

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 285/GT/2020

Coram:

Shri I.S. Jha, Member

Shri Arun Goyal, Member

Shri Pravas Kumar Singh, Member

Date of Order: 18th January, 2023

IN THE MATTER OF

Petition for truing-up of tariff of Vindhyachal Super Thermal Power Station Stage-III (1000 MW) for the period 2014-19.

AND

IN THE MATTER OF

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

.... Petitioner

Vs

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Vidyut Nagar, Jabalpur 482008
2. Maharashtra Electricity Distribution Company Limited,
Prakashgad, Bandra (East), Mumbai 400051
3. Gujarat Urja Vikas Nigam Limited (GUVNL),
Vidyut Bhawan, Racecourse, Vadodara- 390007
4. Chhattisgarh State Power Distribution Company Limited,
P.O Sundar Nagar, Dangania, Raipur- 492013
5. Electricity Department of Goa,
Vidyut Bhawan, Panaji, Goa
6. DNH Power Distribution Company Limited,
UT of DNH, Silvassa- 396230
7. Electricity Department,
Administration of Daman & Diu,
Daman- 396210

...Respondents



Parties Present:

Shri Venkatesh, Advocate, NTPC
Shri Ashutosh K. Srivastava, Advocate, NTPC
Shri Tushar Srivastava, Advocate, NTPC
Shri Abhishek Nangia, Advocate, NTPC
Shri Nihal Bharadwaj, Advocate, NTPC
Shri Harsh Vardhana, NTPC
Shri Anurag Naik, MPPMCL
Shri Arvind Banerjee, CSPDCL

ORDER

This petition has been filed by the Petitioner, NTPC Limited for truing up of tariff of Vindhyachal Super Thermal Power Station Stage-III (1000 MW) (in short 'the generating station') for the period 2014-19, in accordance with Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short 'the 2014 Tariff Regulations'). The generating station with a total capacity of 1000 MW comprises of two units of 500 MW each and the date of commissioning of the units are as under:

Unit-I	1.12.2006
Unit-II	15.7.2007

2. The Commission vide its order dated 24.2.2017 in Petition 342/GT/2014 had approved the capital cost and the annual fixed charges of the generating station for the period 2014-19, as under:

Capital Cost allowed

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	355879.73	366214.10	366766.48	367363.48	368340.48
Add: Addition during the year/ period	10334.7	552.38	597.00	977.00	1103.00
Closing capital cost	366214.10	366766.48	367363.48	368340.48	369443.48
Average capital cost	361046.92	366490.29	367064.98	367851.98	368891.98



Annual Fixed Charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	18607.73	18888.27	18917.89	18958.45	19012.05
Interest on Loan	10164.75	9006.56	7645.93	6168.49	4652.06
Return on Equity	21240.39	21665.07	21699.05	21745.57	21807.05
Interest on Working Capital	5175.08	5232.09	5264.07	5372.74	5415.69
O&M Expenses	18116.36	19126.36	20196.36	21336.36	22546.36
Compensation Allowance	0.00	0.00	0.00	100.00	200.00
Total	73304.31	73918.36	73723.30	73681.62	73633.21

3. 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.”

4. In terms of the above regulations, the Petitioner has filed this petition, for truing-up of tariff of the generating station for the 2014-19 tariff period and has claimed the following annual fixed charges and capital cost:

Capital Cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital cost	355879.73	363202.72	366421.51	368863.22	372494.25
Add: Addition during the year/period	8134.44	2205.76	2659.62	3392.61	230.87
Less: Decapitalization during the year/period	905.19	21.25	253.55	489.85	392.29
Less: Reversal during the year/period	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year/period	93.75	1034.28	35.64	728.28	129.23
Closing Capital Cost	363202.72	366421.51	368863.22	372494.25	372462.07
Average Capital cost	359541.23	364812.12	367642.36	370678.74	372478.16

Annual Fixed Charges claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	18580.73	18853.13	19004.90	19162.98	19260.47
Interest on Loan	10106.94	8931.53	7653.41	6168.63	4715.95
Return on Equity	21152.89	21566.96	21734.28	21913.79	22078.27
Interest on Working Capital	6163.02	6165.82	6254.93	6496.89	6521.76
O&M Expenses	19049.94	19160.41	20024.82	21287.10	22974.44
Compensation Allowance	0.00	0.00	0.00	100.00	200.00
Total (A)	75053.53	74677.87	74672.36	75129.38	75750.90
Additional O&M Expenditure					
Impact of Pay Revision	0.00	16.86	1040.19	1240.00	1517.19



Impact of GST	0.00	0.00	0.00	139.00	210.00
Ash Transportation Expenditure	0.00	0.00	0.00	0.00	0.00
Water Charges for period prior to 2014-19	0.00	0.00	0.00	1194.32	0.00
Total (Additional O&M) (B)	0.00	16.86	1040.19	2573.32	1727.19
Total (A+B)	75053.53	74694.73	75712.55	77702.70	77478.09

5. The Respondent, MSEDCL, Respondent MPPMCL and Respondent CSPDCL vide affidavits dated 6.1.2021, 31.5.2021 and 1.6.2021 respectively, have filed their replies. The Petitioner vide affidavits dated 16.6.2021 and 15.7.2021 has filed its rejoinder to the said replies. The Commission vide ROP of the hearing dated 11.6.2021 directed the Petitioner to furnish certain additional information. In compliance to the same, the Petitioner has filed the additional information. Thereafter, the matter was heard on 4.1.2022 and the Commission, after hearing the parties, reserved its order in the matter, after directing the Petitioner to submit certain additional information. In compliance to the above directions, the Petitioner has filed the additional information vide affidavit dated 21.1.2022, after serving copies on the Respondents. Based on the submissions of the parties and the documents available on record and on prudence check, we proceed for truing-up the tariff of the generating station, for the period 2014-19, as stated in the subsequent paragraphs.

Capital Cost

6. 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 capitalisation and de-capitalisation for the respective year of tariff as determined in accordance with Regulations 14;*
- (c) *expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15;”*

7. As stated above, the Commission vide its order dated 24.2.2017 in Petition No.342/GT/2014 had approved the annual fixed charges of the generating station for the period 2014-19, considering the opening capital cost of Rs.355879.73 lakh (on



cash basis) and the same has been considered as the opening capital cost, as on 1.4.2014, in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

Exclusions

8. The summary of exclusions from the books of accounts, as claimed (on accrual basis) by the Petitioner for the 2014-19 tariff period, is as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Items not allowed during the period 2009-14	93.16	13.93	0.11	20.45	0.00
Items not claimed as additional capitalization during the period 2014-19	0.00	1.16	5.69	86.21	3.01
Loan FERV	1505.43	3218.04	0.00	0.00	0.00
Capitalization of Capital Spares	582.08	512.16	632.79	2483.13	1108.54
Inter-Unit Transfer	(-) 844.61	0.00	(-) 0.50	(-) 4.32	0.00
Reversal of Liabilities	(-) 5.34	0.00	0.00	(-) 26.10	(-) 116.70
De-capitalization of Spares: Not part of capital cost	(-) 276.79	(-) 344.23	(-)19.52	(-) 6.21	(-) 529.41
De-Capitalization: MBOA not part of capital cost	(-)103.37	0.00	(-) 0.37	0.00	0.00
De-capitalization of MBOA: Part of capital cost	(-) 0.59	(-) 38.96	(-) 24.92	0.00	0.00
Ind-AS Adjustment capital overhauling	0.00	0.00	0.00	0.00	0.00
Total Exclusions claimed	949.96	3362.08	593.27	2553.17	465.44

9. We now examine the exclusions claimed by the Petitioner for the 2014-19 tariff period in the subsequent paragraphs:

Items not allowed during the period 2009-14

10. The Petitioner has claimed amount of Rs.93.16 lakh in 2014-15, Rs.13.93 lakh in 2015-16, Rs.0.11 lakh in 2016-17, Rs.20.45 lakh in 2017-18 under exclusion towards items that were not allowed during the period 2009-14. The items claimed under this head include Acoustic Leak Detection System, Area Development and Horticulture works, Balance Plant brick drains, Construction of boundary walls & road in Matwai area, Construction of function hall and parking shed at various locations in township, Road in northwest township, Road bridge, Drains and Culvert. It is observed that these items have been disallowed by the Commission vide its order dated



15.5.2014 in Petition 148/GT/2013 and order dated 28.5.2012 in Petition 260/2009. In view of the above, the claim of the Petitioner under this head is allowed under exclusion.

Items not claimed as additional capitalization during the period 2014-19

11. The Petitioner has claimed amount of Rs.1.16 lakh in 2015-16, Rs.5.69 lakh in 2016-17, Rs.86.21 lakh in 2017-18 and Rs.3.01 lakh in 2018-19 towards items that has not been claimed as additional capital expenditure during the period 2014-19. The items under this head, include Off-site civil works, Construction of Bio-diesel Plant in township, Electrical works package for construction of boundary wall, Roads in D-type quarter, SG area civil works, Shelter and toilet in dry ash silo and Cooling Tower (peripheral drain in CT). It is observed that the Petitioner has not claimed any of the above expenditures for additional capital expenditure during the period 2014-19. In view of this, the Petitioner's claim under the above head is allowed under exclusion.

Loan FERV

12. The Petitioner has claimed exclusion of loan FERV of Rs.1505.43 lakh in 2014-15 and Rs.3218.04 lakh in 2015-16. In justification for the same, the Petitioner has submitted that since the Petitioner it is entitled to directly claim FERV on foreign currency loans as per the 2014 Tariff Regulations, the same has been kept under exclusions. As the Petitioner is entitled to bill the loan FERV claim directly from the beneficiaries, the claim under this head is allowed.

