CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 577/GT/2020

Coram:

Shri I. S. Jha, Member
Shri Arun Goyal, Member
Shri Pravas Kumar Singh, Member

Date of Order: **17th February, 2023**

In the matter of

Petition for truing up of annual fixed charges for the period 2014-19 and for determination of tariff for the 2019-24 period in respect of Mejia Thermal Power Station, Units-I to III (630 MW)

And

In the matter of

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

Vs

1. West Bengal State Electricity Distribution Company Limited,
   Block 'DJ' Sector-11, Salt Lake City, Kolkata – 700 091.

2. Jharkhand Bijli Vitran Nigam Limited,
   Engineering Building, HEC, Dhurwa, Ranchi- 834 004.

3. Damodar Valley Power Consumers Association,
   9, A J C Bose Road, 4th Floor, Kolkata – 700017. **...Respondents**

Parties Present:

Shri M.G. Ramachandran, Senior Advocate, DVC
Ms. Anushree Bardhan, Advocate, DVC
Ms. Srishti Khindaria, Advocate, DVC
Shri Manik Rakshit, DVC
Shri Subrata Ghosal, DVC
Shri Samit Mandal, DVC
Shri Arnab Kr. Sinha, DVC
Shri Rajiv Yadav, Advocate, DVPCA

ORDER

This petition has been filed by the Petitioner, Damodar Valley Corporation, for truing-up of tariff of Mejia TPS, Unit I to III (3 x 210 MW) (in short "the generating station”) for the period 2014-19, in terms of Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff of the generating station for the 2019-24 tariff period, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short ‘the 2019 Tariff Regulations’).

2. The Petitioner is a statutory body established by the Central Government under the Damodar Valley Corporation Act, 1948 (hereinafter referred to as the 'DVC Act') for the development of the Damodar Valley, with three participating Governments, namely, the Central Government, the Government of West Bengal and the Government of Jharkhand. The generating station is a non-pit head station, with a total capacity of 630 MW, comprising of three units of 210 MW each. The date of commercial operation of the units of the generating station are as under:

	Actual COD
Unit – I	1.3.1996
Unit – II	1.3.1998
Unit – III	1.9.1999

Background

3. Petition No. 66/2005 was filed by the Petitioner for approval of the revenue requirements and for determining the tariff for electricity related activities, that is, the generation, transmission and distribution of electricity, undertaken by it for the period from 1.4.2004 to 31.3.2009. The Commission by its order dated 3.10.2006 determined tariff in respect of the generating stations and inter-state transmission systems of the Petitioner, after allowing a special dispensation to the Petitioner to continue with the prevailing tariff till 31.3.2006. Against the Commission’s order dated 3.10.2006, the Petitioner filed Appeal No.273/2006 before the Appellate Tribunal for Electricity (hereinafter referred to as ‘the APTEL’) on various issues. Similarly, appeals were also

filed before the APTEL by some of the objectors / consumers, namely, Maithon Alloys Ltd and others (Appeal No.271/2006), Bhaskhar Shrachi Alloys Ltd. and others (Appeal No. 272/2006), State of Jharkhand (Appeal No.275/2006) and the West Bengal State Electricity Regulatory Commission (Appeal No.8/2007) challenging the order of the Commission dated 3.10.2006 on various grounds. The APTEL by its judgment dated 23.11.2007 disposed of the said appeals ('Appeal Nos. 273/2006 & batch') as under:

> *"113. In view of the above, the subject Appeal No. 273 of 2006 against the impugned order of Central Commission passed on October 3, 2006 is allowed to the extent described in this judgment and we remand the matter to Central Commission for de novo consideration of the tariff order dated October 3, 2006 in terms of our findings and observations made hereinabove and according to the law. Appeal No. 271, 272 and 275 of 2006 and No. 08 of 2007 are also disposed of, accordingly"*

4. Against the above judgment dated 23.11.2007, some of the parties namely, the Central Commission (Civil Appeal No.4289/2008), the West Bengal State Electricity Regulatory Commission (Civil Appeal No.804/2008), M/s Bhaskhar Shrachi Alloys Ltd & ors (Civil Appeal No 971-973/2008), the State of Jharkhand (Civil Appeal No.4504-4508/2008) and the State of West Bengal (Civil Appeal No.1914/2008) filed Civil Appeals before the Hon'ble Supreme Court. Thereafter, in terms of the directions contained in the judgment of APTEL dated 23.11.2007 in Appeal No.273/2006 and other connected appeals, for a de novo consideration of the order dated 3.10.2006, the Petition No. 66/2005 (with I.A. Nos.19/2009 and 23/2009) was heard by the Commission and tariff of the generation and inter-state transmission systems of the petitioner for the period 2006-09 was re-determined by order dated 6.8.2009, subject to the final outcome of the said Civil Appeals pending before the Hon'ble Supreme Court. Against the Commission's order dated 6.8.2009, the Petitioner filed appeal (Appeal No.146/2009) before APTEL on various issues. However, APTEL by its judgment dated 10.5.2010, rejected the prayers of the Petitioner and upheld the order of the Commission dated 6.8.2009. Against the judgment of APTEL dated 10.5.2010,

the Petitioner filed appeal (Civil Appeal No.4881/2010) before the Hon'ble Supreme Court and the Hon'ble Court by interim order dated 9.7.2010 stayed the directions of APTEL for refund of excess amount billed, until further orders. However, on 17.8.2010 the Hon'ble Court had passed interim order in the said appeal. During the pendency of these appeals, the Commission, in terms of the judgment of APTEL, while notifying the 2014 Tariff Regulations, applicable for the period 2014-19, incorporated Regulation 53, containing special provisions related to the generating stations of the Petitioner. Accordingly, the tariff of the generating stations of the Petitioner for the period 2014-19, were determined by this Commission, subject to the final decision of the Hon'ble Supreme Court, in the said civil appeals. Similar provisions were made by the Commission under Regulation 72, while notifying the 2019 Tariff Regulations, applicable for the tariff period 2019-24.

5. Meanwhile, the Hon'ble Supreme Court vide its common judgment dated 23.7.2018 in Civil Appeal No(s) 971-973/2008 (along with C.A Nos. 1914/2008, C.A No. 4504-4508/2008 and C.A No. 4289/2008) dismissed all the Civil Appeals thereby affirming the judgment of APTEL dated 23.11.2007 in Appeal Nos. 273/2006 & batch. Further, vide judgment dated 3.12.2018, the Hon'ble Supreme Court dismissed the Civil Appeal No. 4881/2010 filed by the Petitioner, against the judgment of APTEL dated 10.5.2010. In this background and in terms of the special provisions under the 2014 and 2019 Tariff Regulations, the tariff of the generating station of the Petitioner, is trued-up for the period 2014-19 and also determined for the period 2019-24, as stated in the subsequent paragraphs.

6. The Commission vide its order dated 31.8.2016 in Petition No. 347/GT/2014 had approved the capital cost and the annual fixed charges for the period 2014-19 as under:

Capital cost allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (A)	161072.25	161504.39	161610.63	161676.71	161676.71
Add: Additional Capital Expenditure allowed (B)	432.14	106.23	66.08	0.00	340.93
Closing Capital Cost (C) = (A) + (B)	**161504.39**	**161610.63**	**161676.71**	**161676.71**	**162017.64**
Average Capital Cost (D) = (A+C) / 2	161288.32	161557.51	161643.67	161676.71	161847.18

Annual fixed charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	639.04	325.38	134.37	29.74	390.95
Interest on loan	0.00	0.00	0.00	0.00	1.88
Return on Equity	9488.59	9504.43	9509.50	9511.44	9521.47
Interest on Working Capital	6174.93	6241.95	6286.62	6473.72	6553.17
O&M Expenses	15057.00	16002.00	17010.00	18081.00	19221.30
Compensation Allowance	252.00	315.00	315.00	420.00	420.00
Sub-Total (A)	**31611.56**	**32388.75**	**33255.49**	**34515.89**	**36108.78**
Additional claims allowed					
Share of Common Office Expenses	112.91	104.83	98.78	98.68	97.69
Additional O&M on account of Ash Evacuation, Mega Insurance, CISF Security and Share of subsidiary activities	0.00	0.00	0.00	0.00	0.00
Share of Pension & Gratuity Contribution	0.00	0.00	0.00	0.00	0.00
Sub-Total (B)	**112.91**	**104.83**	**98.78**	**98.68**	**97.69**
'Total Annual Fixed Charges (C = A+B)	**31724.47**	**32493.58**	**33354.26**	**34614.58**	**36206.46**

TRUING-UP OF TARIFF FOR THE PERIOD 2014-19

7. Regulation 8(1) of the 2014 Tariff Regulations provides as follows:

> *"(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."*

8. In terms of the above regulation, the Petitioner, in the present petition, has claimed the capital cost (in Form 1(i) of the petition) and annual fixed charges for the period 2014-19, as under:

Capital Cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (A)	161072.25	162086.65	162410.04	162887.83	163342.67
Add: Addition during the year / period (B)	1389.96	425.20	475.59	592.31	1109.25
Less: De-capitalization during the year / period (C)	451.12	115.91	3.98	138.01	142.70
Less: Reversal during the year / period (D)	0.00	0.00	0.00	0.00	0.00
Less: Undischarged liabilities (E)	38.27	8.34	0.54	0.00	7.55
Add: Discharges during the year / period (F)	113.84	22.45	6.71	0.54	30.58
Closing Capital Cost (G)=(A+B-C-D-E+F)	**162086.65**	**162410.04**	**162887.83**	**163342.67**	**164332.23**
Average Capital Cost (H)=(A+G/2)	161579.45	162248.35	162648.94	163115.25	163837.45

Annual fixed charges claimed (as per Form 1 of the petition)

(Rs in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	603.19	1008.02	459.64	423.26	772.48
Interest on loan	21.29	25.74	4.27	5.01	10.79
Return on Equity	9505.94	9591.53	9615.22	9642.78	9711.06
Interest on Working Capital	6325.64	6499.93	6550.41	6657.85	6600.02
O&M Expenses	15057.00	16002.00	17010.00	18081.00	19221.30
Water Charges	0.00	1119.60	570.32	690.95	562.86
Compensation Allowance	252.00	315.00	420.00	420.00	525.00
Sub-Total (A)	**31765.05**	**34561.82**	**34629.86**	**35920.85**	**37403.52**
Additional Claims					
Capital Spares	316.56	4.58	15.58	44.93	104.52
DVC's share of savings in interest cost due to loan restructuring	0.00	0.00	0.00	0.15	0.33
Impact of Pay Revision due to recommendation of 7th Pay Commission	0.00	0.00	765.21	963.13	678.40
Impact of GST as change in law	0.00	0.00	0.00	42.27	144.52
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	1751.89	1880.57	2159.04	0.00	0.00
Share of P&G expenses	934.71	2400.26	2637.80	5971.84	1128.35
Share of Common Office Expenditure	122.72	114.83	97.61	105.70	113.11
Expenses due to Ash evacuation, Mega insurance, CISF expenditure & Expenditure for Subsidiary activity	3418.98	2988.99	3705.15	3710.45	2895.74
Sub-Total (B)	**6544.85**	**7389.23**	**9380.39**	**10838.48**	**5064.98**
Total annual fixed charges claimed (C = A+B)	**38309.90**	**41951.05**	**44010.25**	**46759.33**	**42468.49**

9. As stated, the Petitioner has filed this petition for truing-up of tariff for the period 2014-19 and for determination of tariff for the period 2019-24 of the generating station vide affidavit dated 21.1.2020. Subsequently, the Petitioner vide its affidavit dated 17.6.2020/8.9.2020, furnished certain additional information along with revised tariff filing forms for the period 2019-24, after correction of the certain inadvertent errors. The Respondent, Damodar Valley Power Consumers Association (DVPCA) has filed its reply vide affidavit dated 8.7.2020 and in response, the Petitioner has filed its rejoinder to the said reply of DVPCA, vide affidavit dated 5.11.2020. The Petition was thereafter heard on 25.5.2021, through virtual conferencing, and the Commission, after directing the Petitioner to submit certain additional information, reserved its order in the petition. The Petitioner also filed the note of arguments circulated during the hearing dated 25.5.2021. In response, the Petitioner vide affidavit dated 22.7.2021 has filed the additional information after serving copies on the Respondents. DVPCA has filed its reply vide affidavit dated 21.6.2021 and the Petitioner filed its rejoinder to the same, vide affidavit dated 22.9.2021. Since the order in the petition, could not be passed prior to the Chairperson, Shri P. K. Pujari demitting office, the Petition was re-listed and heard on 24.6.2022, through virtual conferencing. The Commission after hearing the parties, directed the Petitioner to submit additional information and reserved its order in the petition. In response, the Petitioner vide affidavit dated 13.7.2022, has filed additional information after serving copy on the Respondents. DVPCA has filed its reply vide affidavit dated 22.7.2022 and the Petitioner has filed its rejoinder to the same vide affidavit dated 28.7.2022. We, therefore, proceed to examine the claims of the Petitioner, in this petition, on prudence check, as stated in the subsequent paragraphs.

10. It is observed that the Petitioner while submitting the information in compliance to

ROP dated 30.6.2022, has also submitted some additional information and revised Form-9A (Additional Capital Expenditure), Form-9Bi (Details of Assets De-capitalised), Form-13 (Calculation of Weighted Average Rate of Interest on Actual Loan) and Form-17 (Details of Capital Spares). It has however, not submitted the corresponding revisions in the other applicable forms.

Capital Cost

11. Regulation 9(3) of the 2014 Tariff Regulations provides as follows:

> *"9. Capital Cost:*
>
> *(3) The Capital cost of an existing project shall include the following:*
>
> *(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014.*
>
> *(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and*
>
> *(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.*
> *xxx…"*

12. The Commission vide its order dated 31.8.2016 in Petition No. 347/GT/2014 had allowed the closing capital cost of Rs. 161072.25 lakh as on 31.3.2014. 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.

Additional Capital Expenditure

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

> *"14. Additional Capitalization and De-capitalization:*
>
> *(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 recognized 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 recognized 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 obsolesce 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-materialization 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 stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization 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 Modernization (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation."

14. The details of the additional capital expenditure allowed vide order dated 31.8.2016 in Petition No. 347/GT/2014 is summarized below:

(Rs. in lakh)

S. No.	Head of Works/ Equipment	Additional Capital Expenditure Claimed	De-capitalization claimed	Net Additional Capital Expenditure allowed
	2014-15			
1	6.6 kV Vacuum CB U-1	80.00	35.08	44.92
2	Retrofitting numerical relays	10.50	4.29	6.21
3	Up-gradation of obsolete HIACS 3000 DCS	672.62	291.60	381.02
4	Procurement of thermo- gravimetric analyzer	40.00	27.26	0.00
5	Replacement of old fire tender	140.00	60.69	0.00
	Total	**943.12**	**418.92**	**432.15**
	2015-16			
1	6.6 kV Vacuum CB U-2	93.55	43.89	49.67
2	H2 gas drier system U-1&2	62.02	29.60	32.42
3	Retrofitting of VCB in place of SF6 CB	43.00	18.85	24.15
	Total	**198.58**	**92.34**	**106.23**
	2016-17			
1	6.6 kV Vacuum CB-U 3	97.19	46.20	50.98
2	H2 gas drier system U-3	32.04	16.94	15.10
	Total	**129.23**	**63.15**	**66.08**
	2018-19			
1	Up-gradation of obsolete SIEMENS as 220EA DES System by latest state of art system U-3	604.86	263.93	340.93
		604.86	**263.93**	**340.93**
	Total allowed	**1875.78**	**838.34**	**945.39**

15. The Petitioner has submitted that the un-discharged liabilities included in additional capitalization expenditure, cash expenditure, and IDC included in additional capitalization expenditure for individual items, could not be furnished, as data are not recorded in that fashion and therefore, the additional capital expenditure claimed for each item is on 'accrual basis'. Accordingly, the additional capital expenditure claimed by the Petitioner, in revised Form-9A, for the period 2014-19 is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Land	(-)0.04	(-)0.01	0.00	0.00	0.00	**(-)0.05**
Buildings	442.86	106.90	155.44	79.95	0.00	**785.15**
Roads, Culverts & Railway Sidings	17.16	0.00	167.35	173.00	312.75	**670.26**
Barrage, Gates & Others	14.96	0.00	0.00	0.00	0.00	**14.96**
Powerhouse Plant & Machinery	921.42	235.11	129.03	0.00	368.57	**1654.12**
Sub Station Equipment	0.00	15.84	1.88	326.50	380.56	**724.78**
Other Assets	0.00	1.73	3.95	0.00	0.00	**5.68**
Total Additional Capitalization (A)	**1396.36**	**359.56**	**457.65**	**579.45**	**1061.88**	**3854.90**
Less: De-capitalization during the year / period (B)	450.81	115.91	3.98	129.47	136.82	**836.99**
Less: Reversal during the year / period (C)	0.00	0.00	0.00	0.00	0.00	**0.00**
Less: Undischarged liabilities (D)	38.27	8.34	0.54	0.00	7.55	**54.70**
Add: Discharges during the year / period (E)	113.84	22.45	6.71	0.54	30.58	**174.11**
Net additional capitalization claimed including discharge of liability (F=A-B-C-D+E)	**1021.12**	**257.75**	**459.85**	**450.52**	**948.08**	**3137.32**

16. DVPCA has submitted that the Petitioner has not provided appropriate justification and / or documentary evidence as per the Regulation 14(3) of the 2014 Tariff Regulations. It has further submitted that the Petitioner's claim for certain additional capital expenditures under Regulations 54 and 55 of the 2014 Tariff Regulations, can be considered by the Commission only in rare cases, and the Petitioner has not presented any extraordinary circumstance for the same. According to DVPCA, the additional capital expenditure allowable to the Petitioner vis a vis the claim of the Petitioner in the petition (as revised) are tabulated below:

(Rs. in lakh)

	2014-15		2015-16		2016-17		2017-18		2018-19	
	Claimed	**As per DVPCA**	**Claimed**	**As per DVPCA**	**Claimed**	**As per DVPCA**	**Claimed**	**As per DVPCA**	**Claimed**	**As per DVPCA**
Land	(-) 0.04	(-) 0.04	(-) 0.01	(-) 0.01	0.00	0.00	0.00	0.00	0.00	0.00
Buildings	442.86	359.12	106.90	0.00	155.44	0.00	79.95	0.00	0.00	0.00
Roads, Culverts & Rly. Sidings	17.16	17.16	0.00	0.00	167.35	0.00	173.00	173.00	312.75	312.75
Barrage, Gates & Others	14.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Powerhouse Plant & Machinery	921.42	554.19	300.75	195.35	146.97	0.00	12.86	12.86	399.27	354.39
Sub Station Equipment	(-) 28.97	(-) 28.97	15.84	0.00	1.88	0.00	326.50	326.50	383.04	352.22
Other Assets	(-) 3.22	(-) 3.90	1.73	0.00	3.95	0.00	0.00	0.00	14.18	1.54
Total Additional Capitalization	**1389.96**	**897.56**	**425.20**	**195.33**	**475.59**	**0.00**	**592.31**	**512.36**	**1109.25**	**1020.92**

17. In response, the Petitioner has submitted that the additional capital expenditure claimed, the liability created and discharged has been duly reconciled with the books of account and audited by the Comptroller & Auditor General (CAG) of India. It has also submitted that the justification against each of the items of additional capital expenditure has been furnished along with documentary evidence, wherever necessary. The Petitioner has further submitted that the additional capital expenditure claimed is for reasons of replacement of the age-old equipment or modification of existing equipment's, in order to ensure reliable and efficient operation, thereby ensuring the plant's security and safety, compliance to statutory Environmental norms, & Court orders and for procurement of tools and equipment's, to facilitate the monitoring, testing and for maintenance works.

18. We now examine the item-wise additional capital expenditure claimed by the Petitioner in subsequent paragraphs:

Land

19. The Petitioner has claimed reversal entries of (-) Rs.0.04 lakh in 2014-15 and (-)

Rs.0.01 in 2015-16, on account of rectification of payment being a revenue expenditure, which was inadvertently booked in the fixed asset ledger code. Since the claim pertains to rectification of entry, the same is **allowed**.

Building

20. The additional capital expenditure claimed by the Petitioner is summarised and examined below:

(Rs. in lakh)

Building	Regulations	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Concreting & gravelling at MTPS switchyard Unit- 1-4	14(3) (vii) with 54 & 55	101.93	0.00	0.00	0.00	0.00	**101.93**
Shed near CHP area		26.56	0.00	0.00	0.00	0.00	**26.56**
Chain link fencing, security post and water supply arrangement etc. for Waiting Bay Line cabin	14(3) (iii) with 54 & 55	65.91	0.00	0.00	0.00	0.00	**65.91**
New building with barrack facility for Police Out-Post and building for banks		150.07	0.00	0.00	0.00	0.00	**150.07**
Modification of Gate No. 2 (near Durlovpur) & transfer of visitors' gate from Gate No-1		49.62	24.28	0.00	0.00	0.00	**73.90**
Parking space at MTPS Hospital	54 & 55	7.56	0.00	0.00	0.00	0.00	**7.56**
Guard wall at CISF parade ground and guard wall between ash slurry pipeline & railway track inside plant	14(3) (iii) with 54 & 55	41.25	0.00	0.00	0.00	0.00	**41.25**
Internal Wiring & Fittings		(-)0.02	0.00	0.00	0.00	0.00	**(-)0.02**
House service connection		(-)0.02	0.00	0.00	0.00	0.00	**(-)0.02**
Second storey building to cater services of additional manpower during overhauling	14(3) (vii) with 54 & 55	0.00	75.67	0.00	0.00	0.00	**75.67**
Under-ground fire water pipes at CHP & switchyard, and over ground pipe pedestal at reservoir side	14(3) (iii) with 54 & 55	0.00	6.96	0.00	0.00	0.00	**6.96**
Full and final settlement for Detailing, fabrication, dispatch and erection of structured steel work	54 & 55	0.00	0.00	155.44	0.00	0.00	**155.44**

Building	Regulations	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Store Building - Maintenance cum store sheds	14(3) (vii) with 54 & 55	0.00	0.00	0.00	79.95	0.00	**79.95**
Total		**442.86**	**106.90**	**155.44**	**79.95**	**0.00**	**785.15**

Concreting & gravelling at MTPS switchyard Units 1- 4

21. The Petitioner has claimed additional capital expenditure of Rs.101.93 lakh for Concreting & gravelling MTPS switchyard Units-1 to 4, in 2014-15, under Regulation 14(3)(vii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that concreting & gravelling was done to restrict the huge vegetative growth within the switch yard, as it hampered the movement during maintenance works badly, and also obstructed the vision. It has also stated, that the said work was executed based on the recommendations of NTPC, in its report on Technical audit, Gap analysis and Performance improvement plan for this generating station.

22. The matter has been considered. It is observed that the additional capital expenditure is necessitated for restricting the vegetation growth, improve the visibility and better movement within switchyard and this the expenditure is pertains to Units 1 to 4. Accordingly, keeping in view that these assets are necessary for successful operation and for sustenance of operation of the generating station, we, in exercise of our power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 14(3)(vii) of the 2014 Tariff Regulations, as a special case, and allow the apportioned capitalization of the said expenditure i.e., Rs.76.45 lakh in respect of this generation station.

Chain link fencing, security post and water supply arrangement etc. for Waiting Bay Line cabin

23. The Petitioner has claimed additional capital expenditure for Rs. 65.91 lakh for Construction of chain link fencing, security post and water supply arrangement etc. for

Waiting Bay Line cabin, in 2014-15, under Regulation 14(3)(iii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that due to single rail line so far, in order to meet the coal requirement, several times rakes were detained in Waiting Bay Line, for accommodating more coal rakes. It has also submitted that there were instances of theft of coal from the coal rakes during detention of rakes, at waiting bay line, and also instances of theft of fitting and fixtures of the permanent rail-line leading to derailments, which have been reported to the local authorities i.e., F.I.R. Accordingly, it has submitted that in order to prevent such instances of theft, construction of chain link fencing, security post and water supply arrangement etc. was necessary.

24. The matter has been considered. It is observed that the Petitioner has incurred the expenditure to prevent the recurring theft instances and the expenditure is pertains to unit 1 to 8. Though Regulation 14(3)(iii) of the 2014 Tariff Regulations provides for consideration of additional capital expenditure based on any advice or directions, of statutory authority or governmental agencies responsible for national security, we, taking into consideration the submissions of the Petitioner and in exercise of our power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 14(3)(iii) of the 2014 Tariff Regulations, as a special case and **allow** the apportioned additional capital expenditure of Rs. 17.74 lakh.

Guard wall at CISF parade ground and guard wall between ash slurry pipeline & railway track inside plant

25. The Petitioner has claimed additional capital expenditure for Rs.41.25 lakh for Construction of a guard wall at CISF parade ground and a guard wall between ash slurry pipeline & Railway track inside plant, in 2014-15, under Regulation 14(3)(iii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, it has submitted that the elevation of parade ground and

ground level of EPP cabin of ‘Captive Railway System’ is very high in respect of adjacent road and railway line. It has submitted that during rainy season, land slide occurred and hampered the movement on road and rail line, and as the side slope was very steep, guard wall was constructed to prevent land sliding. In support of the claim, the Petitioner has furnished letter received from CISF.

26. The matter has been considered. It is observed that the Petitioner has claimed the expenditure under Regulation 14(3)(iii) of the 2014 Tariff Regulations based on CISF letter dated 6.3.2012. However, the Petitioner had not claimed additional capitalisation of this asset/work in Petition No.347/GT/2014. It is noticed that the Assistant Commandant, CISF in his letter addressed to the Project head, has observed, that during monsoon, the earth may slide, which may collapse the railway running and to and fro movement of CISF vehicles through main road and so ground wall at toe and boulder pitching along the periphery of the parade ground is required to prevent land sliding. Since the additional capital expenditure incurred by the Petitioner is based on the advice of CISF and non-execution of this work can hamper movement of coal / equipment to the plant and security personnel and the same pertains to unit 1 to 8, the apportioned additional capital expenditure of Rs.11.11 lakh is allowed.

Internal Wiring & Fittings and House service connection

27. The Petitioner has claimed reversal entries amounting for (-) Rs.0.02 lakh for internal wiring and fittings and (-) Rs 0.02 lakh for house service connection in 2014-15 on account of rectification of payment vouchers being revenue expenditure and inadvertently booked in fixed asset ledger code. In view of this, the amounts are allowed.

Full and final settlement in respect of detailing, fabrication, despatch and erection of structured steel work of MTPS Unit-1,2,3 power house, mill bay and switchyard

28. The Petitioner has claimed additional capital expenditure for Rs.155.44 lakh towards full and final settlement in respect of detailing, fabrication, despatch and erection of structured steel work of MTPS Unit-1,2,3 power house, mill bay and switchyard as undertaken by M/s Bridge and Roof Co. (India) Ltd in 2016-17, under Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification for the same, it has submitted that the work was completed in March 1999 and this amount is only the residual payment, that has been capitalized, once the full and final settlement was made. On specific query regarding submission of documentary evidence, reasons for such an inordinate delay and non-showing of this amount in the undischarged liabilities, the Petitioner has submitted that the delay in payment was on account of delay in fixation of recovery rate against non-return of steel material by M/s B&R which was finally resolved in 2016-17. It has further submitted that the firm liability was accounted only upon submission of the bill by the vendor, which in the present case was not submitted. As a result, accounting provision in liability was not made. Although, the work in original project scope of work, has been completed in prior period, the amount is booked in accounts on submission of bill and actual payment made to the contractor before the closure of the contract. The payment made to the vendor is contractual obligation which attained finality on payment of final residual payment made to the contractor and the vendor also had recognised the fact. The Petitioner also submitted all the relevant documents and correspondences related with the transaction.

29. The matter has been considered. It is observed that the claim of the Petitioner pertains to works completed in March, 1999, however, the Petitioner has not furnished

the subject outstanding liabilities, in previous petitions. However, based on the justification and documents submitted by the Petitioner, we, in exercise of our power under Regulation 54 of the 2014 Tariff Regulations, and as a special case, allow the capitalization of the expenditure claimed.

30. In addition to the additional capital expenditure discussed above, the Petitioner has claimed few additional capital expenditure items under the head 'Building'. It is pertinent to mention that the expenditure claimed is either in the nature of O&M expenses or is beyond the original scope of work or does not fall within the provisions of the relevant regulations. Moreover, the Petitioner is allowed Compensation Allowance in terms of Regulation 17 of the 2014 Tariff Regulations, to meet the additional capital expenditure for new assets of capital nature which are not admissible under the provisions of Regulation 14 of the 2014 Tariff Regulations. In view of this, the claims of the Petitioner have not been allowed as detailed below:

Assets/Works	**Regulations**	**Amount claimed *(Rs. in lakh)***	**Justification**	**Reason for in-admissibility**
Construction of a shed site near CHP area in the year 2014-15	14(3)(vii) read with 54 & 55	26.56	Shed is necessary to protect huge inventory of spares, required to carry out regular maintenance work. It is also used for assembly / maintenance/repairing jobs of critical equipment's and also facilitates the performance of day-to-day maintenance jobs, if done under open sky, would have been badly disrupted, especially during rainy or humid days.	The expenditure is in the nature of O&M expenses and is also beyond the original scope of work.
New building with barrack facility for Police Out-Post and building for banks in the year 2014-15	14(3)(iii), 54 & 55	150.07	The construction of a new building with barrack facility for the purpose of Police Out-Post at the project has been undertaken on a request received from the District Police authority. this additional capital expenditure also	The item doesn't pertain to the main plant and is also beyond original scope of works. A request letter from the District Police cannot

Assets/Works	Regulations	Amount claimed *(Rs. in lakh)*	Justification	Reason for in-admissibility
			includes the construction of separate buildings for banks to facilitate increased banking activities.	be construed as a statutory direction / advice of governmental agencies to fall within the ambit and scope of Regulation 14(3)(iii) of the 2014 Tariff Regulations.
Modification of Gate No. 2 (near Durlovpur) & transfer of visitors' gate from Gate No-1 in the years 2014-15 and 2015-16	14(3)(iii), 54 & 55	73.90 (Rs. 49.62 lakh in 2014-15 and Rs. 24.28 lakh in 2015-16)	Gate No. 1 is located far away from the main installations and offices of Powerhouse, it often caused logistical problems and apart from this, there are also several rail crossings on the way, which also caused obstruction to movement of men and materials. Therefore, to care of the internal security and better logistic of the plant, man and material movements were transferred from Gate No. 1 to Gate No. 2, which necessitated the modification at Gate No. 2.	The expenditure is beyond original scope of works. Further, the Petitioner has not furnished any documents in support of that the expenditure incurred is based on any advice or directions of statutory authority or governmental agencies responsible for national security and to fall within the ambit and scope of Regulation 14(3)(iii) of the 2014 Tariff Regulations.
Parking space at MTPS Hospital premises in the year 2014-15	54 & 55	7.56	Construction of parking space at MTPS Hospital premises was required to create parking space for vehicles.	The item does not pertain to the main plant and is also beyond the original scope of work.
Second storey building to cater services of additional manpower during overhauling in the year 2015-16	14(3)(vii), 54 & 55	75.67	During overhauling and maintenance works by expert agencies, the Petitioner needs to accommodate the outsourced technicians, helpers and supervisors in the Township area, in consideration of which one (1) overhauling building was required	The expenditure is in the nature of O&M expenses and is also beyond the original scope of work.

Assets/Works	Regulations	Amount claimed *(Rs. in lakh)*	Justification	Reason for in-admissibility
			near Gate no. 02.	
Under-ground fire water pipes at CHP & switchyard, and over ground pipe pedestal at reservoir side in the year 2015-16	14(3)(iii), 54 & 55	6.96	The underground fire water lines at different locations inside plant were damaged severely, therefore laying of new fire water line was required. In addition, pipe pedestals for over-ground pipes were required to be installed for laying of over ground fire water pipeline.	The expenditure is in the nature of O&M expenses. Also, the Petitioner has neither provided any documentary evidence nor any justification for the item to fall within the ambit and scope of Regulation 14(3)(iii) of the 2014 Tariff Regulations.
Construction of maintenance cum store sheds in the year 2017-18	14(3)(vii), 54 & 55	79.95	Required for day-to-day maintenance purpose as well as for temporary storage of frequently used spares	The expenditure is in the nature of O&M expenses and is also beyond the original scope of work.

31. Based on the above, the additional capital expenditure allowed under the head 'Building' is summarised below:

(Rs. in lakh)

Building	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Concreting & gravelling at MTPS switchyard Unit 1-4	76.45	0.00	0.00	0.00	0.00	**76.45**
Shed near CHP area	0.00	0.00	0.00	0.00	0.00	**0.00**
Chain link fencing, security post and water supply arrangement etc. for Waiting Bay Line cabin	17.74	0.00	0.00	0.00	0.00	**17.74**
New building with barrack facility for Police Out-Post and building for banks	0.00	0.00	0.00	0.00	0.00	**0.00**
Modification of Gate No. 2 (near Durlovpur) & transfer of visitors' gate from Gate No-1	0.00	0.00	0.00	0.00	0.00	**0.00**
Parking space at MTPS Hospital	0.00	0.00	0.00	0.00	0.00	**0.00**
Guard wall at CISF parade ground and guard wall between ash slurry pipeline & railway track inside plant	11.11	0.00	0.00	0.00	0.00	**11.11**

Building	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Internal Wiring & Fittings	(-)0.02	0.00	0.00	0.00	0.00	(-)**0.02**
House service connection	(-)0.02	0.00	0.00	0.00	0.00	(-)**0.02**
Second storey building to cater services of additional manpower during overhauling	0.00	0.00	0.00	0.00	0.00	**0.00**
Under-ground fire water pipes at CHP & switchyard, and over ground pipe pedestal at reservoir side	0.00	0.00	0.00	0.00	0.00	**0.00**
Full and final settlement for Detailing, fabrication, dispatch and erection of structured steel work	0.00	0.00	155.44	0.00	0.00	**155.44**
Store Building - Maintenance cum store sheds	0.00	0.00	0.00	0.00	0.00	**0.00**
Total	**105.26**	**0.00**	**155.44**	**0.00**	**0.00**	**260.70**

Roads, Culverts and Railway Sidings

32. The additional capital expenditure claimed by the Petitioner under 'Roads, Culverts and Railway Sidings' is summarised and examined below:

(Rs. in lakh)

Roads, Culverts & Railway Sidings	Regulation	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Access Roads inside 220 kV Switchyard	14(3) (vii) with 54 & 55	17.16	0.00	0.00	0.00	0.00	**17.16**
Railway Sidings: Modification of fuel oil unloading at railway track yard	14(3) (iii) with 54 & 55	0.00	0.00	167.35	173.00	0.00	**340.35**
Railway Sidings: Payment to M/s IRCON Ltd as arbitration settlement	14(3) (i)	0.00	0.00	0.00	0.00	312.75	**312.75**
Total		**17.16**	**0.00**	**167.35**	**173.00**	**312.75**	**670.26**

Railway Sidings: Payment to M/s IRCON LTD

33. The Petitioner has claimed additional capital expenditure for Rs. 312.75 lakh towards Payments made to M/s IRCON Ltd, as arbitration settlement in 2018-19, based on the order dated 5.1.2018 of the Hon'ble High Court of Calcutta, under Regulation 14(3)(i) of the 2014 Tariff Regulations. Since the expenditure incurred is on account of the payments made to M/s IRCON Ltd towards works completed in 1999, as an arbitration settlement, in terms of the order of the Hon'ble High Court, the same is **allowed** under Regulation 14(3)(i) of the 2014 Tariff Regulations.

34. In addition to the above, the Petitioner has claimed two other additional capital expenditure items under the head 'Roads, Culverts and Railway Sidings'. It is pertinent to mention that the expenditure claimed is in the nature of O&M expenses and does not fall within the provisions of the relevant regulations. Moreover, the Petitioner is allowed Compensation Allowance in terms of Regulation 17 of the 2014 Tariff Regulations, to meet the additional capital expenditure for new assets of capital nature which are not admissible under the provisions of Regulation 14 of the 2014 Tariff Regulations. In view of this, the claims of the Petitioner have not been allowed, as detailed below:

Assets/Works	Regulations	Amount Claimed (Rs. in lakh)	Justification	Reason for inadmissibility
Access roads inside 220 kV switchyard in the year 2014-15	14(3)(vii) read with 54 & 55	17.16	Construction of concrete road inside 220 kV switchyard is required to ensure proper inspection of line & bays. As vegetative growth badly hampered the movement during maintenance works and also obstructed the vision, the concrete road was required for easy movement of hydra/ truck to carry Current Transformer (CT), Potential Transformer (PT), Bus post insulator (BPI), Capacitor Voltage Transformer (CVT), circuit breaker, cable etc. during heavy maintenance work at 220 KV Switch yard.	The expenditure is in the nature of O&M expenses
Railway Sidings: Modification of fuel oil unloading at railway track yard in the years 2016-17 and 2017-18	14(3)(iii) read with 54 & 55	340.35 (Rs. 167.35 lakh in 2016-17 and Rs. 173.00 lakh in 2017-18)	Due to leakage of oil during unloading from oil tankers ballast and moorum base were completely soaked in oil causing stagnation of water during any shower and leads to settlement and mis-alignment of railway track. it used to create nuisance from pollution point of view, as well as from safety point of view (as it was prone to fire). this condition was also observed by CISF vide its letter dated 26.10.2013 regarding inspection of housekeeping of MTPS fuel oil tank area; and by the same letter, CISF has recommended corrective action to avoid unwanted fire incidents.	On scrutiny, it is noticed that in the oil unloading area, oil leakage, wild vegetation, stacking of empty drums, blockage of drains, hanging of switchgear etc., were observed by CISF. Accordingly, it requested the Petitioner to take corrective action to avoid unwanted fire incidents. Basically CISF has recommended for adequate

Assets/Works	Regulations	Amount Claimed (Rs. in lakh)	Justification	Reason for inadmissibility
				maintenance to avoid unwanted fire incidents. Moreover, the Petitioner has claimed Compensation Allowance in terms of Regulation 17 of the 2014 Tariff Regulations.

35. Accordingly, the additional capital expenditure allowed under the head 'Roads, Culverts and Railway Sidings' is summarised below:

(Rs. in lakh)

Roads, Culverts & Railway Sidings	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Access Roads inside 220 kV Switchyard	0.00	0.00	0.00	0.00	0.00	**0.00**
Railway Sidings: Modification of fuel oil unloading at railway track yard	0.00	0.00	0.00	0.00	0.00	**0.00**
Railway Sidings: Payment to M/s IRCON Ltd as arbitration settlement	0.00	0.00	0.00	0.00	312.75	**312.75**
Total	**0.00**	**0.00**	**0.00**	**0.00**	**312.75**	**312.75**

Barrage, Gates & Others

36. The Petitioner has claimed additional capital expenditure for Rs. 14.96 lakh in 2014-15 (i.e., Rs 6.79 lakh for Construction of RCC drain at ash pond from culvert end to bell mouth and Rs 8.17 lakh for Construction of box culvert at intermediate dyke of ash pond including WBM road) under Regulation 14(3)(vii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that the connection road from culvert end to bell mouth is water bound macadam (WBM) in nature. It has also submitted that earlier there used to be a kutcha drain beside the WBM road for draining of seepage water as well as spillage ash slurry and due to movement of heavy ash laden dumpers on this road, the drain got damaged and choked several times. As a result, there used to be huge

runoff during rainy season that very often cut-off the approach road of dyke and hampered ash evacuation works. Accordingly, the Petitioner has submitted that the construction of RCC drain was necessary to guide the seepage water and spillage slurry in a confined path, that ultimately would facilitate ash evacuation works and help in maintaining the stability of ash dyke.

