that it has claimed GCV margin in accordance with Central Electricity Authority (CEA) letter dated 17.10.2017.

131. The Petitioner has also submitted the details of GCV on 'as received' basis for the months of January 2014 to March 2014. The Petitioner has submitted that though the computation of energy charges moved from 'as fired' basis to 'as received' basis, with effect from 1.4.2014, in terms of Regulation 30(6) of the 2014 Tariff Regulations, however, for calculation of IWC under Regulation 28(2) of the 2014 Tariff Regulations, the GCV shall be as per 'actuals' for the three months preceding the first month for which tariff is to be determined. It has further submitted that for the 2014-19 tariff period, Regulation 28(2) of the 2014 Tariff Regulations unequivocally provide that the actual cost and GCV of the preceding three months shall be considered and for these preceding three months (January 2014 to March 2014), by virtue of it falling under the 2009 Tariff Regulations, shall be computed on the basis of 'as fired' GCV. Referring to the judgment of the Hon'ble Supreme Court in PTC India v CERC (2010) 4 SCC 603 and the judgment of APTEL in NEEPCO v TERC (2006) APTEL 148, the Petitioner has submitted that the Commission is bound by the provisions of the Tariff Regulations and that purposive interpretation ought to be given to the 2014 Tariff Regulations and interest on working capital ought to be computed in terms of Regulation 28 (2) of the 2014 Tariff Regulations, 2014 on actual GCV i.e., 'as fired' GCV. The Petitioner, in response to the clarification sought regarding details of GCV on as received basis for the month of January 2014 to March 2014, which was uploaded on the website of the Petitioner and shared with the beneficiaries are as under:



Sr. No.	Month	Weighted Average GCV of coal received (EM basis) (kcal/kg)	Total moisture (TM) (in %)	Equilibrated moisture (EM) (in %)	Weighted Average GCV of coal received (TM basis) (kcal/kg)
		(A)	(B)	(C)	(D)= [(A)*(1-B%)/(1-C%)]
1	January 2014	3768	11.70	5.20	3509.65
2	February 2014	3868	11.90	5.30	3598.42
3	March 2014	3289	11.90	4.80	3043.71
	Average				3383.93

132. The submissions in the matter have been considered. As stated above, the Petitioner in Form-13 F has considered the average GCV of coal on “as received basis” i.e. from wagon top for the period from October 2016 to March 2019 for the purpose of computation of working capital for the 2014-19 tariff period. In addition to the average GCV, it has also considered a margin of 100 kCal/kg for computation of the working capital of the generating station.

133. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of cost of fuel as a part of IWC is to be based on the landed price and gross calorific value of the fuel, as per actuals, for the three months preceding the first month for which the tariff is to be determined. Thus, calculation of IWC for 2014-19 tariff period is to be based on such values for months of January 2014, February 2014 and March 2014. The Petitioner has not been able to furnish these values at the time of determination of tariff for the 2014-19 tariff period in Petition No. 323/GT/2014. In the instant truing up petition, the Petitioner has proposed that instead of GCV for January 2014, February 2014 and March 2014, the Commission should consider the average values for months of October 2016 to March 2019 since the measurement of ‘as received’ GCV has been done in accordance with directions of the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014. In our view, the proposal of the Petitioner to consider the retrospective application of 30 months’ (October 2016 to March 2019) average of ‘as received’ GCV data in place of ‘as received’ GCV of the



preceding three months (January 2014 to March 2014) is not acceptable, keeping in view that the average GCV for 30 months may not be commensurate to the landed cost of coal for the preceding three months to be considered for calculating IWC in terms of Regulation 28(2) of the 2014 Tariff Regulations and that due to efflux of time (gap of 30 month), the quality of coal extracted from the linked mines would have undergone considerable changes. Also, the consideration of loss of GCV of 100 kCal/kg cannot be considered, as the same is not as per provisions of the 2014 Tariff Regulations.

134. It is observed that though the Petitioner has furnished the details of 'as received' GCV for the three months of January 2014 to March 2014 as in table under paragraph 131 above, it has submitted that GCV of fuel is to be considered 'on actuals' for January 2014 to March 2014 and as such, GCV is required to be considered on an 'as fired' basis. In other words, the Petitioner has contended that since the period of January 2014 to March 2014 falls in the 2009-14 tariff period for measurement of GCV of coal, Regulation 18(2) read with Regulation 21(6) of the 2009 Tariff Regulations was applicable which mandates that generating company shall measure GCV on 'as fired' basis (and not on 'as received' basis). This submission of the Petitioner is also not acceptable in view of provisions of Regulation 21(6) of the 2009 Tariff Regulations that was amended on 31.12.2012, by addition of the following provisos.