Capitalization of Capital Spares

13. The Petitioner has claimed exclusion of capital spares of Rs.582.08 lakh in 2014-15, Rs.512.16 lakh in 2015-16, Rs.632.79 lakh in 2016-17, Rs.2483.13 lakh in 2017-18 and Rs.1108.54 lakh in 2018-19. In justification, the Petitioner has submitted that capital spares capitalized after cut-off date, are not allowable as per the 2014 Tariff



Regulations and accordingly the same has been claimed as exclusion. The capitalization of spares over and above initial spares procured after the cut-off date of the generating station is not allowed as part of capital cost as per the 2014 Tariff Regulations. Accordingly, the Petitioner's claim under this head is allowed.

Inter-Unit Transfer

14. The Petitioner has claimed exclusion of (-)Rs.844.61 lakh in 2014-15, (-) Rs.0.50 lakh in 2016-17 and (-)Rs.4.32 lakh in 2017-18, on account of Inter-unit transfer of assets to/from the generating station. In justification for the same, the Petitioner has submitted that since the Commission is not considering the temporary inter-unit transfer of assets, for the purpose of tariff, the same has been kept under exclusions. The Commission, in its various orders, while dealing with the application for additional capitalisation, in respect of other generating stations of the Petitioner, had decided that both positive and negative entries, arising out of inter-unit transfers, of a temporary nature, shall be ignored for the purposes of tariff. In line with the said decision, the exclusion of the said amounts on account of inter-unit transfer is allowed.

Reversal of Liabilities

15. The Petitioner has claimed exclusion of reversal of liabilities of (-) Rs.5.34 lakh in 2014-15, (-) Rs.26.10 lakh in 2017-18, and (-) Rs.116.70 lakh in 2018-19. In justification of the same, the Petitioner has submitted that since tariff is allowed on cash basis, and liabilities do not form part of tariff, the reversal of the same has been kept under exclusion. Since the tariff is allowed only on cash basis, the exclusion of reversal of un-discharged liabilities is allowed, for the purpose of tariff.

De-capitalization of Spares (Not part of capital cost)

16. The Petitioner has claimed exclusion of de-capitalisation of capital spares for Rs.276.79 lakh in 2014-15, Rs.344.23 lakh in 2015-16, Rs.19.52 lakh in 2016-17,



Rs.6.21 lakh in 2017-18 and Rs.529.41 lakh in 2018-19. In justification of the same, the Petitioner has submitted that these capital spares do not form part of the capital cost allowed for the generating station and hence, their de-capitalisation has been claimed as exclusions. It is observed from the submission of the Petitioner that these capital spares do not form part of the approved capital cost of the generating station. Accordingly, the Petitioner's claim for exclusion under this head is allowed.

De-capitalization of MBOA (Not part of capital cost)

17. The Petitioner has claimed exclusion of de-capitalisation of MBOA for Rs.103.37 lakh in 2014-15 and Rs.0.37 lakh in 2016-17. In justification for the same, the Petitioner has submitted that these MBOA's do not form part of the approved capital cost of the generating and accordingly their de-capitalisation has been claimed as exclusion. Since these de-capitalised MBOAs do not form part of the approved capital cost of the generating station, the exclusion claimed under this head is allowed.

De-capitalization of MBOA (Part of Capital Cost)

18. The Petitioner has claimed exclusion of de-capitalisation of MBOAs for Rs.0.59 lakh in 2014-15, Rs.38.96 lakh in 2015-16, and Rs.24.92 lakh in 2016-17. In justification for the same, the Petitioner has submitted that since the capitalisation of expenditure against these items are not allowed for the purpose of tariff in terms of the 2014 Tariff Regulations, the de-capitalisation of the same has been claimed as exclusion. Since Regulation 14(4) of the 2014 Tariff Regulations provides that in case of de-capitalisation of assets, the original cost of such assets shall be removed from the admitted capital cost of the generating station, the claim of the Petitioner under this head is not allowed.

19. Based on the above, the exclusions allowed and disallowed for the period 2014-19 is summarized below:



	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Items not allowed during the period 2009-14	93.16	13.93	0.11	20.45	0.00
Items not claimed as additional capitalization during the period 2014-19	0.00	1.16	5.69	86.21	3.01
Loan FERV	1505.43	3218.04	0.00	0.00	0.00
Capitalization of Capital Spares	582.08	512.16	632.79	2483.13	1108.54
Inter-Unit Transfer	(-) 844.61	0.00	(-) 0.50	(-) 4.32	0.00
Reversal of Liabilities	(-) 5.34	0.00	0.00	(-) 26.10	(-) 116.70
De-capitalization of Spares: Not part of capital cost	(-) 276.79	(-) 344.23	(-) 19.52	(-) 6.21	(-) 529.41
De-capitalization: MBOA Not part of capital cost	(-)103.37	0.00	(-)0.37	0.00	0.00
De-capitalization of MBOA: Part of capital cost	0.00	0.00	0.00	0.00	0.00
Ind-AS adjustment-Capital overhauling	0.00	0.00	0.00	0.00	0.00
Total Exclusions allowed	950.55	3401.05	618.19	2553.17	465.44
Total Exclusions disallowed	(-) 0.59	(-) 38.96	(-) 24.92	0.00	0.00

Additional Capital expenditure

20. Regulation 14 of the 2014 Tariff Regulations, provides as under:

“14. Additional Capitalisation and De-capitalisation:

(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Un-discharged liabilities recognised to be payable at a future date;

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and

v) Change in law or compliance of any existing law:

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognised to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.”

(2) The capital expenditure incurred or projected to be incurred in respect of the new project on the following counts within the original scope of work 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) Deferred works relating to ash pond or ash handling system in the original scope of work; and



(iv) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.

(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 of 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 un-discharged 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;

(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialisation of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilisers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalisation for determination of tariff w.e.f. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite-based station shall be met out of compensation allowance:



Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.”

21. The actual additional capital expenditure claimed by the Petitioner, on cash basis, for the period 2014-19 are as under:

<i>(Rs. in lakh)</i>						
	Regulation	2014-15	2015-16	2016-17	2017-18	2018-19
Already Allowed Items						
1 st Raising of Ash dyke Lagoon V-3A	14(3)(iv)	31.51	0.00	0.00	0.00	0.00
1 st Raising of Ash dyke Lagoon V-3B		440.76	0.00	0.00	0.00	0.00
Civil Works of Ash Dyke for Lagoon V-3A		0.00	7.09	0.00	0.00	3.56
2 nd Raising of Ash Dyke V-3A Stage-3		0.00	0.00	694.78	86.78	15.47
2 nd Raising of Ash Dyke V-3B Stage-3		0.00	0.00	0.00	695.79	0.00
Wagon Tippler	14(3)(X)	7672.18	2198.67	394.70	74.04	72.71
New Claims						
Works Adjustments	14(4)	(-)10.02	0.00	0.00	0.00	0.00
Entry Tax	14(2)(i)	0.00	0.00	1570.14	0.00	0.00
Water Charges	14(3)(ii)	0.00	0.00	0.00	2535.99	0.00
Off Site Civil Works	14(3)(v)	0.00	0.00	0.00	0.00	91.39
SG Area Civil Works		0.00	0.00	0.00	0.00	47.73
Decapitalisation of Spares (part of capital cost)	14(4)	(-) 905.19	(-) 21.25	(-) 253.55	(-) 489.85	(-) 392.29
Additional capital expenditure claimed (before discharge of liabilities)		7229.25	2184.51	2406.07	2902.76	(-)161.42
Add: Discharge of Liabilities		93.75	1034.28	35.64	728.28	129.23
Net Additional capital expenditure claimed (including discharges of liabilities)		7322.99	3218.79	2441.71	3631.04	(-)32.19

22. We now examine the actual additional capital expenditure claimed by the Petitioner for the period 2014-19 as under:

A. Already allowed Items

Ash Related Works

1st Raising of Ash dyke Lagoon V-3A

23. The Petitioner has claimed additional capitalisation of Rs.31.51 lakh, on cash basis, towards the 1st raising of the Ash dyke lagoon V 3A in 2014-15. In justification



for the same, the Petitioner has submitted that the Commission vide its order dated 6.2.2017 in Petition No.343/GT/2014, had allowed the additional capital expenditure of Rs.555.96 lakh towards 1st raising of Ash Dyke works in 2013-14. The Petitioner has stated that the present capitalisation pertains to the balance work for 1st raising of V-3A dyke, which was completed during 2014-15.

24. The matter has been considered. It is observed that the Commission vide its order dated 6.2.2017 in Petition No. 343/GT/2014 had allowed additional capitalisation of Rs.555.96 lakh towards works related to 1st ash dyke raising of ash dyke lagoon V 3A. Since the claim of the Petitioner in the present Petition pertains to balance works related to the ash dyke raising works allowed earlier, the claim of the Petitioner is allowed. Further, the undischarged liability of Rs.11 lakh pertaining to the above works is also allowed.

1st Raising of ash dyke lagoon V-3B

25. The Petitioner has claimed additional capital expenditure for Rs.440.76 lakh towards 1st raising of Ash dyke lagoon V-3B in 2014-15. in justification for the same, the Petitioner has submitted that Commission vide its order dated 24.2.2017 in Petition No.342/GT/2014 had admitted the projected expenditure claimed against the said work during the period 2014-19, as the same was based on the tentative estimate, made at the time of finalization of projections for the period 2014-19. The Petitioner has however clarified that the present claim pertains to the actual award value, which had increased on account of the considerable increase in the cost of secondary material like sand etc., thereby, leading to an increase in the cost of raising work of ash dyke.

26. The matter has been considered. It has been observed that the Commission vide its order dated 24.2.2017 in Petition No.342/GT/2014 had allowed the projected



additional capital expenditure of Rs.300 lakh claimed towards 1st raising of ash dyke lagoon V-3B. Considering the fact that the difference between the projected additional capital expenditure of Rs.300 lakh allowed earlier, and the present claim for Rs.440.76 lakh, is on account of the actual value of the contract awarded by the Petitioner, we allow the claim of the Petitioner, on cash basis along with the undischarged liability of Rs.95.05 lakh.