37. The matter has been considered. It is observed that the claim of the Petitioner is in the nature of O & M expenses. Accordingly, the additional capital expenditure claimed under this head is not allowed.

Powerhouse Plant & Machinery

38. The item-wise additional capital expenditure claimed under the head 'Powerhouse Plant & Machinery' is summarised and examined below:

(Rs. in lakh)

Powerhouse Plant & Machinery	**Regulations**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**Total**
DP (differential pressure) level measurement system of Coal Mills	14(3) (vii) read with 54 & 55	367.23	0.00	0.00	0.00	0.00	**367.23**
Upgradation of obsolete HIACS 3000 DCS system of MTPS Unit 1		554.19	0.00	0.0	0.00	0.00	**554.19**
6.6 kV Vacuum Circuit Breaker of Unit#1		0.00	91.43	0.00	0.00	0.00	**91.43**
Retrofitting of numerical relays in place of electromagnetic relays		0.00	4.30	8.55	0.00	0.00	**12.85**
26V battery banks		0.00	99.61	9.06	0.00	2.54	**111.21**
Thermogravimetric Analyzer		0.00	39.76	1.83	0.00	0.00	**41.58**
Effluent Quality Monitoring System and Online continuous stack emission monitoring system	14(3) (ii)	0.00	0.00	108.71	0.00	0.00	**108.71**
Three nos. AC machine for the	54 & 55	0.00	0.00	0.89	0.00	0.00	**0.89**

Powerhouse Plant & Machinery	Regulations	2014-15	2015-16	2016-17	2017-18	2018-19	Total
office / administrative buildings							
Upgradation of existing SAF system with VFD	14(3) (vii) read with 54 & 55	0.00	0.00	0.00	0.00	24.04	**24.04**
Automatic Coal Sampling System	14(3) (ii) and 14(3)(vii) read with 54 & 55	0.00	0.00	0.00	0.00	335.64	**335.64**
Portable Welding Machine	14(3) (vii) with 54 & 55	0.00	0.00	0.00	0.00	1.15	**1.15**
Top conductive meter		0.00	0.00	0.00	0.00	3.13	**3.13**
Portable air compressor for Coal Handling Plant		0.00	0.00	0.00	0.00	0.39	**0.39**
Different types of tools and measuring instruments		0.00	0.00	0.00	0.00	0.75	**0.75**
Sound Level Meter	14(3) (ii) and 14(3) (vii) read with 54 & 55	0.00	0.00	0.00	0.00	0.93	**0.93**
Total		**921.42**	**235.11**	**129.03**	**0.00**	**368.57**	**1654.12**

Upgradation of obsolete HIACS 3000 DCS system

39. The Petitioner has claimed additional capital expenditure for Rs. 554.19 lakh for Upgradation of obsolete HIACS 3000 DCS system in 2014-15 for MTPS Unit-1 as per recommendation of the OEM, M/s Hitachi, under Regulation 14(3)(vii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, it has submitted that one of the two hard drive of the computer-based system, used to support e DCS, had gone faulty, and the same was replaced, based on OEM's recommendation, to ensure reliability and operational stability of the control system of the unit. Further, it has also submitted that the additional capital expenditure for this asset was approved by the Commission in its order dated 31.8.2016 in Petition No.347/GT/2014.

6.6 kV Vacuum Circuit Breaker of Unit-1

40. The Petitioner has claimed additional capital expenditure for Rs. 91.43 lakh for

Procurement and installation of 6.6 kV Vacuum Circuit Breaker of Unit-1 in 2015-16 under Regulation 14(3)(vii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, it has submitted that the existing NGEF make SF6 breakers were in service since inception and as the OEM's (M/s NGEF) manufacturing unit is closed, the original spares, as well as services and support are not available. It has also submitted that the additional capital expenditure for this item was approved by the Commission vide order dated 31.08.2016 in Petition No.347/GT/2014.

Retrofitting of numerical relays in place of electromagnetic relays

41. The Petitioner has claimed total additional capital expenditure for Rs. 12.85 lakh during 2015-17 (i.e., Rs.4.30 lakh in 2015-16 and Rs.8.55 lakh in 2016-17) for Retrofitting of numerical relays in place of electromagnetic relays under Regulation 14(3)(vii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that the CTMM relays which are installed at BIPH and at CWPH (Units- 1,2,3) for protections of different HT motors, are in service for more than 16 years, whereas, these relays are old electromagnetic disc type and due to ageing not responding correctly, resulting in unwanted tripping of the motors and hence the same has been retrofitted. It has further submitted that the additional capital expenditure for this item was approved by the Commission in its order dated 31.8.2016 in Petition No.347/GT/2014.

42. The matter has been considered. It is observed that the additional capital expenditure claimed by the Petitioner in Petition No. 347/GT/2014 towards replacement of assets like 6.6 kV VCB for Units I to III, Retro-fitting of numerical relays, Up-gradation of obsolete HIACS 3000 DCS etc., was allowed by the Commission vide order dated 31.8.2016 in relaxation of Regulation 14(3)(vii) of the 2014 Tariff Regulations, as a special case, keeping in view that these assets are

necessary for successful operation and for sustenance of operation of the generating station. The relevant portion of the order is extracted below:

> *"23. Regulation 14(3)(vii) of the 2014 Tariff Regulations provides for consideration of expenditure due to any additional work which has become necessary for successful and efficient plant operation for hydro projects only. It also provides that the claim is required to 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 etc., As stated above, the petitioner has sought the replacement of these assets like 6.6 kV VCB for Units I to III, Retro-fitting of numerical relays, Up-gradation of obsolete HIACS 3000 DCS, H2 gas drier system for Units I to III, Up-gradation of obsolete Siemens AS220EA DES system, Retrofitting of VCB in place of SF6 circuit breaker on the ground that these assets are necessary for efficient operation of the generating station. Though Regulation 14(3)(vii) provides for consideration of additional capital expenditure which are necessary for successful and efficient plant operation for hydro projects only, we, in exercise of our power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 14(3)(vii) of the 2014 Tariff Regulations, as a special case and allow the capitalization of the said expenditure along with their de-capitalization in respect of the thermal generation station, keeping in view that these assets are necessary for successful operation and for sustenance of operation of the generating station. It is noticed that except for the projected additional capital expenditure claimed for thermo-gravimetric analyser in 2014-15, the petitioner has submitted the technical report/OEM certificate in justification for the replacement of the additional capital expenditure claimed which has been considered. However, in respect of the assets where the OEM certificate /technical report has not been submitted by the petitioner, the projected additional capital expenditure claimed along with de-capitalization amount has not been allowed and shall be considered at the time of truing up provided proper documentary evidence is submitted."*

43. In line with the above and keeping in view that these assets are necessary for successful operation and for sustenance of operation of the generating station, we, in exercise of our power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 14(3)(vii) of the 2014 Tariff Regulations **allow** the additional capital expenditure for the aforesaid assets, along with their de-capitalization.

Thermogravimetric Analyser

44. The Petitioner has claimed total additional capital expenditure for Rs. 41.58 lakh during 2015-17 (i.e., Rs.39.76 lakh in 2015-16 and Rs.1.83 lakh in 2016-17) for Procurement of Thermogravimetric Analyser for proximate analysis of coal samples under Regulation 14(3)(vii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, it has submitted that the OEM of the existing thermo gravimetric analyser (Model No-TGA 601) has declared the same as

obsolete and the production of equipment as well as spares have been stopped. The old instrument is conventional type and analysis is being done at furnace, where analysis of only 05-06 nos. of samples can be done in a day. However, the its requirement is average 15 nos. of coal samples for collected as station coal, rake samples, barjora coal, imported coal & feeder samples for efficiency calculation of units on daily basis. Further, it has stated that manual testing with such a big nos. of samples at our chemical laboratory will be a herculean task due to shortage/non-availability of this equipment. It has submitted that the TGA -701 will carry out analysis of more than 15 samples at a time with precision & rules out wastage of time as well as extra manpower, proper monitoring of units' efficiency can also be done and thus, the efficiency calculated on a daily basis, using the above equipment, will be helpful to improve the overall unit efficiency, by monitoring the other parameters closely. It also added that the additional capital expenditure claimed for this item was disallowed by the Commission vide its order dated 31.8.2016 in Petition No. 347/GT/2014, due to absence of OEM certificate, which has now been submitted.

45. The matter has been considered. It is observed that the Petitioner, in Petition No.347/GT/2014 had claimed the projected additional capital expenditure of Rs.40.00 lakh in 2014-15 along with Rs.27.26 lakh as de-capitalization of the old assets. However, the same was disallowed by order dated 31.8.2016, as the Petitioner had not submitted the obsolesce certificate from the OEM, as under:

> *"18. The petitioner was directed to submit the OEM certificate in justification for the replacement of the item due to obsolescence and the same has not been furnished by the petitioner. Moreover, the petitioner has not submitted proper explanation as to how the expenditure would contribute to the efficient operation of the generating station. In view of this, the additional capital expenditure for the asset is disallowed. However, the petitioner is granted liberty to submit proper justification along with the OEM certificate / technical report for claiming tis asset at the time of truing-up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations and the same will be considered in accordance with law"*

46. The Petitioner has now furnished the OEM certificate justifying that the asset has

become obsolete and requires replacement. Accordingly, keeping in view that these assets are necessary for successful operation and for sustenance of operation of the generating station, we, in exercise of our power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 14(3)(vii) of the 2014 Tariff Regulations **allow** the capitalization of the said expenditure along with their de-capitalization in respect of this generation station.

Effluent Quality Monitoring System and Online continuous stack emission monitoring system

47. The Petitioner has claimed additional capital expenditure for Rs. 108.17 lakh for Procurement and Installation of Effluent Quality Monitoring System (EQMS) and Online continuous stack emission monitoring system, in 2016-17, under Regulations 14(3)(ii) of the 2014 Tariff Regulations. In justification of the same, it has submitted that these systems need to be installed and commissioned, as per the statutory norms of the Pollution Control Board under 17 categories of highly polluting industries & in common hazardous waste and biomedical waste incinerators. It has submitted that the procurement, installation and commissioning of the devices is required to comply with the changed rules of the Pollution Control Board letter dated 7.7.2014 and the same is enclosed with this petition. As the additional capital expenditure claimed is for compliance to the statutory norms of the Pollution Control Board, the same is **allowed** under Regulation 14(3)(ii) of the 2014 Tariff Regulations.

Automatic Coal Sampling System

48. The Petitioner has claimed additional capital expenditure for Rs. 335.64 lakh for Procurement and Installation of Automatic coal sampling system, in 2018-19 under Regulation 14(3)(ii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, it has submitted that checking & control of coal quality is vital for fuel management for which proper sampling method must be

adopted. It has also submitted that the sample collected by 'Coal Sampling System' is comparatively a true representative of coal provided and sample collection through Coal Sampling Units (CSU) and testing of the same in laboratory helps to control the quality of coal in various ways. The Petitioner has further submitted that it assists the thermal power producers to reduce disputes with coal suppliers, by identifying the true sample of coal and also helps to control the quality of coal fed to the bunkers, by facilitating proper blending/ mixing of coals of different grades, by knowing the coal qualities of different sources with the help of the lab test results. The Petitioner has added that the additional capital expenditure claimed is in compliance of the notification issued by the MOP, GOI on 31st March, 2016. The additional capital expenditure claimed by the Petitioner is for complying with the MOP, GOI notification dated 31.8.2016 and the same is pertains to Unit 1 to 8. Accordingly, the apportioned additional capital expenditure i.e., Rs. 90.36 lakh is **allowed** under Regulation 14(3)(ii) of 2014 Tariff Regulations.

49. It is pertinent to mention that other items under the head 'Roads, Culverts and Railway Sidings', the expenditure claimed is either in the nature of O&M expenses or is beyond the original scope of work or does not fall within the provisions of the relevant regulations. Moreover, the Petitioner is allowed Compensation Allowance in terms of Regulation 17 of the 2014 Tariff Regulations, to meet the additional capital expenditure for new assets of capital nature which are not admissible under the provisions of Regulation 14 of the 2014 Tariff Regulations. In view of this, the claims of the Petitioner have not been allowed, as detailed below:

Assets/Works	Regulations	Amount claimed ***(Rs. in lakh)***	Justification	Reasons for inadmissibility
Procurement and installation of DP (differential	14(3)(vii) read with 54 & 55	367.23	DP level measurement system of the coal mill is very vital for monitoring the level of the pulverized fuel inside the coal mill besides the noise level & mill	The documents furnished by the Petitioner in its additional submission vide affidavit dated 13.7.2022 are internal

Assets/Works	Regulations	Amount claimed *(Rs. in lakh)*	Justification	Reasons for inadmissibility
pressure) level measurement system of Coal Mills in the year 2014-15			amperage. On specific query in the ROP of hearing dated 24.6.2022, the Petitioner in its additional submission vide affidavit dated 13.7.2022 submitted that Coal Mill DP level for Unit-1 to 3 was not functioning satisfactorily resulting in frequent piling up of the mill. Accordingly, replacement of the existing DP level measurement by the new system was done for better performance of the coal mill.	documents of the Petitioner which relate to the period between 2007 and 2012. Further, the Petitioner has also claimed Compensation allowance in terms of Regulation 17 of the 2014 Tariff Regulations.
Procurement, freight and installation of 26V battery banks in the years 2015-16, 2016-17 and 2018-19	14(3)(vii) read with 54 & 55	111.21 (Rs. 99.61 lakh in 2015-16, Rs. 9.06 lakh in 2016-17 and Rs. 2.54 lakh in 2018-19)	The existing Battery banks of Units-1,2 & 3 were more than 20 years old and M/s Exide Industries Limited, (the OEM), has recommended to replace all these battery banks in their inspection report.	The Petitioner has also claimed additional expenditure of Rs.431.17 lakh for the same asset during 2017-19, under the head "sub-station'. In addition, the Petitioner has also claimed a total expenditure for Rs. 365.87 lakh under the head 'Capital Spares' towards various types of battery banks and also claimed additional capital expenditure for 220V batteries during the 2019-24 tariff period. The expenditure claimed is recurring in nature and form part of the O & M expenses. Further, the Petitioner has also claimed Compensation allowance in terms of Regulation 17 of the 2014 Tariff Regulations.
Procurement of three nos. AC machines in the year 2016-17	54 & 55	0.89	Required for the office/administrative buildings inside the plant premises	In terms of first proviso to Regulation 14(3) of the 2014 Tariff Regulations, the claimed items are not allowed.
Upgradation of existing SAF system with Variable Frequency Drive (VFD) in the year 2018-19	14(3)(vii), 54 & 55	24.04	The SAF system is driven by squirrel cage induction motors, which when started, draws 6 times the rated full load current. With VFD, the starting current is limited within rated full load current due to higher ramping time and reduced voltage at the time of starting and therefore, it helps in power conservation.	The items / works claimed are beyond the original scope of work and is claimed after the completion of major useful life of plant. Even otherwise, these assets would improve the auxiliary energy consumption and benefit the Petitioner, particularly during starting. However, the benefit of efficiency gains on this count are

Assets/Works	Regulations	Amount claimed *(Rs. in lakh)*	Justification	Reasons for inadmissibility
				not being passed on to the beneficiaries. Further, the Petitioner has claimed Compensation allowance in terms of Regulation 17 of the 2014 Tariff Regulations.
Procurement of Portable welding machine in the year 2018-19	14(3)(vii), 54 & 55	1.15	Portable welding machine is required to carry out welding work at various location of boiler and its auxiliaries and to cater to emergency situation like tube leakage or any other leakage. The departmental welding machine was very much needed, based on which it was decided to procure three portable welding machines for BMS and for machine shop works. A low weight compact single-phase portable DC TIG & MMA welding machine has been procured, considering effortless mobility at different location of boilers and availability of single-phase connection at most of the locations of Boiler area and these types of welding machine can be used both for TIG and MMA welding purpose and suitable electrode of diameter up to 4 mm can be utilized.	In terms of first proviso to Regulation 14(3) of the 2014 Tariff Regulations, the items claimed are not allowed.
Procurement of top conductive meter in the year 2018-19	14(3)(vii), 54 & 55	3.13	Top conductive meter instruments necessary for regular routine analysis of conductivity of different samples like raw water, DM water, Boiler Feed water condensed Steam, Coagulated water, CW Cooling Water. The existing instruments are old enough and frequently become out of order. However, Conductivity meter is very much essential the same necessitated for procure 02 (two) nos. of Conductivity meters.	
Procurement of portable air compressor for Coal Handling Plant (CHP) in the year 2018-19	14(3)(vii), 54 & 55	0.39	CHP is a dust prone area and has static and rotating equipment's which are exposed to coal dust and for efficient functioning of equipment's and prevention of equipment damage, regular cleaning is required in areas like crusher	

Assets/Works	Regulations	Amount claimed *(Rs. in lakh)*	Justification	Reasons for inadmissibility
			house, bunker, stacker & reclaimer, and various transfer points. There is no service airline installed in paddle feeder, crusher house, stacker & reclaimer, various transfer points and coal bunker areas and therefore, one no. of Portable Air compressor was procured for such cleaning purpose. At many parts of equipment's which are not approachable, dust can be removed by portable Air compressor.	
Procurement of tools and measuring instruments in the year 2018-19	14(3)(vii), 54 & 55	0.75	Different types of tools and measuring instruments are necessary for electrical maintenance of equipment's in the Balance of Plant (excluding CHP) and these items facilitate the maintenance works, thereby helping in ensuring availability and reliability of the plant and machineries.	
Procurement of sound level meter in the year 2018-19	14(3)(vii), 54 & 55	0.93	The generating station has an Environment Management & Pollution Control Cell (EM&PC), which looks after the various aspects of minimizing pollution and coordinating with the various administrative bodies of the PCB and the State. As per the directives of the administrative bodies of the PCB and the State, it has been decided to measure, monitor and record the ambient noise level on a regular basis and take corrective actions as and when felt necessary.	

50. Based on the above discussions, the additional capital expenditure allowed under the head 'Powerhouse Plant & Machinery' is summarised below:

(Rs. in lakh)

Powerhouse Plant & Machinery	2014-15	2015-16	2016-17	2017-18	2018-19	Total
DP (differential pressure) level measurement system of Coal Mills	0.00	0.00	0.00	0.00	0.00	**0.00**
Upgradation of obsolete HIACS 3000 DCS system of MTPS Unit 1	554.19	0.00	0.00	0.00	0.00	**554.19**
6.6 kV Vacuum Circuit Breaker of Unit-1	0.00	91.43	0.00	0.00	0.00	**91.43**
Retrofitting of numerical relays in place of electromagnetic relays	0.00	4.30	8.55	0.00	0.00	**12.85**

Powerhouse Plant & Machinery	2014-15	2015-16	2016-17	2017-18	2018-19	Total
26V battery banks	0.00	0.00	0.00	0.00	0.00	**0.00**
Thermogravimetric Analyser	0.00	39.76	1.83	0.00	0.00	**41.58**
Effluent Quality Monitoring System and Online continuous stack emission monitoring system	0.00	0.00	108.71	0.00	0.00	**108.71**
Three nos. AC machine for the office/administrative buildings	0.00	0.00	0.00	0.00	0.00	**0.00**
Upgradation of existing SAF system with VFD	0.00	0.00	0.00	0.00	0.00	**0.00**
Automatic Coal Sampling System	0.00	0.00	0.00	0.00	90.36	**90.36**
Portable Welding Machine	0.00	0.00	0.00	0.00	0.00	**0.00**
Top conductive meter	0.00	0.00	0.00	0.00	0.00	**0.00**
Portable air compressor for Coal Handling Plant	0.00	0.00	0.00	0.00	0.00	**0.00**
Different types of tools and measuring instruments	0.00	0.00	0.00	0.00	0.00	**0.00**
Sound Level Meter	0.00	0.00	0.00	0.00	0.00	**0.00**
Total	**554.19**	**135.49**	**119.09**	**0.00**	**90.36**	**899.13**

Substation Equipment

51. The item-wise additional capital expenditure claimed under the head 'Substation Equipment' are summarised and examined as under:

(Rs. in lakh)

Substation Equipment	Regulations	2014-15	2015-16	2016-17	2017-18	2018-19	Total
220 kV lightning arrestors	14(3) (vii) read with 54 & 55	0.00	15.84	1.88	0.00	0.00	17.71
SF6 Circuit Breaker		0.00	0.00	0.00	106.62	0.00	106.62
26V battery banks		0.00	0.00	0.00	202.20	228.97	431.17
UPS System of MTPS Unit-1	14(3) (vii) read with 54 & 55	0.00	0.00	0.00	17.68	0.00	17.68
6.6 kV Vacuum Circuit Breaker of Unit -2		0.00	0.00	0.00	0.00	120.78	120.78
Numerical Distance Protection Relay		0.00	0.00	0.00	0.00	30.18	30.18
Battery charger for Telephone exchange	54 & 55	0.00	0.00	0.00	0.00	0.64	0.64
Total		**0.00**	**15.84**	**1.88**	**326.50**	**380.56**	**724.78**

Installation of 220 kV lightning arrestors

52. The Petitioner has claimed total additional capital expenditure for Rs. 17.71 lakh during 2015-17 (Rs.15.84 lakh in 2015-16 and Rs.1.88 lakh in 2016-17) for Installation of 220 kV lightning arrestors under Regulation 14(3)(vii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, it has submitted that the existing lightning arrestors were quite old and the performance had deteriorated due to ageing, which may result in faults and undesired tripping of the

equipment's connected in the bay. Further, in order to avoid such tripping and consequent generation outage these were replaced with new one and the old equipment is not the criteria for replacement.

53. The matter has been considered. It is observed that the Petitioner has claimed additional capital expenditure on account of the asset being old and its performance was deteriorating, and replacement of the asset, would avoid tripping and generation outages. Accordingly, keeping in view that these assets are necessary for successful operation and for sustenance of operation of the generating station, we, in exercise of our power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 14(3)(vii) of the 2014 Tariff Regulations, as a special case, **allow** the additional capital expenditure for the asset along with de-capitalization.

Procurement and installation of VCB replacing SF6 Circuit Breaker

54. The Petitioner has claimed additional capital expenditure for Rs.106.62 lakh for Procurement and installation of Vacuum Circuit Breaker replacing the existing SF6 Circuit Breaker in 2017-18 under Regulation 14(3)(vii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that the existing NGEF make SF6 breakers were in service since the past 15 years and there were frequent failures of mechanism and other parts due to fatigue and ageing. It has also submitted that the OEM (NGEF) manufacturing unit is closed permanently and therefore, original spares as well as services and support are not available. The Petitioner while pointing out that it was necessary to replace the old circuit breakers with new ones, has submitted that the Commission in its order dated 31.8.2016 in Petition No. 347/GT/2014 had approved the additional capital expenditure for this item.

Procurement and installation of 6.6 kV Vacuum Circuit Breaker of Unit-2

55. The Petitioner has claimed additional capital expenditure for Rs. 120.78 lakh for Procurement and Installation of 6.6 kV Vacuum Circuit Breaker of Unit-2 in 2018-19 under Regulation 14(3)(vii) read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, it has submitted that the existing NGEF make SF6 breakers were in service since inception and the OEM (NGEF) manufacturing unit is shut down and therefore, original spares as well as services and support are not available. The Petitioner has stated that the SF6 breaker of NGEF was giving frequent trouble causing outage of equipment, loss of generation, high SOC etc. and thus, was recommended to be replaced in the technical audit carried out by NTPC. It has further pointed out that the Commission in its order dated 31.8.2016 in Petition No. 347/GT/2014, has approved the additional capital expenditure for this item.

56. The matter has been considered. It is noticed that the Commission in its order dated 31.8.2016 in Petition No.347/GT/2014 had allowed these items. In view of the same and keeping in view that these assets are necessary for successful operation and for sustenance of operation of the generating station, we, in exercise of our power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 14(3)(vii) of the 2014 Tariff Regulations **allow** the additional capital expenditure of Rs. 106.62 lakh for the aforesaid assets, along with decapitalization.

Procurement of Numerical Distance Protection Relay

57. The Petitioner has claimed additional capital expenditure for Rs.30.18 lakh for Procurement of Numerical distance protection relay in 2018-19 under Regulation 14(3)(vii) of the 2014 Tariff Regulations read with Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that the existing static distance protection relays were installed for protection of

different transmission lines and were in service for more than 20 years and these relays are old electrostatic type and due to ageing, the same does not correctly respond every time, resulting in unwanted tripping of the motors, thereby necessitating this replacement.

58. We have considered the matter. It is noticed that the Commission in its order dated 31.8.2016 in Petition No. 347/GT/2014, had allowed the additional capitalisation of Rs.10.50 lakh along with de-capitalization of Rs.4.29 lakh for retrofitting of numerical relays in 2014-15, in relaxation of Regulation 14(3)(vii) of the 2014 Tariff Regulations. In line with this decision, the Petitioner has claimed Rs.12.85 lakh for retrofitting of numerical relays in 2015-17 under the head "Plant & Machinery" and the same was allowed. Considering the same and keeping in view that these assets are necessary for successful operation and for sustenance of operation of the generating station, we, in exercise of our power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 14(3)(vii) of the 2014 Tariff Regulations allow the additional capital expenditure claimed along with the decapitalization.

59. In addition to the above, few other additional capital expenditure has been claimed under the head 'Substation Equipment'. It is pertinent to mention that the expenditure claimed is either in the nature of O&M expenses or is beyond the original scope of work or does not fall within the provisions of the relevant regulations. Moreover, the Petitioner is allowed Compensation Allowance in terms of Regulation 17 of the 2014 Tariff Regulations, to meet the additional capital expenditure for new assets of capital nature which are not admissible under the provisions of Regulation 14 of the 2014 Tariff Regulations. In view of this, the claims of the Petitioner have not been allowed, as detailed below:

Assets/Works	Regulations	Amount claimed (Rs. In lakh)	Justification	Reasons for inadmissibility
Procurement and installation of 26V battery banks in the years 2017-18 and 2018-19	14(3)(vii) read with 54 & 55	431.17 (Rs. 202.20 lakh in 2017-18 and Rs. 228.97 lakh in 2018-19)	The existing battery banks of Units-1,2 & 3 were exceeding 20 years old and M/s Exide Industries limited, the OEM, has recommended to replace all these battery bank in their inspection report	The Petitioner has also claimed additional expenditure of Rs. 111.21 lakh for the same asset, under the head "Powerhouse Plant & Machinery'. In addition, the Petitioner has also claimed a total expenditure for Rs. 365.87 lakh under the head 'Capital Spares' towards various types of battery banks and also claimed additional capital expenditure for 220V batteries during the 2019-24 tariff period. The expenditure claimed is recurring in nature and form part of the O & M expenses. Further, the Petitioner has also claimed Compensation allowance in terms of Regulation 17 of the 2014 Tariff Regulations.
Procurement and installation of UPS system of MTPS Unit-1 in the year 2017-18	14(3)(vii), 54 & 55	17.68	The asset is one of the most critical equipment of total C&I package as during total power failure, the load could not be transferred to battery bank, resulting in disturbance in the overall C&I system. The experts from OEM attended the problem in UPS & recommended for upgradation of the system by IGBT technology, as spares of the existing system had become obsolete & not easily available in market.	Though the Petitioner has submitted that the expenditure claimed is on account of the existing assets being replaced on becoming obsolete, it is observed that the documentary evidence submitted by the Petitioner from OEM is of the year 2009 i.e. a decade ago. Further, the Petitioner has claimed Compensation allowance in terms of Regulation 17 of the 2014 Tariff Regulations.
Procurement of battery charger for telephone exchange in the year 2018-19	54 & 55	0.64	FCBC (Float Cum Boost Charger) for telephone exchange was installed at the time of commissioning of EPABX. It has submitted that the said asset was malfunctioning frequently and was beyond repair as the existing model was very old and its spare parts were not available in open market.	The expenditure claimed by the Petitioner is in the nature of O&M expenses and minor in nature. Hence, not allowable, in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations. Even otherwise, the Petitioner has claimed Compensation Allowance in terms of Regulation 17 of the 2014 Tariff Regulations.

60. Based on the above, the additional capital expenditure allowed under the head 'Substation Equipment' is summarised below:

(Rs. in lakh)

Substation Equipment	2014-15	2015-16	2016-17	2017-18	2018-19	Total
220 kV lightning arrestors	0.00	15.84	1.88	0.00	0.00	**17.71**
SF6 Circuit Breaker	0.00	0.00	0.00	106.62	0.00	**106.62**
26V battery banks	0.00	0.00	0.00	0.00	0.00	**0.00**
UPS System of MTPS Unit-1	0.00	0.00	0.00	0.00	0.00	**0.00**
6.6 kV Vacuum Circuit Breaker of Unit -2	0.00	0.00	0.00	0.00	120.78	**120.78**
Numerical Distance Protection Relay	0.00	0.00	0.00	0.00	30.18	**30.18**
Battery Charger for Telephone exchange	0.00	0.00	0.00	0.00	0.00	**0.00**
Total	**0.00**	**15.84**	**1.88**	**106.62**	**150.96**	**275.30**

Other Assets

61. The item-wise additional capital expenditure claimed under the head 'Other Assets' are summarised below:

(Rs. in lakh)

Other Assets	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Scanner for MTPS Hospital	0.00	0.04	0.00	0.00	0.00	**0.04**
Refrigerators, Dental Root Canal treatment instruments and centrifuge machines for MTPS hospital	0.00	1.69	0.00	0.00	0.00	**1.69**
LED TV for the Directors Bungalow at MTPS colony	0.00	0.00	1.71	0.00	0.00	**1.71**
Refrigerators for the Directors Bungalow at MTPS colony	0.00	0.00	0.29	0.00	0.00	**0.29**
Different instruments, assorted items, medicines, associated furniture for MTPS Hospital	0.00	0.00	1.88	0.00	0.00	**1.88**
Balance expenditure towards procurement of AC machines for offices	0.00	0.00	0.07	0.00	0.00	**0.07**
Total	**0.00**	**1.73**	**3.95**	**0.00**	**0.00**	**5.68**

Scanner for MTPS Hospital

62. The Petitioner has claimed additional capital expenditure for Rs.0.04 lakh for Procurement of scanner for MTPS Hospital, in 2015-16, under Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. in justification for the same, the Petitioner has submitted that the documents of patients are to be scanned and updated in the EBA system and also these documents are required to be e-mailed, while consulting the specialist/consultant.

Refrigerators, Dental Root Canal treatment instruments and centrifuge machines for MTPS hospital

63. The Petitioner has claimed additional capital expenditure for Rs.1.69 lakh for Procurement of Refrigerators, Dental Root Canal treatment instruments and centrifuge machines in 2015-16, for use at the MTPS hospital under Regulations 54 and Regulation 55 of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that the expenditure is for various items to be used at the MTPS hospital for the treatment of patients.

LED TV for the Directors Bungalow at MTPS colony

64. The Petitioner has claimed additional capital expenditure for Rs.1.71 lakh for Procurement of LED TV for Director's Bungalow at MTPS colony in 2016-17 under Regulations 54 and Regulation 55 of the 2014 Tariff Regulations.

Refrigerators for the Directors Bungalow at MTPS colony

65. The Petitioner has claimed additional capital expenditure for Rs.0.29 lakh for Procurement of Refrigerator for Directors' Bungalow at MTPS colony in 2016-17, under Regulation 54 and Regulation 55 of the 2014 Tariff Regulations.

Different instruments, assorted items, medicines, associated furniture for MTPS Hospital

66. The Petitioner has claimed additional capital expenditure for Rs.1.88 lakh for Procurement of different instruments, assorted items, medicines, associated furniture in 2016-17, which are required for smooth functioning of MTPS Hospital under Regulation 54 and Regulation 55 of the 2014 Tariff Regulations.

Balance expenditure toward procurement of AC machines for offices

67. The Petitioner has claimed n additional capital expenditure for Rs. 0.07 lakh as balance expenditure towards the Procurement of Air Conditioning machines in 2016-17, for use at offices, under provisions of Regulations 54 and 55 of the 2014 Tariff

Regulations.

Analysis and Decision

68. All the items, as mentioned in paragraphs 62 to 67 above, have been claimed by the Petitioner for additional capitalisation under Regulations 54 and 55 of the 2014 Tariff Regulations. The Petitioner has not furnished proper reasons with documents along with the relevant provision of the regulations, which are required to be relaxed, for exercise of power to relax under Regulation 54 or for removal of difficulties in terms of Regulation 55 of the 2014 Tariff Regulations. In our considered view, the additional capital expenditure claimed by the Petitioner is in respect of assets in paragraphs 62 to 67 above, are either in the nature of tools & tackles or in the nature of O&M expenses and cannot be permitted for capitalisation in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations. In this background, the additional capital expenditure claimed under the head 'Other Assets' are not allowed.

Exclusions

69. The Petitioner has claimed additional capital expenditure for (-) Rs.28.97 lakh towards disposal of Unit Auxiliary Transformer-1A and 3-phase onload tap changer under the head 'Exclusions' as the Commission had not allowed the additional capitalisation of the said items in order dated 9.7.2013 in Petition No.269/GT/2012. It has also claimed additional capital expenditure for (-) Rs.3.90 lakh towards disposal of Light Commercial Vehicle under the head 'Exclusions, on the ground that the Commission had not allowed 'Other Assets' in terms of the Regulations. Accordingly, the Petitioner has stated that the accounting treatment on disposal of assets booked in Petitioner accounts, should not be from the capital coat allowed for the purpose of tariff.

70. We have considered the matter. On scrutiny, we notice that the exclusion of

decapitalization of assets i.e., Rs.28.97 lakh towards disposal of Unit Auxiliary Transformer-1A and 3-phase onload tap changer and Rs.3.90 lakh towards disposal of Light Commercial Vehicle as claimed by the Petitioner is in order and hence allowed.

71. Accordingly, the total additional capital expenditure allowed for the period 2014-19 is tabulated as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Land	(-) 0.04	(-) 0.01	0.00	0.00	0.00	**(-) 0.05**
Buildings	105.26	0.00	155.44	0.00	0.00	**260.70**
Roads, Culverts & Railway Sidings	0.00	0.00	0.00	0.00	312.75	**312.75**
Barrage, Gates & Others	0.00	0.00	0.00	0.00	0.00	**0.00**
Powerhouse Plant & Machinery	554.19	135.49	119.09	0.00	90.36	**899.13**
Sub-station Equipment	0.00	15.84	1.88	106.62	150.96	**275.30**
Other Assets	0.00	0.00	0.00	0.00	0.00	**0.00**
Total	**659.41**	**151.31**	**276.41**	**106.62**	**554.08**	**1747.83**

De-capitalization

72. The Petitioner has furnished the asset-wise details of total de-capitalization of Rs. 836.99 lakh during the period 2014-19 (Rs. 450.81 lakh in 2014-15, Rs. 115.91 lakh in 2015-16, Rs. 3.98 lakh in 2016-17; Rs. 129.47 in year 2017-18; and Rs. 136.82 lakh in 2018-19) as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Mill DP (differential pressure) level measurement system of Coal Mills	159.21	0.00	0.00	0.00	0.00	**159.21**
Obsolete HIACS 3000 DCS system of MTPS Unit 1	291.60	0.00	0.00	0.00	0.00	**291.60**
6.6 KV Vacuum circuit breaker of Unit-1	0.00	38.57	0.00	0.00	0.00	**38.57**
Retrofitting of numerical relays in place of electromagnetic relays	0.00	1.69	3.22	0.00	0.00	**4.90**
26V battery banks	0.00	42.93	0.00	0.00	0.00	**42.93**
Thermogravimetric Analyser	0.00	26.05	0.00	0.00	0.00	**26.05**
220 kV Lightning Arresters	0.00	6.68	0.76	0.00	0.00	**7.44**
6.6 KV Vacuum circuit breaker of Unit-2	0.00	0.00	0.00	41.70	43.14	**84.83**

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Supply, erection & commissioning of Exide make battery bank of Units-1, 2 & 3	0.00	0.00	0.00	80.94	0.00	**80.94**
UPS 60 KVA without Battery	0.00	0.00	0.00	6.82	0.00	**6.82**
Installation Charge of Exide make battery bank	0.00	0.00	0.00	0.00	0.91	**0.91**
Numerical Distance Protection Relay	0.00	0.00	0.00	0.00	10.78	**10.78**
Different charges paid to Exide Industries for replacement of battery bank	0.00	0.00	0.00	0.00	81.77	**81.77**
48V PCBC/SMPS based battery charger for Telephone Exchange	0.00	0.00	0.00	0.00	0.23	**0.23**
Total De-capitalization	**450.81**	**115.91**	**3.98**	**129.47**	**136.82**	**836.99**

73. We have considered the decapitalization of assets claimed by the Petitioner and the assets against which the additional capital expenditure has not been allowed have been excluded from decapitalization. Accordingly, the decapitalization allowed is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Obsolete HIACS 3000 DCS system of MTPS Unit 1	291.60	0.00	0.00	0.00	0.00	**291.60**
6.6 KV Vacuum circuit breaker of Unit-1	0.00	38.57	0.00	0.00	0.00	**38.57**
Retrofitting of numerical relays in place of electromagnetic relays	0.00	1.69	3.22	0.00	0.00	**4.90**
Thermogravimetric Analyser	0.00	26.05	0.00	0.00	0.00	**26.05**
220 kV Lightning Arresters	0.00	6.68	0.76	0.00	0.00	**7.44**
6.6 KV Vacuum circuit breaker of Unit-2	0.00	0.00	0.00	41.70	43.14	**84.83**
Numerical Distance Protection Relay	0.00	0.00	0.00	0.00	10.78	**10.78**
Total De-Capitalization	**291.60**	**72.98**	**3.98**	**41.70**	**53.91**	**464.18**

Assumed Deletions

74. As per consistent methodology adopted by the Commission in its orders, the expenditure on replacement of assets, if found justified, is allowed for the purpose of

tariff provided that the capitalization of the said asset, is followed by De-Capitalization of the gross value of the old asset. However, in certain cases, where the De-Capitalization is proposed to be affected during the future years to the year of capitalization of the new asset, the De-Capitalization of the old asset for the purpose of tariff, is shifted to the very same year in which the capitalization of the new asset is allowed. Such De-Capitalization which is not a book entry in the year of capitalization is termed as “Assumed Deletion”.

75. Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e., escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. In the instant petition, year of COD of the generating station is 1999-2000. We have considered the value of asset under consideration as on COD as 100 and escalated it @ 5% till the year during which additional capital expenditure is claimed against replacement of the same. The amount claimed for additional capital expenditure against the asset is multiplied by the derived ratio from above two values i.e., value in year of COD divided by value in capitalized year. Accordingly, based on the additional capital expenditure allowed, the year-wise assumed deletion is worked out as follows:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Procurement and installation of SF6 Circuit Breaker	0.00	0.00	0.00	43.06	0.00

76. Accordingly, the total de-capitalisation considered for the purpose of tariff is as follows:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**Total**
De-capitalisation	291.60	72.98	3.98	41.70	53.91	**464.18**
Assumed Deletion	0.00	0.00	0.00	43.06	0.00	**43.06**
Total De-Capitalisation	**291.60**	**72.98**	**3.98**	**84.76**	**53.91**	**507.24**

Un-Discharged Liabilities

77. The total undischarged liabilities furnished by the Petitioner for the period 2014-19 is Rs. 54.70 lakh (Rs. 38.27 lakh in 2014-15, Rs. 8.34 lakh in 2015-16, Rs. 0.54 lakh in 2016-17; 'Nil' in 2017-18; and Rs. 7.55 lakh in 2018-19). The Petitioner has submitted that IDC and 'Undischarged Liabilities' were consolidated and maintained on year-to-year basis, but not item-wise and thus the additional capital expenditure claimed for each item, is on accrual basis. It is also observed that information submitted by the Petitioner is not line with the 2014 Tariff Regulations i.e., item-wise and year-wise discharge of liabilities. In the absence of item-wise availability of undischarged liability, the same is determined on a *pro-rata* basis, considering the admitted additional capital expenditure against the claimed additional capital expenditure, during each year of the 2014-19 tariff period. Accordingly, as against an un-discharged liability of Rs. 54.70 lakh claimed by the Petitioner, a corresponding amount of Rs. 25.84 lakh has been allowed.

Liabilities Discharged

78. The Petitioner has submitted the year-wise total liability discharged for Rs. 174.11 lakh during the 2014-19 tariff period (Rs.113.84 lakh in 2014-15, Rs.22.45 lakh in 2015-16, Rs.6.71 lakh in 2016-17; Rs.0.54 lakh in 2017-18; and Rs.30.58 lakh in 2018-19), instead of the item-wise liability discharges. It is also observed that information submitted by the Petitioner does not contain the item-wise and year-wise discharge of liabilities. In the absence of the item-wise availability of liabilities discharged, the same is determined on a *pro-rata* basis, considering the admitted additional capital expenditure against the claimed expenditure, during each year of the 2014-19 tariff period. Further, the opening balance of liability discharged as on 1.4.2014, has been allowed to be discharged in full. Accordingly, the discharge of

liabilities, allowed as part of additional capital expenditure, corresponding to the assets allowed, are as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Un-Discharged Liabilities **(A)**	126.96	42.81	28.56	22.35	21.98
Additions during the 2014-19 tariff period (corresponding to allowed additional capital expenditure) **(B)**	18.07	3.51	0.32	0.00	3.94
Discharges during the 2014-19 tariff period (corresponding to allowed additional capital expenditure) **(C)**	102.22	17.76	6.54	0.36	21.07
Reversal of Liabilities out of liabilities added during the 2014-19 tariff period (corresponding to allowed additional capital expenditure) **(D)**	0.00	0.00	0.00	0.00	0.00
Closing Un-discharged liabilities (E) = (A+B-C-D)	**42.81**	**28.56**	**22.35**	**21.98**	**4.85**

Capital Cost allowed for the period 2014-19

79. Accordingly, the capital cost approved for the period 2014-19 in respect of the generating station is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost **(A)**	161072.25	161524.21	161616.78	161895.43	161917.66
Add: Addition during the year / period **(B)**	659.41	151.31	276.41	106.62	554.08
Less: De-Capitalization / Assumed Deletion during the year /period **(C)**	291.60	72.98	3.98	84.76	53.91
Less: Undischarged Liabilities **(D)**	18.07	3.51	0.32	0.00	3.94
Add: Discharges during the year /period **(E)**	102.22	17.76	6.54	0.36	21.07
Closing Gross Block (F) = (A+B-C-D+E)	**161524.21**	**161616.78**	**161895.43**	**161917.66**	**162434.95**
Average Gross Block **(F) = (A+F)/2**	161298.23	161570.50	161756.11	161906.55	162176.31

Debt-Equity Ratio

80. Regulation 19 of the 2014 Tariff Regulations provides as follows:

"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 utilization 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."

81. The gross normative loan and equity amounting to Rs.112750.59 lakh and Rs.48321.67 lakh, as considered in order dated 31.8.2016 in Petition No. 347/GT/2014, has been retained for the purpose of tariff. Further, the additional capital expenditure admitted as above, has been allocated in the debt-equity 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 follows:

(Rs. in lakh)

	Capital Cost as on 1.4.2014 (Rs. in lakh)	**(%)**	**Net Additional Capital Expenditure during 2014-19**	**(%)**	**Capital Cost as on 31.3.2019**	**(%)**
Debt	112750.59	70%	953.89	70%	113704.48	70%
Equity	48321.67	30%	408.81	30%	48730.48	30%
Total	**161072.25**	**100%**	**1362.70**	**100%**	**162434.95**	**100%**

Return on Equity

82. Regulation 24 of the 2014 Tariff Regulations provides as follows:

"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:

83. Regulation 25 of the 2014 Tariff Regulations provides as follows:

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

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

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

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

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

(a)Estimated Gross Income from generation or transmission business for FY 2014-15 is Rs 1000 crore.
(b)Estimated Advance Tax for the year on above is Rs 240 crore.
(c) Effective Tax Rate for the year 2014-15 = Rs 240 Crore/Rs 1000 Crore = 24%
(d)Rate of return on equity = 15.50/ (1-0.24) = 20.395%

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

84. The base rate of Return on Equity (ROE), as allowed under Regulation 24 of the 2014 Tariff Regulations, is to be grossed up with the effective tax rate of the respective financial years. Also, in terms of Regulation 25(3) of the 2014 Tariff Regulations, the generating company, shall true up the grossed-up rate of ROE, 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 2014-19 tariff period, on actual gross income of any financial year.

85. DVPCA has submitted that though the Petitioner has considered the effective tax rate of 20.9605%, 21.3416%, 21.3416%, 21.3416% and 21.548% for computation of ROE for the period 2014-19, the Audited accounts reveals that the Petitioner has not paid any actual tax during the 2014-18 period. It has stated that for the year 2018-19, it is apparent that the deferred tax liability which gets materialised in the year pertains to the year 2012-13. Referring to Regulation 49 of the 2014 Tariff Regulations, the Respondent has stated that the claim is in contravention to the 2014 Tariff Regulations and ROE is to be allowed at a rate of 15.50% only, without considering any effective tax rate. In response, the Petitioner, has clarified that there is no income tax liability on the Petitioner for the period 2014-19. However, it has sought leave of the Commission, to claim income tax liability, if any, which may arise in future.

86. The matter has been considered. Since the Petitioner has not been paying any income tax in any of the financial year of the 2014-19 tariff period, 'Nil' rate has been considered as the effective tax rate for the purpose of grossing up of ROE, in terms of the 2014 Tariff Regulations. Accordingly, ROE has been worked out as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Equity-Opening **(A)**	48321.67	48457.25	48485.03	48568.62	48575.29
Addition of Equity due to additional capital expenditure **(B)**	135.59	27.77	83.59	6.67	155.19
Normative Equity-Closing **(C) = (A) + (B)**	48457.25	48485.03	48568.62	48575.29	48730.48
Average Normative Equity **(D) = (A+C)/2**	48389.46	48471.14	48526.82	48571.95	48652.88
Return on Equity (Base Rate) **(E)**	15.50%	15.50%	15.50%	15.50%	15.50%
Effective Tax Rate (F)	0.00%	0.00%	0.00%	0.00%	0.00%
Rate of Return on Equity (Pre-Tax) **(G) = (E)/(1-F)**	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity (Pre-Tax) annualized (H) = (D)*(G)	**7500.37**	**7513.03**	**7521.66**	**7528.65**	**7541.20**

Interest on Loan

87. Regulation 26 of the 2014 Tariff Regulations provides as follows:

"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 Decapitalization 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-capitalization of such asset

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

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

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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such 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."

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

(a) The gross normative loan of Rs.112750.59 lakh has been considered on 1.4.2014, in line with the gross normative loan balance as on 31.3.2014, in order dated 29.7.2016 in Petition No. 465/GT/2014. In addition to this, the loan component towards additional capitalization has been considered as per the approved debt equity ratio.

(b) Cumulative repayment of loan as on 31.3.2014 has been considered as cumulative repayment as on 1.4.2014.

(c) Addition to normative loan on account of additional capital expenditure approved above has been considered on year-to-year basis.

(d) Depreciation allowed has been considered as repayment of normative loan during the respective years of the 2014-19 tariff period. Proportionate adjustment has been made to the repayments on account of de-capitalizations considered in the additional capital expenditure approved above.

(e) In line with the Regulations, the weighted average rate of interest (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, if any, for the generating station. In case of loans carrying floating rate of interest the rate of interest as provided by the Petitioner has been considered for the purpose of tariff.

(f) The Petitioner was directed vide ROP of the hearing dated 24.6.2022, to justify the inclusion of Loan-5 DVC Bonds (For T&D)-fully repaid on 26.2.2017 and Loan-6 REC Loan (For T&D) for computation of weighted average rate of interest (WAROI) for generating station. In response, the Petitioner, vide affidavit dated 13.7.2022, has submitted that the Commission may exclude these two loans from loan portfolio, while computing WAROI. Similarly, RVP loan and US Exim loan was taken for specific purpose. The Petitioner submitted the revised form-13.

(g) Revised Form-13, submitted by the Petitioner, as above, has been considered for the purpose of computation of WAROI and accordingly WAROI has been used in computation of Interest on Loan.

89. Necessary calculation for interest on loan is as follows:

(Rs in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Gross opening loan (A)	112750.59	113066.96	113131.76	113326.81	113342.37
Cumulative repayment of loan up to previous year (B)	112750.59	112972.19	113131.76	113326.81	113342.37
Net Loan Opening (C) = (A) - (B)	-	94.77	-	-	-
Addition due to additional capital expenditure (D)	316.37	64.80	195.05	15.56	362.11
Repayment of loan during the year (E)	350.11	191.90	196.82	52.85	280.08
Less: Repayment adjustment on account of de-capitalization (F)	128.50	32.33	1.77	37.29	24.10
Net Repayment (G) = (E) - (F) + (H)	221.60	159.57	195.05	15.56	255.98
Net Loan Closing (H) =(C) +(D) -(G)	94.77	-	-	-	106.13
Average Loan (I) = (C+H)/2	47.38	47.38	-	-	53.06
Weighted Average Rate of Interest of loan (J)	8.9403%	8.9424%	8.9448%	6.9122%	6.9122%
Interest on Loan (K) = (I)*(J)	**4.24**	**4.24**	**-**	**-**	**3.67**

90. Further, the Petitioner has claimed its share of savings due to REC loan restructuring (i.e., one-third share) amounting Rs.0.15 lakh and Rs. 0.33 lakh for the years 2017-18 and 2018-19 respectively, in terms of Regulation 26(7) of the 2014 Tariff Regulations. In this regard, it is observed that as per the Petitioner’s submission vide affidavit dated 13.7.2022, REC loan is not considered in the actual loan portfolio, for the purpose of computation of WAROI, as the loan pertains to the T&D system of the Petitioner. Therefore, the claim for sharing of savings, due to loan restructuring does not deserve any merit for consideration.

Depreciation

91. Regulation 27 of the 2014 Tariff Regulations provides as follows:

> *“27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication*

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

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

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

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset: Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

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

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

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

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

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

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

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

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

92. Regulation 53(2)(iii) of the 2014 Tariff Regulations provides as follows:

*"**53**. Special Provisions relating to Damodar Valley Corporation. (1) Subject to clause (2), these regulations shall apply to determination of tariff of the projects owned by Damodar Valley Corporation (DVC).*

(2) The following special provisions shall apply for determination of tariff of the projects owned by DVC:

(i)xx….

(ii)xx

(iii) Depreciation: The depreciation rate stipulated by the Comptroller and Auditor General of India in terms of section 40 of the Damodar Valley Corporation Act, 1948 shall be applied for computation of depreciation of projects of DVC."

93. The cumulative depreciation amounting to Rs.143321.59 lakh as on 1.4.2014, is in line with the cumulative depreciation, as on 31.3.2014, as considered in order dated 29.7.2016 in Petition No.465/GT/2014. The weighted average rate of depreciation calculated (Annexure-I) in terms of the Regulation 53(2)(iii) read with Regulation 27 of the 2014 Tariff Regulations, has been considered for calculation of depreciation. The cumulative depreciation has been adjusted on account of de-capitalization considered during the period 2014-19 for the purpose of tariff. Accordingly, depreciation is worked out and allowed as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Average Capital Cost (A)	161298.23	161570.50	161756.11	161906.55	162176.31
Value of freehold land included in average capital cost (B)	1663.01	1662.99	1662.98	1662.98	1662.98
Aggregated Depreciable Value (C)= (A-B) *90%	143671.70	143916.76	144083.81	144219.21	144461.99
Remaining aggregate depreciable value at the beginning of the year (D) = [(C) - (Cumulative Depreciation of Previous year)]	350.11	373.56	199.38	137.16	280.08
No. of completed years at the beginning of the year (E)	16.25	17.25	18.25	19.25	20.25
Balance useful life at the beginning of the year (F) = 25 - (E)	8.75	7.75	6.75	5.75	4.75
Weighted Average Rate of Depreciation (WAROD) (G)	6.3170%	6.3170%	6.3150%	6.3117%	6.3107%

	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Depreciation during the year/ period (H) = Minimum of [(A)*(G) or (D)]	**350.11**	**373.56**	**199.38**	**137.16**	**280.08**
Cumulative depreciation at the end of the year (before adjustment for de-capitalisation) (I) = (H) * (K of the previous year)	143671.70	143916.76	144083.81	144219.21	144461.99
Less: Depreciation adjustment on account of de-capitalisation (J)	128.50	32.33	1.77	37.29	24.10
Cumulative depreciation at the end of the year* (K) = (I) - (J)	**143543.19**	**143884.43**	**144082.04**	**144181.91**	**144437.89**

**Cumulative depreciation at the end of 2013-14 is Rs.143321.59 lakh.*

Operation & Maintenance Expenses

94. Regulation 29(1) (a) of the 2014 Tariff Regulations provides the following O&M norms for the generating station of the Petitioner:

(Rs in lakh/MW)

2014-15	2015-16	2016-17	2017-18	2018-19
23.90	25.40	27.00	28.70	30.51

95. The O&M expenses claimed by the Petitioner are as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
15057.00	16002.00	17010.00	18081.00	19221.30

96. The normative O&M expenses claimed by the Petitioner is in terms of Regulation 29(1)(a) of the 2014 Tariff Regulations and is therefore allowed.

Water Charges

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

> "*29 (2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*
> *Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition:*

98. The water charges claimed by the Petitioner are as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
0.00	1119.60	570.32	690.95	562.86

99. The Commission vide ROP of the hearing dated 25.5.2021, directed the Petitioner to submit the year-wise audited computation of actual water charges claimed for the period 2014-19, including the actual quantity of water consumed; rate (Rs./M^3) charged by the State authorities; any other charges included in the water charges, in addition to the charges calculated based on the above; and Auditor certificate to the effect that such other charges above were booked under the head 'water charges' during the 2014-19 tariff period. In compliance to the same, the Petitioner *vide* affidavit dated 1.7.2021 has submitted the auditor certificate in support of the water charges incurred for the MTPS Unit 1-8 and has apportioned the same for various units/stages based on the year-wise actual generation during the 2014-19 tariff period.

100. DVPCA has submitted that the actual specific water consumption is 3.95 m^3/MWh which is higher than norm of 3.50 m^3/MWh. In response, the Petitioner has submitted that the Ministry of Environment, Forest and Climate Change (MoEF&CC) vide notification dated 7.12.2015, had revised the water consumption standards for the existing thermal plants, (including the Petitioner) and reduced maximum water consumption to 3.50 m^3/MWh, within two years of the notification i.e., 6.12.2017. The Petitioner has stated that it has successfully achieved the timeline in reducing the water consumption during the control period. It has further submitted that the expenses related to water management increased during the 2014-19 tariff period, due to revision in rates of water consumption by the Petitioner's Board, which were due to increase in employee costs on account of the 7th Central Pay Commission and

capital expenditure incurred from time to time. The Petitioner while pointing out that the Commission in the Statement of Objects and Reasons (SOR) to the 2014 Tariff Regulations has observed on the uncontrollable nature of water charges, and has submitted that Commission vide its order dated 29.7.2016 in Petition No. 294/GT/2014 (tariff of NTPC Simhadri STPS, Stage-II (1000 MW) for the period 2014-19) had allowed water charges at a rate of Rs.12.39/Cum for 2013-14, with an escalation of 5% per annum. It has added that the Commission in its order dated 3.10.2016 in Petition No. 207/GT/2015 (tariff for Unit 7 and 8 for the generating station for the period 2014-19) had compared the water charges in respect of NTPC Talcher-I STPS (1000 MW) and accordingly, allowed water charges at a rate of Rs.5.70/Cum. Also, the year-wise computation of the actual water charges claimed, including the actual quantity of water consumed, rate (Rs. /M^3) charged by Damodar Valley Reservoir Regulation Committee (DVRRC) along with notification applicable for the period 2014-19, on water tariff for supply of raw water to various generating stations of the Petitioner, duly certified by Auditor has been submitted. Based on the above, the Petitioner has prayed to allow the water charges claimed to be recovered in full on sharing basis.

101. The matter has been considered. It is noticed that as per the MoEF&CC notification dated 7.12.2015, the specific water consumption allowed for the generating station is 3.5 m^3/MWh. The Regulation 29(2) provides for consideration of the actual consumption of water depending upon type of plant, type of cooling water system etc, subject to prudence check. The Petitioner vide affidavit dated 1.7.2021 has furnished audited water consumption and charges incurred thereof, for the period 2014-19. It is however noticed, that the Petitioner has booked the water consumption charges for the 2014-15 and 2015-16 in the audited accounts for 2015-16. The details of water charges claimed are as follows:

	Water Use	Quantity of water consumed (M^3)	Rate of water charges (Rs. /M^3)	Water Charges as per Rate (Rs. lakh)	Water Charges apportioned as per Annual Accounts
2014-15	Industrial	22478180	5.70	1281.26	0.00
	Domestic	1149740	1.15	13.22	
	Total	**23627920**		**1294.48**	
2015-16	Industrial	18704473	5.70	1066.15	1119.60
	Domestic	809271	1.15	9.31	
	Total	**19513744**		**1075.46**	
2016-17	Industrial	15305090	5.70	872.39	570.32
	Domestic	166080	1.15	1.91	
	Total	**15471170**		**874.30**	
2018-19	Industrial	14018611	5.70	799.06	690.95
	Domestic	170323	1.15	1.96	
	Total	**14188934**		**801.02**	
2019-20	Industrial	14699674	5.70	837.88	562.86
	Domestic	171132	1.15	1.97	
	Total	**14870806**		**839.85**	
Total		**87672574**		**4885.11**	**2943.74**

102. It is observed that the water charges determined, based on consumption and rate, thereof, are in slight variance with the apportioned audited water charges. Accordingly, the audited water charges have been considered. It is also noticed, that the water consumption includes domestic water consumption, which are being recovered from its employees. As, the water charges for domestic usage are not allowable, the same have been excluded from the audited apportioned water charges. Accordingly, water charges allowed are as follows:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Claimed	0.00	1119.60	570.32	690.95	562.86
Allowed	0.00	1097.07	568.41	688.99	560.90

Capital Spares

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

> *"29(2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*
>
> *xxxx*

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

104. The Petitioner has claimed total actual expenditure of Rs.656.44 lakh towards capital spares during the 2014-19 tariff period (Rs.343.03 lakh in 2014-15, Rs. 70.22 lakh in 2015-16, Rs.33.52 lakh in 2016-17, Rs.57.79 lakh in 2017-18 and Rs.151.89 lakh in 2018-19) in its additional submission vide affidavit dated 13.7.2022 and has prayed that capital spares replaced / consumed by the generating station during the 2014-19 tariff period may be allowed.

105. DVPCA has submitted that the Petitioner has not furnished proper justification for incurring the 'capital spares' during the period and has also not substantiated as to whether the expenditure incurred, is funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of stores & spares and Renovation & Modernization. It has further stated that the Petitioner has also not provided any documentary evidence to substantiate its claim for capital spares for the period 2014-19. In response, the Petitioner has clarified that the details of capital spares have already been furnished vide Form-17 for the period 2014-19. Further, in order to ensure reliable and efficient operation at all times by the generating station, the units / equipment is taken under overhaul / maintenance and inspected regularly for wear and tear and during such works, spares parts of equipment's which became damaged / unserviceable are replaced / consumed, so that the machine continue to perform at expected efficiency on sustained basis. In Form-17, it has already confirmed that no part of the capital spares has been funded through compensatory allowance or special allowance or claimed as part of additional capitalization or stores and spares.

106. In our view, the capital spares comprise of two categories i.e. (i) spares which form part of the capital cost and (ii) spares which do not form part of the capital cost of the project. In respect of capital spares which form part of the capital cost of the project, the tariff for which is being recovered since their procurement and, therefore, the same cannot be allowed as part of additional O&M expenses. Accordingly, only those capital spares, which do not form part of the capital cost of the project, are to be considered. It is pertinent to mention that the term 'capital spares' has not been defined in the 2014 Tariff Regulations. The term capital spares, in our view, is a piece of equipment or a spare part, of significant cost that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt.

107. We have examined the list of the capital spares consumed by the Petitioner. 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 (one) lakh, on prudence check of the details furnished by the Petitioner in Form-17 of the petition, has been considered for the purpose. Further, these include some items in nature of instruments, tools and tackles, not pertaining to the generating station, spares procured but not consumed, new items or not part of O & M etc. and cannot be considered as Capital Spares. It is also observed that the Petitioner has also claimed Compensation Allowance in accordance with the provisions of Regulation 17(1) of the 2014 Tariff Regulations. In view of the above discussion, only those capital spares, which do not form part of the capital cost of the project, have been considered and allowed as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Capital Spares (not part of capital cost) claimed (A)	343.03	70.22	33.52	57.79	151.89
Value of Capital Spares (of Rs. 1 lakh and below) disallowed on individual basis (B)	1.04	0.00	1.61	0.00	1.17

	2014-15	2015-16	2016-17	2017-18	2018-19
Value of capital spares disallowed on individual basis (C)	76.95	65.65	16.33	12.86	46.19
Net total value of capital spares considered (D) = (A) - (B) - (C)	265.04	4.58	15.58	44.93	104.52

108. We are also of the view that spares do have a salvage value. Accordingly, in line with the practice of considering the salvage value, presumed to be recovered by the Petitioner on sale of capital assets, on becoming unserviceable, the salvage value of 10% has been deducted from the cost of capital spares considered above, for the period 2014-19. Therefore, on prudence check of the information furnished by the Petitioner in Form-17 and on applying the said ceiling limit, along with deduction of the salvage value @10%, the net capital spares allowed in terms of Regulation 29(2) of 2014 Tariff Regulations is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Net total value of capital spares considered (A)	265.04	4.58	15.58	44.93	104.52
Salvage value @ 10% (B)	26.50	0.46	1.56	4.49	10.45
Net Claim allowed (C) = (A)*(B)	238.54	4.12	14.03	40.43	94.07

109. Accordingly, the O&M expenses allowed for the period 2014-19 are as follows:

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
Installed Capacity (MW) (A)		630.00	630.00	630.00	630.00	630.00
O&M Expenses under Reg.29(1) in Rs. lakh / MW (B)		23.90	25.40	27.00	28.70	30.51
Total O&M Expenses (in Rs. lakh) (C) = (A)*(B)	Claimed	15057.00	16002.00	17010.00	18081.00	19221.30
	Approved	15057.00	16002.00	17010.00	18081.00	19221.30
Water Charges (in Rs. lakh) (D)	Claimed	0.00	1119.60	570.32	690.95	562.86
	Approved	0.00	1097.07	568.41	688.99	560.90
Capital Spares Consumed (in Rs. lakh) (E)	Claimed	343.03	70.22	33.52	57.79	151.89
	Approved	238.54	4.12	14.03	40.43	94.07
Total O&M Expenses as allowed (including Water Charges and Capital Spares Consumed) (F) = (C+D+E)	Claimed	**15400.03**	**17191.82**	**17613.84**	**18829.74**	**19936.05**
	Approved	**15295.54**	**17103.19**	**17592.43**	**18810.43**	**19876.27**

Compensation Allowance

110. Regulations 17 of the of 2014 Tariff Regulations provides as under:

"17. Compensation Allowance:

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

(2) The compensation allowance shall be allowed in the following manner from the year following the year of completion of 10,15 or 20 years of useful life.

Years of Operation	*Compensation Allowance (Lakh Rs./MW/Year)*
0-10	*Nil*
11-15	*0.2*
16-20	*0.5*
21-25	*1.0*

"

111. The Petitioner has claimed compensation allowance as follows:

(Rs. in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
252.00	315.00	420.00	420.00	525.00

112. In line with the above regulations, the compensation allowance for the generating station is as under:

	Unit-I	**Unit-II**	**Unit-III**	**Total**
Installed Capacity in MW	210	210	210	630
COD	1-Mar-1996	1-Mar-1998	1-Sep-1999	
Balance Useful life as on 1.4.2014 (in years)	6.92	8.92	10.42	
a) 10 Years	1-Mar-2006	1-Mar-2008	1-Sep-2009	
b) 15 Years	1-Mar-2011	1-Mar-2013	1-Sep-2014	
c) 20 Years	1-Mar-2016	1-Mar-2018	1-Sep-2019	
2014-15	105.00	105.00	42.00	252.00
2015-16	105.00	105.00	105.00	315.00
2016-17	210.00	105.00	105.00	420.00
2017-18	210.00	105.00	105.00	420.00
2018-19	210.00	210.00	105.00	525.00
Total	**840.00**	**630.00**	**462.00**	**1932.00**

113. Based on above, the compensation allowance of Rs. 840.00 lakh for Unit-I, Rs. 630.00 lakh for Unit-II and Rs. 462.00 lakh for Unit-III is allowed for the period 2014-19.

Operational Norms

114. The operational norms as claimed by the Petitioner are as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Annual Plant Availability Factor (NAPAF) (%)	83%	83%	83%	83%	83%
Gross Station Heat Rate (kCal/kWh)	2450	2450	2450	2450	2450
Auxiliary Power Consumption (%)	9.00%	9.00%	9.00%	9.00%	9.00%
Specific Oil Consumption (ml/kWh)	1.00	1.00	1.00	1.00	1.00

Normative Annual Plant Availability Factor

115. Regulation 36 of the 2014 Tariff Regulations provides as follows:

"(A) Normative Annual Plant Availability Factor(a) All Thermal generating stations, except those covered under clauses (b),(c),(d) &(e)- 85%.

Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.

The above provision shall be reviewed based on actual feedback after 3 years from 1.4.2014.

116. The Commission in its order dated 31.8.2016 in Petition No. 347/GT/2014, had allowed NAPAF for the generating station as under:

"53. The petitioner has considered the Target Availability of 83% during 2014-19 due to inadequate regular supply of quality coal. However, no proper justification has been furnished by the petitioner substantiating the inadequacy of coal. The target availability of 83% as claimed by the petitioner has been provisionally considered for the years 2014-15 to 2016-17. The petitioner is directed to submit the details on this count at the time of truing up of tariff of the generating station. However, for the years 2017-18 and 2018-19, the target availability of 85% has been considered in terms of the Regulation 36(A) (a) of the 2014 Tariff Regulations."

117. The Petitioner has claimed NAPAF of 83% for the period 2014-19 as against the NAPAF of 85% specified under the said Regulations. In justification for the same, the Petitioner, while pointing out that the said regulations provide for consideration of coal shortage for the purpose of NAPAF, and has submitted that during the 2014-19 period, the PAF of the generating station was adversely impacted during the monsoon season due to inadequate regular supply of quality coal, which resulted in depletion of coal stock. Accordingly, the Petitioner has prayed for relaxation of the NAPAF of the generating station from 85% to 83% for the period 2017-19, in exercise of the 'power to relax' in terms of Regulation 54 of the 2014 Tariff Regulations.

118. DVPCA has submitted that the arrangement of adequate coal supply is the sole responsibility of the Petitioner. It has also stated that since coal supply is being governed by a separate bilateral Fuel Purchase Agreement (FPA) signed between the Petitioner and Coal Supplier, the beneficiaries are in no way responsible for coal linkage shortage and such burden should not be passed on to the beneficiaries for any lapses, which is attributable to the Petitioner / Coal Supplier. In response, the Petitioner in its rejoinder has clarified that it has furnished a day-wise statement of Coal receipt (in MT), Coal consumption (in MT), Closing coal stock (in MT), Closing coal stock (in number of days) and DC loss (in MU) for the generating station for the years 2017-18 and 2018-19. Referring to the said submission, the Petitioner has stated that the coal stock for majority of the days was below the critical level, thereby severely impacting the PAF of the generating station. Accordingly, the Petitioner has prayed for relaxation of NAPAF from 85% to 83% for the years 2017-18 and 2018-19.

119. The matter has been considered. Considering the coal stock availability, Regulation 36(A) of 2014 Tariff Regulations have provided for NAPAF of 83% for three (3) years i.e., from 2014-15 to 2016-17 and to review the same thereafter. In line with this, the coal availability has been reviewed and it is observed that the availability of coal to the thermal generating stations in the country was normal and therefore, the Normative Annual Plant Availability Factor was revised as 85% in 2017-18 and 2018-19. In our view, the non-availability of coal to the generating station of the Petitioner, is a localised or a plant specific issue and cannot be a factor to reduce NAPAF, particularly, keeping in view that arrangement of coal supply is the sole responsibility of the generator (Petitioner). Thus, the continuation of reduced NAPAF of 83% in 2017-18 and 2018-19 to the generating station is not allowed. Accordingly, the NAPAF of 83% for 2014-15 to 2016-17 and 85% for 2017-18 and 2018-19 is allowed in accordance with the provisions of Regulation 36 (A) of the 2014 Tariff Regulations.

Gross Station Heat Rate

120. The Petitioner has claimed Gross Station Heat Rate (GSHR) of plant as 2450 Kcal / kWh. As the Gross Station Heat Rate claimed is in accordance with the provisions of Regulation 36(C)(a) of the 2014 Tariff Regulations, the same is allowed.

Auxiliary Energy Consumption

121. The Petitioner has claimed Auxiliary Energy Consumption (AEC) of 9.00% for the plant. The Regulation 36(E)(a) of the 2014 Tariff Regulations provides for AEC of 8.5% for coal based generating stations of 210 MW sets with Natural Draft cooling tower. Further, it provides that for thermal generating stations with induced draft cooling towers, the norms shall be further increased by 0.5%. Accordingly, claimed AEC of 9.00%, is in line with the above Regulations and hence, the same is allowed.

Secondary Fuel Oil Consumption

122. The Petitioner has claimed secondary fuel oil consumption as 1.00 ml / kWh. In this regard, it is noted that the Regulation 36(D)(c) of the 2014 Tariff Regulations provide for secondary fuel oil consumption by the generating station as 1.0 ml/kWh during the 2014-19 tariff period. Accordingly, the secondary fuel oil consumption claimed by the Petitioner is in line with the 2014 Tariff Regulations and therefore, the same has been allowed.

123. Based on the above, the operational norms allowed are as under:

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Normative Annual Plant Availability Factor (NAPAF) (%)	83	83	83	85	85
Gross Station Heat Rate (kCal/kWh)	2450	2450	2450	2450	2450
Auxiliary Power Consumption (%)	9.00	9.00	9.00	9.00	9.00
Specific Oil Consumption (ml/kWh)	1.00	1.00	1.00	1.00	1.00

Interest on Working Capital

124. Regulation 28 of the 2014 Tariff Regulations provides as follows:

"28. Interest on Working Capital:

(1) The working capital shall cover:

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

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

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

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

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

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

(vi) Operation and maintenance expenses for one month.

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

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or a[s] 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."

125. Interest on working capital as claimed by the Petitioner is as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Cost of Coal / Lignite for Stock and Generation (A)	17673.57	17721.99	17673.57	17673.57	17673.57
Cost of oil for 2 months (B)	429.16	430.33	429.16	429.16	429.16
O&M expenses - 1 month (C)	1254.75	1426.80	1465.03	1564.33	1648.68
Maintenance Spares - 20% of O&M (D)	3011.40	3424.32	3516.06	3754.39	3956.83
Receivables - 2 months (E)	24487.71	25144.16	25437.76	25895.94	25180.81
Total Working Capital (F) = (A+B+C+D+E)	**46856.58**	**48147.60**	**48521.58**	**49317.39**	**48889.04**
Rate of Interest (G)	13.50%	13.50%	13.50%	13.50%	13.50%

	2014-15	2015-16	2016-17	2017-18	2018-19
Total Interest on Working capital (H) = (F)x(G)	**6325.64**	**6499.93**	**6550.41**	**6657.85**	**6600.02**

(a) Fuel Cost for Working Capital

126. Sub-clauses (i), (ii) and (iii) of Regulation 28(1) of the 2014 Tariff Regulations provide for 30 days of cost towards coal stock, 30 days of cost of coal towards generation and cost of secondary oil for two months respectively, to be considered for computation of working capital and in terms of Regulation 28(2) of the 2014 Tariff Regulations. Further, the computation of cost of fuel is to be based on the landed price and gross calorific value of the fuel, as per actuals, for the period from January 2014 to March 2014.

127. Regulation 30 (6) of the 2014 Tariff Regulations provides as follows:

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

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

(a) For coal based and lignite fired stations

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

(b) xxxxx

Where,

AUX =Normative auxiliary energy consumption in percentage.

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

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

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

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

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

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

LC = Normative limestone consumption in kg per kWh.

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

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

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

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

128. Therefore, in terms of the above Regulation, for determination of the working capital, the GCV on 'as received 'basis is to be considered. Further, Regulation 30 (7) of the 2014 Tariff Regulations provides as follows:

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

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

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

129. The Petitioner has furnished the average GCV of coal as 3262.82 Kcal/kg on "as received" basis for the period from January 2014 to March 2014. The Petitioner has also submitted that it has filed separate petition (Petition No. 133/MP/2018) before the Commission, wherein, it had taken samples manually from the wagon top and GCV of coal on considered 'as received' basis, for computation of cost of coal and the same is pending. Accordingly, the Petitioner has submitted that the Commission may take on record the statements of measurement of GCV as submitted in Petition 133/MP/2018 along with this petition and determine the tariff for the generating station, based on GCV considered on 'as received' basis.

130. The matter has been considered. As stated above, the Petitioner, in Form-15, has considered the average GCV of coal on "as received" basis i.e. from Wagon top, for the period from January 2014 to March 2014, for the purpose of computation of working capital for the period 2014-19. Accordingly, the cost for fuel components in

working capital has been computed considering the fuel details (price and GCV) as per Form-15 and GCV of 3262.82 Kcal/kg. It is observed that while the Petitioner in Form-15 of the hard copy had submitted the details of coal quantity in Million Metric Tonne up to two decimal places, in Form-15 of excel soft copy, the figures have been furnished by the Petitioner, up to 7-8 decimal places. Accordingly, in order to determine the appropriate values, the information furnished in excel soft copy, has been considered. It is also observed that the transit & handling loss of coal, GCV and price of primary and secondary fuel claimed by the Petitioner are in line with the regulations. Accordingly, the weighted average cost and GCV of primary and secondary fuel and the cost of fuel components in working capital are allowed as follows:

	Allowed
Weighted Average GCV of Oil (kCal/ltr)	9685.35
Weighted Average cost of Oil (Rs./kl)	56214.05
Weighted Average GCV of Coal (kCal/kWh)	3262.82
Weighted Average cost of Coal (Rs./Tonne)	3095.28

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

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Cost of Coal towards stock (30 days - corresponding to NAPAF)	8715.73	8715.73	8715.73	8925.75	8925.75
Cost of Coal towards Generation (30 days-corresponding to NAPAF)	8715.73	8715.73	8715.73	8925.75	8925.75
Cost of Secondary fuel oil 2 months (corresponding to NAPAF)	429.16	430.33	429.16	439.50	439.50

(b) Working capital for Maintenance Spares

132. The Petitioner has claimed maintenance spares in working capital as under:

(Rs. in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
3011.40	3424.32	3516.06	3754.39	3956.83

133. It is noticed that the Petitioner has claimed working capital for maintenance

spares by excluding the capital spares. However, Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the O&M expense, including water charges and capital spares. Accordingly, the cost of maintenance spares @ 20% of the operation & maintenance expenses including water charges and capital spares, allowed are as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
3059.11	3420.64	3518.49	3762.09	3975.25

(c) Working Capital for O&M Expenses

134. O&M expenses for 1 month claimed by the Petitioner for the purpose of working capital is as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1254.75	1426.80	1465.03	1564.33	1648.68

135. It is noticed that the Petitioner has claimed working capital for O&M expenses for one month, by excluding capital spares. However, Regulation 28(a)(vi) of the 2014 Tariff Regulations provides for O&M expenses for one month for coal based generating station as a part of working capital, inclusive of water charges and capital spares. Accordingly, the one-month O&M expenses, inclusive of water charges and capital spares, allowed is as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1274.63	1425.27	1466.04	1567.54	1656.36

(d) Energy Charge Rate (ECR) for Working Capital

136. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of 260.57 Paise/kWh for the generating station, based on the landed cost of coal, GCV of coal & GCV and price of Oil for the preceding three months of 2014-19 for the generating station. The GCV and Price of oil as claimed by the Petitioner, are allowed. Accordingly, ECR allowed is as under:

	Unit	2014-19
Capacity	MW	630
Gross Station Heat Rate	Kcal/kWh	2450
Aux. Energy Consumption	%	9.00
Weighted average GCV of oil	Kcal/lit	9685.35
Average GCV of Coal for Jan to March 2014	Kcal/kg	3262.82
Weighted average price of oil	Rs. /KL	56214.05
Weighted average price of Coal	Rs. /MT	3095.28
Rate of Energy Charge ex-bus (rounded off to 3 decimals)	Rs. /kWh	**2.606**

137. Energy charges for 2 months as a part of working capital have been calculated on the following basis:

(a) ECR of Rs.2.606/kWh as calculated above (rounded off to three places as per Regulation 30(6) of 2014 Regulations).

(b) Ex-bus energy (two months), corresponding to the installed capacity of 630 MW normative availability of 83% for first three years and 85% for last two years, and Auxiliary Energy Consumption of 9.00%.