"The following provisos shall be added under Clause (6) of Regulation 21 of the Principal Regulations as under, namely:

Provided that generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., as per the form 15 of the Part-I of Appendix I to these regulations:

Provided further that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels as received shall also be provided separately, along with the bills of the respective month:

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid



fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months."

135. Accordingly, in terms of the above amendment to the 2009 Tariff Regulations, the details regarding the weighted average GCV of the fuels on 'as received' basis was also required to be furnished by the Petitioner along with bills of the respective month. Also, bills detailing the parameters of GCV and price of fuel were to be displayed by the Petitioner on its website, on monthly basis.

136. As per SOR to the 2014 Tariff Regulations, we note that the main consideration of the Commission while moving from 'as fired' GCV to 'as received' GCV for the purpose of energy charges under Regulation 30(6) of the 2014 Tariff Regulations for the 2014-19 tariff period was to ensure that GCV losses which might occur within the generating station after receipt of coal are not passed on to the beneficiaries on account of improper handling and storage of coal by the generating companies. As regards the allowable (normative) storage loss within the generating station, CEA had observed that there is negligible difference between 'as received' GCV and 'as fired' GCV. As such, for the purpose of calculating energy charges, the Commission moved from 'as fired' GCV to 'as received' GCV under Regulation 30(6) of the 2014 Tariff Regulations without allowing any margin between the two measurements of GCV. Thus, 'as received' GCV was made applicable for the purpose of calculating working capital requirements based on the actual GCV of coal for the preceding three months of the first month for which tariff is to be determined in terms of Regulation 28(2) of 2014 Tariff Regulations. In case the submission of the Petitioner that 'as fired' is to be considered 'at actuals' for the preceding three months for purpose of IWC, the same would mean allowing (and passing through) all storage losses which would have occurred during the preceding three months (January 2014 to March 2014) for the 2014-19 tariff period. This, according to us, defeats the very purpose of moving from



'as fired' GCV to 'as received' GCV in the 2014 Tariff Regulations. In this background and keeping in view that in terms of amended Regulation 21(6) of the 2009 Tariff Regulations, the Petitioner is required to share details of the weighted average GCV of the fuel on 'as received' basis, we consider the fuel component and energy charges for two months based on 'as received' GCV of the preceding three months (January 2014 to March 2014) for the purpose of computation of IWC in terms of Regulation 28(2) of the 2014 Tariff Regulations.

137. The Petitioner has furnished GCV of 3383.93 kCal/kg which represents the simple average of GCV of the preceding three months (January 2014 to March 2014). As specified by the 2014 Tariff Regulations, the weighted average GCV for three months, based on the net coal quantities as per Form-15 of the petition and the monthly GCVs as submitted by the Petitioner in the above table, works out to 3379.42 kCal/kg. As regards the margin of 100 kcal/kg considered on the average GCV of coal for the period from October 2016 to March 2019 for the purpose computation of Interest on Working Capital of the generating station, the same is not considered since the provisions of the 2014 Tariff Regulations, do not provide for the same. Accordingly, the cost for fuel components in working capital has been computed considering the fuel details (price and GCV) as per Form-15, and GCV of 3379.42 kCal/kg. 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 the fuel components in working capital.

138. Based on the above discussion, the cost of fuel components in working capital is worked out and allowed as follows:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (15 days of Generation)	5023.46	5023.46	5023.46	5144.50	5144.50
Cost of Coal towards	10046.91	10046.91	10046.91	10289.01	10289.01



generation (30 days of Generation)					
Cost of Secondary fuel oil (2 months of Generation)	554.20	555.72	554.20	567.56	567.56

(b) Energy Charge Rate (ECR) for Working Capital calculations

139. Regulation 30(6)(a) of the 2014 Tariff Regulations provides for computation and payment of Energy Charge for thermal generating stations. The Petitioner has claimed ECR ex-bus of 84.037 Paise/kWh for the generating station based on the landed cost of coal during preceding three months, GCV of coal (on 'as received' basis for average of 30 months) along with the storage loss of 100 kCal/kg & GCV and price of Oil procured and burnt for the preceding three months of 2014-19 for the generating station. Since these claims have not been considered as stated in paragraph above, the allowable ECR, based on the operational norms as specified under the 2014 Tariff Regulations and on weighted average of 'as received' GCV of 3379.42 kcal/kg is worked out as follows:

	Unit	2014-19
Capacity	MW	2100
Gross Station Heat Rate	kCal/kWh	2396.43
Auxiliary Energy Consumption	%	6.68
Weighted average GCV of oil	kCal/lit	10093.36
Weighted Average GCV of Coal for January 2014 to March 2014	kCal/kg	3379.42
Weighted average price of oil	Rs. /KL	43555.91
Weighted average price of coal	Rs. /MT	1131.35
Rate of Energy Charge ex-bus	Rs. /kWh	0.881

140. Energy Charges for 2 months for the purpose of working capital has been calculated based on the following basis:

- a) ECR of Rs.0.881/kWh as calculated above (rounded off to three places as per Regulation 30(6) of the 2014 Tariff Regulations).
- b) Two months ex-bus energy corresponding to installed capacity of 2100 MW, normative availability of 83% for 2014-15 to 2016-17 and 85% for 2017-18 and 2018-19, along with AEC of 6.68%.