2nd Raising of Ash Dyke V-3A Stage-3 and Associated civil works

27. The Petitioner has claimed additional capital expenditure for Rs.694.78 lakh in 2016-17, Rs.86.78 lakh in 2017-18 and Rs.15.47 lakh in 2018-19 towards 2nd raising of Ash dyke V-3A. The Petitioner has also claimed expenditure for Rs.7.09 lakh in 2015-16 and Rs.3.56 lakh in 2018-19 towards Civil Works associated with the 2nd raising of Ash dyke V-3A. In justification for the same, the Petitioner has submitted that the Commission vide its order dated 24.2.2017 in Petition No.342/GT/2014 had already admitted the additional capital expenditure against this work for 2nd raising of V-3A dyke. This capitalisation pertains to the preliminary civil works which are required for the start of raising work. The Petitioner has incurred an amount of Rs 817.43 lakh towards 2nd Ash dyke raising work for V-3A. The Petitioner has stated that the projected additional capital expenditure claimed was based on the tentative estimate made at the time of finalization of projections for the 2014-19 tariff period, whereas, the additional capital expenditure claimed now, is based on the actual awarded value.

28. The matter has been considered. The Commission vide its order dated 24.2.2017 in Petition No.342/GT/2014 had allowed the projected additional capital expenditure of Rs.747 lakh claimed towards 2nd raising of Ash dyke 3-A. The Petitioner, in the present petition, has claimed the actual additional capital expenditure of Rs.807.68 lakh, on cash basis, along with the undischarged liability of Rs.13.30 lakh. Considering



the fact that the difference between the projected additional capital expenditure of Rs.747 lakh allowed earlier, and the present claim of Rs.440.76 lakh, is only on account of the actual value of the contract awarded by the Petitioner, we allow the claim of the Petitioner, along with undischarged liability.

2nd Raising of Ash Dyke V-3B Stage-3

29. The Petitioner has claimed additional capital expenditure of Rs.695.79 lakh towards the 2nd raising of Ash dyke V-3B in 2017-18. In justification for the same, the Petitioner has submitted that the Commission vide its order dated 24.2.2017 in Petition No.342/GT/2014, had allowed the additional capitalisation of Rs.677 lakh towards 2nd raising of ash dyke V-3B. The matter has been considered. It is observed that the Commission has already allowed the projected additional capitalisation of Rs.677 lakh towards the said works during the period 2014-19, against which the Petitioner has claimed Rs. 695.79 lakh, based on the actual value of the contract awarded. In view of this, the claim of the Petitioner of Rs.695.79 lakh on cash basis along with undischarged liability of Rs.11.95 lakh is allowed.

Wagon Tippler

30. The Petitioner has claimed additional capital expenditure for Rs.7672.18 lakh in 2014-15, Rs.2198.67 lakh in 2016-17, Rs.394.70 lakh in 2017-18, Rs.74.04 lakh in 2017-18 and Rs.72.71 lakh in 2018-19 towards Wagon Tippler Package. In justification for the same, the Petitioner has submitted the Commission vide its order dated 24.2.2017 in Petition No.342/GT/2014 had approved the additional capital expenditure against this work during the period 2014-19. The Petitioner has also submitted that the contract was awarded to M/s Indure at a cost of Rs 110.5 crore (without taxes duties/ cost escalation) and the said work was completed during the period 2014-19. The



Petitioner has stated that the total cost incurred is Rs.118.96 crore which includes price escalation, as per the contract and taxes and duties etc., during the period.

31. The matter has been considered. It is observed that the Commission vide its order dated 24.2.2017 in Petition No.342/GT/2014 had allowed projected additional capital expenditure of Rs.10000 lakh towards Wagon Tippler Package. The Petitioner has claimed additional capital expenditure of Rs.10412.30 lakh, on cash basis, along with undischarged liability of Rs.593.86 lakh. Considering the fact that the difference between the projected additional capital expenditure allowed earlier, and the present claim of Rs.440.76 lakh, is only on account of the actual value of the contract awarded by the Petitioner, we allow the claim of the Petitioner, along with undischarged liability.

B. New Claims

Works Adjustments

32. The Petitioner has claimed additional capital expenditure of (-) Rs.10.02 lakh towards work adjustment under Regulation 14(4) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that the said work adjustment has been made in the books of account, for the scrap returned by the contracting agencies, for the works allowed prior to 31.3.2009, in the capital cost. Considering the fact that the expenditure incurred is towards final adjustment of bill in respect of works allowed for capitalisation and forms part of the capital cost of the project, the works adjustments during the period 2014-19 is allowed.

Entry Tax

33. The Petitioner has claimed additional capital expenditure for Rs.1570.14 lakh towards Entry Tax paid, on cash basis, in 2016-17 under Regulation 14(2)(i) of 2014 Tariff Regulations, for the period during which the plant was under construction. In justification of the same, the Petitioner has submitted that various states including the



State of Madhya Pradesh have enacted law that provide for levy of a tax on the “entry of goods into local areas comprising the States”. It has also submitted that the Government of Madhya Pradesh has also enacted the law “entry tax Act” for recovery of entry tax on entry of goods into a local area for consumption in the State of Madhya Pradesh. It has further submitted that based on this Act, the Commercial Tax Office had raised a demand for Entry tax vide its Demand Order dated 7.7.2006 to the Petitioner on the Plant & Machinery and Construction materials, which was purchased for the Construction of two units of the generating station. The Petitioner has added that against the said demand Order, the Petitioner had argued that as the generating station was under construction phase and was not declared under commercial operation, it was not liable to pay the Entry tax. Against this demand order, the Petitioner had also filed an appeal before the Hon’ble High Court of Madhya Pradesh (Jabalpur Bench), which was rejected. Subsequently, the Petitioner filed SLP before the Hon’ble Supreme Court (SLP No.18034 of 2008), whereupon the Hon’ble Supreme Court vide common order dated 11.11.2016 also rejected the Petitioner’s prayer. The Petitioner has stated that the present additional capitalisation claim pertains to Entry tax relating to the construction phase of this generating station in respect of the works already allowed by the Commission.

34. The Respondent, MPPMCL has submitted that the Petitioner may be directed to submit the head wise, year-wise work wise details of the Entry tax levied by the Commercial Tax Department, Government of Madhya Pradesh (GoMP) and also whether the amount claimed relates to a period prior to 15.7.2007 i.e., COD of the plant. It has also submitted that the Commission may assess as to whether this Entry tax can be avoided by the Petitioner, keeping in view the special status of thermal power plants being installed by GOI owned companies, during huge power shortage period in the State of Madhya Pradesh, as well as in the country and also whether



proper efforts on the part of Petitioner have been made to get the entry tax abolished or reduced. The Respondent has added that the expenditure claimed under this head may not be passed on to beneficiaries, in the interest of justice.

35. We have considered the matter. As regards the arrears of entry tax of Rs.1570.14 lakh paid by the Petitioner and claimed as additional capital expenditure in 2016-17 under Regulation 14(2)(i) of the 2014 Tariff Regulations, we are not inclined to allow the additional capitalization of the said amount, considering the fact that the generating station had already completed useful life of 10 years. However, keeping in view that the Petitioner was mandated to pay the Entry tax, as stated above, based on the directions of Hon'ble Supreme Court, we allow the recovery of Entry tax amount of Rs.1570.14 lakh, as a change in law event, reimbursable by the beneficiaries of the generating station in twelve equal monthly instalments.

Off Site Civil Works and SG Area civil works

36. The Petitioner has claimed an amount of Rs.91.39 lakh in 2018-19 towards Off Site civil works and Rs.47.73 lakh in 2018-19 under SG Area civil works under Regulations 14(3)(v) of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that the capitalisation pertains to balance payments of the works, which were completed prior to cut-off date of the generating station.

37. The Respondent, MPPMCL has submitted that the Petitioner has not filed any information pertaining to prior period liabilities, at the time of tariff determination petition. It has also submitted that in terms of Regulation 14(3)(x) of the 2014 Tariff Regulations, any expenditure except those covered under Regulation 14(3)(i) to 14(3)(iv) of the 2014 Tariff Regulations, shall be met out of the compensation allowance and hence, the Petitioner claim under this head is liable to be rejected.



38. We have considered the matter. Considering the fact that the additional capitalization claimed under this head relate to works which were executed prior to the cut-off date of the generating station and are in the nature of final settlement, the claim of the Petitioner under this head is allowed.

Arrears of Water Charges

39. The Petitioner has claimed additional capital expenditure of Rs.2535.99 lakh towards capitalized portion of arrears of water charges in 2017-18, under Regulation 14(3)(ii) of the 2014 Tariff Regulations, which pertains to the period during which the generating station was under construction. The Petitioner has submitted that the bill for the arrear amounts has been raised afresh for the first time, by the Water Resources Department (WRD), GOMP and the same has been paid in 2017-18 and capitalized in the books of accounts pertaining to the construction period of the plant. The Petitioner has therefore prayed that the Commission may allow the same as additional capital expenditure under 'change in law'.

40. The Respondent, CSPDCL has submitted that the claim of the Petitioner cannot be covered under change in law, as the Petitioner has failed to demonstrate the event of 'change in law'. It has also submitted that the Petitioner has already claimed O&M expenses during the periods 2004-09 and 2009-14, when water charges were included in the O&M expense norms as per the prevailing regulations.