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
18104.53	18154.13	18104.53	18540.79	18540.79

Receivables for Working Capital

139. Receivables equivalent to two months of capacity charge and energy charge has been worked as follows:

(Rs.in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - for two months Corresponding to NAPAF (A)	18104.53	18154.13	18104.53	18540.79	18540.79
Fixed Charges – for two months (B)	4874.78	5202.11	5258.60	5484.74	5700.56
Total (C) = (A+B)	**22979.31**	**23356.24**	**23363.13**	**24025.53**	**24241.34**

(f) Rate of interest on working capital

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal for Stock (30 days generation Corresponding to NAPAF) (A)	8715.73	8715.73	8715.73	8925.75	8925.75
Cost of Coal for Generation (30 days generation Corresponding to NAPAF) (B)	8715.73	8715.73	8715.73	8925.75	8925.75
Cost of oil for 2 months Corresponding to NAPAF (C)	429.16	430.33	429.16	439.50	439.50
O&M expenses - 1 month (D)	1274.63	1425.27	1466.04	1567.54	1656.36
Maintenance Spares - 20% of O&M (E)	3059.11	3420.64	3518.49	3762.09	3975.25
Receivables - 2 months (F)	22979.31	23356.24	23363.13	24025.53	24241.34
Total Working Capital (G) = (A+B+C+D+E+F)	**45173.67**	**46063.94**	**46208.27**	**47646.15**	**48163.95**
Rate of Interest (H)	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital (I) = (G)*(H)	**6098.45**	**6218.63**	**6238.12**	**6432.23**	**6502.13**

Additional O&M Expenses

141. The Petitioner has also claimed additional O&M expenses over and above the normative O&M expenses, allowable to the generating station, in accordance with the provisions of the 2014 Tariff Regulations. These expenditure heads include Mega Insurance, Expenses for CISF Security, Ash Evacuation Expenses, Impact of GST, Impact of Pay Revision, Share of Pension & Gratuity (P&G) and Share of Subsidiary Activities. In order to examine and decide as to whether the claims of the Petitioner for additional O&M expenses are over and above the normative O&M expenses allowed to the generating station, in terms of the 2014 Tariff Regulations, we rely on the duly audited financial statements of the Petitioner. In the Financial statements, all O&M expenses are covered in Notes to Financial Statements i.e. Note No. 29 under Operation & Maintenance and General administration charges and Note No. 27 of the Annual accounts under Employee Benefit Expenses. Accordingly, we examine the head-wise claims of the Petitioner as detailed in the subsequent paragraphs.

(A) Ash Disposal Expenses

142. The Petitioner has claimed total amount of Rs.8553.24 lakh (Rs.2103.21 lakh in

2014-15, Rs. 1509.16 lakh in 2015-16, Rs. 1947.02 lakh in 2016-17, Rs.1837.45 lakh in 2017-18 and Rs. 1156.40 lakh in 2018-19) during the period 2014-19, towards of Ash Disposal expenses, as additional O&M expenses for the generating station. In justification of the same, the Petitioner has submitted that due to statutory directions of the MoEF&CC, GOI vide notification dated 14.9.1999 (and its amendments dated 27.8.2003, 3.11.2009 and 25.1.2016), the fly ash generated during the course of operation of coal power plants, is required to be utilized, under various designated modes, out of which, mine stowing is the most feasible option for the generating station, as the Eastern Coalfields Ltd (ECL) has allowed the Petitioner to utilize its abandoned mines for this. Accordingly, the Petitioner has engaged various transporters for excavation and transportation of ash from ash ponds of the generating station to the abandoned open cast mines of ECL. Further, the Petitioner has further submitted that the expenses for such ash evacuation and transportation activities for Units 1 to 8 of the Project (MTPS) has been booked in the annual accounts in a consolidated manner and subsequently apportioned among the various units of the project, based on the actual gross generation of the units for the respective years of the period 2014-19 tariff period. The Petitioner has prayed that the Commission may approve the proposed Ash Disposal expenses for the period 2014-19, and allow the same to be recovered in full from the beneficiaries, considering the statutory requirement as per notifications under Regulation 8(3)(ii) of the 2014 Tariff Regulations.

143. DVPCA has submitted that the Commission has disallowed the claim of expenses towards ‘Ash evacuation’ in a number of orders, stating that the Petitioner was fully aware of the MOEFCC Notification, 2009, which mandates 100% ash utilization to be ensured by the generator, within a specific period by installation of dry ash and wet ash disposal system. It has submitted that the Petitioner must have taken

necessary steps for installation of the evacuation system at the inception stage. While pointing out that the Petitioner has claimed Ash transportation charges on the ground that it has not complied with MoEF&CC Notification, 2009 and is taking appropriate measures now, DVPCA has stated that as the actual O&M expenses including Ash Evacuation expenses are lower than the normative O&M expenses, there is no requirement to allow the additional expenses towards ash evacuation. It has also pointed out that the Commission vide its order dated 31.8.2016 in Petition No.347/GT/2014 had not allowed Ash Evacuation expenses.

144. The Petitioner in its rejoinder has clarified that the Commission in its order dated 5.11.2018 in Petition No. 172/MP/2016 (NTPC v. UPPCL & ors) had admitted the expenses related to transportation of ash under 'change in law' as additional O&M expenses and NTPC was granted liberty to claim the same at the time of truing-up of tariff for the period 2014-19. It has also pointed out that the Commission in its order dated 29.7.2020 in Petition No.101/MP/2019, had granted liberty to the Petitioner to claim expenses for ash transportation at the time of truing-up for the 2014-19 period. Accordingly, the Petitioner has submitted that it has claimed expenses incurred for ash transportation from its thermal generating stations for the period 2014-19 for the approval under Regulation 8(3)(ii) of the 2014 Tariff Regulations. The Petitioner has stated that the issue of 'actual vs norms' is no longer res-integra and stands decided by the Hon'ble Supreme Court in UPPCL Vs NTPC & ors (2011) 122 SCC 400, wherein, it has upheld the concept of 'normative basis' and rejected the contention, that tariff should be determined on the basis of 'normative' or 'actuals', whichever is less. The Petitioner has added that even the National Tariff Policy, 2016 prescribes that the operating parameters in tariffs should be at "normative levels" only and not at "lower of normative and actuals" and this is essential to encourage better operating performance. The Petitioner has also stated that the Commission in its order dated

29.7.2020 in Petition No.101/MP/2019 had directed the Petitioner to furnish some additional information in support to the Petitioner's claim on ash evacuation expenses as under:

> *"31. Accordingly, we in exercise of the regulatory power hold that the actual additional expenditure incurred by the Petitioner towards transportation of ash in terms of the MOEFCC No as additional O&M expenses. However, the admissibility of the claims is subject to prudence check of the following conditions/ details on case-to-case basis for each station:*
> *(a) Award of fly ash transportation contract has been effected through a transparent competitive bidding procedure. Alternatively, the schedule rates of the respective State Governments, as applicable for transportation of fly ash.*
> *(b) Details of the actual additional expenditure incurred on Ash transportation after 25.1.2016, duly certified by auditors.*
> *(c) Details of the Revenue generated from sale of fly ash/fly ash products and the expenditure incurred towards Ash utilisation up to 25.1.2016 and from 25.1.2016 to till date, separately.*
> *(d) Revenue generated from fly Ash sales maintained in a separate account as per the MoEF notification."*

145. The Petitioner has stated that in compliance to the above, the Petitioner has submitted that the transportation of fly ash was awarded through competitive bidding and the transportation charges are within the schedule rates of the respective State Governments. In addition, the Petitioner has submitted that the revenue generated from Fly ash sales is maintained in a separate account, as per the MoEF&CC notifications, and an auditor certificate on the information associated with ash evacuation/ transportation expenses in respect of various stations are as follows:

(Rs. in lakh)

	DSTPS	**DTPS**	**KTPS**	**CTPS**	**MTPS**	**BTPS**	**Total**
Ash transportation Charges 1.4.2014 to 25.1.2016	454.11	880.91	749.75	3202.23	15797.33	761.93	**21846.26**
Ash transportation Charges 26.1.2016 to 31.3.2019	411.69	1016.24	2533.62	7147.80	24768.26	3457.03	**39334.64**
Income from sale of Ash / Cenosphere from 1.4.2014 to 25.1.2016	0.00	0.00	0.00	28.97	0.00	11.96	**40.93**
Income from sale of Ash from 26.1.2016 to 31.3.2019	1964.87	17.04	812.47	10.05	297.11	7.62	**3109.16**

146. The matter has been examined. The relevant portion of the MoEF&CC Notifications dated 3.11.2009 and 25.1.2016 are extracted as under:

> ***Notification dated 3.11.2009***
> *"6. The amount collected from sale of fly ash and fly ash based products bycoal and / or lignite based thermal power stations or their subsidiary or sister concern unit, as applicable should be kept in separate account head and shall be utilized only for development of infrastructure facilities, promotion of and facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved; thereafter as long as 100 % fly ash utilization levels are maintained, the thermal power station would be free to utilize the amount collected for other development programmes also and in case, there is a reduction in fly ash utilization levels in the subsequent year(s), the use of financial return from fly ash shall get restricted to development of infrastructure or facilities and promotion or facilitation activities for fly ash utilization until 100 percent fly ash utilization level is again achieved and maintained."*
>
> ***Notification dated 3.11.2009***
> *"10. The cost of transportation of ash for road construction projects or for manufacturing of ash based products or use as soil conditioner in agriculture activity within a radius of hundred kilometres from a coal or lignite based thermal power plant shall be borne by such coal or lignite based thermal power plant and the cost of transportation beyond the radius of hundred kilometres and up to three hundred kilometres shall be shared equally between the user and the coal or lignite based thermal power plant."*

147. It is observed that the Petitioner had filed Petition No.101/MP/2019 before this Commission seeking recovery of ash transportation charges, through monthly bills of beneficiaries, in terms of the MoEF&CC notification dated 25.1.2016, as 'change in law' event and the Commission *vide* its order dated 29.7.2020, disposed of the same, after observing that the said MOEF&CC notification is a change in law event. Accordingly, the Petitioner was granted liberty to approach the Commission at the time of truing up of tariff, along with the audited details, including the award of transportation through competitive bidding, alternatively scheduled rate of State Government, expenditure incurred and revenue generated (up to 25.1.2016/ after 25.1.2016) and to maintain the revenue generated from fly ash in a separate account. In compliance to the above, the Petitioner has furnished the year-wise audited ash transportation details and the income received from sale of ash for its various generating stations i.e., MTPS, CTPS, DTPS, BTPS, DSTPS, KTPS etc., during the period 2014-19 and these charges were apportioned to the various stages, on the

basis of their actual generation, in the respective years. Further, in compliance to direction given in order dated 29.7.2020 in Petition No.101/MP/2019, the Petitioner has furnished additional information such as the end user type, category of ash utilization, the award of transportation carried out through competitive bidding/ rate of transportation is lower than Schedule of Rates (SoR), the actual quantum of ash supplied, transported, distance, awarded rate of transportation in Rs./ton per kilometre, income from sale of ash etc, from 25.1.2016 to 31.3.2019 for DTPS (1 x 210 MW), MTPS (4 x 210 MW + 2 x 250 MW + 2 x 500 MW), KSTPS (2 x 500 MW), DSTPS (2 x 500 MW), CTPS (1 x 130 MW + 2 x 250 MW) and BTPS (1 x 210 MW + 1 x 500 MW). It is noticed that the Petitioner has also claimed Ash transportation charges, pertaining to mine filling (abandoned coal mines of ECL) and low-lying area (DVC & its premises) and the revenue generated through sale of ash to cement / non-cement plants. However, the information regarding the revenue generated from sale of ash as on 25.1.2016 has not been furnished. The Petitioner has also transported ash from its generating stations through road (trucks), the distance varied from 2 kms to 76 kms and has therefore declared that it has not received any money from escrow account / coal mine companies for mine stowing.

148. Considering, the claim of the Petitioner towards Ash transportation charges in its various tariff petitions filed in respect of its thermal generating stations, it is noticed that total ash transportation expenses incurred by the Petitioner is Rs.611.75 crore (approx.), which also matches with the audited figures and the annual report (after rounding off), on yearly basis, as detailed below:

(Rs. in lakh)

	2014 - 15	**2015 - 16**	**2016 - 17**	**2017 - 18**	**2018 -19**	**Total**
DSTPS	115.00	339.11	46.64	244.45	120.6	**865.80**
DTPS	608.40	303.99	1016.24	(-) 31.24	0.00	**1897.39**
KTPS	0.00	819.49	513.59	897.39	1050.56	**3281.03**
CTPS	1618.10	1891.14	2518.01	2840.98	1478.59	**10346.82**
MTPS	10292.17	8215.14	10601.33	6535.3	4921.30	**40565.24**

BTPS	578.44	534.11	1598.27	1068.46	439.68	**4218.96**
Total	**13212.11**	**12102.98**	**16294.08**	**11555.34**	**8010.73**	**61175.24**

149. In consideration of the above submissions of the Petitioner and since the MoEF&CC notification dated 25.1.2016 is a change in law event, the ash transportation charges from 26.1.2016 to 31.3.2019 are determined as follows:

(Rs. in lakh)

	2014 - 15	**2015 – 16 (w.e.f. 26.1.2016)**	**2016 - 17**	**2017 - 18**	**2018 -19**	**Total**
DSTPS	0.00	0.00	46.64	244.45	120.6	**411.69**
DTPS	0.00	31.24	1016.24	(-) 31.24	0.00	**1016.24**
KTPS	0.00	72.08	513.59	897.39	1050.56	**2533.62**
CTPS	0.00	310.22	2518.01	2840.98	1478.59	**7147.80**
MTPS	0.00	2710.33	10601.33	6535.3	4921.30	**24768.26**
BTPS	0.00	350.62	1598.27	1068.46	439.68	**3457.03**
Total	**0.00**	**3474.49**	**16294.08**	**11555.34**	**8010.73**	**39334.64**

150. The Petitioner has also generated revenue through the sale of ash and the plant- wise details along with the year-wise income received from sale of fly ash, from 26.10.2016 to 31.3.2019, as under:

(Rs. in lakh)

	DSTPS	**DTPS**	**KTPS**	**CTPS**	**MTPS**	**BTPS**
26.1.2016 to 31.3.2016	0.00	0.00	0.00	0.00	0.00	0.00
2016 – 17	272.40	0.00	0.00	0.00	0.00	0.00
2017 – 18	664.47	3.26	373.70	10.05	44.67	7.62
2018 – 19	1027.99	13.78	438.77	0.00	252.44	0.00
Total	**1964.87**	**17.04**	**812.47**	**10.05**	**297.11**	**7.62**

151. In terms of the MoEF&CC notification dated 25.1.2016, the plant-wise revenue generated, shall be first adjusted towards the ash transportation charges of the plant and the balance shall be recovered from the beneficiaries. In this regard, it is noticed that during the period from 26.1.2016 to 31.3.2019, except for DSTPS, the ash transportation charges of all other plants, are higher than the income received from the sale of fly ash as worked out below:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018 -19**	**Total**
DSTPS	0.00	0.00	0.00	0.00	0.00	**0.00**
DTPS	0.00	0.00	999.20	0.00	0.00	**999.20**
KTPS	0.00	72.08	513.59	523.69	611.79	**1721.15**
CTPS	0.00	310.22	2518.01	2830.93	1478.59	**7137.75**

MTPS	0.00	2710.33	10601.33	6490.63	4668.86	**24471.15**
BTPS	0.00	350.62	1598.27	1060.84	439.68	**3449.41**
Total	**0.00**	**3443.25**	**16230.40**	**10906.08**	**7198.92**	**37778.66**

152. Accordingly, the ash transportation charges allowed as above during the 2014-19 tariff period in respect of this generating station (MTPS) are apportioned to the various stages, based on their actual generation as under:

(Rs. in lakh)

Stage	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018 -19**	**Total**
MTPS 1, 2 & 3	**0.00**	**497.90**	**1947.02**	**1824.89**	**1097.08**	**5366.89**
MTPS 4	0.00	89.28	291.57	475.09	356.84	**1212.78**
MTPS 5 & 6	0.00	722.50	3027.51	1397.99	1119.73	**6267.73**
MTPS 7 & 8	0.00	1400.65	5335.24	2792.65	2095.20	**11623.75**
MTPS (all stages)	0.00	2710.33	10601.33	6490.63	4668.86	24471.15

153. Admittedly, the 2014 Tariff Regulations, do not contain any provision for allowing the ash transportation charges. Accordingly, we, in exercise of the regulatory powers, allow the total expenditure of Rs 5366.89 lakh towards fly ash transportation for the generating station of the Petitioner for the period 2014-19, after adjusting the revenue received from the sale of ash of such plants, in six equal instalments, starting from March, 2023, keeping in view the interest of the beneficiaries. Considering the fact that the reimbursement of the ash transportation expenses is being allowed based on the MOEF&CC notification, these expenses are not made part of the O&M expenses and the consequent annual fixed charges being determined in this order under the 2014 Tariff Regulations. The Petitioner is also directed to utilize the surplus fund of Rs. 1553.18 lakh pertaining to DSTPS, in terms of the MOEFCC's notification only.

(B) Mega Insurance Expenses

154. The Petitioner has claimed total amount of Rs. 346.19 lakh (Rs. 71.99 lakh in 2014-15, Rs. 9.45 lakh in 2015-16, Rs. 64.57 lakh in 2016-17, Rs. 146.37 lakh in 2017-18 and Rs. 53.81 lakh in 2018-19) during the 2014-19 tariff period, towards Mega Insurance expenses, as 'additional O&M expenses' for the generating station. In

justification of the same, the Petitioner has submitted that the generating station is located in high alert security zone and therefore, the Petitioner has to ensure substantial safeguard measures through Mega Insurance, against damage or destruction of the assets. It has further stated that the expenses for Mega Insurance for Mejia TPS have been booked in the annual accounts in a consolidated manner. Therefore, the accounted mega Insurance expenses for Mejia TPS has been apportioned amongst Mejia TPS Unit-1 to 8, based on the installed capacity and the same have been claimed in the present petition.

155. DVPCA has submitted that the Commission in its earlier orders had disallowed the expenditure on Mega Insurance and the same was to be recovered as part of the normative O&M expenses. It has stated that the actual O&M expenses, including the mega insurance expenses for the period 2014-19, is lower than the normative O&M expenses specified under the 2014 Tariff Regulations, and thus, the normative O&M expenses are sufficient to cover such expenses. It has stated that the claim of the Petitioner may not be considered separately. In response, the Petitioner has submitted that the subject expenditure is necessitated due to 'substantial increase in the risk profile of power plants' on account of various issues (including lenders covenants), natural calamities, law and order etc, and it protects the customers from any tariff shock, in the event of any substantial loss, arising out of damage or destruction of the power plant. Accordingly, DVPCA has submitted that the Petitioner may not be allowed the expenses as an additional pass through, over and above, the norms. The Petitioner has however submitted, that the Commission vide its various order dated (i.e., Order dated 13.12.2005 in Petition No. 163/2004, Order dated 9.7.2013 in Petition No. 269/GT/2012, Order dated 29.7.2016 in Petition No. 465/GT/2014, Order dated 7.8.2013 in Petition No. 275/GT/2012 and Order dated 29.7.2016 in Petition No. 470/GT/2014) had allowed the expenses towards Mega

Insurance to the Petitioner.

156. The matter has been considered. As regards, the submission of the Petitioner that the Commission had allowed expenses towards Mega insurance to Mejia 1, 2 & 3, CTPS 1, 2 & 3 etc, over and above the O&M expenses norms, it is noticed that the grant of Mega insurance was for the period prior to the 2014–19 tariff period and in exercise of its Power to Relax, but the same was not allowed for the other projects of the Petitioner. It is pertinent to mention that the Commission, while specifying the O&M norms for the period 2014-19, had considered ‘insurance expenses’ as part of the O&M expense calculations and had also factored the same in the said norms. Considering the above, we are not inclined to allow the expenses towards Mega Insurance over and above the O&M expense norms.

(C) CISF Security Expenses

157. The Petitioner has claimed total amount of Rs.6084.91 lakh (Rs. 890.81 lakh in 2014-15, Rs. 1038.84 lakh in 2015-16, Rs. 1333.79 lakh in 2016-17, Rs. 1380.45 lakh in 2017-18 and Rs. 1441.02 lakh in 2018-19) during the 2014-19 tariff period, towards CISF Security expenses, as additional O&M expenses for the generating station. In justification of the same, the Petitioner has made the following submissions:

(a) The generating station is located in high alert security zone and any untoward situation arising due to the terrorist attack or theft, may cause loss of property and prolonged interruption of generation. The concerned Ministry, from time to time has directed the Petitioner, to take appropriate security arrangements at hydro generating stations, dams etc. and to strengthen the physical security of various generating stations and tighten personal security.

(b) The Ministry of Home Affairs, GOI, had granted approval for creation of additional security personnel posts to be stationed at the generating station. Thus, accordingly, the Petitioner has deployed CISF personnel in its plants, to ensure adequate security at the plants, as well as to comply with the directives, on security measures. Accordingly, the Petitioner has been incurring expenses towards CISF security for deployment of CISF personnel and associated CISF activities.

(c) The expenses for CISF Security for the project have been booked in the annual accounts in a consolidated manner. Therefore, the accounted CISF Security expenses for the project for the 2014-19 period has been apportioned among Unit- 1 to 8 of the projects, based on the installed capacity of the units. Accordingly, the apportioned CISF Security expenses for Units- 1 to 3 (the generating station) has been claimed.

(d) The Commission had allowed the CISF expenses in case of this generating station *vide* order dated 9.7.2013 in Petition No. 269/GT/2012 and order dated 29.7.2016 in Petition No. 465/GT/2014 and for Chandrapura TPS (Units 1 to 3) *vide* dated 7.8.2013 in Petition No. 275/GT/2012 and order dated 29.7.2016 In Petition No. 470/GT/2014. Accordingly, the Commission may allow the CISF expenses as incurred by and apportioned to the generating station during the 2014-19 tariff period to be recovered in full, in exercise of the 'Power to Relax' under the 2014 Tariff Regulations, similar to the Commission's treatment in the aforesaid orders.

158. DVPCA has submitted that the actual O&M expenses, including the security expenses, for the period 2014-19 have been lower than the normative O&M expenses specified under the 2014 Tariff Regulations. It has further submitted that the provisions of the 2014 Tariff Regulations, does not allow security expenses over and above the O & M norms. Accordingly, the claim may not be allowed separately.

159. The matter has been considered. As regards the submission of the Petitioner that the Commission had allowed expenses towards CISF security vide its order dated 29.7.2016 in Petition No. 465/GT/2014 and order dated 29.7.2016 in Petition No. 470/GT/2014, it is observed that the CISF expenses, over and above the O&M expenses norms was allowed only for Mejia Therma Power Station (Units 1-3) and Chandrapura Thermal Power Station (Units-1 to 3) projects of the Petitioner during the 2009-14 tariff period in exercise of its Power to Relax, but was not allowed to the other projects of the Petitioner. Further, the Commission while specifying the O&M expense norms for the period 2014-19, had considered security expenses for the generating station, as part of the O&M expenses and had factored the same in the said norms. Considering the above, we do not find any reason to allow additional O&M expenses towards CISF security.

(D) Impact of Goods and Service Tax (GST)

160. The Petitioner has claimed additional O&M expenses of Rs. 42.27 lakh in 2017-18 and Rs. 144.52 lakh in 2018-19 as impact of Goods and Service Tax (GST), including the apportioned impact with regard to DVC Head Quarters, during the 2014-19 tariff period. DVPCA has submitted that the Petitioner's claim is extraneous to the provisions of 2014 Tariff Regulations and the various orders of the Commission. In response, the Petitioner has clarified that the Commission in order dated 14.3.2018 in Petition No. 13/SM/2017 and order dated 17.12.2018 in Petition No. 01/SM/2018 had considered the implementation of GST as "change in law".

161. The submissions have been considered. It is observed that the Commission while specifying the O&M expense norms for the period 2014-19 had considered taxes to form part of the O&M expenses 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) to 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..."*

162. 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 impact of GST.

(E) Share of Subsidiary Activities

163. The Petitioner has claimed total amount of Rs.1734.95 lakh during the period

2014-19 (Rs. 352.97 lakh in 2014-15, Rs. 431.53 lakh in 2015-16, Rs. 359.77 lakh in 2016-17, Rs. 346.18 lakh in 2017-18 and Rs. 244.50 lakh in 2018-19) towards 'Share of Subsidiary activities,' as additional O&M expenses. In justification of the same, the Petitioner has submitted that it has been undertaking various subsidiary activities in terms of Section 12 of the DVC Act, 1948. It has also submitted that in terms APTEL judgment dated 23.11.2007 in Appeal No. 273 of 2006 and batch, the expenses with regard to subsidiary activities, are to be allowed as a pass-through element, in tariff. It has submitted that the APTEL's judgment was affirmed by the Hon'ble Supreme Court vide in its judgment dated 23.7.2018 in C.A No. 971-973 of 2008 along with C.A Nos. 4289 of 2008 (BSAL v DVC) [(2018) 8 SCC 281]. The Petitioner has further stated that the expenses toward share of subsidiary activities was allowed in case of this generating stations by Commission's order dated 9.7.2013 in Petition No.269/GT/2012, Order dated 29.7.2016 in Petition No. 465/GT/2014, Order dated 7.8.2013 in Petition No. 275/GT/2012 and order dated 29.7.2016 in Petition No. 470/GT/2014, in relaxation of the provisions of the Tariff Regulations. Accordingly, the Petitioner has prayed that the Commission may allow the expenses toward share of subsidiary activities, as incurred and apportioned to the generating station during the 2014-19 tariff period for recovery in full, in exercise of the power to relax' under the 2014 Tariff Regulations.

164. DVPCA has submitted that the Petitioner has also claimed expenses towards subsidiary activities including additional capital, O&M, Return on Equity, Interest on loan and Depreciation. It has submitted that the contribution to subsidiary fund is not allowable as the Return on Equity, Interest on loan and Depreciation, on common assets, have been claimed separately. DVPCA has also submitted that the Commission had dealt with the issue of expenditure of subsidiary activities, while framing the 2014 Tariff Regulations and had specifically disallowed such expenses to

be charged as additional O&M expenses, vide order dated 31.8.2016 in Petition No. 347/GT/2014. DVPCA has further stated that the actual O&M expenses including the share of subsidiary expenses are lower than the normative O&M expenses and thus, there is no requirement of allowing the share of subsidiary expenses additionally. In response, the Petitioner has clarified as under:

(a) DVC has been undertaking multifarious functions in the Damodar Valley area in terms of Section 12 of the DVC Act, 1948 with the obligation to undertake development of Damodar Valley, which falls in the provinces of West Bengal and Jharkhand. The activities of DVC are not restricted to generation and sale/supply of electricity. The functions of the DVC include promotion and operation of schemes for irrigation, water supply and drainage, flood control and improvement of flow conditions in the Hooghly River, navigation in the Damodar River and its tributaries and channels, afforestation and control of soil erosion and promotion of public health and agricultural, industrial, economic and general well-being in the Damodar Valley under its areas of operation. Thus, DVC is engaged in number of activities which are not commercial in nature and where no significant revenue accrues to DVC.

(b) DVC cannot generate required revenue from the users of service in regard to schemes such as drainage, flood control, improvement in the flow conditions, navigation, afforestation and control of soil erosion or the promotion of public health and general well-being in the Damodar Valley. The main revenue earning activity performed by DVC is generation and sale of power. DVC is undertaking various activities in a comprehensive manner for the betterment of Damodar Valley and using the revenues earned from various sources including generation and sale of electricity for the above varied purposes for which DVC has been established. In the facts and circumstances mentioned herein above, DVC occupies a special position.

(c) The activities of DVC are akin to the activities undertaken by the Governments, Central, State or Municipalities. Therefore, it is critical that the expenses incurred by DVC in undertaking the various subsidiary activities be recovered in suitable manner so as to not create financial burden on DVC.

(d) Section 32 of the DVC Act 1948 allows DVC to incur expenditure on activities other than power, irrigation and flood control. The APTEL's judgment dated 23.11.2007 in Appeal No. 271, 272, 273 and 275 of 2006, had allowed the recovery of these expenses through tariff. The said judgment was upheld by the Hon'ble Supreme Court *vide* order dated 23.7.2018 in Bhaskar Shrachi Alloys Ltd. vs. Damodar Valley Corporation (2018) 8 SCC 281, whereupon, the Hon'ble Supreme Court has reiterated the fact that the other activities undertaken by DVC are statutory in nature and provided for recovery of related expenses.

165. The submissions have been considered. The expenses of subsidiary activities include multipurpose dams and other heads. In this regard, the Regulation 53 of the 2014 Tariff Regulationsprovides as under:

"53. Special Provisions relating to Damodar Valley Corporation:

(1)Subject to clause (2), this regulation shall apply to determination of tariff of the projects owned by Damodar Valley Corporation (DVC).

(2)The following special provisions shall apply for determination of tariff of the projects owned by DVC:

*(i) **Capital Cost**: The expenditure allocated to the object 'power', in terms of sections 32 and 33 of the Damodar Valley Corporation Act, 1948, to the extent of its apportionment to generation and inter-state transmission, shall form the basisof capital cost for the purpose of determination of tariff:*
Provided that the capital expenditure incurred on head office, regional offices, administrative and technical centers of DVC, after due prudence check, shall also form part of the capital cost.
xxxx

*(iv) **Funds under section 40 of the Damodar Valley Corporation Act, 1948**: The Fund(s) established in terms of section 40 of the Damodar Valley Corporation Act, 1948 shall be considered as items of expenditure to be recovered through tariff.*

(3)The provisions in clause (2) of this regulation shall be subject to the decision of the Hon'ble Supreme Court in Civil Appeal No 4289 of 2008 and other related appeals pending in the Hon'ble Court and shall stand modified to the extent they are inconsistent with the decision.

166. It is noticed that the Commission in its various tariff orders of the Petitioner for the period 2014-19 has observed that as per Statement of Objects and Reasons to the 2014 Tariff Regulations, the site specific norms in case of thermal generating stations may not serve much purpose as there is a set of advantages and disadvantages associated with every site, which average out, and the proposed norms are also based on multiple stations with wide geographical spread and therefore, such aspects are already factored in the norms and accordingly, the additional O&M expenses claimed by the Petitioner, including share of subsidiary activities was not allowed. In this regard the relevant sections of DVC Act 1948 are as follows:

***"**32. Expenditure on objects other than irrigation, power and flood control: The Corporation shall have power to spend such sums as it thinks fit on objects authorised under this Act other than irrigation, power and flood control and such sums shall be* *treated as common expenditure payable out of the Fund of the Corporation before allocation under Section 33.*

33. Allocation of expenditure chargeable to project on main objects: The total capital expenditure chargeable to a project shall be allocated between the three main objects, namely, irrigation, power and flood control as follows, namely:

1) expenditure solely attributable to any of these objects, including a proportionate share of overhead and general charges, shall be charged to that object, and

2) expenditure common to two or more of the said objects, including a proportionate share of overhead and general charges shall be allocated to each of such objects in proportion to the expenditure which, according to the estimate of the Corporation, would have been incurred in constructing a separate structure solely for that object, less any amount determined under clause (1) in respect of that object.

37. Disposal of profits and deficits. —

(1) Subject to the provisions of sub-section (2) of section 40, the net profit, if any, attributable to each of the three main objects, namely, irrigation, power and floodcontrol, shall be credited to the participating Governments in proportion to their respective shares in the total capital cost attributed to that object.

(2) The net deficit, if any, in respect of any of the objects shall be made good by the Governments concerned in the proportion specified in sub-section (1):

Provided that the net deficit in respect of flood control shall be made good entirely by the Government of West Bengal and the Central Government shall have no share in such deficit."

167. It is noticed that APTEL vide its judgement dated 23.11.2007 had observed that the expenditure incurred by the Petitioner, on objects other than irrigation, power and flood control, are non-commercial in nature and accrue little or no revenue and is not likely to sub serve the objectives of Section 41 and 51 of the Act and therefore, can be allocated to these three heads as per section 32 and 33 of DVC Act, 1948 and the expenditure so allocated to power object, should be allowed to be recovered through the electricity tariff. Subsequently, the Hon'ble Supreme Court *vide* its judgment dated 23.7.2018 in Civil Appeal No. 4289 of 2008 and batch thereof, upheld the decision of APTEL as under:

"55. In so far as the issue of allowance of cost relating to 'other activities' of the Corporation to be recovered through tariff on electricity is concerned, we have taken note of the objection(s) raised in this regard which in sum and substance is that Sections 32 and 33 of the Act of 1948 are in direct conflict with Sections 41 and 51 ofthe 2003 Act and, therefore, recovery of cost incurred in "other works" undertaken by theCorporation through power tariff is wholly untenable. Apart from reiterating the basis on which we have thought it proper to affirm the findings of the learned Appellate Tribunal on the purport and scope of the fourth proviso to Section 14 of the 2003 Act and the continued operation of

the provisions of the Act of 1948 which are not inconsistent with the provisions of the 2003 Act, we have also taken note of the specific provisions contained in Sections 41 and 51 of the 2003 Act which, inter alia, require maintenance of separate accounts of the other business undertaken by transmission/distribution licensees so as to ensure that the returns from the transmission/distribution business of electricity do not subsidize any other such business. Not only Sections 41 and 51 of the 2003 Act contemplate prior approval of the Appropriate Commission before a licensee can engage in any other business other than that of a licensee under the 2003 Act, what is contemplated by the aforesaid provisions of the 2003 Act is some return or earning of revenue from such business. In the instant case, the "other activities" of the Corporation are not optional as contemplated under Sections 41/51 of the 2003 Act but are mandatorily cast by the statute i.e. Act of 1948 which, being in the nature of socially beneficial measures, per se, do not entail earning of any revenue so as to require maintenance of separate accounts. The allowance of recovery of cost incurred in connection with "other activities" of the Corporation from the common fund generated by tariff chargeable from the consumers/customers of electricity as contemplated by the provisions of the Act of 1948, therefore, do not collide or is, in any manner, inconsistent

168. Accordingly, the expenses of 'Other activities' is allowed as claimed by the Petitioner during the 2014-19 tariff period.

(F) Impact of Pay Revision and P&G contribution

169. The Petitioner has claimed expenses pertaining to impact of Pay Revision on account of 7th Central Pay Commission and Pension & Gratuity (P&G), over and above, the normative O&M expenses allowable to the generating station.

170. It is noticed that the Petitioner, in its tariff petitions for truing-up for the 2009-14 tariff period had made additional claims towards P&G liability based on actuarial valuation. This prayer was, however, rejected by the Commission by its various orders, on the ground that the P&G liability formed part of the O&M expense norms specified under the 2009, Tariff Regulations. Aggrieved by this decision, the Petitioner filed Appeal No.268-275 of 2016 before APTEL and the same is pending. The Petitioner, as made similar prayers in tariff petitions for the period 2014-19, which was also rejected by the Commission on the ground that the Petitioner's contribution to P&G fund is required to be met through the normative O&M expenses, allowed to the generating stations. However, the Commission in order dated 20.9.2016 in Petition No.353/GT/2014 (approval of tariff for Panchet Hydel Power Station, Units-I &II for the

014-19 tariff period) granted liberty to the Petitioner to claim the said relief through a separate application along with all relevant details, so that a holistic view can be taken in the matter, in accordance with law. Accordingly, the Petitioner had filed Petition No.197/MP/2016, wherein P&G contribution of Rs.3228.86 crore and impact of pay revision from January, 2016 as Rs.420.27 crore for 2014–19 was claimed over and above the normative O&M expenses specified under Regulation 29 of the 2014 Tariff Regulations. The Commission, *vide* its order dated 4.9.2019, while holding that the said petition was maintainable, disposed of the same as under:

> *"25**……**The employee expenses, in general, form a considerable part of O&M expenses and includes all types of employee related expenses like Salary, contribution to CPF, gratuity, pension, etc., However, the submission of the Petitioner that no part of P&G contribution related to power business were factored in the O&M expenses during the base years cannot be appreciated in the absence of any supporting details/data being furnished by the Petitioner. As stated, the normative O&M expenses were specified under Regulation 29 of the 2014 Tariff Regulations after giving due consideration of the requirements of various generating companies. The Petitioner DVC has argued that in so far as the liability of pension for its employees is concerned, it is unique and different from those prevalent in other central generating stations regulated by this Commission since the revision of pension from time to time, is based on the decision of the Central Govt. However, the information/details available on record do not support the aforesaid submission of the Petitioner that it incurs extra expenditure on terminal benefits to the employees over and above the normative O&M expenses under the 2014 Tariff Regulations. In the above background and in the absence of any supporting details/data, the prayer of the Petitioner cannot be granted in this order. However, the Petitioner is at liberty to claim the said relief with all relevant information/ documents including the (a) actuarial valuation; (b)actual data duly audited and certified by the auditor and (c) annual accounts of the pension fund, at thetime of truing up of tariff in terms of Regulation 8 of the2014 Tariff Regulations*
> *26.xxxxx*
>
> *27. We notice that subsequently, the Petitioner has implemented the recommendations of the 7th Pay Commission for its employees with effect from 1.1.2016. In view of this, the impact of pay revision, after implementation of the 7th Pay Commission, is required to be examined on actual basis, on prudence check of the information/ details to be submitted by the Petitioner. Accordingly, we direct the Petitioner to furnish the actual impact of pay revision based on the recommendations of the 7th CPC, effective from 1.1.2016, along with details of HRA and transport allowance from July, 2017. The aforesaid details/informationshall be furnished by the Petitioner at the time of truing up of tariff and the same will be considered in accordance with law."*

171. Based on the above, the Petitioner, in respect of its petitions for truing-up of generation tariff for the period 2014-19, has submitted its claim for P&G contribution

and for impact of pay revision, as additional O&M expenses, which are examined below:

(i) Impact of Pay revision

172. The Petitioner has claimed total amount of Rs. 2406.74 lakh (Rs. 765.21 lakh in 2016-17, Rs. 963.13 lakh in 2017-18 and Rs. 678.40 lakh in 2018-19) towards impact on account of Pay revision during 2014-19 tariff period, due to recommendations of 7th Pay Commission. Further, the Petitioner has submitted that the Commission, while specifying the 2014 Tariff Regulations, has in the Statement of Objects and Reasons (SOR) that the increase in employee expenses on account of pay revision shall be considered appropriately on case-to-case basis, balancing the interest of generating stations and consumers.

173. The Commission *vide* ROP of the hearing dated 25.5.2021, directed the Petitioner to furnish the following information:

> ***"True-up for 2014-19 tariff period***
>
> *"i. Break-up of the actual O&M expenses of the generating station under various subheads (as per Annexure-A enclosed) after including the pay revision impact (employees, CISF and Corporate Centre) and wage revision impact (minimum wages), if applicable. (in both MS Excel and PDF format).*
>
> *ii. Break-up of the actual O&M expenses of Corporate Centre/other offices including pay revision impact (as per Annexure-B enclosed) for the generating station along with the allocation of the total O&M expenses to the various generating stations under construction, operational stations and any other offices/business activity, along with basis of allocating such expenditure (in both MS Excel and PDF format).*
>
> *iii. Breakup of the pay revision impact claimed in respect of employees of the Petitioner Company, Security personnel stationed at the generating station and Corporate Centre/other offices employee cost allocated to the generating station. (as per Annexure-C enclosed in both MS Excel and PDF format)."*

174. In compliance to the aforesaid directions, the Petitioner *vide* affidavit dated 1.7.2021, has furnished the information and submitted that additional O&M expenses including P&G liability claimed as elements of Part B of the total annual fixed charges and the same were not considered, while preparing the data as per Annexure-A, i.e., in pay revision. Accordingly, the total O&M expenses claimed, as per Annexure-A, for

the period 2014-19 is as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
9872.33	11315.38	13178.98	15044.52	12421.31

175. The Petitioner has further submitted that in line with the methodology adopted by the Commission, while approving the common office expenditure for the period 1.4.2014 to 31.3.2019 in order dated 27.9.2016 in Petition No.350/GT/2014, the actual O&M expenses of Corporate Centre/ other offices has already been apportioned between O&M expenses of DVC's transmission business & generating stations, and is further apportioned to the O&M expenses of various generating stations in operation. The O&M expenses of Corporate Centre / other offices are also apportioned in above manner and considered in Annexure-A. The Petitioner has also stated that it has claimed total Security expenses including the impact of pay revision of the security personnel, however, as per direction of the Commission *vide* ROP for hearing dated 25.5.2021, the breakup of the impact of pay revision claimed in respect of the Securitypersonnel stationed at the generating station and the apportioned cost of security expenses at Corporate Centre / other offices allocated to the generating station, as per Annexure-C, has been submitted. The Petitioner has further submitted that due to frequent transfer of employees from one generation station to other generating station/ T&D wing, on same post or to the higher post, due to promotion, during the period from 1.1.2016 to 31.3.2019 and due to the delayed implementation of pay revision in DVC, it is difficult to find out the station-wise impact of pay revision. Accordingly, the impact of pay revision of DVC employees has been determined in totality towards Power business and thereafter apportioned to transmission and generation based on the capital cost and further apportioned to various generators, based on their installed capacity, as per methodology adopted by the Commission, while approving the common office expenditure *vide* order dated 20.9.2016 in Petition

No. 352/GT/2014.