141. The Energy Charges of two months for the purpose of working capital has been worked out as under:



<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
20921.89	20979.21	20921.89	21426.03	21426.03

(c) Working Capital for Maintenance Spares

142. The Petitioner in Form-13B has claimed maintenance spares in the working capital shown in the table as follows:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
9583.30	10412.58	11425.97	12090.64	12924.30

143. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the operation & maintenance expenses. In terms of Regulation 29(2) of the 2014 Tariff Regulations, the cost of maintenance spares @20% of the operation & maintenance expenses including water charges and cost of capital spares consumed, allowed are as follows:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
9552.21	10330.01	10293.23	10888.22	11452.36

(d) Working Capital for Receivables

144. Receivables equivalent to two months of capacity charge and energy charge has been worked out duly taking into account mode of operation of the generating station on secondary fuel, as follows:

<i>(Rs.in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - for two months (A)	20921.89	20979.21	20921.89	21426.03	21426.03
Fixed Charges – for two months (B)	12214.07	12835.22	12801.52	13237.71	13747.74
Total (C) = (A+B)	33135.96	33814.43	33723.40	34663.74	35173.78

(e) Working Capital for O&M Expenses

145. O&M expenses for 1 (one) month claimed by the Petitioner in Form-13B for the purpose of working capital is shown in the table as follows:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
3993.04	4338.57	4760.82	5037.77	5385.12

146. Regulation 28(a)(vi) of the 2014 Tariff Regulations provides for Operation and



maintenance expenses for one month for coal-based generating station as a part of working capital. The one-month O&M expenses, as allowed for tariff purpose is shown in table as follows:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
3980.09	4304.17	4288.85	4536.76	4771.82

(f) Rate of interest on working capital

147. In terms of clause (3) of Regulation 28 of the 2014 Tariff Regulations, the rate of interest on working capital has been considered as 13.50% (Bank rate of 10.00% + 350 bps).

148. Accordingly, Interest on working capital has been computed as follows:

<i>(Rs. in lakh)</i>						
		2014-15	2015-16	2016-17	2017-18	2018-19
Working capital cost of coal for 15 days for stock	A	5023.46	5023.46	5023.46	5144.50	5144.50
Working capital cost of coal for 30 days for generation	B	10046.91	10046.91	10046.91	10289.01	10289.01
Working capital cost of oil for 2 months	C	554.20	555.72	554.20	567.56	567.56
O & M expenses for 1 month	D	3980.09	4304.17	4288.85	4536.76	4771.82
Maintenance Spares for Working capital	E	9552.21	10330.01	10293.23	10888.22	11452.36
Receivables for Working capital	F	33135.96	33814.43	33723.40	34663.74	35173.78
Total Working Capital	G = (A+B+C+D+E+F)	62292.82	64074.70	63930.06	66089.79	67399.02
Rate of Interest	H	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital	I=(G*H)	8409.53	8650.08	8630.56	8922.12	9098.87

Annual Fixed Charges

149. Based on the above, the annual fixed charges approved for the generating station for the 2014-19 tariff period are summarised as follows:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	90.70	0.00	406.88	0.00	196.11
Interest on Loan	38.63	45.44	40.42	23.40	17.99
Return on Equity	16984.49	16665.71	16265.06	16039.67	15911.69



	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	47761.04	51650.07	51466.17	54441.10	57261.81
Interest on Working Capital	8409.53	8650.08	8630.56	8922.12	9098.87
Compensation Allowance	500.00	500.00	0.00	0.00	0.00
Special allowance	11056.83	11758.94	16747.00	17810.43	18941.40
Total annual fixed charges approved	84841.23	89270.24	93556.10	97236.72	101427.86
Total annual fixed charges approved in order dated 24.2.2017 in Petition No. 323/GT/2014	82315.99	84715.08	91920.01	95982.02	100193.18

150. The difference between the annual fixed charges already recovered by the Petitioner and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 8 (13) of the 2014 Tariff Regulations.

151. Petition No. 451/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
(Member)

Sd/-
(Arun Goyal)
(Member)

Sd/-
(I.S Jha)
(Member)

Sd/-
(P.K. Pujari)
(Chairperson)