41. We have considered the matter. We notice that the generating station was mandated to pay the said arrears of water charges, as per revised arrear bill raised by the Water Resource Department (WRD), GOMP. The part of the arrear amounts of water charges, pertaining to the construction period of the generation station has been capitalised by the Petitioner and claimed as additional capital expenditure, under Regulation 14(3)(ii) of the 2014 Tariff Regulations. According to us, allowing the



additional capitalization of the said expenditure (arrear water charges) after 9 years of COD is not justifiable. However, considering the fact that the said expenditure has been incurred, we are of the view that the said expenditure is required to be allowed, in exercise of the power to relax under Regulation 54 of the 2014 Tariff Regulations, as additional O&M charges. Accordingly, we allow the claim of the Petitioner and direct that the same shall be payable by the beneficiaries in twelve equal monthly instalments. Keeping in view the consumer interest, we, as a special case, direct that no interest shall be charged by the Petitioner on the arrear water charges allowed in this order. This arrangement, in our view, will balance the interest of both, the Petitioner and the Respondents. Also, considering the fact that the said arrear of water charges is being allowed in exercise of the power to relax, these expenses are not made part of the O&M expenses and consequential annual fixed charges being determined in this order under the 2014 Tariff Regulations.

Decapitalization of Spares

42. The Petitioner has claimed de-capitalisation of capital spares forming part of the admitted capital cost of Rs.905.19 lakh in 2014-15, Rs.21.25 lakh in 2015-16, Rs.253.55 lakh in 2016-17, Rs.489.85 lakh in 2017-18 and Rs.392.29 lakh in 2018-19, under Regulation 14(4) of the 2014 Tariff Regulation. The said tariff regulations provides that in case of de-capitalisation of assets the original cost of such asset shall be removed from the admitted capital cost of the generating station. Accordingly, the de-capitalisation claimed under this head is allowed for the purpose of tariff.

Discharge of Liabilities

43. The discharges of liabilities claimed by the Petitioner for the period 2014-19 is as under:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Out of liabilities deducted as on 1.4.2009	77.28	1001.15	35.64	0.24	9.15
Other liabilities	16.47	33.13	0.00	728.04	120.09
Total	93.75	1034.28	35.64	728.28	129.23

44. The discharge of liabilities, as claimed above, are in order and have been considered for the purpose of tariff. Further, considering the reversal of liabilities, during the period 2014-19, correspond to the admitted capital cost, the flow of un-discharged liabilities corresponding to the admitted capital cost is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Out of Liabilities prior to 2009					
Opening Liabilities	8731.97	8650.18	7649.03	7613.40	7600.29
Addition during the period	0.00	0.00	0.00	0.00	0.00
Discharges during the period	77.28	1001.15	35.64	0.24	9.15
Reversals during the period	4.51	0.00	0.00	12.86	113.01
Closing Liabilities	8650.18	7649.03	7613.40	7600.29	7478.14
Other liabilities					
Opening Liabilities	296.68	1276.12	1626.48	1745.76	1125.35
Addition during the period	996.52	383.49	119.28	108.42	7.92
Discharges during the period	16.47	33.13	0.00	728.04	120.09
Reversals during the period	0.62	0.00	0.00	0.80	3.70
Closing Liabilities	1276.12	1626.48	1745.76	1125.35	1009.48

45. Based on the above, the additional capital expenditure allowed for the period 2014-19 is summarized as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
1st Raising of ash dyke lagoon V-3A	31.51	0.00	0.00	0.00	0.00
1st Raising of ash dyke lagoon V-3B	440.76	0.00	0.00	0.00	0.00
Wagon Tippler	7672.18	2198.67	394.70	74.04	72.71
Civil Works of Ash Dyke for Lagoon V-3A	0.00	7.09	0.00	0.00	3.56
2nd Raising of Ash Dyke V-3A Stage-3	0.00	0.00	694.78	86.78	15.47
2nd Raising of Ash Dyke V-3B Stage-3	0.00	0.00	0.00	695.79	0.00
Works Adjustments	(-) 10.02	0.00	0.00	0.00	0.00
Entry Tax	0.00	0.00	0.00	0.00	0.00
Water Charges	0.00	0.00	0.00	0.00	0.00
Offsite Civil Works	0.00	0.00	0.00	0.00	91.39
SG Area Civil Works	0.00	0.00	0.00	0.00	47.73
Decapitalisation of Spares (part of capital cost)	(-) 905.19	(-) 21.25	(-) 253.55	(-) 489.85	(-) 392.29
Additional capital expenditure allowed (before discharge of liabilities)	7229.25	2184.51	835.93	366.77	(-)161.42



Add: Discharge of Liabilities	93.75	1034.28	35.64	728.28	129.23
Exclusion not allowed	(-) 0.59	(-) 38.96	(-) 24.92	0.00	0.00
Net Additional capital expenditure allowed (including discharges of liabilities)	7322.40	3179.82	846.64	1095.05	(-)32.19

Capital cost allowed for the period 2014-19

46. Based on above, the capital cost allowed for the generating station is as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	355879.73	363202.13	366381.96	367228.60	368323.65
Add: Additional capital expenditure	7322.40	3179.82	846.64	1095.05	(-) 32.19
Closing capital cost	363202.13	366381.96	367228.60	368323.65	368291.46
Average capital cost	359540.93	364792.04	366805.28	367776.12	368307.56

Debt-Equity Ratio

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

“19. Debt-Equity Ratio: (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 the 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.”

48. Accordingly, the gross normative loan and equity amounting to Rs.249115.81 lakh and Rs.106763.91 lakh, respectively as on 1.4.2014, as considered in order dated 6.2.2017 in Petition No.343/GT/2014, has been considered as the gross normative loan and equity as on 1.4.2014. Further, the additional capital expenditure approved above has been allocated to debt and equity in ratio of 70:30. 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 under:

	Capital cost as on 1.4.2014 (Rs. in lakh)	(%)	Additional capital expenditure (Rs. in lakh)	(%)	Total cost as on 31.3.2019 (Rs. in lakh)	(%)
Debt	249115.81	70%	8688.21	70%	257804.02	70%
Equity	106763.91	30%	3723.52	30%	110487.44	30%
Total	355879.73	100%	12411.73	100%	368291.46	100%

Return on Equity

49. Regulation 24 of the 2014 Tariff Regulation 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 the 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 of 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 requirements 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 kilometre.”

50. 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

(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.”

51. The Petitioner has claimed tariff considering the rate of Return on Equity (ROE) of 19.611% in 2014-15, 19.706% in 2015-18 and 19.758% in 2018-19. The Petitioner has arrived at these rates after grossing up base rate of return on equity of 15.50% with MAT rate of 20.961% in 2014-15, 21.342% in 2015-18 and 21.549% in 2018-19. However, after rectifying the rounding off errors the rate of ROE considered for the purpose of tariff works out to 19.610% for 2014-15, 19.705% for 2015-18 and 19.758% for 2018-19. Accordingly, ROE has been worked out as under:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Notional Equity- Opening	106763.92	108960.64	109914.59	110168.58	110497.10
Add: Addition of Equity due to additional capital expenditure	2196.72	953.95	253.99	328.51	(9.66)
Normative Equity – Closing	108960.64	109914.59	110168.58	110497.10	110487.44
Average Normative Equity	107862.28	109437.61	110041.58	110332.84	110492.27
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for respective years	20.961%	21.342%	21.342%	21.342%	21.549%
Rate of Return on Equity (Pre-tax)	19.610%	19.705%	19.705%	19.705%	19.758%
Return on Equity (Pre-tax) - (annualised)	21151.79	21564.68	21683.69	21741.09	21831.06

Interest on loan

52. 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 Decapitalisation 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 up to the date of de-capitalisation 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 capitalised:

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 refinancing 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.”

53. Interest on loan has been worked out as under:

- i) The gross normative loan of Rs.249115.81 lakh as on 1.4.2014, as consider in order dated 6.2.2017 in Petition No. 343/GT/2014, has been retained as on 1.4.2014.
- ii) Cumulative repayment of Rs.118055.87 lakh as on 1.4.2014, as considered in order dated 6.2.2017 in Petition No. 343/GT/2014, has been retained as on 1.4.2014.
- iii) Accordingly, the net normative opening loan as on 1.4.2014 works out to Rs.131059.94 lakh.
- iv) Addition to normative loan on account of additional capital expenditure approved above has been considered.
- v) Depreciation allowed has been considered as repayment of normative loan during the respective year of the 2014-19 tariff period. Further, the repayments have been adjusted for de-capitalisation of assets considered for the purpose of tariff. Also, proportionate adjustment has been made to the repayments corresponding to discharges and reversal of liabilities considered during the respective years on account of cumulative repayment adjusted, corresponding to liabilities deducted, as on 1.4.2009
- vi) The Petitioner has claimed interest on loan considering weighted average rate of interest (WAROI) of 8.1085% in 2014-15, 8.1269% in 2015-16, 8.2287% in 2016-17, 8.0838% in 2017-18 and 8.0395% in 2018-19. The WAROI, has been calculated by applying the actual loan portfolio existing as on 1.4.2014, along with subsequent additions during the 2014-19 tariff period for the generating station.

54. Necessary calculation of interest of loan is as under:

		<i>(Rs. in lakh)</i>				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Gross opening loan	249115.81	254241.49	256467.37	257060.02	257826.55
B	Cumulative repayment of loan upto previous year	118055.87	136313.99	155221.36	174053.61	192810.07
C	Net Loan Opening (A-B)	131059.94	117927.50	101246.01	83006.41	65016.48
D	Addition due to additional capital expenditure	5125.68	2225.88	592.65	766.53	(22.53)
E	Repayment of loan during the year	18580.54	18854.80	18962.19	19015.03	19044.66
F	Repayment adjustment on account of de-capitalisation	328.81	25.69	132.72	259.60	228.10
G	Repayment adjustment on account of discharges/reversals corresponding to un-discharged	6.39	78.26	2.79	1.02	9.55



	liabilities deducted as on 1.4.2009					
H	Net Repayment of loan during the year (E-F+G)	18258.12	18907.37	18832.25	18756.46	18826.11
I	Net Loan Closing (C+D-H)	117927.50	101246.01	83006.41	65016.48	46167.84
J	Average Loan [(C+I)/2]	124493.72	109586.75	92126.21	74011.44	55592.16
K	Weighted Average Rate of Interest on loan	8.1084%	8.1270%	8.2289%	8.0838%	8.0395%
L	Interest on Loan (J x K)	10094.50	8906.09	7580.94	5982.97	4469.34

Depreciation

55. 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 up to 31.3.2014 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, 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-capitalisation 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 de-capitalised asset during its useful services.”