176. DVPCA has submitted that the impact of pay revision claimed by the Petitioner shall not be allowed as the same is to be considered within the normative O&M expenses and also actual O&M expenses, including pay revision expenses, are well within the limit of normative O&M expenses. DVPCA has compared the overall claimed O&M expenses by the Petitioner, in its various generation tariff petitions with the overall actual O&M expenses and submitted that the actual O&M expenses are lower than the normative O&M expenses and thus, there is no requirement of allowing pay revision expenses additionally.

177. The Petitioner, in its rejoinder, has reiterated the submissions and has stated that the recovery of impact of pay revision is to be considered and allowed in line with tariff principles enshrined under Section 61(d) of the Act. It has also mentioned that the norms for O&M expenses under the 2014 Tariff Regulations, were determined on the basis of the actual O&M expenses for the years 2008-09 to 2012-13 and the 2014 Tariff Regulations, were notified by the Commission on 21.2.2014 i.e., prior to the implementation of the pay revision (7th CPC). Accordingly, it has submitted that while arriving at the O&M norms for the period 2014-19, the Commission had no occasion to consider the impact of pay revision w.e.f. 1.1.2016. The Petitioner has further submitted that the Commission while specifying the 2014 Tariff Regulations, was of the view that the increase in employee expenses on account of pay revision, in case of central generating stations and private generating stations are to be considered appropriately and therefore, the Commission decided that the said costs shall be examined on case-to-case basis so that the interest of generating stations and consumers remains balanced. Accordingly, the Commission *vide* its order dated 4.9.2019 in Petition No. 197/MP/2016 had directed the Petitioner to furnish the actual

impact of pay revision at the time of truing up of tariff.

(ii) Share of P&G Contribution

178. The Petitioner has claimed share of P&G contribution for the period 2014-19 as under:

(Rs. in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
934.71	2400.26	2637.80	5971.84	1128.35

179. The Petitioner, in terms of the directions contained in order dated 4.9.2019 in Petition No.197/MP/2016, has furnished the following data, duly certified by auditor:

(a) actuarial valuation of pension and gratuity;
(b) actual data as per books of accounts on terminal benefits; and
(c) annual accounts of pension funds for the period 2014-19.

180. The Petitioner has further submitted that as per recommendations of the 7th Pay Commission, the Cabinet on 12.9.2017, had cleared the Payment of Gratuity (Amendment Bill 2017), wherein, the upper ceiling of gratuity has been enhanced from the present value of Rs.10 lakh to Rs.20 lakh, effective from 1.1.2016. It has submitted, that since the impact due to enhancement of upper ceiling of gratuity has not been considered / factored by the Commission, while fixing the normative O&M expenses for the period 2014-19, the Commission may consider the impact while considering the P&G contribution for the period 2014-19.

181. DVPCA has submitted that the Petitioner has claimed normative O&M expenses, in accordance with the 2014 Tariff Regulations and the same is being allowed, the additional expenses claimed by the Petitioner, over and above the normative O&M expenses, under the heads, P&G, Pay revision, Ash Evacuation expenses, CISF Security expenses, Expenditure for subsidiary activities, Mega Insurance expenses, impact of GST on O&M may be disallowed.

182. In response, the Petitioner in its response has clarified as follows:

(a) DVC as a statutory body is required to maintain appropriate scheme for meeting the Terminal Benefits of the employees i.e., Pension (wherever the appointment of employees is on pension basis), Gratuity, Contributory Provident Fund i.e., CPF (wherever the employment of the employees is on Provident Fund contribution basis instead of pension). The CPF scheme being an alternative to the pension scheme, is for those who have not opted or otherwise not eligible for pension scheme and DVC makes contribution to the CPF. In addition to the above, there is also a General Provident Fund (GPF), wherein, fund is contributed only by the employees but not by DVC. Thus, Provident Fund schemes are of two types, namely, the CPF and the GPF.

(b) The article 16 and 17 of Employees Provident Funds and Miscellaneous Provisions Act, 1952 provides for administration of Provident Fund Scheme. Accordingly, DVCis maintaining Provident Fund, both CPF and GPF, in respect of each of the employees with individual account of the employees duly reflecting (a) the contribution apportioned to such employees or the contribution made by DVC, wherever applicable, (b) apportionment to such employees, apportionment of the interest earned on the money invested from the Provident Fund Scheme in approved securities and (c) contribution made by the employees to the GPF. Such contributions are maintained in a separate account of each of the employees asper the applicable scheme.

(c) The Pension & Gratuity Fund accounts are maintained separately by the Trust. The contributions to the Pension and Gratuity Trust are made based on actuarial valuation undertaken from time to time by actuaries appointed for the purpose. Theactuarial valuation is in regard to all the employees and workmen of DVC.

(d) No part of the amount related to Pension or Gratuity Fund contribution is used by DVC for its business activities in any of the years commencing from 01.4.2006 i.e. for the period in which the tariff is being determined by this Hon'ble Commission, upon coming into force of the Electricity Act, 2003. The contribution to the Pension & Gratuity Fund made by DVC is considered in the audited accounts of the DVCfor the respective financial years.

(e) In regard to the Provident Fund, the amount contributed is maintained by DVC but is dedicated to the benefit of DVC's employees and workmen. As in the case of Pension & Gratuity Fund, no part of the Provident Fund amount is to the account of DVC or to be utilised for the business activities of DVC. In line with the Employees Provident Funds and Miscellaneous Act, 1952, DVC is investing CPF and GPF amount in approved securities and the interest thereof is apportioned to employees. This has been reflected in Schedule 27 with two corresponding entries, namely, interest payable and interest recoverable on investment. DVC is requiredto duly account for all such interest.

(f) The amount contributed by DVC to the Pension & Gratuity Fund is invested by the Trust in the name of the trust and not in the name of DVC. The interest accrued on this investment is considered as the income of the Trust. No part of the interest income is realized by DVC or appropriated by DVC in any manner and nowhere it is reflected in the audited accounts of DVC.

(g) In view of the above, there is a difference between the Pension & Gratuity Contribution of DVC as compared to the Contributory Provident Fund.

183. The Petitioner also submitted that the O&M expenses inclusive of employees cost and Contributory Provident Fund will not cover the revenue requirements of the

DVC on account of the P&G contributionon following grounds:

(a) The Contributory Provident Fund is in respect of the actual amount of contributionduring the relevant year, and does not involve adjustments for that year in future years, however, the Pension and Gratuity Contribution is to be constantly adjusted for past period of services also and is dependent on actuary valuation to be undertaken from time to time. The period of past services rendered by the employees of DVC including the deficit amount of contribution in the past in order to meet the pension payment to the employees upon their retirement need to be necessarily considered. Similarly, in case the contribution already made is in excess of the requirement, suitable adjustment is made through actuary valuation. Thus, the contribution to P&G cannot be restricted to current year.

(b) The amount of Pension & Gratuity contribution in the case of DVC is significantly more in the recent past i.e., from 1.1.2006 onwards, on account of the following factors:

(i) Earlier, as there was no fund maintained for receiving the Pension and Gratuity Contribution, the same was being discharged by DVC on revenue basis pay as you go as in the case of any other Government Department. However, as per the mandate of the Comptroller and Auditor General and in accordance with the directions given by the Central Government, now, DVC has to maintain the Pension and Gratuity Fund. Accordingly, the contributions are being made not only for the present year working of the employees but also for all the past years of services including for persons who have retired from DVC in the past;

(ii) There has been a substantial increase in Pension and Gratuity payment tothe employees on account of wage revision pursuant to the decision taken by the Central Government, firstly, in the year 2006 and secondly in the year 2016. These higher contributions to be made are not confined to the current year but also relates to the payment for the past services including the services rendered by the retired employees;

(iii) The liability under Contributory Provident Fund ceases with the year in whichit is contributed. There is no actuary valuation or adjustment for upward revision on account of any wage revision etc. however, the pension payment is payable by DVC after the retirement of the employees on a continuous basis along with the revision to the pension from time to time as per the decision of the Central Government applicable to all retired employees; further the pension payment liability continues even after the death of the employee. The family pension needs to be given to the widows and other eligible members under the pension scheme.

(c) Thus, the matter relating to Pension & Gratuity Contribution and other aspects of Terminal Benefit liabilities to the employees including the increase in such Pension and Gratuity contribution on account of actuarial valuation undertaken from time to time cannot be inter-mixed with the normative O&M expenditure provided for in the Tariff Regulations.

(d) The normative O&M expenses determined by the Commission is based on the normalized actual quantum of expenditure incurred by the Utilities in the past period and escalation of thereof on account of inflation and other factors. Such normative expenditure would consider matters such as contribution to the Provident Fund etc. where the amount of contribution is duly factored as a percentage of the salaries and wages paid to the employees and is adopted by Central Power Sector Utilities who do not maintain a Pension scheme such as NTPC, NHPC etc, however, it cannot be ipso facto adopted for DVC, wherein, some of its employees are under Pension Scheme, as admissible to the Government departments.

(e) The contribution which DVC has to make towards the Pension and Gratuity Fund from time to time based on the actuarial valuation including for increase in the Pension and Gratuity Contribution related to the past period on account of pay revision, is not factored into in the determination of the employees cost as part of the normative O&M cost decided by this Hon'ble Commission from time to time. These are also not part of any specific tariff elements given in the Regulation 21and 14 of the 2009 and 2014 Tariff Regulations, respectively.

(f) APTEL and the Hon'ble Supreme Court in the orders dated 23.11.2007 and 23.7.2018 respectively have directed in favour of full recovery of the P&G contribution. Further, the Commission *vide* order dated 04.09.2019 in Petition no. 197/MP/2016 granted liberty to DVC to claim the Pension and Gratuity contributionalong with relevant details at the time of truing up.

(g) The principle for apportionment of the contribution towards Pension & Gratuity fund to the different generating stations and T&D system of DVC, based on capital cost and installed capacity has been already approved by the Commission for the 2006-09 period and the same principle has been followed by DVC in its true-up petitions for the period 2014-19.

(h) As regards linking the recovery of Pension & Gratuity contribution to Plant Availability Factor (PAF), the APTEL in its judgment dated 23.11.2007 had directedfor recovery of the entire amount of the Pension & Gratuity contribution from the consumers through tariff. The said judgment of APTEL dated 23.11.2007 was upheld by the Hon'ble Supreme Court *vide* its order dated 23.7.2018. The State Commissions of West Bengal and Jharkhand in their different orders, had also allowed the full recovery of the Pension & Gratuity contribution of the Petitioner.

(i) The Respondent's contentions may be rejected and the amount claimed towards contribution to Pension & Gratuity for the period 2014-19 may be allowed to be recovered in full, on sharing basis.

Analysis and Decision

184. The submissions have been considered. As regards pay revision, it is noticed that the Petitioner has prayed and claimed the impact of pay revision on account of 7th pay commission. However, in respect of P&G, it is noted that the Petitioner has primarily pleaded for impact of pay revision on P&G but claimed the actual P&G. It is observed that the normative O&M expenses includes a gratuity and CPF of public sector undertakings. Accordingly, the O&M norms under the regulations account for gratuity and a part of pension pertaining to serving employees of Petitioner. However, the Petitioner has the liability of Pension for retired employees as well. Thus, the actual impact of pension needs to be assessed to examine the additional O&M claim

by the Petitioner. It is observed that the Petitioner is maintaining the audited accounts of its entire power vertical, which consists of 15 generating stations, transmission system and distribution system, on consolidated basis. In this regard, the Petitioner has submitted that due to frequent transfer of employees from one generation station to other generating station / T&D wing, on same post, or to the higher post, due to promotion during the period from 1.1.2016 to 31.3.2019, delayed implementation of pay revision etc., the Petitioner has expressed its difficulty to provide the station-wise impact of pay revision separately but determined it in totality for Power business and thereafter, apportioned as per methodology adopted by the Commission, while approving the common office expenditure *vide* order dated 20.9.2016 in Petition No.352/GT/2014.

185. In view of the above, to assess the impact of Pay Revision on O&M expenses and P&G contribution, it was decided to adopt a holistic approach i.e. to compare the actual normalised O&M expenses of power vertical of DVC as per audited accounts, with the normative O&M expenses specified under the 2014 Tariff Regulations. In case the normative O&M expenses are in excess of the actual normalised O&M expenses associated with power vertical, the additional expenditure claimed by the Petitioner shall not be allowed and in case of any, under-recovery, if any, to the extent of impact of pay revision and expenses on account of P&G contribution shall be allowed, in relaxation of O&M norms under the 2014 Tariff Regulations.

186. In order to ascertain the justification for additional O&M expenses, over and above the normative O&M expenses allowed, a comparative analysis of the actual O&M expenses, was undertaken, including the additional normalised claims and the normative O&M expenses allowable under the various tariff petitions for truing up filed by the Petitioner. It is observed that during the 2014-19 tariff period, the total

normative O&M expenses allowed as per the Tariff Regulations for the various tariff petition (both Generation and Transmission) is Rs.1044745.04 lakh. Further, as per audited financial statements water charges for Rs.38226.00 lakh (in terms of Regulation 29(2) of the 2014 Tariff Regulations) and Ash Evacuation expenses of Rs. 61182.00 lakh (as change in law) has been incurred by the Petitioner, during the 2014-19 tariff period. However in line with the MoEF&CC notification dated 25.1.2016, the ash transportation charges have been allowed from 26.1.2016 to 31.3.2019 which works out to Rs.39334.64 lakh Since the Petitioner maintains separate accounts for each generating station and the Petitioner is granted liberty to claim the ash evacuation expenses separately, the total amount allowable to the Petitioner against O&M, Water charges and allowable Ash Evacuation charges is Rs.1122305.68 lakh (Rs.1044745.04 lakh + Rs.38226.00 lakh+Rs.39334.64 lakh) whereas, the actual O&M expenses, as per DVC Financial statements for the 2014-19 period is Rs.1219786.00 lakh (including subsidiary activities), which indicates that the actual O&M expenses exceeds the normative O&M expenses, by Rs.97480.32 lakh. However, we note that the actual O&M expenses of Rs.1219786 lakh also includes Provisions for Loss, Doubtful claims & Advances, Doubtful debts, and Shortage/Obsolescence in stores etc. amounting to Rs.77573 lakh, and Rebates & Discount allowed to consumers for Rs.49937 lakh, out of which rebate of Rs.40820 lakh pertain to firm consumers (breakup submitted by the Petitioner vide ROP dated 22.4.2022). When the actual O&M expenses are normalised, by excluding the provisions amounting to Rs.77573 lakh (being a non-cash expenditure and Rebates & Discounts for Rs.40820 lakh pertaining to firm consumers, as stated above, the actual O&M expenses work out to Rs.1101392.70 lakh (i.e., Rs.1219786 - Rs.77573 - Rs.40820.30 lakh). The computation of the normalised actual O&M expenses is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	TOTAL
A. ACTUAL O&M AS PER DVC AUDITED FINANCIAL STATEMENTS						
Note No.27-Employee	81960.00	96738.00	126691.00	159010.00	109249.00	573648.00
Note No.29-O&M and General Administration Charges-Power Segment	93447.00	117668.00	132286.00	169568.00	133169.00	646138.00
TOTAL (A)	**175407.00**	**214406.00**	**258977.00**	**328578.00**	**242418.00**	**1219786.00**
B. PROVISIONS-NOTE NO 29-POWER SEGMENT						
Provision for Loss on Fixed Assets	446.00	191.00	6544.00	4293.00	0.00	11474.00
Provision for Doubtful Claims and Advances	4586.00	1308.00	0.00	0.00	0.00	5894.00
Provision for Doubtful Debts	205.00	733.00	9126.00	41657.00	8299.00	60020.00
Provision for Shortage /Obsolescence in Stores	12.00	8.00	13.00	128.00	24.00	185.00
TOTAL (B)	**5249.00**	**2240.00**	**15683.00**	**46078.00**	**8323.00**	**77573.00**
C. REBATE & DISCOUNT ALLOWED TO FIRM CUSTOMERS (as per Petitioner submission)						
Rebate & Discount Allowed	3821.32	8983.93	8766.85	8393.73	10854.47	40820.30
TOTAL (C)	**3821.32**	**8983.93**	**8766.85**	**8393.73**	**10854.47**	**40820.30**
NORMALISED ACTUAL O&M AS PER AUDITED STATEMENT OF ACCOUNTS (A-B-C):-	**166336.68**	**203182.07**	**234527.15**	**274106.27**	**223240.53**	**1101392.70**

187. A comparison of the normative O&M expenses (including allowable water charges) with the normalized actual O&M expenses in respect of the various truing-up generation and transmission tariff petitions filed by the Petitioner for the period 2014-19 and allowed for the period 2014-19 (in this petition) is as under:

(Rs. in lakh)

Petition No.	Generating Station / Transmission Petitions	Normative O&M expenses claimed
574/GT/2020	Bokaro Thermal Power Station-A	20741.38
569/GT/2020	Bokaro Thermal Power Station-1-3	64499.08
565/GT/2020	Chandrapur Thermal Power Station 1-3	56979.30
570/GT/2020	Chandrapur Thermal Power Station 7-8	67755.00
573/GT/2020	Durgapur Steel Thermal Power Station 1-2	90740.00
567/GT/2020	Durgapur Steel Thermal Power Station 3-4	38527.32
564/GT/2020	Koderma Thermal Power Station 1-2	89118.08
577/GT/2020	Mejia Thermal Power Station 1-3	85371.30
205/GT/2020	Mejia Thermal Power Station 4	28457.10
571/GT/2020	Mejia Thermal Power Station 5-6	67755.00
568/GT/2020	Mejia Thermal Power Station 7-8	90740.00
575/GT/2020	Raghunathpur Thermal Power Station	62340.00
578/GT/2020	Maithon Hydel Station 1-3	10931.64
566/GT/2020	Panchet Hydel Station 1-2	8830.12
572/GT/2020	Tilaiya Hydel Station1-2	3991.24

713/TT/2020	New Elements of Transmission	1154.65
466/TT/2020	Non-ISTS 400 kV Transmission Lines of Transmission and Distribution (T&D) System	1724.30
482/TT/2020	Existing Transmission and Distribution (T&D)System (allowed)	255089.53
(A) Total Normative O&M Expenses allowable		**1044745.04**
(B) Water charges as per DVC audited accounts to be considered separately under Regulation 29(2) of 2014 Tariff Regulations		**38226.00**
(C) Ash Evacuation expenses allowed under change in law (w.e.f. 26.1.2016 till 31.3.2019		**39334.64**
(D) TOTAL (A+B+C):		**1122305. 68**
(E) Normalized Actual O&M expenses as per audited financial statement of accounts		**1101392.70**
(F) Excess of Normative O&M expenses, Water Charges & Ash Evacuation charges over the normalized actual O&M Expenses (D-E):		**20912.98**

188. It is evident from the above, that the total normative O&M expenses allowable in respect of all the generation and transmission tariff petitions of the Petitioner for the 2014-19 period is Rs.1044745.04 lakh, in terms of the 2014 Tariff Regulations. Also, considering the actual water charges of Rs.38226.00 lakh and Ash Evacuation Charges w.e.f. 26.1.2016 of Rs. 39334.64 lakh, the total works out to Rs.1122305.68 lakh, which is higher than the normalised actual O&M expenses of Rs.1101392.70 lakh, as per audited financial statements pertaining to Power segment. Further, as per Regulation 29(2) of the 2014 Tariff Regulations, capital spares are allowable separately, and in this petition an amount of Rs.391.19 lakh has been allowed. Further amounts towards Capital spares will be allowed on prudence check, in the remaining tariff petitions of the Petitioner. Since the normative O&M expenses including the actual Water charges and Ash Evacuation charges allowed separately, are in excess of the actual O&M expenses in the case of the Petitioner, we are not inclined to allow the impact of pay revision and the contribution towards P&G, Mega Insurance, CISF expenditure etc., during the period 2014-19, as sought by the Petitioner, in this petition.

Other Additional Claims

(A) Interest & Contribution on Sinking Fund (As per Section 40, Part IV of DVC Act)

189. The Petitioner has claimed additional expenditure towards Interest & Contribution on Sinking fund as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1751.89	1880.57	2159.04	0.00	0.00

190. The Petitioner has allocated sinking fund contribution and interest for 13th Series (10.2.2010) 8.95% DVC Bonds of Rs. 640 crore amongst its generating stations as follows:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Total share of Interest & Contribution on Sinking Fund for DVC generating stations	6554.84	7013.43	7504.45	0.00	0.00
TPS	1751.89	1880.57	2159.04	0.00	0.00
CTPS	1084.50	1164.16	1242.56	0.00	0.00
DTPS	973.27	1021.86	719.68	0.00	0.00
MTPS (1-3)	**1751.89**	**1880.57**	**2159.04**	**0.00**	**0.00**
MTPS-4	583.96	626.86	719.68	0.00	0.00
MHS	175.74	188.65	216.59	0.00	0.00
PHS	222.46	238.80	274.16	0.00	0.00
THS	11.12	11.94	13.71	0.00	0.00

191. In justification of the claim, the Petitioner has submitted that APTEL vide its judgment dated 23.11.2007 in Appeal No. 273 of 2006 & batch, had allowed the recovery of sinking funds and this judgment has also been affirmed by the Hon'ble Supreme Court vide its by judgement dated 23.7.2018 in C.A No. 971-973 of 2008 & batch matters.

192. DVPCA has also submitted that under the 2014 Tariff Regulations, the Petitioner is allowed all expenses related to energy charges and fixed charges and also allows the funding of approved capital cost and interest/ returns on the debt/ equity components on actual / normative basis, as the case may be. It has further

submitted that the loan repayment is provided through higher depreciation for initial 12 years and interest on working capital is allowed on normative basis. The Objector has stated that the creation of funds, without any specific purpose, cannot be allowed to be recovered as an expenditure in tariff, even if it is mentioned in DVC Act and the 2014 Tariff Regulations. It also submitted that the Commission may seek details on the purpose of borrowing such funds, when all expenses related to capital funding and working capital funding are allowed. Accordingly, the Objector has prayed that the claim of the Petitioner may be disallowed. In response, the Petitioner has reiterated the submissions made in the petition. Further, it has also relied upon the APTEL's judgment dated 17.5.2019 in Appeal No.17/2014 & batch (Maithon Alloys Ltd V CERC & Ors) and submitted that, APTEL while rejecting the submissions, observed that there was no double allowance of bonds. The Petitioner, also pointed out that the Objector herein has preferred review (Review Petition No. 4 of 2019) against the judgment dated 17.5.2019, before APTEL and the same is pending and since there is no stay of operation of the said order the same is binding on the parties. Accordingly, the Petitioner has prayed that the submissions of the Objector may be rejected.

193. The matter has been examined. Section 40 of the DVC Act, 1948 provides that the Petitioner shall make provision for depreciation and for reserve and other funds at such rates and on such terms as may be specified by the C&AG in consultation with the Central Government. The APTEL in its judgment dated 23.11.2007 in Appeal No. 271/ 2006 & batch cases, decided as under:

> *"E.15 As regards sinking funds which is established with the approval of Comptroller and Accountant General of India vide letter dated December 29, 1992 under the provision of Section 40 of the DVC Act is to be taken as an item of expenditure to be recovered through tariff,*

194. Regulation 53(2)(iv) of the 2014 Tariff Regulations provides as under:

> *(iv) Funds under section 40 of the Damodar Valley Corporation Act, 1948: The Fund(s) established in terms of section 40 of the Damodar Valley*

Corporation Act,1948 shall be considered as items of expenditure to be recovered through tariff.

195. DVPCA has objected to the claim of the Petitioner and has submitted that neither the provisions of the Electricity Act, 2003 nor the 2014 Tariff Regulations sanction the recovery of cost of generation assets twice over, through (a) allowance of Contribution to Sinking Fund; and (b) Depreciation and allowance of Interest on loan, by treating the amount realized through bonds, as normative debt. Per contra, the Petitioner has, however pointed out that in Appeal No.17/2014 (MAL v CERC & ors.) & batch cases, filed by HT consumers before APTEL, similar submissions raised by the appellants therein, were rejected by APTEL vide its judgment dated 17.5.2019. It is noticed from the said judgment dated 17.5.2019 that similar contention of the Objector herein, have been rejected by APTEL vide its judgement dated 17.5.2019 as under:

"8.5 We have carefully considered the submissions of learned counsel for the Appellants and learned counsel for Respondent Nos.1 & 2 and also took note of the various judgments relied upon by the parties. While the main contentions of the learned counsel for the Appellants are against the allowance of contribution to sinking fund to DVC and its utilisation, on the other hand, leaned counsel for the Respondents contend that the Central Commission is allowing the same as per settled position of law and its relevant regulations relating to the subject. Learned counsel for the Appellants contended that this Tribunal did not lay down that DVC could be allowed with both interest on loan as well as contribution to sinking fund which tantamount to a particular cost component being allowed twice to a generating company.

8.6. It is relevant to note that as per Section 40 of DVC Act, 1948, DVC is entitled for provision for depreciation, reserve and other fund. This Tribunal in its judgment dated 23.11.2007 in Appeal No.271 of 2006 & batch has held the admissibility of sinking fundin favour of DVC which has also been upheld by the Hon'ble Supreme Court in its judgment dated 23.7.2018 reported as 2018 (8) SCC 281. Regarding the contention of alleged double counting of learned counsel for the Appellant, we find no such duplication in the considerations and findings of the Central Commission.

8.7 Further, from the Tariff Regulation of the Central Commission, it is noticed that interest on loan and interest on working capital are distinct elements of the tariff and at no point of time, the repayment of loan capital is considered as a tariff element to be serviced in the tariff. The redemption of bonds from contribution to sinking fund is a special tariff element provided for DVC under Section 40 of the DVC Act, 1948 in addition to tariff elements provided in the Tariff Regulations. This aspect has already been upheld by the Apex court vide its judgment dated 23.7.2018 (stated supra). It is also noted from the *tariff regulations that depreciation and interest on loan payable are two different aspects while sinking fund contribution is an additional tariff element admissible only to DVC under the DVC Act. We, therefore, find no force in the contentions of the learned counsel for the Appellants that by allowing depreciation, interests on loan and sinking fund altogether, results into double counting and in turn yields into undue burden on consumers.*

8.8 In view of above facts, we hold that the Central Commission has passed the impugned order in accordance with settled position of law and its Regulations. Thus, the instant case does not give in any manner rise to substantial question of law requiring our intervention / interference"

196. Though the Respondent has sought review of the said judgment before APTEL, there is no stay of operation of the said judgement. Regulation 53(2)(iv) of the 2014 Tariff Regulations categorically provides that the funds created under Section 40 of the DVC Act, 1948 shall be considered as item of expenditure to be recovered through tariff. It is observed that the sinking funds have been created only for redemption of bonds. Accordingly, the amount claimed by the Petitioner for this generating station is allowed as under:

(Rs. in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
1751.89	1880.57	2159.04	0.00	0.00

(B) Share of Common Office Expenditure

197. The Petitioner has submitted that the expenditure pertaining to common offices such as Direction Office, Central Office, Other Offices, Subsidiary activities, IT centre and R&D caters services to all generating stations as well as composite transmission and distribution systems. In this regard, it is noted that the Petitioner *vide* affidavit dated 9.9.2022 in Petition No. 567/GT/2020 (DTPS 3 & 4) has updated the additional capital expenditure pertaining to common offices. The revised additional capital expenditure claimed by the Petitioner towards various offices under Common offices is summarised as below:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Central Office	50.86	94.73	43.26	1,263.95	393.86
R & D	2.72	38.31	0.00	(-)550.49	0.00
Direction Office	26.85	9.17	68.62	50.07	(-)255.83
Subsidiary Activities	0.20	1.66	7.37	3.29	0.13

IT Cell	37.69	0.00	0.00	0.00	185.62
Other Offices	1.49	30.17	44.63	406.40	62.70
Total	**119.82**	**174.04**	**163.88**	**1173.22**	**386.48**

198. The head-wise additional capital expenditure claimed by the Petitioner towards common offices is summarised as below:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Land and Land Rights	2.72	0.00	0.00	508.33	70.80
Buildings	1.49	38.31	0.00	34.91	130.47
Power House	0.00	0.00	38.84	0.00	5.42
Sub Station equipment	0.00	8.01	1.15	431.94	52.08
Other assets, Office Furniture and Personalcomputer	77.91	128.60	124.77	198.34	29.09
Cyber Security	0.00	0.00	0.00	0.00	97.85
EBA	37.69	0.00	0.00	0.00	0.00
Machinery & equipment	0.00	(-)0.88	(-)0.88	(-)0.01	0.00
Tower Pole & Fixtures	0.00	0.00	0.00	(-)0.28	0.00
Assets Held for Disposal	0.00	0.00	0.00	0.00	0.76
Total	**119.82**	**174.04**	**163.88**	**1173.23**	**386.48**

199. The Petitioner has computed the Return on Equity, Interest on Loan and Depreciation on the Common Assets for the period 2014-19 based on the opening capital cost as on 1.4.2014 for different offices and has apportioned them to each generating stations and T&D system in proportion to the capital cost approvedas on 31.3.2014. Further, the Petitioner has allocated the cost of common offices among generating stations of the Petitioner on the basis of installed capacity. The annual fixed charges claimed towards assets of common offices are as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Direction Office	146.09	85.91	107.01	128.92	68.70
Subsidiary Activities	113.33	113.94	114.21	114.52	114.92
Other Offices	129.97	132.58	115.82	171.39	207.12
R&D	319.84	315.43	308.45	248.10	190.53
IT	43.87	46.34	44.98	43.46	58.84
Central Office	570.62	562.94	561.83	645.87	771.37
Total	**1323.73**	**1257.14**	**1252.29**	**1352.25**	**1411.48**

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Common Office Expenditure apportioned to all generating Stations of DVC	1218.63	1157.33	1152.86	1244.88	1299.41
Common Office Expenditure apportionedto T&D	105.10	99.82	99.43	107.37	112.07
Total	**1323.73**	**1257.14**	**1252.29**	**1352.25**	**1411.48**

200. In line with the above, the Petitioner has claimed the apportioned common office expenses for this generating station as under.

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
122.72	114.83	97.61	105.70	113.11

201. The matter has been considered. It is observed that the Petitioner's claim for common office expenditure is in line with the Commission's methodology and decision in the previous tariff orders in respect of the generating stations of the Petitioner. Accordingly, in order to work out the common office expenditure to be allowed as a part of truing-up, we have examined the additional capital expenditure claimed by the Petitioner, as under:

Land and Land Rights

202. The Petitioner has claimed an additional capital expenditure of Rs.2.72 lakh in 2014-15 and (-) Rs.550.49 lakh in 2017-18 in R&D Centre; & Rs.1058.82 lakh in 2017-18 and Rs.70.80 lakh in 2018-19 for Central Office under this head. However, the Petitioner has not furnished any justification for the same. Subsequently, in response to the ROP for the hearing dated 10.8.2022 in another Petition No. 567/GT/2020 (DTPS 3 & 4), the Petitioner submitted that these expenses were incurred for transfer of land from R & D to Central Office as per the Govt. of West Bengal (change in the type of land from educational to business), capitalization of land in Ranchi and Kolkata, decapitalization of asset from R&D etc., considering the nature of expenses, the expenditure claimed as additional capitalization and decapitalization is allowed under the 2014 Tariff Regulations.

Buildings

203. The Petitioner has claimed total additional capital expenditure of Rs.165.38 lakh during 2017-19 (i.e., Rs 34.91 lakh in 2017-18 and Rs.130.47 lakh in 2018-19) for

Central Office; Also, an amount of Rs.1.49 lakh in 2014-15 has been claimed for Other Offices [including Central Relay & Instrumentation Testing Laboratory (CRITL), CMFS, Central Relay & Instrumentation Testing Mobile (CRITM), Central Service Organization (CSO) and Central Load Despatch (CLD)]; and Rs.38.31 lakh in 2015-16 for R&D Centre under this head. The Petitioner *vide* its affidavit dated 9.9.2022 in revised submissions mentioned that Rs. 165.38 lakh pertains to transfer of asset from DAM to central office, stamp paper & registration of a property in Delhi; Rs. 38.31 lakh pertains to expansion of R & D building and Rs.1.49 lakh towards extension of Central Testing Laboratory building; Considering the nature of expenses, the claimed expenditure as additional capitalization is allowed under the 2014 Tariff Regulations.

Power House Plant & Machinery

204. The Petitioner has claimed additional capital expenditure of Rs.38.84 lakh in 2016-17 and Rs.5.42 lakh in 2018-19 for Direction Office, towards installation of Rooftop solar power plant at DVC Head Quarters for consumption of solar power for own usage. It is observed that the Petitioner has not justified the need for the work being undertaken and as to how the same would benefit the operations of the Petitioner in general and generating stations in particular. Accordingly, the additional capital expenditure of Rs.38.84 lakh in 2016-17 and Rs.5.42 lakh in 2018-19 for Direction Office is not allowed.

Machinery & Equipment- Workshop

205. The Petitioner has claimed an additional capital expenditure of (-) Rs.0.88 lakh in 2015-16, (-) Rs.0.88 lakh in 2016-17 and (-) Rs. 0.01 lakh in 2017-18 in Other Offices [including Central Relay & Instrumentation Testing Laboratory (CRITL), CMFS, Central Relay & Instrumentation Testing Mobile (CRITM), Central Service Organization (CSO) and Central Load Despatch (CLD)], as rectification entry under

this head. In view of this, the claims are allowed.

Sub-Station Equipment

206. The Petitioner has claimed additional capital expenditure of Rs.8.01 lakh in 2015-16, Rs.1.15 lakh in 2016-17, Rs. 431.94 lakh in 2017-18 and Rs. 52.08 lakh in 2018-19 for Other Offices [including Central Relay & Instrumentation Testing Laboratory (CRITL), CMFS, Central Relay & Instrumentation Testing Mobile (CRITM), Central Service Organization (CSO) and Central Load Despatch (CLD)] and (-) Rs.5.70 lakh in 2017-18 for Direction Office under this head. As regards additional capital expenditure pertaining to Other Offices, the Petitioner has submitted that the expenditure was incurred to upgrade and equip the existing relay testing laboratory for accreditation by the National Accreditation Board for Testing and Calibration. As the additional capital expenditure incurred for NABL accreditation is not covered under the provisions of the 2014 Tariff Regulations, the additional capitalization and decapitalization claimed are not allowed.

Tower Poles & Fixatures

207. The Petitioner has claimed additional capital expenditure of (-) Rs.0.28 lakh in 2017-18 for Other Offices [including Central Relay & Instrumentation Testing Laboratory (CRITL), CMFS, Central Relay & Instrumentation Testing Mobile (CRITM), Central Service Organization (CSO) and Central Load Despatch (CLD)] under this head as a rectification entry. Accordingly, the same is allowed.

Cyber Security Devices

208. The Petitioner has claimed additional capital expenditure of Rs.97.85 lakh in 2018-19 for IT Cell–HQ towards strengthening the IT Cell to safeguard the IT equipment against any cyber threat, with the overall aim to protect data, and network secrecy to ensure smooth functioning of the system. The Petitioner has submitted that

the said work is in compliance to the directives of the Ministry of Power (MOP), Government of India (GOI) dated 12.4.2010 and 2.8.2017, with regard to the steps to be taken to prevent cyber-attacks. As the work is in compliance to the directives of MOP, GOI to prevent cyber-attacks, the additional capital expenditure of Rs.97.85 lakh claimed towards procurement of cyber security devices for the period 2014-19 is allowed.

EBA- Integrated Software

209. The Petitioner has claimed additional capital expenditure of Rs.37.69 lakh in 2014-15 for IT Cell – HQ for supporting system of the integrated software used to facilitate various functions including material management, finance & accounting. It is noticed that the said work is related to ERP implementation at Head Office and hence, the additional capital expenditure claimed under this head is allowed.

Other Assets, Office Furniture and Personal Computers

210. The Petitioner has claimed following additional capital expenditure under the head 'Other Assets', 'Office Furniture' and 'Personal computer' towards procurement of like personal computer, software, hardware, office equipment etc.

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Direction Office	26.85	9.17	29.77	55.79	(-)291.94
Subsidiary Activities	0.20	1.66	7.37	3.29	0.13
Other Offices	0.00	23.04	44.36	(-)30.96	10.62
R&D	0.00	0.00	0.00	0.00	0.00
IT	0.00	0.00	0.00	0.00	87.77
Central Office	50.86	94.73	43.26	170.21	222.52
Total	**77.91**	**128.60**	**124.77**	**198.34**	**29.09**

211. In justification for the same, the Petitioner has submitted that to fulfil the demand of valley area as well as other state utilities and distribution licensees, these items had to be additionally procured for capacity addition during the 2014-19 tariff period. The Petitioner has also submitted that the expenditure was essential to cope

up with the extra volume of works associated with the huge capacity augmentation program taken up by the Petitioner and for smooth functioning of the offices. Considering the nature of these items, the additional capitalization and decapitalization is not allowed, in terms of first proviso to Regulation 14(3) of the 2014 Tariff Regulations.

Assets Held for Disposal

212. The Petitioner has claimed total of Rs. 0.76 lakh (negative entry of Rs. 29.93 lakh in Central office and positive entry of Rs. 30.68 lakh in Direction office) under Asset held for disposal, however, has not furnished any justification for the same. Accordingly, the additional capitalization and decapitalization under subject head is not allowed.