56. The cumulative depreciation amounting to Rs.118358.93 lakh, as on 31.3.2014, as considered in order dated 6.2.2017 in Petition No.343/GT/2014, has been considered on 1.4.2014. Since, as on 1.4.2014, the elapsed life of the generating station is 7.02 years, which is less than 12 years from the effective station COD of the generating station, depreciation has been computed considering weighted average rate of depreciation (Annexure-I). Necessary calculations in support of depreciation are as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Average capital cost (A)	359540.93	364792.04	366805.28	367776.12	368307.56
Value of freehold land included above (B)	0.00	0.00	0.00	0.00	0.00
Aggregated depreciable Value [C = (A-B) x 90%]	323586.84	328312.84	330124.75	330998.51	331476.80
Remaining Aggregate Depreciable value at the beginning of the year (D = C – ‘K’ of previous year)	205227.91	191695.79	174600.33	156641.84	138363.67
Balance useful life at the beginning of the year (E)	17.98	16.98	15.98	14.98	13.98
Weighted average rate of depreciation (F)	5.1679%	5.1686%	5.1696%	5.1703%	5.1709%
Depreciation during the year (G = A x F)	18580.54	18854.80	18962.19	19015.03	19044.66
Cumulative depreciation at the end of the year, before adjustment of de-capitalisation adjustment (H = G + ‘K’ of previous year)	136939.47	155471.85	174486.61	193371.70	212157.79
Cumulative depreciation adjustment on account of de-capitalisation (I)	328.81	25.69	132.72	259.60	228.10
Cumulative Depreciation adjustment on account of un-	6.39	78.26	2.79	1.02	9.55



	2014-15	2015-16	2016-17	2017-18	2018-19
discharged liabilities deducted as on 1.4.2009 (J)					
Cumulative depreciation, at the end of the year (K = H – I+J)	136617.05	155524.42	174356.67	193113.13	211939.24

O&M Expenses

57. The Commission in its order dated 24.2.2017 in Petition No. 342/GT/2014 had allowed O & M expenses as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses allowed under Regulation 29(1)(a)	16000.00	17010.00	18080.00	19220.00	20430.00
Water Charges allowed under Regulation 29(2)	2116.36	2116.36	2116.36	2116.36	2116.36
Capital spares	0.00	0.00	0.00	0.00	0.00
Total O&M Expenses	18116.36	19126.36	20196.36	21336.36	22546.36

58. The O&M expenses claimed by the Petitioner is as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses under Regulation 29(1)(a) of the 2014 Tariff Regulations	16000.00	17010.00	18080.00	19220.00	20430.00
O&M expenses claimed under Regulation 29(2) of the 2014 Tariff Regulations:					
- Water Charges	1867.96	1784.93	1671.75	1571.04	1622.74
- Capital Spares consumed	1181.98	365.48	273.08	496.06	921.70
Sub-total O&M Expenses	19049.94	19160.41	20024.82	21287.10	22974.44
Impact of Wage revision	0.00	16.86	1040.19	1240.00	1517.19
Impact of GST	0.00			139.00	210.00
Arrears of water charges for the period prior to 2014-19	0.00	0.00	0.00	1194.32	0.00
Total O&M Expenses	19049.94	19177.27	21065.01	23860.42	24701.63

59. The normative O&M expenses claimed by the Petitioner, in terms of Regulation 29(1)(a) of the 2014 Tariff Regulations were allowed by the Commission vide order dated 24.2.2017 in Petitioner No.342/GT/2014. Accordingly, the same is allowed for the generating station.

60. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

“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:



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”.

Water Charges

61. In terms of the first proviso to Regulation 29(2), water charges are to be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The Petitioner has claimed water charges based on actual water consumption of the generating station. The water charges claimed by the Petitioner is as under:

<i>(Rs. in lakh)</i>						
	Units	2014-15	2015-16	2016-17	2017-18	2018-19
Type of cooling tower	-	Induced Draft Cooling Tower (IDCT)				
Type of cooling water system	-	Closed Cycle				
Water allocation/contracted	MCM	160	160	160/149	149	149
Actual water consumption for Stage-III	MCM	37.65	31.71	32.22	32.68	31.07
Rate of water charges	-	Rs.5.5/m ³				
Total water charges paid (for whole generating station)	Rs. in lakh	7957.51	7979.31	7957.51	7478.13	7381.94
Water charges paid for Stage-II and claimed in Petition	Rs. in lakh	1867.96	1784.93	1671.75	1571.04	1622.74

62. The water charges allowed, on projected basis, by the Commission in order dated 24.2.2017 in Petition No. 342/GT/2014 is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
2116.36	2116.36	2116.36	2116.36	2116.36

63. The Respondent, CSPDCL and MPPMCL have submitted that the specific water consumption should be maximum of 3.5 m³/MWh as per Ministry of Environment, Forest and Climate Change (MOEFCC), GOI Notification dated 7.12.2015. In response, the Petitioner has stated that the consumption of water charges in the generating station also fall in line with the water consumption specified as per CEA guidelines.



64. We have examined the matter. The water charges claimed by the Petitioner, is lesser than the projected water charges allowed vide order dated 6.2.2017 in Petition No.327/GT/2014 for the period 2014-19. The computations done by the Respondent MPPMCL does not take into consideration the provision of agreement dated 27.12.2008 between the Petitioner and the WRD, GoMP. The said agreement provides for payment of water charges for at least 90% of the total quantum of water charges allowed to be drawn or the actual water drawn, whichever is higher. In view of above the water charges allowed for the purpose of tariff is as under:

	Units	2014-15	2015-16	2016-17	2017-18	2018-19
Installed Capacity		4260	4469.02	4760	4760	4760
Installed Capacity Stage		1000	1000	1000	1000	1000
Type of Cooling Water System						
Water Allocation/ Contracted	MCM	160.74	160.74	154.94	149.13	149.13
Worked Out Contracted Capacity	MCM	37.73	35.97	32.55	31.33	31.33
90% of the contracted capacity	MCM	33.96	32.37	29.29	28.20	28.20
Actual Water Consumption	MCM	37.65	31.71	32.22	32.68	31.07
Rate		5.50	5.50	5.50	5.50	5.50
Water Charges claimed	Rs. lakh	1867.96	1784.93	1671.75	1571.04	1622.74
Water Charges allowed	Rs. lakh	1867.96	1784.93	1671.75	1571.04	1622.74

Capital Spares

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

“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”.

66. In terms of the above proviso, capital spares consumed are admissible separately, at the time of truing up of tariff, based on the details furnished by the Petitioner. The capital spares claimed by the Petitioner is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
1181.98	365.48	273.08	496.06	921.70



67. We have examined the list of spares furnished by the Petitioner along with the de-capitalisation details, submitted in Form-9Bi. The capital spares consumption claimed by the Petitioner comprise of two categories as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Capital spares (forming part of allowed capital cost)	0.00	0.00	0.00	0.00	0.00
Capital spares (not forming part of allowed capital cost)	1181.98	365.48	273.08	496.06	921.70
Total capital spares consumed claimed	1181.98	365.48	273.08	496.06	921.70

68. 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 standardized practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs.1.00 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. Based on this, the details of capital spares consumption allowed for the 2014-19 tariff period is summarized as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Total capital spares consumed claimed	1181.98	365.48	273.08	496.06	921.70
Total capital spares consumed (not part of capital cost)	1181.98	365.48	273.08	496.06	921.70
Less: Value of capital spares below Rs.1.00 lakh disallowed on individual basis	2.27	3.02	2.42	6.35	2.44
Net total value of capital spares considered	1178.01	362.46	270.66	489.71	919.26

69. Also, considering the fact that the original value of capital spares taken out of service is neither available nor has been furnished by the Petitioner for the period 2014-19, we are of the view that the salvage value of the capital spares being replaced



is required to be deducted from the net total value of capital spares considered during the period 2014-19. In view of this, the salvage value of 10% has been deducted from the net total value of capital spares considered during the period 2014-19. Accordingly, net capital spares allowed is summarized as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Net total value of capital spares considered	1178.01	362.46	270.66	489.71	919.26
Less: Salvage value @ 10%	117.80	36.25	27.07	48.97	91.93
Net capital spares allowed	1060.20	326.21	243.60	440.74	827.33

Additional O&M Expenses

A. Impact of Goods and Service Tax

70. The Petitioner has claimed additional O&M expenses of Rs.139.00 lakh in 2017-18 and Rs.210.00 lakh in 2018-19 on account of payment of Goods and Service Tax (GST). The Respondent, MPPMCL has submitted that through enactment of GST Act, the GOI, has rationalized the tax regime by subsuming various taxes/cess/duties and has also have reduced various tax slabs. The Respondent has further submitted that introduction of GST has resulted in the reduction of overall applicable tax rate in the country and therefore the claim of the Petitioner is not just and proper. The Respondent, MSEDCL has submitted that the Petitioner's claim for GST expenses towards O&M expenses will lead to additional burden on the consumers and the GST expenses towards O&M expenses are applicable, only if, a service is outsourced. The Respondent, MSEDCL also submitted that services have been outsourced due to lack of expertise or efficiency issues within the company and will obviously be lower than the cost of doing that job internally. It has also stated that the O&M norms are ceiling norms and the generating companies are required to manage within these limits. In response, the Petitioner has submitted that it is a settled position of law that promulgation of GST is change in law event and falls within the purview of Regulation 3(9) read with Regulation 14(3) of the 2014 Tariff Regulations. The Petitioner further



submitted that the amount claimed is only on account of differential rate of tax for taxable services relating to O&M i.e. under erstwhile service tax 15% and in GST 18%.

71. The submissions have been considered. It is observed that the Commission while specifying the O&M expense norms for the 2014-19 tariff period had considered taxes to form part of the O&M expense calculations and accordingly, had factored the same in the said norms. This is evident from paragraph 49.6 of the SOR (Statement of Objects and Reasons) issued with the 2014 Tariff Regulations, which is extracted hereunder:

“49.6 With regards to suggestion received on other taxes to be allowed, the Commission while approving the norms of O&M expenses has considered the taxes as part of O&M expenses while working out the norms and therefore the same has already been factored in...”

72. Further, the escalation rates considered in the O&M expense norms is only after accounting for the variations during the past five years of the 2014-19 tariff period, which in our view, takes care of any variation in taxes also. It is pertinent to mention that in case of reduction of taxes or duties, no reimbursement is ordered. In this background, we find no reason to grant additional O&M expenses towards payment of GST.

B. Impact of Wage Revision

73. The Petitioner has submitted that the Commission while specifying the 2014 Tariff Regulations applicable for the 2014-19 tariff period, had taken note in SOR to the said regulations that any increase in the employee expenses, on account of pay revision shall be considered appropriately, on case-to-case basis, balancing the interest of generating station and consumers. The Petitioner has, therefore, claimed additional O&M expenses of Rs.16.86 lakh in 2015-16, Rs.1040.19 lakh in 2016-17, Rs.1240.00 lakh in 2017-18 and Rs.1517.19 lakh in 2018-19, towards impact of wage revision of employees of CISF and Kendriya Vidyalaya (KV) from 1.1.2016 and the



employees of the Petitioner posted in the generating station with effect from 1.1.2017.

In this regard the Petitioner vide affidavit dated 30.6.2021 has submitted the following:

- (a) Detailed break-up of the actual O&M expenses booked by the Petitioner for the 2014-19 tariff period for the whole generating station
- (b) Detailed break-up of actual O&M expense of the Corporate Centre and its allocation to various generating stations, for the 2014-19 tariff period.
- (c) Break-up of claimed wage revision impact on employee cost, expenses on corporate centre and on salaries of CISF & Kendriya Vidyalaya employee of the generating station for the 2014-19 tariff period.

74. We have examined the submissions and the documents available on record. As stated, the Petitioner has claimed total amount of Rs.3814.24 lakh (Rs.16.86 lakh in 2015-16, Rs.1040.19 lakh of in 2016-17, Rs.1240.00 lakh in 2017-18 and Rs.1517.19 lakh in 2018-19) as impact of wage revision of employees of CISF and Kendriya Vidyalaya staff from 1.1.2016 and for 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 employees, consequent upon wage revision, of Rs.111.02 lakh in 2017-18 and Rs.440.96 lakh in 2018-19. 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, stand reduced to Rs.3262.39 lakh with the following year-wise break up.

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Wage revision impact claimed (excluding PRP/ex-gratia)	0.00	16.86	1040.17	1129.04	1076.32	3262.39

75. 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 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 the SOR is extracted under:

“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 macro economics 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.”

76. The methodology indicated in SOR quoted above suggests a comparison of the normative O&M expenses with the actual O&M expenses, on year-to-year basis.

However, in this respect the following facts needs consideration:

- (a) The norms are framed based on the averaging of the actual O&M expense of past five years to capture the year-on-year variations in sub-heads of O&M;
- (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 generating companies find that their actual expenditure has gone beyond the normative O&M expenses in a particular year put departmental restrictions and try to bring the expenditure for the next year below the norms.



77. In consideration of above facts, we find 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 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 2015-19 on a combined basis, which is commensurate with the wage revision claim being spread over these four years.

78. The Petitioner has furnished the detailed breakup of the actual O&M expenses incurred during the 2014-19 tariff period for combined stages i.e., Stage-I, II, III, IV and V of the Vindhyachal STPS. It is noticed that the total O&M expenses incurred for generating station is more than the normative O&M expenses recovered during each year of the 2014-19 tariff period. The impact of wage revision/ pay revision could not be factored by the Commission while framing the O&M expense 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 SOR to the 2014 Tariff Regulations, the following approach has been adopted for arriving at the allowable impact of pay revision:

- (a) Comparison of the normative O&M expenses with the actual O&M expenses incurred 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 fee, 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 expense norms for the 2014-19 tariff period, have been excluded from the yearly actual O&M expenses. Having done so, if the normative O&M expenses for the period 2015-19 are higher than the actual O&M expenses (normalized) for the said period, then the impact of wage revision (excluding PRP and ex-gratia) as claimed for the said 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 lesser 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.

79. The details as furnished by the Petitioner for actual O&M expenses incurred for Stage-I, II, III and IV (4260 MW) for the period from 1.4.2014 to 30.10.2015 and for Stages-I to V (4760 MW) for the period from 31.10.2015 to 31.3.2019, and the wage revision impact (excluding PRP and ex-gratia) for the generating station (Stage-II 1000 MW) are as under:

(Rs. in lakh)

	Actual O&M expenses for whole Vindhyachal STPS, excluding water charges & capital spares	Wage revision impact claimed for the generating station i.e. Vindhyachal STPS, Stage-III (1000 MW)
2014-15	72955.49	0.00
2015-16	81612.17	16.86
2016-17	89452.94	1040.17
2017-18	92110.08	1129.04
2018-19	100388.52	1076.32
	Total	3262.39

80. As a first step, the expenditure against sub-heads of O&M expenses as indicated in paragraph 76 above have been excluded from the actual O&M expenses incurred to arrive at the actual O&M expenses (normalized) for the combined stages of the generating station (Stage-I to IV till 30.10.2015 for 4260 MW and Stage-I to V from 31.10.2015 to 31.3.2019 for 4760 MW). Accordingly, the comparison of the normative O&M expenses versus the actual O&M expenses (normalized) along with the wage revision impact claimed by the Petitioner for the generating station i.e. Vindhyachal STPS, Stage-II (1000 MW) for the period 2015-19 is as follows:

(Rs. in lakh)

	2015-16	2016-17	2017-18	2018-19	Total
Actual O&M expenses (normalized) for combined stages of the generating station (Stage-I to IV till 30.10.2015 for 4260 MW and Stage-I to V from 31.10.2015 to 31.3.2019 for 4760 MW) – (a)	74002.30	81635.20	83197.07	89074.61	327909.17



Actual O&M expenses (normalized) for the generating station, Stage-III (1000 MW) pro-rated based on capacity – (b)	16558.97	17150.25	17478.38	18713.15	69900.75
Normative O&M expenses for generating station as per Regulation 29(1) of the 2014 Tariff Regulations – (c)	17010.00	18080.00	19220.00	20430.00	74740.00
Under/(Excess) recovery for the generating station (d)=(b)-(c)	(-)451.03	(-)929.75	(-)1741.62	(-)1716.85	(-)4839.25
Wage revision impact claimed (excluding PRP/ex-gratia)	16.86	1040.17	1129.04	1076.32	3262.39

81. It is observed that for the wage revision impact during the period 2015-19, the normative O&M expenses are in excess of the actual O&M expenses (normalized) and the excess recovery is to the tune of Rs.4839.25 lakh, which exceeds the wage revision impact claimed (excluding PRP/ex-gratia) by the Petitioner. As such, in terms of methodology described above, the wage revision impact (excluding PRP/ex-gratia) is not allowable for this generating station.

Additional O&M Expenses on account of payment of arrears of Water Charges

82. The Petitioner has claimed additional O&M expenses of Rs.1194.32 lakh in 2017-18 on account of payment of arrears of water charges for the period prior to the period 2014-19. The Petitioner has submitted that 150 cusecs of water was in-principally allocated, subject to signing of agreement with Water Resource Department, Government of Madhya Pradesh (WRD), to the generating station w.e.f. 1.4.1988 from Rihand reservoir. It has also submitted the following:

- (a) The Rihand reservoir was constructed by the Government of Uttar Pradesh, however the catchment area is mainly located in the state of Madhya Pradesh, which lead to a dispute between these two governments on the rights of stored water and the beneficiary of charges of water supplied to the Vindhyachal STPS and accordingly no bills were being raised for the water consumption by Vindhyachal STPS.
- (b) The M.P. Irrigation Department raised the first ever bill on 5.3.2004 to Vindhyachal based on actual quantity drawn for the period from 6.3.1988 to January 2004, and the same was duly paid by the Petitioner. Subsequently, the generating station continued to pay the water charges based on actual consumption till signing of agreement of 180 cusec for supply of water to Vindhyachal STPS with WRD on 27.12.2008. The said agreement provided for



payment of water charges based on the actual water consumption or 90% of the allocated quantity, whichever is higher.

- (c) In the month of July, 2016, WRD raised a fresh demand of Rs.925.58 crores for the water charges comprising of differential payment on account of payment of water charges for the period from 1.4.1988 to 26.12.2008 along with applicable interest and penal charges for the period of construction as well as operation for these stations and finally after number of deliberations between both the parties, the revised arrear bill for Rs.305.56 crores was raised by WRD in April 2018 and the Petitioner made the payment for the same in 2017-18.
- (d) Out of arrear bill of Rs.305.56 crore, the Petitioner has allocated and claimed Rs.3730.31 lakh (Rs.2535.99 lakh as IEDC for construction period and Rs.1194.32 lakh as revenue expenditure for operating period) for the generating station. The water charges pertaining to the construction period of the stations have been capitalised in the books of accounts and has been claimed as additional capital expenditure under change in law and the water charges pertaining to operating period has been booked under revenue expenditure and claimed as reimbursement for the generating station.