213. Accordingly, the item-wise additional capital expenditure allowed towards various offices is summarised below:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Land and Land Rights	2.72	0.00	0.00	508.33	70.80
Buildings	1.49	38.31	0.00	34.91	130.47
Road Culverts & Rly. Sidings	0.00	0.00	0.00	(-)0.01	0.00
Power House Plant & Machinery	0.00	0.00	0.00	0.00	0.00
Machinery & Equipment-Workshop	0.00	(-)0.88	(-)0.88	(-)0.01	0.00
Sub Station Equipment	0.00	0.00	0.00	0.00	0.00
Tower Poles & Fixtures	0.00	0.00	0.00	-0.28	0.00
Cyber Security Assets	0.00	0.00	0.00	0.00	97.85
EBA - Integrated Software	37.69	0.00	0.00	0.00	0.00
Other Assets	0.00	0.00	0.00	0.00	0.00
Assets Held for Disposal	0.00	0.00	0.00	0.00	0.00
Total	**41.90**	**37.43**	**(-)0.88**	**542.94**	**299.13**

214. Based on the above, the additional capitalization allowed for various offices under common offices during the 2014-19 tariff period is summarised as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Direction Office	0.00	0.00	0.00	(-)0.01	0.00
Subsidiary Activities	0.00	0.00	0.00	0.00	0.00
Other Offices	1.49	(-)0.88	(-)0.88	(-)0.29	0.00
R&D	2.72	38.31	0.00	(-)550.49	0.00

IT	37.69	0.00	0.00	0.00	97.85
Central Office	0.00	0.00	0.00	1093.73	201.27
Total	**41.90**	**37.43**	**(-)0.88**	**542.94**	**299.13**

215. It is observed, that the Petitioner has worked out ROE by grossing up the rate of ROE with MAT rate. However, as the Petitioner has not been paying any income tax in any of the financial year of 2014-19 tariff period, 'Nil' rate has been considered as effective tax rate for respective financial year for the purpose of grossing up of ROE in terms of the provisions of the 2014 Tariff Regulations and the rate of return on equity is considered as 15.50% for the period 2014-19.

216. The annual fixed charges for Common offices have been worked out by considering the closing capital cost as on 31.3.2014 as the admitted opening capital cost as on 1.4.2014. The annual fixed charges of Common Offices, as worked out for the period 2014-19, have been apportioned to generating stations / T&D systems, based on the approved capital cost as on 31.3.2014. Accordingly, in line with the decision of the Commission order dated 29.7.2016 in Petition No. 465/GT/2014, the fixed charges have been computed and has been allocated to various generating stations as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Depreciation	471.40	407.64	343.93	348.25	368.72
Interest on Loan	140.86	111.83	99.77	67.56	58.18
Return on Equity	548.59	550.43	551.28	563.88	583.46
Total	**1160.85**	**1069.90**	**994.98**	**979.69**	**1010.37**

(Rs. in lakh)

	Capital Cost as on 1.4.2014	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
All DVC Generating Stations	2036943.91	1068.68	984.95	915.98	901.90	930.14
T&D	175678.95	92.17	84.95	79.00	77.79	80.22
Total	**2212622.86**	**1160.85**	**1069.90**	**994.98**	**979.69**	**1010.37**

(Rs. in lakh)

Common Office Expenditure	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
MTPS Units 1-3 *(this generating station)*	107.62	97.73	77.56	76.58	80.97

Annual Fixed Charges allowed for the period 2014-19

217. Accordingly, the annual fixed charges approved for the generating station for the period 2014-19 is summarized as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	350.11	373.56	199.38	137.16	280.08
Interest on loan	4.24	4.24	-	-	3.67
Return on Equity	7500.37	7513.03	7521.66	7528.65	7541.20
Interest on Working Capital	6098.45	6218.63	6238.12	6432.23	6502.13
O&M Expenses	15057.00	16002.00	17010.00	18081.00	19221.30
Water Charges	0.00	1097.07	568.41	688.99	560.90
Capital Spares	238.54	4.12	14.03	40.43	94.07
Compensation Allowance	252.00	315.00	420.00	420.00	525.00
Sub-Total (A)	**29500.69**	**31527.65**	**31971.59**	**33328.48**	**34728.35**
Additional O&M Expenses					
Impact of Pay Revision	0.00	0.00	0.00	0.00	0.00
Impact of GST	0.00	0.00	0.00	0.00	0.00
Share of Pension & Gratuity Contribution	0.00	0.00	0.00	0.00	0.00
Share of Subsidiary Activities	352.97	431.53	359.77	346.18	244.50
Mega Insurance Expenses	0.00	0.00	0.00	0.00	0.00
CISF Security Expenses	0.00	0.00	0.00	0.00	0.00
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	1751.89	1880.57	2159.04	0.00	0.00
Share of Common Office Expenses	107.62	97.73	77.56	76.58	80.97
Sub-Total (B)	**2212.48**	**2409.83**	**2596.36**	**422.77**	**325.47**
Total Annual Fixed Charges (C) = (A) + (B)	**31713.17**	**33937.48**	**34567.95**	**33751.25**	**35053.82**
Annual fixed charges allowed vide order dated 31.8.2016 in Petition No. 347/GT/2014	31724.47	32493.58	33354.26	34614.58	36206.46

Note: (1) All figures are on annualized basis. (2) 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.

Additional O&M expenses (in addition to AFC) as per para 152-153 above

	2014-15	2015-16	2016-17	2017-18	2018-19
Ash Disposal Expenses	0.00	497.90	1947.02	1824.89	1097.08

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

DETERMINATION OF TARIFF FOR THE PERIOD 2019-24

219. The Petitioner, in this petition, has also sought the determination of tariff of the generating station for the 2019-24 tariff period, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short "the 2019 Tariff Regulations"). Subsequently, the Petitioner vide affidavit dated 17.6.2020 submitted additional information and mentioned that due to certain inadvertent errors in the forms of 2019-24 tariff period, submitted earlier, the same was revised after correction and requested commission to consider the revised forms. Accordingly, the capital cost and the annual fixed charges claimed by the Petitioner for the 2019-24 tariff period are as under:

Capital Cost claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	164332.23	167302.55	169507.03	172730.50	177414.43
Add: Additional Capital Expenditure (B)*	3283.75	2444.65	4110.65	5488.09	6095.22
Less: Decapitalisation during the year /period (C)#	313.44	240.17	887.18	804.16	35.75
Less: Undischarged liabilities (D)	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year / period (E)	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost (F) = (A+B-C-D+E)	167302.55	169507.03	172730.50	177414.43	183473.90
Average Capital Cost (D) = (A+F)/2	**165817.39**	**168404.79**	**171118.76**	**175072.46**	**180444.16**

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1910.38	2610.75	2658.73	4356.79	5558.27
Interest on loan	31.52	34.09	39.95	59.88	29.68
Return on Equity	9825.86	9966.39	10106.00	10328.85	10646.73
Interest on Working Capital	5531.16	5584.12	5671.04	5757.00	5880.48
O&M Expenses	20764.80	21495.60	22245.30	23032.80	23839.20
Water Charges	1751.71	1921.61	2113.77	2325.15	2564.67
Security Expenses	1540.90	1608.70	1679.49	1753.40	1830.55
Special Allowance	0.00	0.00	1995.00	1995.00	3990.00
Sub-Total (A)	**41356.32**	**43221.27**	**46509.29**	**49608.86**	**54339.59**
DVC's share of savings in interest cost due to loan restructuring	1.46	1.57	1.85	2.77	1.37
Share of P&G	2347.66	2458.01	2573.56	2694.53	2821.19

	2019-20	2020-21	2021-22	2022-23	2023-24
Share of Common Office Expenditure	123.89	132.96	134.64	115.79	105.54
Expenses for Ash Evacuation, Mega Insurance and Subsidiary Activities	1518.81	1585.64	1655.41	1728.26	1804.31
Sub-Total (B)	**3991.81**	**4178.19**	**4365.45**	**4541.34**	**4732.41**
Total Annual Fixed Charges (A+B)	**45348.14**	**47399.46**	**50874.74**	**54150.21**	**59072.00**

Capital Cost

220. Clause (1), Clause (3) and Clause (5) of Regulation 19 of the 2019 Tariff Regulations provide as under:

> ***"****19. Capital Cost****:***
> *(1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.*
> *(2) xxx*
> *(3) The Capital cost of an existing project shall include the following:*
> *(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
> *(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
> *(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*
> *(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
> *(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
> *(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*
> *xxx*
> *(5) The following shall be excluded from the capital cost of the existing and new projects:*
> *(a) The assets forming part of the project, but not in use, as declared in the tariff petition;*
> *(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*
>
> *Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalised only after its redeployment."*

221. The Petitioner has claimed the opening capital cost of Rs.164332.23 lakh, as on 1.4.2019. However, the closing capital cost of Rs.162434.95 lakh, as on 31.3.2019,

as approved in this order, for the period 2014-19, has been considered as the opening capital cost as on 1.4.2019, for the purpose of determination of tariff for the 2019-24 tariff period, in accordance with the 2019 Tariff Regulations.

Additional Capital Expenditure

222. Clauses (1) and (2) of Regulations 25 and Regulation 26 of the 2019 Tariff Regulations, provides as under:

> *"25. Additional Capitalisation within the original scope and after the cut-off date:*
>
> *(1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:*
>
> *(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
>
> *(b) Change in law or compliance of any existing law;*
>
> *(c) Deferred works relating to ash pond or ash handling system in the original scope of work;*
>
> *(d) Liability for works executed prior to the cut-off date;*
>
> *(e) Force Majeure events;*
>
> *(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*
>
> *(g) Raising of ash dyke as a part of ash disposal system.*
>
> *(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:*
>
> *(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;*
>
> *(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;*
>
> *(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*
>
> *(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.*
>
> *26. Additional Capitalisation beyond the original scope*
>
> *(1) 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 beyond the original scope, may be admitted by the Commission, subject to prudence check:*

(a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

(c) Force Majeure events;

(d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;

(e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;

(f) Usage of water from sewage treatment plant in thermal generating station.

(2) In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of decapitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised."

223. The year-wise projected additional capital expenditure claimed by the Petitioner in respect of the generating station for the period 2019-24 are as under:

(Rs. in lakh)

Head of Work / Equipment	Regulation	2019-20	2020-21	2021-22	2022-23	2023-24	Total
C&I System	25 (2) (c), (d), read with 76 & 77	120.00	120.00	2100.00	2100.00	0.00	**4440.00**
Electrical system of Coal Handling Plant (CHES-I)	25 (2) (a), (c), read with 76 & 77	96.50	0.00	52.00	0.00	0.00	**148.50**
Coal Handling Plant	25 (2) (a)	0.00	33.00	0.00	0.00	0.00	**33.00**
Electrical Inside Power House	25 (2) (a), (c), (d) read with 76 & 77	567.00	341.00	450.00	120.00	0.00	**1478.00**
220 KV Switchyard (SWS1)	25 (2) (a), (c), (d), read with 76 & 77	203.18	175.00	520.00	0.00	105.00	**1003.18**
Store (1-4)	76 & 77	0.00	0.00	35.00	50.00	0.00	**85.00**
FM & CHP (1-4)	76 & 77	5.00	0.00	0.00	0.00	0.00	**5.00**
Power House Civil & AHP	25 (2) (c), 26(1)(e), read with 76 & 77	0.00	1123.40	550.00	0.00	0.00	**1673.40**
Total Additional Capital		**991.68**	**1792.40**	**3707.00**	**2270.00**	**105.00**	**8866.08**

Head of Work / Equipment	Regulation	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Expenditure claimed							

224. DVPCA has submitted that the Petitioner has not provided appropriate justification and / or documentary evidence as per Regulation 25(1) and Regulation 25(2) of the 2019 Tariff Regulations. It has further submitted that the Petitioner has also claimed certain additional capitalization under Regulations 76 and 77 of the 2019 Tariff Regulations, which can be considered only in rare cases and the Petitioner has not presented / cited any extra ordinary circumstance for the same. DVPCA has furnished a comparative table indicating the additional capital expenditure originally claimed in the petition (which was subsequently revised vide affidavit dated 13.7.222) and the claims (including capital spares) to be allowable, as per DVPCA, are as under:

(Rs. in lakh)

	2019-20		2020-21		2021-22		2022-23		2023-24	
	Claimed	**As per DVPCA**	**Claimed**	**As per DVPCA**	**Claimed**	**As per DVPCA**	**Claimed**	**As per DVPCA**	**Claimed**	**As per DVPCA**
C&I system	120.00	90.00	120.00	90.00	2100.00	2100.00	2100.00	2100.00	0.00	0.00
Electrical system of Coal Handling Plant (CHES-I)	96.50	67.50	0.00	0.00	52.00	28.00	0.00	0.00	0.00	0.00
Coal Handling Plant	0.00	0.00	33.00	33.00	0.00	0.00	0.00	0.00	0.00	0.00
Electrical Inside Power House	567.00	160.00	341.00	92.00	450.00	200.00	120.00	20.00	0.00	0.00
220 KV switchyard (SWS1)	203.18	139.00	175.00	163.00	520.00	450.00	0.00	0.00	105.00	0.00
Store (1-4)	0.00	0.00	0.00	0.00	35.00	0.00	50.00	0.00	0.00	0.00
FM & CHP (1-4)	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power House Civil & AHP	0.00	0.00	1123.40	0.00	550.00	0.00	0.00	0.00	0.00	0.00
Capital Spares	2292.07	0.00	652.25	0.00	403.65	0.00	3218.09	0.00	5990.22	0.00
Total Additional Capitalisation	**3283.75**	**456.50**	**2444.65**	**378.00**	**4110.65**	**2778.00**	**5488.09**	**2120.00**	**6095.22**	**0.00**

225. It is observed that the Commission vide ROP of the hearing dated 24.6.2022 directed the Petitioner to furnish additional information and reserved the order in the petition. In compliance of the same, the Petitioner filed the additional information vide affidavit dated 13.7.2022 and submitted that the tariff petition for determination of annual fixed charges for the period 2019-24, is based on the data, captured in 2019. Now, the additional capital expenditure has been revised based on the actual accounting for past three years, i.e., 2019-20, 2020-21 and 2021-22 and projected additional capital expenditure for the years 2022-23 and 2023-24. Accordingly, the Form-9A (additional capital expenditure) for the period 2019-24, has been revised and requested to ignore the earlier Form-9A submitted along with the Petition. Though the Petitioner has mentioned only the clauses of the regulation of the 2019 Tariff Regulations, it has not submitted the relevant sub-clauses thereof [e.g. mentioned Regulation 25 (2) instead of whether it is under sub-clause (a) or (b) or (c) or (d)], which were clearly mentioned in the earlier tariff filing forms and has further not submitted the corresponding revisions in the other applicable forms, including corresponding de-capitalisation of the items against the revised additional capital expenditure items.

226. Accordingly, the Petitioner has claimed projected the total additional capital expenditure of Rs. 27748.21 lakh for the period 2019-24 as under:

(Rs. in lakh)

Head of Work / Equipment	Regulations	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Building		(-)23.07	0.00	0.00	0.00	0.00	**(-)23.07**
Plant and Machinery	25 (2)	656.03	155.22	10969.12	6229.59	9700.09	**27710.05**
Substation Equipment	25 (2)	35.93	0.00	0.00	0.00	0.00	**35.93**
Other Assets	25 (2)	25.23	0.08	0.00	0.00	0.00	**25.30**
Total Additional Capital Expenditure claimed		**694.11**	**155.29**	**10969.12**	**6229.59**	**9700.09**	**27748.21**

227. We now examine the item-wise additional capital expenditure in the subsequent paragraphs.

228. The Petitioner has claimed projected additional capital expenditure items under the heads ‘Buildings’, ‘Plant and Machinery’, ‘Substation Equipment’ and ‘Other Assets’. In this regard, it is observed that the Petitioner has not mentioned any specific Regulation for claimed ‘Buildings’ and further other additional capital expenditures, except for item under the head ‘Buildings’, in the 2019-24 tariff period, has mentioned that the claim is under Regulation 25(2) of 2019 Tariff Regulations, but not the specific sub-clauses under which the said claim has been made thereof, which was otherwise mentioned in the form submitted prior to ROP dated 30.6.2022. It is further observed that some of the justifications furnished by the Petitioner are not legible. It is pertinent to mention that the Petitioner has furnished the excel soft copy of the same. Since the claims for the period 2019-24 are subject to truing-up, we have considered the justifications furnished in the soft copy (excel version) only, where the justifications furnished in the petition was not legible. In this connection, the Petitioner is directed to take due care while filing the tariff petition and ensure that petition is legible and clear. The Petitioner has claimed huge additional capital expenditure, which include some items which are in the nature of O & M expenses, new items not forming part of additional capital expenditure pertaining to other than project and some not pertaining to this project, spares, expenses which are R & M in nature etc, and minor expenses as low as Rs. 0.08 lakh. Also, some justifications furnished by the Petitioner are inadequate and / or irrelevant. Accordingly, after prudence check of these claims, we are of the considered view that the claims which are lower than Rs. 2.00 lakh have not been considered at all as they are of O&M nature. Further, the claims which are in the nature of spares, and associated with inadequate and irrelevant justifications, are not allowed. However, the Petitioner is at liberty to claim substantive items which are of

nature of spares, if any, with suitable justification along with relevant documents, after they are put to use, at the time of truing up of tariff. In this context, the Petitioner is directed take due diligence while filing the petition and not to claim the items of O & M nature, R & M in nature and items not pertaining to the generating station. Accordingly, the item-wise and year-wise additional capital expenditure claimed and allowed for the period 2019-24 tariff period are tabulated below:

(Rs. in lakh)

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
	2019-20			
A	**Building**			
	Other Building	(-)23.07	(-)23.07	The Petitioner has not furnished any justification for this, however, as the subject claim is being part of capital cost, the same is **allowed** as claimed by the Petitioner. In this regard, the Petitioner is directed to submit the justification and relevant documents at the time of truing up of tariff of 2019-24 tariff period for further consideration.
	Sub-Total (A)	**(-)23.07**	**(-)23.07**	
B	**Plant and Machinery**			
1	Procurement, Erection & Commissioning of Microprocessor based Feeder Control System for Unit#1&2	206.37	206.37	The Petitioner has submitted that the item is procured for accurate monitoring of Coal flow measurement in Gravimetric mode as the existing item was not functioning in Gravimetric mode and was also recommended by Theme Audit on Fuel Management. Considering that the claimed expenditure is for the replacement of an item, which is the part of original scope of works and is necessary for successful and sustenance of operation of the generating station, the same is **allowed** under Regulation 25(2)(a) of 2019 Tariff Regulations. However, the Petitioner is directed to submit appropriate documentary evidence substantiating its claim along with the decapitalization of old assets at truing-up of tariff for further consideration.
2	Procurement of Portable tube bevelling & facing machine for Boiler	2.85	0.00	As the Petitioner has not provided any justification, the claim is **not allowed.**
3	Different type of 75 kW motor for CHP	2.78	0.00	The Petitioner has submitted that the expenditure is towards phase-wise replacement of old motors with new energy efficient motors to achieve large energy savings over time and help the generating station to achieve less APC%. It has also submitted that 75 kW motor is installed in Conv#1A/B, Conv#4 of CHP U#1-4. Base of one motor, installed at Conv #1B damaged and replaced by only spare motor. Now no spare motor is available. This is very important to procure a motor to maintain the stability of the system. Considering that the item is procured for energy efficiency measure which will benefit the generating station and also seems to be procured as spare, the claim is **not allowed.**

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
4	Procurement of Microprocessor based remote conductive type Electronic drum level indicator for Unit 1 to 3	21.59	21.59	The Petitioner has submitted that BHEL VISION 10 system was out of service since long in all the three units due to non-availability of spares of the said system, BHEL, the OEM, had been approached for spares but they regretted and declared the existing system (BHEL VISION 10) as obsolete. It was decided to go for up gradation of Electronic drum level indicator system by adopting latest technology in phased manner one side drum level indicator of each of the three units. Considering that the claimed expenditure is on account of obsolesce and is necessary for successful and sustenance of operation of the generating station, the same is **allowed** under Regulation 25(2)(c) of 2019 Tariff Regulations, however, the Petitioner is directed to submit appropriate documentary evidence substantiating its claim along with the decapitalization of old assets at truing-up of tariff for further consideration.
5	Works part of Microprocessor based remote conductive type Electronic drum level indicator for Unit 1 to 3	2.66	2.66	
6	Material for 230V, 1-phase, Electronic Energy meter	0.44	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**
7	Material for 3 Phase, 4 Wire & Single-Phase Energy meter	0.09	0.00	
8	Portable Vibration Analyser	26.84	0.00	
9	Upgradation of Max DNA Control System of Unit 3	321.60	321.60	The Petitioner has submitted that old Siemens make TELEPERM-ME (AS 220EA & OS 220EA) DCS system of BOP in U#3 became obsolete and spares support was not available from SIEMENS. Therefore, latest max DNA based DCS system by M/s. BHEL had been procured, erected and commissioned in Unit-3. Considering that the claimed expenditure is on account of obsolesce and is necessary for successful and sustenance of operation of the generating station, the same is **allowed** under Regulation 25(2)(c) of 2019 Tariff Regulations, however, the Petitioner is directed to submit appropriate documentary evidence substantiating its claim along with the decapitalization of old assets at truing-up of tariff for further consideration.
10	Works part of Upgradation of Max DNA Control System of Unit 3	32.40	32.40	
11	Procurement of 30 kV 1.5 A AC High Voltage test set	6.97	6.97	The Petitioner has submitted that High voltage testing of vital electrical equipment such as Generator, Transformers, cables and bus ducts are done for assessment of the healthiness of the equipment insulation. Hipot testing is also used as a diagnostic tool to detect ageing or deterioration of equipment, which helps in planning predictive maintenance as well as breakdown maintenance of the vital electrical equipment. Availability of such HV test kit will not only enable to carry out vital HV testing but will also reduce the downtime of the repair activity. Considering that this set up prevails with plant, the claimed expenditure is in the nature of replacement. As it would improve the assessment of healthiness of various components of the plant and avoid unwarranted breakdown and down time, the same is **allowed** under Regulation 25(2)(a) of 2019 Tariff Regulations, however, the Petitioner is directed to submit information regarding

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				prevailing facilities and decapitalization thereof at the time truing-up of tariff for further consideration.
12	Procurement of 30KV 1.5 A AC High Voltage test set	16.43	0.00	The Petitioner has submitted that for accurate monitoring of Coal flow measurement in Gravimetric mode, latest micro-processor-based feeder control system has been procured, erected and commissioned by replacing existing feeder control system which was non-functioning in Gravimetric mode. It was also recommended by Theme Audit on Fuel Management. Considering that the justification submitted is not being relevant to the claimed expenditure, the claim is **not allowed.**
13	RFID system & traffic barrier related to ash weigh bridge	15.03	0.00	The Petitioner has not provided any justification. Thus, the claim is **not allowed.**
	Sub-Total (B)	**656.03**	**591.58**	
C	**Substation Equipment**			
1	Procurement of MPACT MPRO ACB, 415V, 3P EDO, 65KA (415 V Air Circuit Breaker)	3.01	0.00	The Petitioner has submitted that GE make MPACT series LT ACB are in service in CHP U#1-4, wherein the frequency of operation of drives like Conv # 8A,8B is very high and frequent failure of M-PACT series breaker in those drives is faced, causing outage of entire CHP for prolonged period. Since Conv #8A/ 8B ACB have been installed at inside Power House board of Unit#1 and 2 respectively and the distance of Conv # 8A/8B breaker is more (approx. 1 KM) from CHP U # 1 to 4 control room so more time delay occurs for rectification of breaker. We have approached the OEM M/S GE to highlight the breaker problems. As per MOM dt 26/07/2013 the OEM has recommended for replacement of these obsolete ACB with their upgraded product MPACT MPRO series ACB for trouble free performance. However, considering cost curtailment, other reputed manufacturers have also been approached for providing alternative solution for retrofitting the existing obsolete GE make LT Breaker. As the claimed expenditure appears not to be associated with units 1-3, the same is **not allowed**.
2	Erection, testing & commissioning of 6.6KV Siemens make VCB in place of NGEF make SF6 Breaker	7.85	7.85	The Petitioner has submitted that, at present there are 6 nos. of 1600A NGEF make 6.6 kV SF6 breakers in service. It has been repeatedly recommended by various technical audits as well as ISO audits to phase out these SF6 breakers. Moreover, with the closure of manufacturing units of OEM NGEF, no spare breakers are currently available to cater to breakdown maintenance of these breakers. In 2019-20, two nos. of breakers were replaced. Considering that the claimed expenditure is on account of obsolesce and is necessary for successful and sustenance of operation of the generating station, the same are **allowed** under Regulation 25(2)(c) of 2019 Tariff Regulations. However, the Petitioner is directed to submit the information regarding the total no. of 6.6 kV breakers, no. of breakers already replaced, no. of breakers due for replacement etc, along with appropriate documentary evidence substantiating its claim along with the decapitalization of old assets at

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				truing-up of tariff for further consideration.
3	Relay and Control Panel: Areca Controllers of ESP of Unit 1	23.60	23.60	The Petitioner has submitted that in order to maintain the SPM level of flue gas emission within permissible limits, all the fields are required to be in service. There are 24 nos. of ESP fields in each unit. These controllers are very old and gives frequent trouble. 08 Nos controller procured for replacement in unit#1-3, to maintain the ESP performance at desired level. Considering that the claimed expenditure is for the replacement of an item, which is the part of original scope of works and is necessary for successful and sustenance of operation of the generating station, the same is **allowed** under Regulation 25(2)(a) of 2019 Tariff Regulations. However, the Petitioner is directed to submit appropriate documentary evidence substantiating its claim along with the decapitalization of old assets at truing-up of tariff for further consideration.
4	Battery Charging Apparatus: (Installation & Commissioning of Exide battery)	1.48	0.00	The battery banks have completed over 20 years of continuous service and need replacement due to aging for maintaining reliability of the DC system. Considering that the item is part of O&M and claim is lower than Rs. 2.00 lakh, the same is **not allowed**.
	Sub-Total (C)	**35.93**	**31.45**	
D	**Other Assets**			
1	Office Equipment (Procurement of 1.5-ton AC Machine for MP cell)	0.69	0.00	As the Petitioner has not provided any justification, the claim is **not allowed.**
2	Weighing Machine (Complete Belt weighing system including controller with control panel, Belt speed sensor, Display unit, 4 load cell, weighing platform etc. Capacity: 800 TPH for CHP)	8.46	6.34	The Petitioner has submitted that complete Belt Weighing system (including controller with con panel, Belt speed sensor, display unit, 4 load cell, weighing platform and other BW related accessories) are installed at Conv. 2A/B (before crusher) of CHP#1-4. Belt weigh system is installed at conveyor belt for proper monitoring of coal flow rate and weighing of coal passing through it. The OEM of the Two (02) no. Belt Weighing system installed at Conv. 2A/B (before crusher) of CHP#1-4 have conveyed that they have discontinued manufacturing of existing electronic belt weighing and also its spares since last five years and they are unable to provide any spare /service support. For which installation of complete belt weighing system was done replacing the old one. In this regard, it is noted that the claimed expenditure is for the replacement of an item on obsolesce, which is the part of original scope of works, however, the same pertains to unit 1 to 4 of MTPS. Accordingly, the claim apportioned the generating station is **allowed** under Regulation 25(2)(c) of 2019 Tariff Regulations. However, the Petitioner is directed to submit appropriate documentary evidence substantiating its claim along with the decapitalization of old assets at truing-up of tariff for further consideration.
3	Motor Lorries, Bus, Truck (Dry Chemical Powder (DCP) Trailer of 150 Kg Capacity)	3.27	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
4	Miscellaneous (1.5 Ton AC 10 nos. & 2.0 Ton AC 10 nos. at site for IB & DB)	7.69	0.00	
5	Miscellaneous (Procurement of Water Purifier cum Cooler)	0.84	0.00	
6	Miscellaneous (Procurement of different measuring instruments)	1.20	0.00	
7	Miscellaneous (Acquisition of GEYSER, 230V SINGLE PHASE)	1.34	0.00	
8	Miscellaneous (Procurement of measuring instruments like Digital Multi-metre & ma/volt calibrator for C&I I)	1.73	0.00	The Petitioner has submitted that existing multi-meters and mA/mV injectors which were in use for quite long time had expired their service life due to aging. Also 06 nos multi-meters were found defective and could not be repaired. These tools are considered very much important items and accuracy has to be ensured for day to day C&I maintenance point of view. Therefore, new Digital multi-meter & mA/volt calibrators have been procured and procured items are in use. Considering the fact that the items are of the nature of O&M expenses and is lower than Rs. 2.00 lakh, the same is **not allowed**.
	Sub-Total (D)	**25.23**	**6.34**	
	Total for 2019-20	**694.11**	**606.30**	
	2020-21			
A	**Building**			
	Sub-Total (A)	**0.00**	**0.00**	
B	**Plant and Machinery**			
1	Pneumatic Spanner/ Pneumatic Torque wrench along with all accessorizes like FRL unit, hose, fittings etc.	3.95	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**
2	Spares for Scaffolding, estimating unit-BMS (1-4)	26.40	0.00	
3	Spares for Scaffolding, estimating unit-BMS (1-4)	6.27	0.00	
4	Spares for Scaffolding, estimating unit-BMS (1-4)	0.61	0.00	
5	Turbo Generator: Liner - seat ring for low capacity PRDS valve	1.15	0.00	
6	Turbo Generator: Assembly ESV valve cone with valve spindle	8.77	0.00	
7	Turbo Generator: Governor Impeller Assy	5.00	0.00	
8	Turbo Generator: Cartridge Unit Assy of JOP	10.22	0.00	
9	Turbo Generator: Accumulated Charging Valve	1.06	0.00	The Petitioner has submitted that to maintain the SPM level of flue gas emission within permissible limits, all the fields are required to be in service. There are 24 nos. of ESP fields in each unit. These controllers are very old and gives frequent trouble. 04 Nos controller

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				installed in 2020-21. Considering that the justification provided by the Petitioner is not relevant to the item, the expenditure is **not allowed**.
10	Accessory Electric Equipment (Procurement of Areca controllers for ESP of Unit#1,2 &3,)	5.90	0.00	The Petitioner has submitted that the expenditure is claimed towards supply charges for the battery charger. The Battery chargers installed for charging of 220V battery bank & maintaining the system voltage for operation & protection of the switchgears at U#1-3 RIPH, CWPH & BIPH pertaining to OFES U#1-6, are of utmost importance. The Battery Charger for 220V, 250Ah battery bank installed at reservoir switch house has been in service for more than twenty years. Its various components have started developing problems due to ageing & have become prone to failure. The failure / malfunction of the chargers may damage the battery bank also. The OEM has repeatedly recommended complete replacement to ensure better & reliable performance of the chargers. Considering that the justification provided by the Petitioner is not relevant to the item, the expenditure is **not allowed**.
11	Accessory Electric Equipment (Supply, Erection & Commissioning of Battery charger panel for 220V DC,250Ah Plante Lead-acid Battery installed at Reservoir Switch House U-1-3)	7.79	0.00	The Petitioner has submitted that the expenditure is towards the installation charges of the Battery Charger. Considering that the item itself (battery charger panel) could not be found in the additional capital expenditure list claimed by the Petitioner, we do not find any merit in allowing the installation charges for the same. Accordingly, the item is **not allowed**.
12	Accessory Electric Equipment (Supply, Erection & Commissioning of Battery charger panel	1.00	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**
12	Accessory Electric Equipment (Chiller Pump Complete set for Central AC Plant)	5.62	0.00	
13	Accessory Electric Equipment (Impeller (Bronze) - For Chiller Pump of Central AC Plant)	3.19	0.00	
14	Accessory Electric Equipment (Actuator SA50E180, MAX TORQUE: 500Nm,)	3.56	0.00	The Petitioner has submitted that there are 33 No. of 245 kV breaker in 220 kV switchyard in continuous service since the last 20 years. Most of the breakers have outlive their age as per the time frame. The Circuit breaker analyser with DCRM is required for performance measurement as per standard practices and CEA guidelines. Accordingly, one no. of circuit breaker operational analyser with DCRM is procured. Considering that the justification provided by the Petitioner is not relevant to the item, the expenditure is **not allowed.**

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
15	Accessory Electric Equipment (Circuit Breaker Operational Analyser with DCRM, E)	24.76	0.00	The Petitioner has submitted that there are two nos. 220 kV lines connected with Main Bus #3 &4 and associated with Unit#5-6 220 kV Switchyard. In these two lines, 'OHMEGA' relay is used for Line Distance Protection Main, out of which one relay becomes inoperative. As per Indian Electric Grid Code (IEGC), 2010 all transmission line of capacity 132 kV or above must be protected with two numerical distance protection relays. Further, as per OEM, OHMEGA Relay has become obsolete. Hence two nos. of numerical relays were installed to replace the obsolete OHMEGA relays. Considering the fact that the justification provided by the Petitioner is not relevant to the item, and also the item claimed does not pertain to the generating station, the expenditure is **not allowed**
16	Accessory Electric Equipment (Line Distance Protection Relay: OHMEGA)	7.08	0.00	The Petitioner has submitted that 6.6 kV VCBs are installed in CHP U#1-4 electrical switch-gear room in different feeders of CHP to protect the electrical equipment from damage caused by excess current, short circuit, earth fault etc. by interrupting the current flow when a fault is detected. These breakers were earlier retrofitted against 6.6 kV NGEF SF6 breakers in the year 2009-10. Two no. of spare motor feeder breaker were available since then and it is now not functioning properly and no spare incomer breaker is available. Considering age effect and no. of operation of breakers in CHP, minimum two (02) nos. of motor feeder breakers are required to cope up any kind of unforeseen eventuality vis a vis maintain the stability of the system. So, two numbers of breakers were procured as spare. Considering the fact that the justification provided by the Petitioner is not relevant to the item, the expenditure is **not allowed.**
17	Coal Handling Equipment (6.6 kV HT Breaker, Estimating unit - CHES (1-4))	15.00	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**
18	Ash Handling Equipment (Clinker grinder gear box & fluid coupling)	0.56	0.00	
19	Ash Handling Equipment (Complete Set seal water pump)	11.30	0.00	
20	Ash Handling Equipment (Complete set of Pneumatic (double acting) cylinder assembly)	1.55	0.00	
21	Miscellaneous Power Plant Equipment (Procurement of Laboratory Instrument (UV-Visible Spectrophotometer) for Chemical Laboratory)	4.48	0.00	
	Sub-Total (B)	**155.22**	**0.00**	
C	**Substation Equipment**			

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
	Sub-Total (C)	**0.00**	**0.00**	
D	**Other Assets**			
1	Hospital Equipment (Procurement of FAX machine for hospital)	0.08	0.00	As the Petitioner has not provided any justification, the claim is **not allowed.**
	Sub-Total (D)	**0.08**	**0.00**	
	Total for 2020-21	**155.29**	**0.00**	
	2021-22			
A	**Building**			
	Sub-Total (A)	**0.00**	**0.00**	
B	**Plant and Machinery**			
1	Replacement of 220 kV CT for implementation of system energy measurement accounting and audit (SEMA) for loss measurement and other reporting as per CEA guidelines.	9,152.59	1,642.77	The Petitioner has submitted that replacement of old 1.0 accuracy class CTs with higher accuracy 0.2 class CTs under System Energy Metering and Audit (SEMA) Project for more accurate 0.2 class Energy Measurement system as per CEA / CERC regulation for 17 Numbers Bay (1) Line-239 & 240, 228 (Kalyanesri Line) (2) Line-232 (Burnpur Line) (3) Line-230 & 231 (Barjora Line) (4) Line-221 & 222 (DTPS Line) (5) Line-1 & 2 (Gola) (6) Transformers (SST-A & B, PTR-1 &2, GT-1,2 & 3) In this regard, it is noted that the claimed expenditure is for higher accuracy of CTs for energy metering system and is to comply with CEA Metering Regulations, however, the same pertains to the entire Mejia TPS. Further, it is also noted that the Petitioner has claimed special allowance for unit 1. Accordingly, apportioned (210 x 2 / 2340) claim pertaining to the generating station (excluding unit 1) is **allowed** under Regulation 25(2)(b) of 2019 Tariff Regulations. However, the Petitioner is directed to submit appropriate documentary evidence substantiating its claim along with the decapitalization of old assets at truing-up of tariff for further consideration and also reasons for non-compliance of subject Metering Regulations since 2006.
2	Coal Handling Plant (Complete Belt Weighing system)	3.99	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**
3	Turbo Generator & Accs. (Capitalisation of cost and installation charges of new stator bars which were used to replace damaged stator bars when Unit 3)	988.72	988.72	The Petitioner has submitted that Unit#3 of MTPS tripped on 04/02/2019 at 22:15 hrs on stator earth fault with broken delta relay operated. After isolation of Gen PTs, IR was taken from NGT side & it was found to be zero. For further investigation generator links were opened & IR value of isolated generator windings measured. The IR value of B-Ph winding is found to be zero and R-Ph & Y-Ph are healthy. On identification of fault, it has been found that earth fault is due to bottom terminal bar No. 5 (Five). As there is no scope of work for rectification of fault for bottom bar in the work order has been placed on the OEM i.e., M/s BHEL along with supply of material. OEM M/s BHEL recommended for replacement of Bottom Bar Slot-5 as remedial measure. Accordingly, replacement work has been carried out. Considering that the claimed expenditure is replacement

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				of stator bars of generator / alternator of unit 3 and is necessary for successful and sustenance of operation of the generating station, the same is **allowed** under Regulation 25(2)(b) of 2019 Tariff Regulations. However, the Petitioner is directed to submit appropriate documentary evidence substantiating its claim along with the information regarding the operation of the unit from Feb, 2019 to 2021-22 and energy generated thereof, preventive and periodic maintenance reports, fault analysis, audit report, lapses attributed to petitioner and beyond the control of petitioner, complete scope of works, etc. at truing-up stage for further consideration.
4	Turbo Generator & Accs. (Capitalisation of cost and installation charges of new stator bars which were used to replace damaged stator bars when Unit 2)	817.56	817.56	The Petitioner has submitted that Unit#2 of MTPS tripped on 13/07/2021 at 23:47 hrs on stator earth fault. After isolation of Gen PTs, IR was taken from NGT side & it was found to be zero. For further investigation generator links were opened & IR value of isolated generator windings measured. The IR value of R-Ph winding is found to be zero and Y-Ph & B-Ph are healthy. On identification of fault it has been found that earth fault is due to bottom bar of slot No. 54. Unit#2 generator stator has core looseness problem since last few years. Core packets are found loose at some locations, resulting in breaking out of core stamping and damaging winding bar insulation. Considering all above, proposal is already initiated by OS & U wing, Kolkata for procurement of generator stator. But at present, to bring back the unit, repairing of the machine by bottom bar replacement job is the only option. Considering that the claimed expenditure is replacement of stator core / bars of generator / alternator of unit 2 and is necessary for successful and sustenance of operation of the generating station, the same is **allowed** under Regulation 25(2)(b) of 2019 Tariff Regulations. However, the Petitioner is directed to submit appropriate documentary evidence substantiating its claim along with the information regarding the preventive and periodic maintenance reports, fault analysis, audit report, lapses attributed to petitioner and beyond the control of petitioner, complete scope of works etc, at truing-up stage for further consideration.
5	Turbo Generator & Accs. (210MW Generator Bottom Bar for Unit 2)	6.25	0.00	The Petitioner has submitted that the OEM M/s BHEL recommended for replacement of Bottom Bar Slot-54 as remedial measure. Accordingly, replacement work has been carried out. In this regard, it is noticed that the subject claim is associated with replacement of bottom bar slot 54 and is over and above the Rs. 817.56 lakh claimed for Capitalisation of cost and installation charges of new stator bars which were used to replace damaged stator bars when Unit 2, at above S. No. 4, which was allowed. However, the Petitioner not provided any suitable justification for this additional claim. Therefore, the Commission don't find any merit in the claim. Accordingly, the same is **not allowed**.
	Sub-Total (B)	**10,969.12**	**3,449.06**	
C	**Substation Equipment**			