83. We have considered the submissions. Since the expenditure has been incurred by the Petitioner, in terms of the directions of the WRD, State of MP, we are of the view that the said expenditure is required to be allowed, in exercise of power to relax under Regulation 54 of the 2014 Tariff Regulations, as additional O&M charges. Accordingly, we allow the claim of the Petitioner with direction that the same shall be payable by the beneficiaries in twelve equal monthly instalments. Keeping in view the consumer interest, we, as a special case, direct that no interest shall be charged by the Petitioner on the arrear water charges allowed in this order. This arrangement, in our view, will balance the interest of both, the Petitioner and the Respondents. Also, considering the fact that the said arrear of water charges is being allowed in exercise of the power to relax, these expenses are not made part of the O&M expenses and consequential annual fixed charges being determined in this order under the 2014 Tariff Regulations.

84. Accordingly, the total O&M expenses allowed to the generating station for the period 2014-19 is summarised below:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Normative O&M expenses claimed under Regulation 29(1)(a) of the 2014 Tariff Regulations (a)	16000.00	17010.00	18080.00	19220.00	20430.00
Normative O&M expenses allowed under Regulation 29(1)(a) of the 2014 Tariff Regulations (b)	16000.00	17010.00	18080.00	19220.00	20430.00
Water Charges claimed under Regulation 29(2) of the 2014 Tariff Regulations (c)	1867.96	1784.93	1671.75	1571.04	1622.74
Water Charges allowed under Regulation 29(2) of the 2014 Tariff Regulations (d)	1867.96	1784.93	1671.75	1571.04	1622.74
Capital Spares consumed claimed under Regulation 29(2) of the 2014 Tariff Regulations (e)	1181.98	365.48	273.08	496.06	921.70
Capital Spares consumed allowed under Regulation 29(2) of the 2014 Tariff Regulations (f)	1060.20	326.21	243.60	440.74	827.33
Total O&M expenses claimed under Regulation 29 of the 2014 Tariff Regulations (a + c + e)	19049.94	19160.41	20024.83	21287.1	22974.44
Total O&M expenses allowed under Regulation 29 of the 2014 Tariff Regulations (b + d + f)	18928.16	19121.14	19995.35	21231.78	22880.07
Impact of Wage revision claimed	0.00	16.86	1040.19	1240.00	1517.19
Impact of Wage revision allowed	0.00	0.00	0.00	0.00	0.00
Impact of GST claimed	0.00	0.00	0.00	139.00	210.00
Impact of GST allowed	0.00	0.00	0.00	0.00	0.00
Arrear of water charges for the period prior to 2014-19 claimed	0.00	0.00	0.00	1194.32	0.00
Arrear of water charges for the period prior to 2014-19 allowed	0.00	0.00	0.00	1194.32	0.00

Compensation Allowance

85. Regulation 17 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 the useful life.”

Years of operation	Compensation Allowance (Rs. lakh/MW/year)
0-10	Nil
11-15	0.20
16-20	0.50
21-25	1.00

86. The Commission in its order dated 24.2.2017 in Petition No.342/GT/2014 had allowed compensation allowance of Rs.100.00 lakh in 2017-18 and Rs.200.00 lakh in



2018-19, for the generating station. The same has been considered by the Petitioner and hence allowed for the purpose of tariff for the period 2014-19.

Operational Norms

87. The operational norms in respect of the generating station i.e. normative annual plant availability factor, gross station heat rate, specific fuel oil consumption and auxiliary power consumption are discussed below:

(a) Normative Annual Plant Availability Factor (NAPAF)

88. In terms of Regulation 36(A)(a) of the 2014 Tariff Regulations, the Commission vide its order dated 24.2.2017 in Petition No. 342/GT/2014 had allowed NAPAF of 83% for the period 2014-17 and 85% for the period 2017-19. The same is considered for the purpose of tariff.

(b) Gross Station Heat Rate (kCal/kWh)

89. In terms of Regulation 36(C)(a) of the 2014 Tariff Regulations, the Gross Station Heat Rate (GSHR) of 2375 kCal/kWh as allowed in order dated 24.2.2017 in Petitioner No. 342/GT/2014, is considered for the purpose of tariff.

(c) Specific Oil Consumption

90. In terms of Regulation 36(D)(a) of the 2014 Tariff Regulations, the secondary fuel oil consumption of 0.50 ml/kWh as allowed in order dated 24.2.2017 in Petition No. 342/GT/2014, is considered for the purpose of tariff.

(d) Auxiliary Power Consumption

91. In terms of Regulation 36(E)(a) of the 2014 Tariff Regulations, the auxiliary power consumption of 5.75%, as allowed in order dated 24.2.2017 in Petition No. 342/GT/2014, is considered for the purpose of revision of tariff.

Interest on Working Capital

92. Regulation 28 of the 2014 Tariff Regulations provides as under:



“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.”

Fuel Cost and Energy Charges in Working Capital

93. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of cost of fuel as part of Interest on Working Capital (IWC) is to be based on the landed price and GCV of fuel as per actuals, for the three months preceding the first month for which the tariff is to be determined.

94. Regulation 30(6)(a) of the 2014 Tariff Regulations provides as under:

“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 place in accordance with the following formula:

(a) For coal based and lignite fired stations

ECR = {(GHR – SFC x CVSF) x LPPF / CVPF+SFC x LPSFi + LC x LPL} x 100 / (100 – AUX)

Where,



AUX = Normative auxiliary energy consumption in percentage.
CVPF = Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic metre, as applicable.
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.
SFC= Normative specific fuel oil consumption, in ml/ kWh
LPSFi= Weighted average landed price of secondary fuel in Rs/ ml during the month”.

95. 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.

96. Regulation 30(7) of the 2014 Tariff Regulations provides as under:

“(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.”

97. The Regulations for computation of energy charges and issue of ‘as received’ GCV specified in Regulation 30 of the 2014 Tariff Regulations was challenged by the Petitioner Company 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 of Delhi 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.”

98. 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 its 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.

99. In Petition No. 342/GT/2014 filed by the Petitioner for determination of tariff of this generating station for the 2014-19 tariff period, the Petitioner had furnished GCV of coal on ‘as billed’ but not ‘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 its order dated 24.2.2017 in Petition No.342/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.



100. As per the Commission's order dated 25.1.2016 in Petition No. 283/GT/2014, the Petitioner, in Form-13F, 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 based on (i) 'as received' GCV of coal for 30 months from October 2016 to March 2019 with adjustment of 100 kCal/kg towards storage loss, (ii) landed price of coal for preceding three months i.e. January 2014 to March 2014 and (iii) GCV and landed price of Secondary fuel oil procured for the preceding three months i.e. January 2014 to March 2014 for the generating station, has been claimed by the Petitioner in the working capital as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (15 days)	3842.12	3842.12	3842.12	3934.70	3934.70
Cost of Coal towards Generation (30 days)	7684.25	7684.25	7684.25	7869.41	7869.41
Cost of Secondary fuel oil (2 months)	318.65	319.52	318.65	326.33	326.33

101. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of 139.22 paise/kWh for the generating station based on GCV and price of fuel (coal and secondary fuel oil) as indicated above.

102. The Petitioner, suo-moto has submitted the additional details on the GCV on 'as received' basis which was sought by the Commission, in other similar matters for the months of January 2014 to March 2014, which was uploaded in the website of the



Petitioner and shared with the beneficiaries. The Petitioner vide affidavit dated 30.6.2021 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, for calculation of IWC under Regulation 28(2) of the 2014 Tariff Regulations, the GCV should 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 APTEL judgment in NEEPCO vs 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 on actual GCV i.e., 'as fired' GCV. It also submitted that without prejudice to the above submissions, it has furnished the details of GCV on 'as received' basis for the months of January 2014 to March 2014 in compliance with the directions of the Commission in other similar matters as under:

Sl. No.	Month	Weighted Average GCV of coal received (EM basis) (kcal/kg) (A)	Total Moisture TM) (in %) (B)	Equilibrated Moisture (EM) (in %) (C)	Weighted Average GCV of coal received (TM basis) (kcal/kg) D=A*(1-B%)/(1-C%)
1	January 2014	3853.27	17.90	7.50	3420.03
2	February 2014	3881.99	17.40	6.6	3729.77
3	March 2014	3956.01	17.77	6.81	3490.75
	Average				3447.96

103. The submissions have been considered. It is observed that while calculating the Weighted Average GCV on coal received (TM basis) as tabulated above, the GCV



for the month of Feb 2014 is wrongly calculated as 3739.77 kcal/kg and should be 3433.109 kcal/kg. As stated in paragraph 100 above, the Petitioner in Form-13F, 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.

104. 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 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. 342/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.

105. 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 the table under paragraph 102 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."

106. Thus, 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 provided 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.



107. 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.



108. The Petitioner has calculated GCV 3447.96 kCal/kg which represents average of GCVs of preceding three months. 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 table at paragraph 95 above) works out to 3455.20 kCal/kg.

109. Accordingly, the cost for fuel components in working capital has been computed considering the fuel details (price and GCV) as per Form-15 of the petition except for 'as received' GCV of coal, which is considered as 3455.20 kCal/kg as discussed above. All other operational norms such as Station Heat Rate, Auxiliary Energy Consumption and Secondary Fuel Cost have been considered as per the 2014 Tariff Regulations for calculation of fuel components in working capital.