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
	Sub-Total (C)	**0.00**	**0.00**	
D	**Other Assets**			
	Sub-Total (D)	**0.00**	**0.00**	
	Total for 2021-22	**10969.12**	**3,449.06**	
	2022-23			
A	**Building**			
	Sub-Total (A)	**0.00**	**0.00**	
B	**Plant and Machinery**			
1	Sky Climber for Boiler	70.00	0.00	As the Petitioner has not provided any justification, the claim is **not allowed.**
2	Upgradation of obsolete BHEL make Hardware based SG & TG Control system & BOP System of MTPS Unit # 1 by BHEL Make Latest version of MAX DNA	780.00	0.00	The Petitioner has mentioned 'obsolescence of existing DCS'. The claim is **not being allowed** as Petitioner is availing special allowance for unit-1
3	Upgradation of Rockwell make PLC system of DM plant Unit 1, 2 & 3	1.20	0.00	The Petitioner has mentioned 'to combat obsolescence of old PLC-5 system'. Considering the fact that the item is in the nature of O&M expenses and is lower than Rs. 2.00 lakh, the same is **not allowed.**
4	Procurement, Erection & Commissioning of new Online Generator H2 purity measurement system for MTPS Unit 1, 2 & 3	3.15	2.10	The Petitioner has submitted that measurement of Generator H2 purity of MTPS Unit 1, 2 & 3 is being done offline in chemical laboratory through ORSET, where there is a compromise in the accuracy level mainly with moisture content. Thus, Online Generator H2 Purity Measurement System is required for accurate H2 purity measurement with instant value. It is noted that the item is upgradation in nature and required for purity measurement of H2. However, as special allowance is allowed for unit 1, in exercise of powers under 76 and 77 of 2019, Tariff Regulations, the apportioned of the claimed expenditure is **allowed** under Regulation 25(2)(a) of 2019 Tariff Regulations. In this regard, the Petitioner is directed to submit appropriate documentary evidence substantiating the justification and decapitalization of old assets at the time of truing-up of tariff for further consideration.
5	Upgradation of UPS System of Unit 2&3 (2x60 kVA) each	44.00	44.00	The Petitioner has submitted that 2x60 kVA UPS of Unit#2&3 is in service since 1997. The spares of the system have been declared obsolete by the OEM, thus the same need to be upgraded. Considering the fact that the item is in the nature of upgradation on account of obsolesce and form part of the original scope of works, the same is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. However, the Petitioner is directed to submit appropriate documentary evidence substantiating the justification along with decapitalization of old asset at the time of truing-up of tariff for further consideration
6	Upgradation of DPU-4E Controller of SG & TG package of Unit # 4	565.27	0.00	The Petitioner has submitted that presently, SG TG controllers of Unit 4 are DPU 4E and BOP Controller is DPU 4F of max DNC Control System. Maintenance of the system is being done with available DPU 4E spares. OEM M/s BHEL has already declared that due to

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				component obsolescence DPU 4E has already been phased out with withdrawal of spares and service support for DPU 4E. Hence, SG TG package will require upgradation in 2022-23. Considering the fact that the item pertains to other generating station (Unit-4 of MTPS), the same is **not allowed**.
7	Upgradation of Coal Mill Feeder Control System of Unit # 4	150.00	0.00	The Petitioner has submitted that the existing feeder control system is relay based, which was supplied and erected in 2003-04. OEM M/s BHEL has already stopped service support for this control system of feeder long back. Hence, upgradation of the existing control system is necessary for smooth operation of the feeders in gravimetric mode. Considering the fact that the item pertains to other generating station (Unit-4 of MTPS), the same is **not allowed**.
8	MTPS U#4, SOx Nox analyzer system modification	8.36	0.00	For compliance of mandatory statutory guidelines of CPCB/WBPCB. Considering the fact that the item pertains to other generating station (Unit-4 of MTPS), the same is **not allowed.**
9	DC Drive for 8 kW DC Motor	0.84	0.00	The Petitioner has submitted that in S/R of CHP # 1 to 4 for starting / speed control of two no. 8 KW DC motor field current control card/trigger card are used but lot of trouble is occurred in this control system and non-availability of S/R hamper the coal feeding (stacking/reclaiming) process. To avoid non-availability of S/R, this system can be upgraded with DC drive system, initially upgradation will be done in one S/R out of two. Considering that the items are in the nature of O&M expenses and is lower than Rs. 2.00 lakh, the same is **not allowed**.
10	415 V Air Circuit Breaker	8.95	0.00	415V Air Circuit Breaker 800 Amp of C&S make is installed in Stacker cum Reclaimer PMCC of CHP U#5&6 which is the only one incomer breaker for whole PMCC Board of S/R. It is very vital for the availability Stacker cum Reclaimer. Total 01 (one) no. of this type of ACB is installed in S/R of CHP U#5&6. The operation of the breaker is multiple times on daily basis. So, it is deteriorating day by day. Procurement of total one (01) no. of this type of ACB is proposed which will be used for routine maintenance / overhauling of MCC Board without hampering the system. Considering the fact that the item pertains to other generating station (Unit-5&6 of MTPS), the same is **not allowed**.
11	In Line Magnetic Separator (ILMS)	26.00	0.00	The Petitioner has submitted that In Line Magnetic Separator (ILMS) installed in CHP U#1-4 are used for detecting and removing of ferrous material from uncrushed/crushed coal in running conveyor belts. It is very vital for safety of crushers, coal conveyor elts and also coal mills etc. Total 04 (four) nos. of ILMS are installed in CHP U#1-4. Procurement of total 01

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				(One) no. of this type of magnet for ILMS is proposed which will be used for routine maintenance/overhauling of ILMS without - hampering the system. Considering that the item in the nature of spares, the same is **not allowed.**
12	Crusher bearing Temperature Monitoring System for CHP #1-4	9.44	0.00	As the Petitioner has not provided any justification, the claim is **not allowed.**
13	Electric operated submersible Goodwin pump for CHP Unit#1 to 4	35.19	17.60	The Petitioner has submitted that considering the topography of MTPS, the ground level of CHP # 1-4 is very low, leading to submerging of the site office of CHP#1-4 and its breaker room in water during heavy rain. To avoid the same 06 nos of high discharge Electric operated submersible abrasive resistant pumps in the whole Coal Handling Plant of MTPS are required, out of which 2 are in the head of CHP#1-4. In this regard, it is noted that the claimed expenditure is for submersible pumps for CHP associated with unit 1 to 4 and is beyond original scope of works. However, considering the nature of works, in exercise of powers under Regulations 76 and 77 of the 2019, Tariff Regulations, apportioned claim (unit 2 & 3) is **allowed** under 26(1)(d) of 2019 Tariff Regulations and petitioner is directed to submit the relevant documents at the time of truing up of tariff for further consideration.
14	Gear Box Bucket wheel drive planatory reduction ratio 201.65:1, output torque 63700 N-m MAMC Type GPW 185 AC Motor rating Spares for CHP	66.08	0.00	The Petitioner has submitted that at CHP#1-4 Two (2) numbers of rail mounted stacker cum reclaimers S/r#1 & S/R#2 are provided for serving three parallel stockpiles, one on either side of the track rails and are a very important and inseparable equipment of coal conveying system. Therefore, its healthiness and availability is very necessary for CHP#1-4. After a long run, the S/R#2 drive gearbox was badly damaged and can no longer be repaired in any way. We had a gearbox for emergency and put it in S/R#2 and brought it to running condition. As, now there is no more gearbox, available, and also since this is a critical item, we must always keep a gearbox in stock according to OSU's Critical Spare list. Availability of unit will increase on the account of reduction of equipment outage/ Unit Outage. Considering the fact that the item in the nature of spares, the same is **not allowed.**
15	Crusher Rotor Shaft	16.88	0.00	The Petitioner has submitted that there are total three (03) Crushers in CHP 1-4 meant for crushing rail borne raw coal to desired size. These crushers work under hostile condition as it handle abrasive raw coal as well as small size stones and so wear and tear of its internals is much more. Performance of the crusher mainly depends upon the healthiness of its internals such as Rotor Shaft, Ring Hammers, Disc Centre, Disc End, Suspension bar etc. Last procured One (04) no. of New Crusher Rotor Shafts were put into service in CR#3. Rotor shaft of Crusher#1 is also partially damaged, it is being run with its excessive run-out which is 0.3mm (Allowable is .03mm) as a result it is running with high vibration. Keeping in view of these problem it is necessary to change as soon as possible. The

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				crusher rotor shaft suffers fatigue, wear& tear etc. Present Stock of the proposed item is NIL. Rotor shaft is the one of the most critical spares among the all spares used in CHP#1-4 so one more Shaft need to keep in our hand to meet the future emergency. Availability of unit will increase on the account of reduction of equipment outage/ Unit Outage. Considering the fact that the item in the nature of spares, the same is **not allowed.**
16	Portable vibration Analyzer	40.00	0.00	The Petitioner has submitted that Mejia TPS has only one no of Portable Vibration Analyzer cum balancer, attached along with EBA from the OEM. Portable vibration analyser is used for measuring vibration, analysing the collected data and balancing etc. of any rotating equipment. It has been felt that only one Vibration Analyzer is not sufficient for machine health analysing of so many equipment from U#1-8. Availability of unit will increase on the account of reduction of equipment outage / Unit Outage (MPC data). The Petitioner already has one portable analyser. In addition to that, to meet the requirements of all 8 units of MTPS the subject additional capital expenditure is claimed. However, the same could have been part of original scope of works and within cut-off date. Further, as the generating station is at fag end of useful life and the item is in the nature of spares / back up, the same is **not allowed.**
17	Infra Red Thermo-vision Camera	14.00	0.00	The Petitioner has submitted that the Mejia TPS has one IR Thermo-vision Camera for Thermography of different equipment in U#1-8, MTPS. The camera developed some major problems during March'2021 and became unusable. It was repaired but since then it is not working properly due to ageing, as it is more than 4 years old. IR Thermo Vision Camera/ Thermal Imager thus improves reliability of systems and sub systems of the plant by minimizing equipment's downtime through effective condition monitoring. Considering the large nos. of equipment from U#1-8 and large usage areas, it is pertinent to keep one set of IR Thermo Vision Camera/ Thermal Imager in standby to cater the services of such a big plant. Hence, it is prudent to procure another set of latest model IR Thermo Vision Camera/ Thermal Imager Availability of unit will increase on the account of reduction of equipment outage / Unit Outage (MPC data). Considering the fact that the item in the nature of spares, the same is **not allowed.**
18	Pinion for Coal mill of Unit #1-4.	40.78	0.00	As the Petitioner has not provided any justification, the claim is **not allowed.**
19	ELECON make Speed Reducer Gear Box for Coal Mills of U4	324.60	0.00	
20	Bronze liner for Coal mill BBD 4760	8.97	0.00	
21	Float cum Boost Charger (FCBC) with Battery	0.87	0.00	The Petitioner has submitted that this FCBC is used for power supply of EPABX exchange. Present stock position is nil and in case of damage/burning of this will

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				be hampered whole communication system. This was not purchased at regular interval, It was last purchased since long thus its moving average is low. We have proposed One (01) no. of this item in which one will be immediately utilized to replace malfunctioned one to cope up with any kind of unforeseen eventuality vis a vis maintain the stability of communication system. Considering the fact that the item in the nature of O&M expenses and is in the nature of spares / back up and also lower than Rs. 2.00 lakh, the same is **not allowed.**
22	Renovation of Old astra make Exchange at unit # 7 & 8 and making the single exchange in MTPS with new server base technology	150.81	0.00	The Petitioner has submitted that due to upgradation of technology upgradation and augmentation of the present EPABX System from PCM-TDM to latest server-based technology. it may create better and smooth telephone connectivity among all area of plant and colony and also may reduce the limitation of analog trunking system i.e only 4(Four) user can be connected MTPS U#7&8 to MTPS U#1-6 and vice-versa and make the communication much more reliable. At present EPABX System are connected through analog trunking. Same also has been advised in Technical Audit (14/07/21 - 17/07/2021) email dated 16/10/2021 to merge all the EPABX system to a single EPABX exchange and for purchase of telephone set. Considering the fact that the item pertains to other generating station (Unit-7&8 of MTPS), the same is **not allowed.**
23	Brush holder carrier assembly, Unit#4, MTPS	63.00	0.00	The Petitioner has submitted that MTPS U#4 tripped on rotor E/F on 20.07.21. On preliminary inspection in presence of OEM M/s BHEL, it was observed that the surface of the positive side slip ring had become roughened and Brush Holder Carrier Assembly had got damaged at some location. Considering the extent of damage reliability of the brush carrier assembly cannot be confirmed and the OEM has advised to plan for replacement at the earliest. Therefore, it is proposed to purchase one no of brush holder carrier assembly for Generator Unit#4, so that it can be utilised on arrival to replace the existing one. Considering the fact that the item pertains to other generating station (Unit-4 of MTPS), the same is **not allowed.**
24	Battery Bank, 220 V - YHP 25	1.20	0.00	The Petitioner has submitted that the existing battery bank is in service for more than 20 years. The condition of the bank is deteriorating and replacement of the entire bank is required for reliability of the DC system. Considering the fact that the item is in the nature of O&M and is also lower than Rs. 2.00 lakh, the same is **not allowed.**
25	Energy efficient LT motors (90 kW and above)	25.00	0.00	The Petitioner has submitted that as per guidelines of IEC / IS /National Mission for Energy Efficiency, it is intended that the lower energy efficient the motors are upgraded in a phased manner. Accordingly, few of the LT Motors in Unit-4 are proposed to be replaced. It is noted that the item is in the nature of O&M and also

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				pertain to other generating station (Unit-4 of MTPS). Accordingly, the same is **not allowed.**
26	Retrofit of GRP numerical relays replacing old electromechanical relays	67.00	33.50	The Petitioner has submitted that presently most of the relays in the (GRP) Generator Relay Protection Panel of Unit #1 & 2 are of Electromechanical, which are very old and are getting obsolete as per OEM as there is a great problem for maintenance due to non-availability of spares & no service support from OEM. With ageing there is also a risk of the reliability and accuracy of most of the old GRP relays. The malfunctioning of these old & obsolete GRP relays cannot be predicted even though these relays are being annually tested & maintenance done during every unit overhauling. With progress in relay technology, Numerical relays have evolved with many useful features such as multi functionality, display of measured parameters and fault data recording and later viewing & analysing after downloading, which are not only user friendly but also very versatile. They also provide fast response and improved protection of Generator. It is observed that the item is upgradation in nature on account of obsolescence and for Unit-1 and 2 of the generating station. Considering that the item is necessary for successful and sustenance of operation of the generating station, the portion allocable to Unit-2 (excluding Unit-1, for which the Petitioner has been allowed Special Allowance under Regulation 28 of 2019 Tariff Regulations) is **allowed** under Regulation 25(2)(c) of 2019 Tariff Regulations. However, the Petitioner, is directed to submit appropriate documentary evidence substantiating the justification along with decapitalization of old asset at the time of truing-up of tariff for further consideration.
27	Procurement of Spare Numerical relays for GRP of U#3, MTPS	16.50	0.00	The Petitioner has submitted that the age old electromechanical and static relays of MTPS U#3 were upgraded to Numerical relays in May 2021 for better protection co-ordination, system stability, reliability and better fault analysis. At present, there is a requirement of spare numerical relays against the newly installed and commissioned numerical relays in GRP of Unit-3 to meet exigency need and to maintain minimum spare quantity for future. Hence, it is felt prudent to procure spare numerical relays for GRP of U-3 of MTPS on OEM basis for compatibility and 1:1 replacement. Considering the fact that the item is in the nature of spares, the same is **not allowed.**
28	CEP Motor	55.00	0.00	The Petitioner has submitted that condensate extraction pump (CEP) is used to pump out condensate from hot-well to Deaerator. Two Nos of CEP motor, are installed in Unit 4 (210 MW), MTPS. These pumps are driven by vertical mounted motor of rating 550 kW at voltage level 6.6 kV in Unit 4, MTPS. Out of these, one no of motor remains continuously running and another one remains as standby in case of unit synchronised with grid. The availability of CEP is directly linked with generation. MTPS unit 4 is getting older and probability of failure of its motor cannot be ruled out. In case of failure of any

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				one CEP motor, generation of the unit could be affected adversely, so it is prudent to keep one CEP Motor as spare. Considering the fact that the item in the nature of spares and does not pertain to the generating station, the same is **not allowed.**
29	Battery Bank, 26 V - YHP 27	30.00	0.00	The Petitioner has submitted that 24 V system of U#4 consists of 04 nos of battery banks of YHP27 operating in parallel. They provide the necessary DC backup to DCS (MAXDNA) in the event of total power failure. All commands, feedbacks, C&I logics of DCS (MAXDNA) operate on 24 V system. Failure of unit 24 V may be catastrophic for man-machine safety. Since these banks have crossed their service life, we have undertaken the replacement of these banks in a phased manner. Accordingly, 02 nos of YHP27 battery banks were replaced in 2021-22 v 02 nos of YHP-27 battery banks in U-4. Considering the fact that the item in the nature of O&M and also not pertaining to the generating station (Unit-4 of MTPS), the same is **not allowed.**
30	LED Lights	221.83	0.00	The Petitioner has submitted that to achieve better energy efficiency and reduction of auxiliary power consumption, one-time replacement of all conventional lights with LED lights is being done in MTPS. All the sodium vapour/mercury vapour/conventional bulbs and tube lights will be replaced with outdoor and indoor type LED lamps. Considering the fact that the item in the nature of O&M and the Petitioner has been benefitted in terms of the reduced auxiliary energy consumption, the same is **not allowed.**
31	Upgradation of Boiler Lifts of Unit#1,2&3	85.00	0.00	The Petitioner has submitted that civil work payment for 02 units work. Part payment for all three units against electrical contract. Considering the fact that the justification provided is inadequate and also Unit-1 is availing Special Allowance, the item is **not allowed.**
32	Upgradation of Battery chargers	85.00	0.00	The Petitioner has submitted that upgradation work for 02 units is planned during current FY for 3rd unit will be carried out in next year. Considering the fact that the Petitioner has provided inadequate justification, the item is **not allowed.**
33	Procurement of Generator Stator winding bar	4.80	0.00	The Petitioner has submitted that for maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. Considering the fact that the item in the nature of spares, the same is **not allowed.**
34	210 MW Generator Slip Ring for Unit#1, 2 & 3, MTPS, DVC	35.00	0.00	The Petitioner has submitted that Generator slip ring is required in static excitation system in MTPS Unit#1,2&3. Submitting the status of generator slip ring of Unit-1,2&3, it is submitted that one set of sip ring should be kept ready before taking up the machining job. Considering the above 2 nos. of Generator Slip rings have been procured in February 2021. In view of the fact that the item is in the nature of spare, the same is **not allowed.**

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
35	Replacement of existing Hydrogen Gas drier system of U#1,2&3	14.00	9.33	The Petitioner has submitted that since inception refrigerant type H2 gas drier system with CFC compressor, operating with R-12 refrigerant is in use for Unit No. 1, 2 & 3. The H2 gas drier system extracts the moisture from the H2 gas circulating inside the generator casing. The moisture content inside Generator casing has to be maintained within its recommended value, beyond which moisture deteriorates Generator's performance and useful life. In order to achieve satisfactory performance of the H2 gas drier system, we need to top up refrigerant R-12 gas as and when required. Since refrigerant R-12 as now-a-days is being considered as one of the Greenhouse gases which contain Ozone depleting substances and R-12 refrigerant and R-12 based compressor is not available in the market. Therefore, it is felt prudent to replace R-12 refrigerant by eco-friendly refrigerant. In view of above we intend to phase-out the CFC compressors operating with R-12 refrigerant installed in our existing system. The expenditure is on account of obsolescence and is pertains to units 1, 2 and 3, however, the special allowance is allowed for unit 1. Accordingly, the apportioned claim pertaining to unit 2 and 3 is **allowed** under Regulation 25(2)(c) of 2019 Tariff Regulations. However, the Petitioner, is directed to submit appropriate documentary evidence substantiating the justification along with decapitalization of old asset at the time of truing-up of tariff for further consideration.
36	Replacement of Gen. AVR U#1,2,3	98.00	0.00	The Petitioner has submitted that end of predefined useful life as per manufacturer experience (MPC vetting). Earlier one order was placed on M/S BHEL for Upgradation of existing static excitation system with DVR (digital voltage regulator) system for two units of U#1,2&3 of MTPS, DVC (each 210 MW Unit). Against this order, Upgradation work in Unit#3 has already been completed. Upgradation of another unit will be done during overhauling, material for which is already received at site. Therefore, we need to procure another set of material for upgradation of existing AVR system of third unit for improving the reliability of the system. Considering the fact that the item is being procured for Unit-1, for which Special Allowance is availed, the claim is **not allowed.**
37	Procurement of LT motors (>90 KW)	40.00	0.00	The Petitioner has submitted that for replacement of the existing IE2 motors with more energy efficient IE3 motors as per GOI guidelines published in National Mission for Energy Efficiency. Considering the fact that the Petitioner has projected the expenditure for availing energy efficiency measures for its own benefit but not furnished any information regarding units for which the claim is associated. Further, Special Allowance for unit 1 is allowed. Hence, the claim is **not allowed.**

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38	VFD for CEP	250.00	0.00	The Petitioner has submitted that Auxiliary power consumption of Unit no#1-4 is much higher than the CERC benchmark. To reduce auxiliary power consumption detailed study was done and it was decided to install VFD system in various equipment. As a part of this, one VFD was installed at one of the CEP motors of unit#1, MTPS. Performance of the VFD system is satisfactory and substantial reduction in power consumption was achieved. Now, it is proposed to install two number VFD in CEP motors, one each for unit#2, and 3, MTPS. It is also noted that the Petitioner has claimed Rs. 100 lakh towards this item in 2023 – 24. In this regard, it is noted that the item is for availing energy efficiency measures for its own benefit (during starting), and beyond original scope of works and also not due to obsolesce of technology. Accordingly, the same is **not allowed.**
39	LED Lights	783.00	0.00	The Petitioner has submitted that to achieve better energy efficiency and reduction of auxiliary power consumption, one-time replacement of all conventional lights with LED lights is being done in MTPS. All the sodium vapour/mercury vapour/conventional bulbs and tube lights will be replaced with outdoor and indoor type LED lamps. Considering that the item in the nature of O&M expenses and the Petitioner is benefitted of the same in terms of reduced auxiliary energy consumption, the same is **not allowed.**
40	Implementation of DG Synchronising Scheme for Unit #1,2,3	20.00	0.00	The Petitioner has submitted that the existing Emergency MCC (EMCC) is charged through SST in normal condition. In case of power failure, DG set take start in AUTO due to EMCC under voltage. DG set breaker at EMCC is closed from unit control desk and EMCC is charged. When SST is normalised, DG set breaker is tripped and EMCC is made dead. Then EMCC normal breaker at Reserve board is closed and EMCC is charged. Isolator corresponding to EMCC normal supply breaker at EMCC is always kept in ON condition. To ensure interruption-free transfer from EMCC to SST, Synchronization scheme of DG set is required. Considering the fact that the items beyond original scope of works and also in the nature of O&M expenses, the same is **not allowed.**
41	140 MT In- motion Weigh Bridge	38.00	0.00	The Petitioner has submitted that Mejia TPS have two numbers of Avery Make In-motion weigh bridges of capacity 100 MT (In-motion WB#1) & 120 MT (In-motion WB#2) for weighment of BOBRN Coal rakes received at Mejia TPS. For unloading of rakes, there are three nos. of track hoppers i.e. TH #1 which is meant for Unit# 1 to 4, TH#2 for Unit# 5 & 6 and TH#3 for Unit# 7 & 8. Gross weight of all the incoming rakes placed at TH#1 & TH#2 are being done commonly at In-motion WB #1. And Gross Weight of all the incoming rakes placed at TH#3 are being done at WB#2 separately. As per the layout of the Railway tracks at MTPS for TH#1 closed loop is

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				existing before In-motion WB#1, thereby tare weight of empty rakes placed at TH#1 is only possible. But tare weight of rakes placed at TH#2 & TH#3 are not possible, as the exit point lies on the different track in which Weight Bridge is not present. Based on the recommendation during joint inspection by representatives from Mejia TPS, DVC HQ and M/s Avery India td to identify a suitable location for installation of new In-motion weigh bridge so that tare weight of all the empty rakes can be done it was been decided to install the new In-motion weigh bridge (140 MT) at a suitable location at the newly constructed common exit railway line which is in front of WBL S&T Building. This newly constructed 140 MT In-motion Weigh Bridge will be integrated with the existing 100 MT & 120 MT In-motion Weigh Bridge so that gross/tare/net weight of all rakes at any weight bridge can be obtained. Considering the fact that the claimed item is not pertaining to the generating station, , the same is **not allowed**
42	Printers & Photocopier	28.60	0.00	Efficiency will increase (MPC Report/Recommendation). Considering the fact that the item in the nature of O&M expenses, the same is **not allowed.**
43	Flue Gas Analyser	9.21	0.00	Internal Audit Report. Efficiency will increase (MPC Report/Recommendation). Considering the inadequate justification and also the claim appears to be in the nature of O&M expenses, the same is **not allowed.**
44	Portable Digital Temperature Indicator	0.25	0.00	Internal Audit Report. Efficiency will increase (MPC Report/Recommendation). Considering the inadequate justification and also the item in the nature of O&M expenses and is lower than Rs. 2.00 lakh, the same is **not allowed.**
45	Air Conditioner	2.87	0.00	As the Petitioner has not provided any justification, the claim is **not allowed.**
46	Ceiling Fan, Exhaust Fan, Industrial Fan Etc.	5.23	0.00	
47	Battery Charger for RIPH	2.50	1.67	The Battery chargers installed for charging of battery bank & maintaining the system voltage for operation & protection of the switchgears at U#1-3 RIPH are of utmost importance. The Battery Charger has been in service for more than twenty years. Its various components have started developing problems due to ageing & have become prone to failure. The failure / malfunction of the chargers may damage the battery bank also. So, it is required to replace the battery charger of RIPH. Considering the fact that the claimed item is on account of replacement, the apportioned claim pertaining to Unit-2 & 3 (excluding Unit-1, for which the Petitioner has been allowed Special Allowance under Regulation 28 of 2019 Tariff Regulations) is **allowed** under Regulation 25(2)(a) of 2019 Tariff Regulations. The Petitioner is directed to submit the decapitalization of old asset at the time of truing up of tariff for further consideration.

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
48	6.6 kV CW Pump Motor	180.00	0.00	There are three nos. of CW Pump Motors in each unit of MTPS U1-3. Considering the fact that the Petitioner has not provided sufficient justification, thus, the claim is **not allowed.**
49	N-Pit Pump for DM Plant	22.00	3.95	The Petitioner has submitted that the N-Pit Pump handles acid/alkaline water of DM Plant and thus subjected to high wear and tear and become unserviceable. Replacement of N-Pit pump reduces down time of overhauling, as such it ensures availability and reliability for sustained generation of DM Plant. Moreover, as per standard Guarantee & Warrantee is 18 months from the date of delivery and 12 months from the date of commissioning whichever occurs earlier which had already exhausted for installed pumps and same cannot be recovered from OEM. In this regard, it is noted that subject claim pertaining 8 units of MTPS and the claimed item is on account of replacement. Accordingly, the apportioned claim pertaining to Unit-2 & 3 is **allowed** under Regulation 25(2)(a) of 2019 Tariff Regulations. The Petitioner is directed to submit the decapitalization of old asset at the time of truing up of tariff for further consideration.
50	C.W. Pump Complete/ Impeller/Shafts (U#1-3)	171.69	114.46	The Petitioner has submitted that as per OEM Guidelines for maintenance of CW pump, pump has to be overhauled after every 2 years (20000 hrs running hours). Replacement of complete CW Bowl assembly reduces down time of overhauling, as such it ensures availability and reliability for sustained generation from the unit. Moreover, as per standard Guarantee & Warrantee is 18 months from the date of delivery and 12 months from the date of commissioning whichever occurs earlier. It had already exhausted its standard Guarantee period and same cannot be recovered from OEM. Considering the fact that the claimed item is on account of replacement, the apportioned claim pertaining to Unit-2 & 3 (excluding Unit-1, for which the Petitioner has been allowed Special Allowance under Regulation 28 of 2019 Tariff Regulations) is **allowed** under Regulation 25(2)(a) of 2019 Tariff Regulations. The Petitioner is directed to submit the decapitalization of old asset at the time of truing up of tariff for further consideration.
51	C.W. Pump Complete/ Impeller/Shafts (U#4).	41.14	0.00	or maintenance of CW pump, pump has to be overhauled after every 2 years (20000 hrs running hours). Replacement of complete CW Bowl assembly reduces down time of overhauling, as such it ensures availability and reliability for sustained generation from the unit. Moreover, as per standard Guarantee & Warrantee is 18 months from the date of delivery and 12 months from the date of commissioning whichever occurs earlier. It had already exhausted its standard Guarantee period and same cannot be recovered from OEM. As the item does not pertain to the generating station; the claim is **not allowed.**

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52	Gear box for Clarifier Bridge	14.01	0.00	The Petitioner has submitted that the water requirement of plant is fed through Clarifier bridge after clarifllocuation for use as clear water which further converted to filter water and then DM Water. These bridges are in service since inception. Availability of the same is very much required for continuous operation of Plant. Due to normal wear & tear Gear Box became unserviceable. Hence adhering to the standard practices of modular spares replacement & suggestive useful life achievement for reliable trouble-free operation, its procurement was proposed and will be replaced, if required for reliable operation & minimize equipment outage downtime. Moreover, as per standard Guarantee & Warrantee is 18 months from the date of delivery and 12 months from the date of commissioning whichever occurs earlier which had already exhausted for installed Gear boxes. Considering the fact that the item in the nature of spares, the same is **not allowed.**
53	Butterfly Valves Complete Assembly - 400 NB (Cooling Tower, U#5-6)	2.00	0.00	The Petitioner has submitted that these valves are installed since COD of the unit. These valves play important role in cooling of CW water for condenser. Due to normal wear & tear these valves became unserviceable. Hence adhering to the standard practices of modular spares replacement & suggestive useful life achievement for reliable trouble-free operation, its procurement was proposed and will be replaced, if required for reliable operation. Moreover, as per standard Guarantee & Warrantee is 18 months from the date of delivery and 12 months from the date of commissioning whichever occurs earlier which had already exhausted for installed valves. As the item does not pertain to the generating station (pertains to Unit 5-6), the claim is **not allowed.**
54	Chlorine absorption Tower	34.00	22.67	The Petitioner has submitted that in MTPS U#1-3 CW Chlorination plant, there is no absorption tower. As per recommendation of Safety audit and safety of men, these has been proposed for procurement. It is noted that the claim is beyond original scope of works and the special allowances allowed for unit 1. However, considering the nature of works, in exercise of powers under regulations 76 and 77 of 2019, Tariff Regulations, the apportioned claim pertaining to Unit-2 & 3 (excluding Unit-1, for which the Petitioner has been allowed Special Allowance under Regulation 28 of 2019 Tariff Regulations) is **allowed** under Regulation 26(1)(d) of 2019 Tariff Regulations. However, the Petitioner is directed to submit relevant documents along with the decapitalization of old assets, at the time of truing up of tariff.
55	Non- Sparking Tools and Hand Tools	1.57	0.00	The Petitioner has submitted that for the compliance of the office order issued by the Chief Engineer OS & U, HQs, DVC for using only non-sparking hand tools made of brass or gun metal towards Safety measures and for safe operation in Hydrogen gas feeding area of U#1-8. The claim pertains to all units of MTPS. As the item is in the nature of O&M expenses and is lower than Rs. 2.00 lakh, the same is **not allowed.**

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
56	Revival of existing inactive drains along the MGR and Fuel oil pump house	200.00	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**
57	Display Board with Installation	20.06	0.00	
58	LED TV with fixing	5.38	0.00	
59	Cooler cum water purifier	1.89	0.00	The Petitioner has submitted that efficiency will increase. Considering the fact that the Petitioner has not provided sufficient justification and otherwise also, the claim lower than Rs. 2.00 lakh, the item is **not allowed.**
60	Split type ACs for C&I card preservation-3 no	1.20	0.00	
61	SF6 Gas analyser	16.00	2.87	The Petitioner has submitted that SF6 Gas Analyser is special type of monitoring/measuring tool and is used in analyzing the healthiness of the arc interrupting & insulating medium of the high voltage circuit breakers. Procurement of this item will help us to ascertain the healthiness of SF6 gas and will also help us in understanding the behaviour / characteristic of the SF6 gas circuit breakers thus any abnormality of these high voltage circuit breakers. Efficiency will increase. In the absence of any detail, it is assumed that the item is for use for the Mejia TPS. Further, the claimed item could have been part of original scope of works. However, considering that the item is necessary for successful and sustenance of operation of the generating station, in exercise of powers under regulations 76 and 77 of 2019, Tariff Regulations, the apportioned claim pertaining to Unit-2 & 3 (excluding Unit-1, for which the Petitioner has been allowed Special Allowance under Regulation 28 of 2019 Tariff Regulations) is **allowed** under Regulation 26(1)(d) of 2019 Tariff Regulations. However, the Petitioner is directed submit relevant documents along with the decapitalization of old assets, at the time of truing up of tariff.
62	ABT metering system for U-1-6	13.75	0.00	The Petitioner has submitted that close monitoring of generation against D.C through online ABT metering system will lead to improvement of output generation. Efficiency of the system will be improved as desk engineers will be able track the DC and actual output generation on the screen in front of them. The claimed expenditure is beyond original scope of works and pertains to unit 1 to 6 of MTPS and also unit 2 is about to complete its useful life and benefits the generating station only. Accordingly, the claim is **not allowed.**
63	Supply, erection & commissioning of 220 kV SF6 CB	117.07	0.00	The Petitioner has submitted that at the present scenario only one grounding tr. is in service and other Ge. Tr is being put into service as and when required. After procurement of a new Gr. Tr. both Tr. will be put into service. Efficiency will increase (MPC Report). Considering the fact that the Petitioner has not provided relevant justification, thus, the claim is **not allowed.**
64	Upgradation of existing 220 kV control panel to SAS	250.60	78.55	The Petitioner has submitted that the expenditure is required for upgradation of existing 220 kV Switchyard Control Panel to Substation Automation System (SAS)

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				for 220 kV Switchyard, U#I-VI, SWS, MTPS, DVC. Efficiency will increase. It is observed that the item is for Unit-1 to 6 (1340 MW) of the Mejia TPS. Considering the fact that the item is replacement of old asset and upgradation in nature, the portion allocable to Unit-2 and 3 (2 x 210 MW, excluding Unit-1, for which the Petitioner has been allowed Special Allowance under Regulation 28 of 2019 Tariff Regulations) is **allowed** under Regulation 25(2)(a) of 2019 Tariff Regulations. The Petitioner is directed to submit relevant documents along with decapitalization of old assets at the time of truing-up of tariff.
65	Numerical Bus Differential Scheme for Sw. yard unit # (1-4)	156.11	78.06	The Petitioner has submitted that to achieve more efficient & reliable Bus differential and LBB protection scheme, it is felt prudent to go for complete replacement of existing Bus Differential scheme with a better and reliable protection scheme that requires minimum manual intervention and have fast, selective and reliable operation. Numerical relay-based scheme shall facilitate quick isolation of faulty section so that fault feeding time through important equipment like Generator, Transformer can be reduced. It is observed that the item is for Unit-1 to 4 (4 x 210 MW) of the Mejia TPS. Considering that the item is replacement of old asset and necessary for successful and sustenance of operation of the generating station, the portion allocable to Unit-2 and 3 (2 x 210 MW, excluding Unit-1, for which the Petitioner has been allowed Special Allowance under Regulation 28 of 2019 Tariff Regulations) is **allowed** under Regulation 25(2)(a) of 2019 Tariff Regulations. The Petitioner is directed to submit relevant documents along with decapitalization of old assets at the time of truing-up of tariff.
66	DSM Complied ABT Metering system for MTPS unit 1 to 6	127.57	0.00	The Petitioner has submitted that supply, installation and commissioning of ABT metering equipment to implement online ABT monitoring system with Deviation Settlement for 25 nos. of bays at 220 kV switchyard control room and U#1-6 BTG control rooms at MTPS, DVC. Efficiency of the system will be improved as desk engineers will be able track the DC and actual output generation on the screen in front of them. The claimed expenditure is beyond the original scope of works and pertaining to unit 1 to 6 of MTPS and is for the benefit for the generating station only. Accordingly, the claim is **not allowed.**
67	Grounding transformer	8.39	0.00	The Petitioner has submitted that supply of 01 no. of 33 kV/415 V, 100 kVA, ZNyn11 Grounding cum Auxiliary transformer for SWS U#1-4, MTPS, DVC. At the present scenario only one grounding tr. is in service and other Ge. Tr is being put into service as and when required. After procurement of a new Gr. Tr. both Tr. will be put into service. Considering the fact that the item in the nature of spares, the same is **not allowed.**
68	Offline Moisture Measurement kit	7.86	0.00	The Petitioner has submitted that efficiency will increase (MPC Report).