110. Based on the above discussion, the cost for fuel component in working capital is worked out and allowed as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (15 days) generation corresponding to NAPAF	3746.11	3746.11	3746.11	3836.38	3836.38
Cost of Coal towards Generation (30 days) generation corresponding to NAPAF	7492.22	7492.22	7492.22	7672.75	7672.75
Cost of Secondary fuel oil 2 months generation corresponding to NAPAF	292.72	293.52	292.72	299.77	299.77

Energy Charge Rate (ECR) for calculating working capital

111. Regulation 30(6)(a) of the 2014 Tariff Regulations provides for computation and payment of 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 place in accordance with the following formula:

(b) For coal based and lignite fired stations

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

Where,



AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic metre, as applicable.

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.

SFC= Normative specific fuel oil consumption, in ml/ kWh

LPSFi= Weighted average landed price of secondary fuel in Rs/ ml during the month”.

112. The Petitioner has claimed Energy Charge Rate (ECR) of 139.22 Paise/kWh for the generating station. The allowable ECR, based on the operational norms as specified in Regulation 36(A) of the 2014 Tariff Regulations and on weighted average of ‘as received’ GCV of 3889.60 kCal/kg is worked out as under:

	Unit	2014-19
Capacity	MW	1000
Gross Station Heat Rate	kCal/kWh	2375
Aux. Energy Consumption	%	5.75%
Weighted average GCV of Oil	kCal/lit	9976.40
Weighted average GCV of Coal	Kcal/kg	3455.20
Weighted average price of Oil	Rs./KL	48311.61
Weighted average price of Coal	Rs./MT	1827.77
Rate of Energy Charge ex-bus	Rs./kWh	1.356

113. The Energy Charges for two months for computation of working capital based on ECR of Rs.1.356/kWh, has been worked out as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
15487.17	15529.60	15487.17	15860.35	15860.35

114. Accordingly, the fuel component and energy charges for two months in working capital is allowed as under:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal for 45 days (15 days for coal stock and 30 days for generation) corresponding to generation at NAPAF	11238.32	11238.32	11238.32	11509.13	11509.13



Cost of Secondary fuel oil for 2 months corresponding to generation at NAPAF	292.72	293.52	292.72	299.77	299.77
Energy Charges for 2 months	15487.17	15529.60	15487.17	15860.35	15860.35

Working Capital for Maintenance Spares

115. The Petitioner in Form-13B has claimed the maintenance spares in the working capital as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
3809.99	3835.45	4213.00	4772.08	4940.33

116. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the O&M expenses as specified in the Regulation 29 of the 2014 Tariff Regulations. Accordingly, maintenance spares @ 20% of the O&M expenses (including the water charges and capital spares) allowed for the 2014-19 tariff period is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
3785.63	3824.23	3999.07	4246.36	4576.01

Working Capital for Receivables

117. Receivables equivalent to two months of capacity charges and energy charges has been worked out duly, considering mode of operation of the generating station on secondary fuel, is allowed as under:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - for two months (A)	15487.17	15529.60	15487.17	15860.35	15860.35
Fixed Charges - for two months (B)	12468.28	12417.97	12384.81	12364.59	12418.70
Total (C = A+B)	27955.45	27947.57	27871.98	28224.95	28279.05

Working Capital for O&M Expenses (1 month)

118. The O&M expenses for 1 month as claimed by the Petitioner in Form-13B is as under:



(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1587.50	1598.11	1755.42	1988.37	2058.47

119. For consideration of working capital, O&M expenses of 1 month are to be considered. The normative O&M expenses allowed as per Regulation 29(1) of the 2014 Tariff Regulations, water charges and capital spares allowed as per Regulation 29(2) of the 2014 Tariff Regulations have been considered for calculating O&M expenses for 1 month as a part of working capital.

120. Accordingly, in terms of Regulation 28(1)(a)(vi) of the 2014 Tariff Regulations, one month's O&M expenses allowed is as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1577.35	1593.43	1666.28	1769.32	1906.67

Rate of interest on working capital

121. In terms of Regulation 28(3) of the 2014 Tariff Regulations, the rate of interest on working capital has been considered as 13.50% (Bank rate 10% + 350 bps).

Accordingly, interest on working capital has been computed as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working capital for Cost of Coal towards Stock (15 days generation corresponding to NAPAF) (A)	3746.11	3746.11	3746.11	3836.38	3836.38
Working capital for Cost of Coal towards Generation (30 days generation corresponding to NAPAF) (B)	7492.22	7492.22	7492.22	7672.75	7672.75
Working capital for Cost of Secondary fuel oil (2 months generation corresponding to NAPAF) (C)	292.72	293.52	292.72	299.77	299.77
Working capital for Maintenance Spares (20% of O&M expenses) (D)	3785.63	3824.23	3999.07	4246.36	4576.01
Working capital for Receivables (2 months of sale of electricity at NAPAF) (E)	27955.45	27947.57	27871.98	28224.95	28279.05
Working capital for O&M expenses (1 month of O&M expenses) (F)	1577.35	1593.43	1666.28	1769.32	1906.67
Total Working Capital (G = A+B+C+D+E+F)	44849.47	44897.07	45068.37	46049.52	46570.64
Rate of Interest (H)	13.5000%	13.5000%	13.5000%	13.5000%	13.5000%
Interest on Working Capital (I = G x H)	6054.68	6061.10	6084.23	6216.68	6287.04



122. The interest on working capital and the energy charge calculated as above are subject to the final decision of the Commission in Petition No. 244/MP/2016.

Annual Fixed Charges

123. Accordingly, the annual fixed charges approved for the period 2014-19 in respect of this generating station is summarised as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	18580.54	18854.80	18962.19	19015.03	19044.66
Interest on Loan	10094.50	8906.09	7583.40	5982.97	4469.34
Return on Equity	21151.79	21564.68	21683.69	21741.09	21831.06
Interest on Working Capital	6054.68	6061.10	6084.23	6216.68	6287.04
O&M Expenses	18928.16	19121.14	19995.35	21231.78	22880.07
Compensation Allowance	0.00	0.00	0.00	100.00	200.00
Total	74809.68	74507.82	74308.86	74287.56	74712.18

Note: All figures are on annualized basis. All figures under each head have been rounded. The figure in total column in each year is also rounded. As such, the sum of individual items may not be equal to the arithmetic total of the column.

124. The difference between the annual fixed charges already recovered in terms of the Commission's order dated 6.2.2017 in Petition No. 342/GT/2014 and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 8(13) of the 2014 Tariff Regulations.

125. Petition No. 285/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(I.S. Jha)
Member

Depreciation for the period 2014-19

Name of the Assets ¹	Depreciation Rates	2014-15		2015-16		2016-17		2017-18		2018-19	
		Gross Block as on 31.03.2014	Depreciation for 2014-15	Gross Block as on 31.03.2015	Depreciation 2015-16	Gross Block as on 31.03.2016	Depreciation 2016-17	Gross Block as on 31.03.2017	Depreciation 2017-18	Gross Block as on 31.03.2018	Depreciation 2018-19
Freehold Land	0	0	0	0	0	0	0	0	0	0	0
Roads,bridges,culvert	3.34	928.39	31.08	932.72	31.15	932.72	31.15	932.72	31.16	932.91	31.16
Main Plant Buildings	3.34	22146.75	739.53	22136.73	739.37	22136.73	739.37	22136.73	739.77	22161.01	740.18
Other Buildings	3.34	5960.23	199.19	5967.11	199.32	5968.27	199.34	5968.27	199.99	6007.14	200.64
Temporary erection	100	29.41	29.41	29.41	29.41	29.41	29.41	29.41	29.41	29.41	29.41
Water supp,drain etc	5.28	749.02	39.59	750.42	39.62	750.42	39.62	750.42	39.62	750.42	39.62
MGR track&Signal sys	5.28	5384.6	284.31	5384.6	284.31	5384.6	284.31	5384.6	284.85	5405.05	285.39
Railway siding	5.28	468.84	24.75	468.84	24.75	468.84	24.75	468.84	24.75	468.84	24.75
Plant and machinery	5.28	339057.5	18147.2	348336.5	18548.81	354270.1	18788.47	357414.5	19016.29	362899.38	19161.09
Construction equip.	5.28	573.55	30.28	573.55	30.28	573.55	30.28	573.55	30.28	573.55	30.28
Electrical install.	5.28	526.34	27.79	526.34	27.79	526.34	27.79	526.34	27.79	526.34	27.79
Vehicles including speed boat	9.5	8.71	0.83	8.71	0.83	8.71	0.83	8.71	0.62	4.39	0.42
Furniture & Fixture	6.33	654.18	41.4	653.86	41.39	653.86	41.36	652.98	41.33	652.98	41.33
EDP,WP&SATCOM equip	15	611.76	83.85	506.25	75.58	501.53	73.38	476.81	71.52	476.81	71.52
Other Office Equip	6.33	392.43	24.84	392.43	24.84	392.43	24.83	392.23	24.83	392.23	24.83
Hospital equipment	5.28	98.42	5.2	98.42	5.2	98.42	5.2	98.42	5.2	98.42	5.2
Communication Equip	6.33	179.73	11.38	179.73	11.38	179.73	11.38	179.73	11.38	179.73	11.38
Lab & Workshop Equip	5.28	51.01	2.69	51.01	2.69	51.01	2.69	51.01	2.69	51.01	2.69
Assets not owned by Co.	5.28	0	0	0	0	0	0	0	0	0	0
Leashold Land	0	0	0	0	0	0	0	0	0	0	0
Leased Vehicle	0	0	0	0	0	0	0	0	0	0	0
Software	15	396.57	59.49	396.57	59.49	396.57	59.49	396.57	59.49	396.57	59.49
TOTAL		378217.4	19782.81	387393.2	20176.22	393323.3	20413.66	396441.9	20640.98	402006.22	20787.17
Weighted Average Rate of Depreciation (%)			5.17%		5.17%		5.17%		5.17%		5.17%