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				Considering the fact that the Petitioner has not provided sufficient justification, thus, the claim is **not allowed.**
69	Complete IPT fully bladed rotor assembly along with Hydraulic Turning Gear of 210 MW DVC Mejia	151.65	0.00	The Petitioner has submitted that during the recent Capital Overhauling along with RLA of Unit no #4, hydraulic turning gear found heavily eroded and due to non-availability of the same it could not be replaced with new one. BHEL RLA team recommended to replace the same at the next available opportunity. The old IP rotor is to be send to BHEL Haridwar for their rectification. Life of the IP Turbine will be increased. Availability of Turbine will be increase. Efficiency of IPT will be better. It is noted that the Petitioner has claimed Rs. 1700.00 lakh towards subject item in 2023 – 24. However, as the subject item does not pertain to the generating station, the claim is **not allowed.**
70	Gas Trap Assembly	3.60	0.00	The Petitioner has submitted that these traps are in service since inception of the units and there is no stock for the same. So, considering the service life it is felt prudent to procure at least 01 no. of gas trap assembly to handle any exigency requirement. Life of Gas Trap will be improved. Availability of Generator will be increase. Reliability of system will be increase. Considering the fact that the item in the nature of spare, the same is **not allowed.**
71	Complete Seal oil Vapour Exhauster Fan	5.19	0.00	The Petitioner has submitted that these fans are in service since inception of the units and there is no stock for the same. So, considering the service life it is felt prudent to procure at least 01 no. of exhauster fan to handle any exigency requirement. Life of seal oil system may be improved. Availability of Turbine will be increase. Reliability of system will be increase. Considering the fact that the item in the nature of spares, the same is **not allowed.**
72	Complete HP Turbine Module Assembly	202.50	0.00	The Petitioner has submitted that during last Capital overhauling along with RLA of Unit # 2,3 & 4, ovality along with high inter-stage radial clearance were found in HPT inner casing and high inter stage clearance of HPT rotor was also found. Ovality also found in outer casing. Due to high clearance and ovality the performance of HP Turbine getting affected. Replacement of casing fins, rotor inter stage fins along with machining and complete correction in casing ovality at site are not possible due to want of different infrastructure and machining facility for which module has to be sent to BHEL Haridwar workshop. It will take considerable time and not possible within the schedule of Capital overhauling. Otherwise schedule of overhauling will be severely affected as well as generation during that period will be hampered. Life of the HP Turbine will be increased. Availability of Turbine will be increase. Efficiency of HPT will be better. It is noted that the Petitioner has claimed Rs. 2200.00 lakh towards subject item in 2023 – 24. However, the claim is in the nature of R&M and the Petitioner has claimed Special Allowance for Unit-1 and 2. In addition, Unit-3 will complete its useful of 25 years in September

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				2024. Further, Unit-4 does not pertain to instant generating station. In view of the above, the claim is **not allowed.**
73	Complete Assembly of Emergency Stop Valve	65.26	0.00	The Petitioner has submitted that during the last Capital Overhauling along with RLA of Unit no #4 in month of Dec'21, one number of ESV is replaced with new one due to damage of seating area. At present stock is NIL and to overcome similar seating area problem during upcoming COH of U#1 to be scheduled in FY22-23, we want to keep stock at least one set of ESV. Life of the ESV will be increased. Availability will be increase. Considering the fact that the item is in the nature of spares and also for Unit-1, for which Special Allowance is claimed, the same is **not allowed.**
74	BD Isolating Valve- 210MW	48.38	0.00	The Petitioner has submitted that to cope up any exigency on account of HPBP system at least minimum stock to be kept as emergency stock as all the valves are running since inception and almost completed the service life of the valves. Life of BD valve will be improved. Availability of system will be increase. Reliability of system will be increase. Considering the fact that the item in the nature of spares, the same is **not allowed.**
75	Auxiliary Hoist Rope Drum Assembly of TG EOT Crane(125/30T)	14.34	0.00	The Petitioner has submitted that recommendation for changing the spares (trip committee, equipment outage, technical audit, OEM Report). For Healthiness of the EOT crane. Availability of EOT crane will be increase. Reliability of EOT crane will be increase. Considering the fact that the item in the nature of spares, the same is **not allowed.**
	Sub-Total (B)	**6,229.59**	**408.75**	
C	**Substation Equipment**			
	Sub-Total (C)	**0.00**	**0.00**	
D	**Other Assets**			
	Sub-Total (D)	**0.00**	**0.00**	
	Total for 2022-23	**6229.59**	**408.75**	
	2023-24			
A	**Building**			
	Sub-Total (A)	**0.00**	**0.00**	
B	**Plant and Machinery**			
1	Spares for Scaffolding	80.00	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**
2	Various Testing Instrument	30.00	0.00	
3	DC Drive for 8 KW DC Motor	9.00	0.00	
4	Crusher Rotor Shaft	35.79	0.00	The Petitioner has submitted that availability of unit will increase on the account of reduction of equipment outage/ Unit Outage. Considering the fact that the Petitioner has not provided sufficient justification, thus, the claim is **not allowed.**
5	Rotor assemblies of radial PA fan	433.44	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**
6	Bronze liner for Coal mill BBD 4760	80.71	0.00	
7	Battery Bank, 26 V - YHP	60.00	0.00	

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
	27			
8	Air Conditioners for Machine/Server rooms	8.00	0.00	
9	LED Lights	122.00	0.00	
10	Upgradation of Battery chargers	45.00	0.00	The Petitioner has submitted that upgradation work for 02 units is planned during current year, for 3rd unit will be carried out in next year. Considering the fact that the Petitioner is already availing Special Allowance for two Units, the claim is **not allowed.**
11	Procurement of Generator Stator winding bar	43.20	0.00	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. Considering the fact that the item in the nature of spares, the same is **not allowed.**
12	New Generator Stator for MTPS Unit #1 to 3	3,500.00	0.00	The Petitioner has submitted that PO is already placed. It is noted that the Petitioner has not provided sufficient justification for the claimed item. Further, the claim is in the nature of R&M and the Petitioner has claimed Special Allowance for Unit-1 and 2. In addition, Unit-3 will complete its useful of 25 years in September 2024. Accordingly, the claim is **not allowed.**
13	Procurement of Areca controllers for ESP of Unit#1,2 &3	24.00	0.00	The Petitioner has submitted that end of predefined useful life as per manufacturer/experience (MPC vetting). Considering the fact that the Petitioner has not provided sufficient justification, and also no document has been submitted to consider the same, thus, the claim is **not allowed.**
14	VFD for CEP	100.00	0.00	The Petitioner has submitted that the item is for APC reduction. In this regard, it is noted that the justification provided is insufficient and also noted that the Petitioner has claimed Rs. 250 lakh in 2022-23 towards this additional capital along with some justification, however, the same was not allowed, as it is for availing energy efficiency measures for its own benefit, which benefit majorly on low load operations, and is beyond original scope of works and also not on the obsolescence of technology. Accordingly, the claim is **not allowed.**
15	6.6 kV Siemens VCB to replace NGEF Circuit Breaker	30.00	10.00	The Petitioner has submitted that the item is for retrofitting of remaining NGEF SF6 Bkr with VCB. Considering the fact that the item is upgradation and replacement of old asset on account of obsolesce, the apportioned claim pertaining to Unit-3 (1 x 210 MW, excluding Unit-1 & 2, for which the Petitioner has been allowed Special Allowance under Regulation 28 of 2019 Tariff Regulations) is **allowed** under Regulation 25(2)(c) of 2019 Tariff Regulations. The Petitioner is directed submit the relevant documents and decapitalization of old asset at the time of truing up of tariff.
16	Printers & Photocopier	26.00	0.00	As the Petitioner has not provided any justification, the claims are **not allowed.**
17	Different measuring instrument	8.08	0.00	
18	Battery Charger	12.82	0.00	
19	Multimeter, Clamp meter, megger and other T&P	10.72	0.00	
20	6.6 kV 1250 A and 1600 A	149.62	0.00	

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
	VCB			
21	Relays	22.09	0.00	
22	Ceiling Fan, Exhaust Fan, Industrial Fan Etc.	96.00	0.00	
23	Sp. tools /Loose tools and testing equipment & calibrators for Unit-3	13.24	0.00	
24	Retrofitting of Numerical Relays in place of Electromagnetic relays	6.62	0.00	
25	6.6KV Breaker retrofitting	11.99	0.00	
26	C.W. Pump Complete/ Impeller/Shafts (U#1-3)	251.29	0.00	
27	C.W. Pump Complete/ Impeller/ Shafts (U#4).	370.29	0.00	
28	Gear box for Clarifier Bridge	4.58	0.00	
29	Revival of existing inactive drains along the MGR and Fuel oil pump house	56.23	0.00	
30	Display Board with Installation	20.06	1.80	The Petitioner has submitted that by adopting effective safety awareness method by using new technologies to achieve target of zero incident so that no loss of man-days and IR issues as well as statutory complications occurs. Considering the fact that the subject claim is towards improving safety measures and also pertains to all 8 units of MTPS, but the special allowance is allowed for unit 1 and 2, the apportioned amount pertaining to unit 3 is **allowed** under Regulation 26(1)(d) of 2019 Tariff Regulations, however, the Petitioner is directed submit relevant documents along with the decapitalization of old assets, at the time of truing up of tariff.
31	LED TV with fixing	5.38	0.48	
32	Cooler cum water purifier	3.78	0.00	The Petitioner has submitted that efficiency will increase. Considering the fact that the Petitioner has not provided sufficient justification, the items are **not allowed.**
33	Split type ACs for C&I card preservation-3 no	1.20	0.00	
34	Supply, erection & commissioning of 220 kV SF6 CB	54.98	0.00	The Petitioner has submitted that the new C.B has improved electrical specification. So, efficiency of the equipment will be increased. Considering the fact that the Petitioner has not provided sufficient justification, the claim is **not allowed.**
35	Numerical Bus Differential Scheme for Sw. yard unit # (1-4)	10.62	2.66	The Petitioner has submitted to achieve more efficient & reliable Bus differential and LBB protection scheme, it is felt prudent to go for complete replacement of existing Bus Differential scheme with a better and reliable protection scheme that requires minimum manual intervention and have fast, selective and reliable operation. Numerical relay-based scheme shall facilitate quick isolation of faulty section so that fault feeding time through important equipment like Generator, Transformer can be reduced. Numerical relay-based scheme shall facilitate quick isolation of faulty section so that fault feeding time through important equipment like Generator, Transformer can be reduced.

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				It is observed that the expenditure is related to Unit-1 to 4. Considering the fact that the item is upgradation and replacement of old asset on account of obsolesce, the apportioned claim pertaining to Unit-3 (1 x 210 MW, excluding Unit-1 & 2, for which the Petitioner has been allowed Special Allowance under Regulation 28 of 2019 Tariff Regulations and unit 4 – another plant) is **allowed** under Regulation 25(2)(c) of 2019 Tariff Regulations. The Petitioner is directed submit the relevant documents and decapitalization of old asset at the time of truing up.
36	Complete IPT fully bladed rotor assembly along with Hydraulic Turning Gear of 210 MW DVC Mejia	1,700.00	0.00	The Petitioner has submitted that during the recent Capital Overhauling along with RLA of Unit no #4, hydraulic turning gear found heavily eroded and due to non-availability of the same it could not be replaced with new one. BHEL RLA team recommended to replace the same at the next available opportunity. The old IP rotor is to be send to BHEL Haridwar for their rectification. Life of the IP Turbine will be increased. Availability of Turbine will be increase. Efficiency of IPT will be better. It is noted that the Petitioner has claimed Rs. 151.65 lakh towards subject item in 2022-23. However, considering the fact that the item does not relate to the generating station, the claim is **not allowed.**
37	Complete HP Turbine Module Assembly	2,200.00	0.00	The Petitioner has submitted that during last Capital overhauling along with RLA of Unit #2,3 & 4, ovality along with high inter-stage radial clearance were found in HPT inner casing and high inter stage clearance of HPT rotor was also found. Ovality also found in outer casing. Due to high clearance and ovality the performance of HP Turbine getting affected. Replacement of casing fins, rotor inter-stage fins along with machining and complete correction in casing ovality at site are not possible due to want of different infrastructure and machining facility for which module has to be sent to BHEL Haridwar workshop. It will take considerable time and not possible within the schedule of Capital overhauling. Otherwise schedule of overhauling will be severely affected as well as generation during that period will be hampered. Life of the HP Turbine will be increased. Availability of Turbine will be increase. Efficiency of HPT will be better. It is noted that the Petitioner has claimed Rs. 202.50 lakh towards subject item in 2022–23. However, the claim is in the nature of R&M and the Petitioner has claimed Special Allowance for Unit-1 and 2. In addition, Unit-3 will complete its useful of 25 years in September 2024. In view of the above, the claim is **not allowed.**
38	IV & CV CASING	50.00	0.00	The Petitioner has submitted that efficiency will increase. During RLA study of U#4, cracks were found in casing of IPSV & IPCV. M/s BHEL recommended to replace it at next available opportunity. IV & CV casing is in service since inception of the unit & hence considering the service life it is felt prudent to procure at least bare minimum qty. Life of the casing will be increased. Availability of the casing will be increased. Reliability of the casing will be increased.

S. No.	Assets/Works	Claimed	Allowed	Justification submitted by the Petitioner and Decision on admissibility/ Non-admissibility
				Considering the fact that the item does not relate to the generating station, the claim is **not allowed.**
39	Complete Valve assembly of IP stop Valve-210 MW	12.20	0.00	The Petitioner has submitted that end of predefined useful life as per manufacturer/Experience. Since IPSV is in service since inception of the unit & hence considering the service life it is felt prudent to procure at least bare minimum qty. For Healthiness of the IPSV. Life of the IPSV will be increased. Availability will be increase. Reliability of IPSV will be increase. It is noted that the subject claim pertains to unit 1, 2, 3 & 4 of MTPS and item is of R & M nature and the Petitioner has claimed Special Allowance for unit 1 and 2, after their useful life. Further, the claimed item is also is in the nature of spares. Accordingly, the claim is **not allowed.**
40	Hydraulic Master Puller	1.18	0.00	The Petitioner has submitted that it is a special purpose tool. This will be required during Pulling the different bearings, couplings etc of various sizes in different critical areas. Considering the fact that the item is of the nature of O&M expenses, the same is **not allowed**.
	Sub-Total (B)	**9,700.09**	**14.94**	
C	**Substation Equipment**			
	Sub-Total (C)	**0.00**	**0.00**	
D	**Other Assets**			
	Sub-Total (D)	**0.00**	**0.00**	
	Total for 2023-24	**9700.09**	**14.94**	
	Total for the period 2019-24	**27748.21**	**4479.04**	

229. While dealing with the additional capital expenditure items claimed by the Petitioner for 2019-24 tariff period, it is observed that while some of the items claimed pertain not only to MTPS Unit 1,2 & 3, but also to other units of MTPS, some of the items claimed pertain to the Unit(s) for which the Petitioner is already claiming Special Allowance under Regulation 28 of 2019 Tariff Regulations. Accordingly, the Petitioner is directed to submit its additional capital expenditure claims clearly mentioning the total expenditure and apportionment to the subject generating station (keeping in view the Unit(s) for which Special Allowance is claimed) and also mention the unit for which the claim pertains, at the time of truing up of tariff.

230. Based on the above discussion, the Head of Work / Equipment-wise total additional capital expenditure allowed for the period 2019-24 is summarised below:

(Rs. in lakh)

Head of Work / Equipment	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Building	(-)23.07	0.00	0.00	0.00	0.00	**(-)23.07**
Plant and Machinery	591.58	0.00	3449.06	408.75	14.94	**4464.33**
Substation Equipment	31.45	0.00	0.00	0.00	0.00	**31.45**
Other Assets	6.34	0.00	0.00	0.00	0.00	**6.34**
Total Additional Capital Expenditure allowed	**606.30**	**0.00**	**3449.06**	**408.75**	**14.94**	**4479.04**
Additional Capital Expenditure eligible for normal RoE	606.30	0.00	3449.06	365.61	12.66	4433.62
Additional Capital Expenditure eligible for WAROI	**0.00**	**0.00**	**0.00**	**43.13**	**2.28**	**45.42**

Flue Gas Desulphurization (FGD)

231. The Petitioner has sought liberty to approach the Commission, with a separate petition for determination of supplementary tariff with respect to the implementation of Flue Gas Desulphurization (FGD) unit, in compliance to the revised emission standards in terms of Regulation 14(2) read with Regulation 29 of the 2019 Tariff Regulations. It is however, noticed that the Petitioner had filed Petition Nos. 461/MP/2019 and 462/MP/2019, for approval of additional expenditure on installation of various Emission Control Systems at Mejia TPS (Units 1 to 6) and for Mejia TPS (Units 7 & 8) respectively, in compliance of MOEF&CC notification dated 7.12.2015 and the Commission by a common order dated 20.9.2021 had disposed of the said petitions, with certain observations. Accordingly, the claim of the Petitioner for additional expenditure on emission control system shall be guided by the observations in the said order dated 20.9.2021.

Discharge of Liabilities

232. The Petitioner has submitted that the projected additional capital expenditure submitted in Form-9, are on accrual basis, and un-discharged liabilities, if any, will be submitted on actual basis, at the time of truing up of tariff. Accordingly, no discharge of liabilities has been considered for the period 2019-24. However, the Petitioner is directed to submit the item-wise and year wise reconciliation statement, showing details of such liabilities as per balance sheet for the 2019-24 tariff period, duly

certified by auditor and also furnish the break-up of discharges included in the liabilities discharged within the original scope of work or other than within the original scope of work of the project, at the time of truing-up of tariff.

De-capitalization

233. While submitting the revised list of the additional capital expenditure items vide affidavit dated 13.7.2022, against some of the items, the Petitioner has either stated that the original value of the old capitalised asset is not available, as the item was installed since commissioning of the generating station or not submitted any details regarding the original value for the purpose of considering item-wise de-capitalization. Further, the assets claimed in revised Form 9A vide affidavit dated 13.7.2022 are in variance with decapitalization of assets submitted earlier vide affidavit dated 17.6.2020, item wise mapping could not be achieved. Accordingly, in the absence of updated information furnished by the Petitioner w.r.t decapitalization, we are constrained to consider assumed de-capitalisation w.r.t the items which have been allowed in this order. Accordingly, cumulative depreciation in respect of assumed deletion has been computed on the basis of apportionment. In this regard, the Petitioner is directed to submit the updated asset-wise and year-wise de-capitalisation list duly linked with the item-wise additional capital expenditure claimed in the truing-up petition for 2019-24 tariff period.

Assumed Deletions

234. In line with the methodology, adopted by the Commission in its orders, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff provided that the capitalization of the said asset, is followed by de-capitalization of the gross value of the old asset. However, in certain cases, where the de-capitalization is proposed to be affected during the future years to the year of

capitalization of the new asset, the de-capitalization of the old asset for the purpose of tariff, is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as “Assumed Deletion”.

235. Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e., escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. In the instant petition, year of COD of the generating station is 1999-2000. We have considered the value of asset under consideration as on COD as 100 and escalated it @ 5% till the year during which additional capital expenditure is claimed against replacement of the same. The amount claimed for additional capital expenditure against the asset is multiplied by the derived ratio from above two values i.e., value in year of COD divided by value in capitalized year. Accordingly, based on the additional capital expenditure allowed, the year-wise assumed deletion is worked out as follows:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Additional Capital Expenditure allowed	606.30	0.00	3449.06	408.75	14.94
Assumed Deletions worked out	222.09	0.00	1145.96	129.34	4.50

236. Based on the above, the additional capital expenditure allowed for the period 2019-24 is summarised as under:

Additional Capital Expenditure eligible for normal ROE

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Admitted additions in projected additional capital expenditure (A)	606.30	0.00	3449.06	365.61	12.66
Less: De-capitalization considered for assets* (B)	222.09	0.00	1145.96	115.69	3.81
Less: Un-discharged Liabilities (C)	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities (against allowed assets / works) (D)	0.00	0.00	0.00	0.00	0.00
Net projected additional capital expenditure allowed (on cash basis) (E) = (A-B-C+D)	384.21	0.00	2303.10	249.92	8.85

**Assumed Deletion*

Additional Capital Expenditure eligible for WAROI ROE

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Admitted additions in projected additional capital expenditure (A)	0.00	0.00	0.00	43.13	2.28
Less: De-capitalization considered for assets* (B)	0.00	0.00	0.00	13.65	0.69
Less: Un-discharged Liabilities (C)	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities (against allowed assets / works) (D)	0.00	0.00	0.00	0.00	0.00
Net projected additional capital expenditure allowed (on cash basis) (E) = (A-B-C+D)	0.00	0.00	0.00	29.49	1.59

Exclusions

237. The Petitioner has not claimed exclusions for the 2019-24 tariff period.

Capital cost allowed for the period 2019-24

238. Accordingly, the capital cost approved for the generating station for the period 2019-24 is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	162434.95	162819.16	162819.16	165122.25	165401.66
Add: Addition during the year / period (B)	606.30	0.00	3449.06	408.75	14.94
Less: De-capitalization during the year /period* (C)	222.09	0.00	1145.96	129.34	4.50
Less: Undischarged liabilities (D)	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year /period (E)	0.00	0.00	0.00	0.00	0.00
Closing Gross Block (F) = (A+B-C-D+E)	**162819.16**	**162819.16**	**165122.25**	**165401.66**	**165412.10**
Average Gross Block (G) = (A+F)/2	162627.06	162819.16	163970.71	165261.96	165406.88

**Assumed Deletion*

Debt Equity Ratio

239. Regulations 18 and 72 of the 2019 Tariff Regulations provides as follows:

"18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. 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.*

(4) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization 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 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 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."

xx

72. Special Provisions relating to Damodar Valley Corporation: *(1) Subject to clause (2), this Regulation shall apply to determination of tariff of the projects owned by Damodar Valley Corporation (DVC).*

(2) The following special provisions shall apply for determination of tariff of the projects owned by DVC:

(ii) Debt Equity Ratio: *The debt equity ratio of all projects of DVC commissioned prior to 01.01.1992 shall be 50:50 and that of the projects commissioned thereafter shall be 70:30."*

240. The gross loan and equity amounting to Rs.113704.48 lakh and Rs. 48730.48 lakh respectively as on 31.3.2019, as determined by this order, for the period 2014-19 above, has been considered as gross loan and equity as on 1.4.2019, in terms of

Regulation 18 of the 2019 Tariff Regulations. The debt-equity ratio of 70:30 has been applied on year-wise admitted additional capital expenditure for arriving at the additions to loan and equity during each year of the period 2019-24. Accordingly, the debt: equity is worked out as under:

(Rs. in lakh)

	Capital Cost as on 1.4.2019	**%**	**Net Additional Capital Expenditure for the period 2019-24**	**%**	**Capital Cost as on 31.4.2024**	**%**
Debt	113704.48	70%	2084.00	70%	115788.48	70%
Equity	48730.48	30%	893.14	30%	49623.62	30%
Total	**162434.95**	**100%**	**2977.14**	**100%**	**165412.10**	**100%**

<u>Return on Equity</u>

241. Regulations 30 and Regulation 31 of the 2019 Tariff Regulations provide as follows:

> *"30. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.*
>
> *(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:*
>
> *Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system*
>
> *Provided further that:*
>
> *i. In case of a new project, the rate of return on equity shall be reduced by 1.00% 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) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*
>
> *ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;*
>
> *iii. in case of a thermal generating station, with effect from 1.4.2020:*
>
> *a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
>
> *b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.

31. Tax on Return on Equity. (1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations 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 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 paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

Rate of pre-tax return on equity = Base rate / (1-t)

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

Illustration-

(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:

Rate of return on equity = 15.50/(1-0.2155) = 19.758%

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

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;
(b) Estimated Advance Tax for the year on above is Rs 240 crore;
(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;
(d) Rate of return on equity = 15.50/ (1-0.24) = 20.395%.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed-up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 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 customers, as the case may be, on year to year basis."

242. DVPCA has submitted that though the Petitioner has considered the effective tax rate of 21.5488% for computation of Return on Equity (ROE) for the 2019-24 tariff period, the same is premature and needs to be considered, based on the actual tax

paid in terms of Regulation 31 of the 2019 Tariff Regulations. As regards the Petitioner's claim for ROE at weighted average rate of interest, on actual loan portfolio, as per Form-1(I) of the petition, DVPCA has submitted that the Petitioner has neither submitted any details of the assets nor any justification for claiming the additional capitalisation after the cut-of date and beyond the original scope of work. In response, the Petitioner has prayed for computation of ROE without considering the income tax rates for the 2019-24 tariff period. However, the Petitioner has craved leave of the Commission to claim the income tax liability, if any, during any year of the 2019-24 tariff period in future. The Petitioner has submitted that it has furnished details of assets along with justification in Form-9 of the petition, for the 2019-24 tariff period.

243. The matter has been considered. The Petitioner has not been paying any income tax in any of the financial years of the 2014-19 tariff period. Also, considering the submissions of the Petitioner above, the effective tax rate has been considered as 'Nil' for the purpose of grossing up of ROE and the rate of ROE has been considered as 15.50% for the 2019-24 tariff period. Accordingly, ROE is worked out and allowed as follows:

(a) Return on Equity at Normal Rate

(Rs. in lakh)

		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross Normative Equity – Opening	A	48730.48	48845.74	48845.74	49536.67	49611.64
Less: Adjustment to equity in terms of first proviso to Regulation 18(3) of 2019 Tariff Regulations	B					0.00
Normative Equity – Opening	C=(A-B)	48730.48	48845.74	48845.74	49536.67	49611.64
Addition to Equity due to additional capital expenditure	D	115.26	0.00	690.93	74.98	2.65
Normative Equity – Closing	E=(C+D)	48845.74	48845.74	49536.67	49611.64	49614.29
Average Normative Equity	F=Average (C, E)	48788.11	48845.74	49191.20	49574.15	49612.97
Return on Equity (Base	G	15.500%	15.500%	15.500%	15.500%	15.500%

		2019-20	2020-21	2021-22	2022-23	2023-24
Rate) (%)						
Effective Tax Rate for the year (%)	H	0.000%	0.000%	0.000%	0.000%	0.000%
Rate of Return on Equity (Pre-Tax) (%)	I=G/(1-H)	15.500%	15.500%	15.500%	15.500%	15.500%
Return on Equity (Pre-Tax) annualized	**J=(FxI)**	**7562.16**	**7571.09**	**7624.64**	**7683.99**	**7690.01**

(b) Return on Equity at WAROI

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Equity – Opening	A	0.00	0.00	0.00	0.00	8.85
Less: Adjustment to equity in terms of first proviso to Regulation 18(3) of 2019 Tariff Regulations	B	-	-	--	-	0.00
Normative Equity – Opening	C=(A-B)	0.00	0.00	0.00	0.00	8.85
Addition to Equity due to additional capital expenditure	D	0.00	0.00	0.00	8.85	0.48
Normative Equity – Closing	E=(C+D)	0.00	0.00	0.00	8.85	9.32
Average Normative Equity	F=Average (C,E)	0.00	0.00	0.00	4.42	9.08
Return on Equity (Base Rate) (%)	G	6.912%	6.912%	6.912%	6.912%	6.912%
Effective Tax Rate for the year (%)	H	0.000%	0.000%	0.000%	0.000%	0.000%
Rate of Return on Equity (Pre-Tax) (%)	I=G/(1-H)	6.912%	6.912%	6.912%	6.912%	6.912%
Return on Equity (Pre-Tax) annualized	**J=(FxI)**	**0.00**	**0.00**	**0.00**	**0.31**	**0.63**

Total Return on Equity allowed

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Return on Equity at Normal Rate	A	7562.16	7571.09	7624.64	7683.99	7690.01
Return on Equity at WAROI	B	0.00	0.00	0.00	0.31	0.63
Total Return on Equity allowed	**C=(A+B)**	**7562.16**	**7571.09**	**7624.64**	**7684.30**	**7690.64**

244. The Petitioner is directed to furnish the report submitted by RLDC with regard to the commissioning of Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre along with relevant information regarding the achievement of 'Ramp Rate' for the purpose of compliance to provisos (i) and (iii) of Regulation 30(2) of the

2019 Tariff Regulations, at the time of truing-up of tariff.

Interest on Loan

245. Regulation 32 of the 2019 Tariff Regulations provides as follows:

*"32. Interest on loan capital**:** (1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.*

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-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 capitalized:

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

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

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

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

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

a. Gross normative loan amounting to Rs.113704.48 lakh on 31.3.2019 as considered in this order for the period 2014-19 has been considered as on 1.4.2019;

b. Cumulative repayment of Rs.113598.35 lakh as on 31.3.2019 as considered in this order for the period 2014-19 has been considered as on 1.4.2019;

c. Accordingly, the net normative opening loan as on 1.4.2019 works out to Rs. 106.13 lakh;

d. Addition to normative loan on account of additional capital expenditure approved above has been considered;

e. The repayments for the respective years of the 2019-24 tariff period, has been considered equal to the depreciation allowed for that year. Further, repayments have been adjusted for de-capitalization of assets considered for the purpose of tariff;

f. Weighted average rate of interest on loan, as allowed for 2018-19 has been considered for the entire 2019-24 tariff period;

g. Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest, considered as above.

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

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan	A	113704.48	113973.42	113973.42	115585.59	115781.17
Cumulative repayment of loan up to previous year	B	113598.35	113872.66	113973.42	114207.64	115781.17
Net Loan Opening	C=(A-B)	106.13	100.76	0.00	1377.95	0.00
Addition due to additional capital expenditure	D	268.94	0.00	1612.17	195.58	7.31
Repayment of loan during the year	E	429.78	100.76	1036.39	1664.07	10.46
Repayment adjustment on account of de-capitalization	F	155.47	0.00	802.17	90.54	3.15
Net repayment of the loan during the year	G=(E-F)	274.31	100.76	234.22	1573.53	7.31
Net Loan Closing	H=(C+D-G)	100.76	0.00	1377.95	0.00	0.00
Average Loan	I=Average (C, H)	103.45	50.38	688.97	688.97	0.00
Weighted Average Rate of Interest of loan	J	6.9122%	6.9122%	6.9122%	6.9122%	6.9122%
Interest on Loan	**K = (I x J)**	**7.15**	**3.48**	**47.62**	**47.62**	**0.00**

248. Further, the Petitioner has claimed share of savings due to restructuring of loan from REC for the 2019-24 tariff period, on projection basis, as per Regulation 61(1) of the 2019 Tariff Regulations. In this regard, it is observed that as per the Petitioner's submission vide affidavit dated 13.7.2022, REC loan has not been considered as actual loan portfolio, for the purpose of computation of WAROI, as the loan pertains to T&D system. Therefore, the Petitioner's claim of its share of savings due to loan

restructuring does not deserve any merit for consideration.

Depreciation

249. Regulations 33 and 72(2)(iii) of the 2019 Tariff Regulations provides as follows:

*"33. Depreciation**:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. 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:*

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 a 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 the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

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

Provided also 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 unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or 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-I** 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 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 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 five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

72. Special Provisions relating to Damodar Valley Corporation: *(1) Subject to clause (2), this Regulation shall apply to determination of tariff of the projects owned by Damodar Valley Corporation (DVC).*

(2) The following special provisions shall apply for determination of tariff of the projects owned by DVC:

xxx

(iii) Depreciation: *The depreciation rate stipulated by the Comptroller and Auditor General of India in terms of section 40 of the Damodar Valley Corporation Act, 1948 shall be applied for computation of depreciation of projects of DVC."*

250. Depreciation has been worked out considering the admitted capital cost of Rs.162434.95 lakh as on 1.4.2019 and the cumulative depreciation of Rs.144437.89 lakh as on 31.3.2019, as determined in this order for the period 2014-19. Accordingly, in terms of Regulation 33 and Regulation 72(2)(iii) of the 2019 Tariff Regulations, depreciation has been worked out and allowed as follows:

(Rs. in lakh)

		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Average Capital Cost	A	162627.06	162819.16	163970.71	165261.96	165406.88
Value of freehold land	B	1662.98	1662.98	1662.98	1662.98	1662.98
Aggregated Depreciable Value	C= [(A-B) x90%]	144867.67	145040.56	146076.95	147239.08	147369.51
Remaining Aggregate Depreciable value at the beginning of the year	D=[(C)-(Cumulative Depreciation of Previous year)]	429.78	370.38	1036.39	2182.96	244.05
Balance useful life at the beginning of the year	E	3.75	2.75	1.75	0.75	0.00
Weighted Average Rate of Depreciation (WAROD)	F	6.3122%	6.3122%	6.3122%	6.3122%	6.3122%
Depreciation (annualized)	**G = [Min (D, A x F)]**	**429.78**	**370.38**	**1036.39**	**2182.96**	**244.05**

		2019-20	2020-21	2021-22	2022-23	2023-24
Cumulative depreciation (at the end of the year)	H= [(Cumulative Depreciation of Previous year) +(G)]	144867.67	145040.56	146076.95	147239.08	147369.51
Less: Depreciation adjustment on account of de-capitalization	I	197.39	0.00	1020.83	113.62	4.00
Cumulative depreciation at the end of the year	J = (H - I)	**144670.18**	**145040.56**	**145056.12**	**147125.46**	**147365.50**

Operation & Maintenance Expenses

251. Regulation 35(1)(1) of the 2019 Tariff Regulations provides for the following O&M expenses in respect of the generating station:

	2019-20	2020-21	2021-22	2022-23	2023-24
210 MW (lakh/MW)	32.96	34.12	35.13	36.56	37.84

252. Accordingly, the normative O&M expenses claimed by the Petitioner under Regulation 35(1) (1) of the 2019 Tariff Regulations is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
20764.80	21495.60	22245.30	23032.80	23839.20

253. As the Petitioner has claimed the normative O&M expenses in accordance with Regulation 35(1)(1) of the 2019 Tariff Regulations, the same is allowed.

Water Charges

254. The first proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides as follows:

> *"35(1)(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:*
>
> *Provided that water charges shall be allowed based on water consumption depending upon type of plant and type of cooling water system, subject to prudence check. The details regarding the same shall be furnished along with the petition;*

255. In terms of the first proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations, the Petitioner has considered normative water consumption of 3.5

m3/MWh, generation as per NAPAF and water charges rate for 2019-20 at Rs.10.64 per KL with an annual escalation at the rate of 10% and claimed as follows:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1751.71	1921.61	2113.77	2325.15	2564.67

256. DVPCA has submitted that the weighted average water charge rate for the period 2014-19 was 5.69 (Rs/Kl)[3] and as against the water charge rate of Rs.10.64/KL for 2019-20 considered by the Petitioner and thereafter escalated yearly at the rate of 10% for the remaining years of the 2019-24 tariff period. The Objector, while pointing out that the Petitioner has not furnished the relevant OM dated 23.7.2019, has submitted that the increase sought is more than 85%, which is unreasonable and therefore, the Commission may undertake prudence check, for working out the allowable water charge rate, such that, it is comparable with the rates prevailing in other States, and that there may not be any cross-subsidisation of other activities of the Petitioner. The Objector has also submitted that an arbitrary escalation of 10% claimed may be rejected as there is neither any basis for the same nor has been provided in the 2019 Tariff Regulations. In response, the Petitioner has submitted that the water charges of the generating stations, with effect from 1.4.2019 and escalation thereof, are governed by water tariff, as notified by the Petitioner *vide* OM dated 23.7.2019.

257. The matter has been considered. It is observed that the Petitioner has submitted OM dated 23.7.2019, as part of the additional information and accordingly, the same has been considered. In view of the above, and considering the MOEF&CC norms, generation as per NAPAF and water charges rate of Rs 10.64/KL and annual escalation of 10% thereof, as per OM dated 23.7.2019, the water charges for the period 2019-24 is allowed as under:

	Units	2019-20	2020-21	2021-22	2022-23	2023-24
Projected Gross Generation @ 85% load factor	MU	4703.83	4690.98	4690.98	4690.98	4703.83
Normative Specific Water Consumption as per MoEF&CC norm	Cubic Meter/MWh	3.50	3.50	3.50	3.50	3.50
Normative Water Consumption as per MoEF&CC norm	Cubic Meter	16463412	16418430	16418430	16418430	16463412
Rate of Water Charges based on 2018-19 approved rates	Rs. / Cubic Meter	10.64	11.70	12.87	14.16	15.58
Total Normative Water Charges	**(in Rs. lakh)**	**1751.71**	**1921.61**	**2113.77**	**2325.15**	**2564.67**

258. The Petitioner is however, directed to submit detailed justification for the high rate of the water charges along with comparison in rate from alternative sources at the time of truing-up.

Security Expenses

259. The second proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides as under:

"35(1)(6) The Water, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately and after prudence check:

xxxx:

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses…"

260. The Petitioner has claimed projected security expenses, as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1540.90	1608.70	1679.49	1753.40	1830.55

261. It is observed that the Petitioner has considered Rs.1475.95 lakh towards security charges for the year 2018-19 and escalated the same at the rate of 4.40% per annum and claimed projected security expenses for the 2019-24 tariff period. The Petitioner has also submitted that escalation of Security expenses has been proposed to accommodate the year-on-year growth of salary expenditure and associated CISF activities, that are primarily governed by CISF Rules. It is observed that the actual

security expenses for 2018-19 is Rs. 1441.02 lakh and the same is considered along with an annual escalation rate of 4.40%, as proposed by the Petitioner. Accordingly, the projected security expenses allowed are as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1504.43	1570.63	1639.75	1711.90	1787.23

262. The Petitioner shall, at the time of truing up of tariff, furnish the actual security expenses incurred along with the justification and the same shall be assessed in terms of Regulation 35(1)(6) of the 2019 Tariff Regulations.

Capital spares

263. The third proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides as under:

> *"35(1)(6) The Water, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately and after prudence check:*
>
> *xxx;*
>
> *Provided also 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 as per Regulation 17 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 or Special Allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization.*
> *xxxxx"*

264. The Petitioner has not claimed any 'capital spares' for 2019-24 tariff period. Accordingly, in terms of the last proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations, the Petitioner is directed to submit the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same. The Petitioner shall also substantiate that the capital spares has not been funded through compensatory allowance or Special Allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization.

265. Based on the above discussion, the total O&M expenses allowed is

summarised as follows:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Installed Capacity (MW)		630.00	630.00	630.00	630.00	630.00
O&M Expenses under Regulation 35(1) in Rs lakh / MW		32.96	34.12	35.31	36.56	37.84
Total O&M Expenses (A)	Claimed	20764.80	21495.60	22245.30	23032.80	23839.20
	Allowed	**20764.80**	**21495.60**	**22245.30**	**23032.80**	**23839.20**
Water Charges (B)	Claimed	1751.71	1921.61	2113.77	2325.15	2564.67
	Allowed	**1751.71**	**1921.61**	**2113.77**	**2325.15**	**2564.67**
Security Expenses (C)	Claimed	1540.90	1608.70	1679.49	1753.40	1830.55
	Allowed	**1504.43**	**1570.63**	**1639.75**	**1711.90**	**1787.23**
Capital Spares (D)	Claimed	0.00	0.00	0.00	0.00	0.00
	Allowed	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total O&M Expenses as allowed (including Water Charges and Security Expenses) (D=A+B+C)	Claimed	24057.41	25025.92	26038.57	27111.35	28234.42
	Allowed	**24020.94**	**24987.85**	**25998.82**	**27069.85**	**28191.10**

Special Allowance

266. Regulation 28 of the 2019 Tariff Regulations provides as follows:

"28. Special Allowance for Coal-based/Lignite fired Thermal Generating station

(1) In case of coal-based/lignite fired thermal generating stations, the generating company, instead of availing renovation and modernization (R&M) may opt to avail a 'special allowance' in accordance with the norms specified in this Regulation, as compensation for meeting the requirement of expenses including renovation and modernisation beyond the useful life of the generating station or a unit thereof and in such an event, upward revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the Special Allowance shall be included in the annual fixed cost:

Provided that such option shall not be available for a generating station or unit thereof for which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms;

Provided further that special allowance shall also be available for a generating station which has availed the Special Allowance during the tariff period 2009-14 or 2014-19 as applicable from the date of completion of the useful life.

(2) The Special Allowance admissible to a generating station shall be @ Rs 9.5 lakh per MW per year for the tariff period 2019-24.

(3) In the event of a generating station availing Special Allowance, the expenditure incurred upon or utilized from Special Allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission as and when directed.

The Special Allowance allowed under this Regulation shall be transferred to a separate fund for utilization towards Renovation & Modernisation activities, for which detailed methodology shall be issued separately."

267. The Special Allowance claimed by the Petitioner in terms of the above regulation is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
0.00	0.00	1995.00	1995.00	3990.00

268. In line with the Regulation 28 of the 2019, Tariff Regulations, the Special Allowance allowed for the generating station is as under:

(Rs. In lakh)

Units	Capacity in MW	Date of Commercial Operation	Year of completion of useful life of 25 years	2019-20	2020-21	2021-22	2022-23	2023-24
Unit – 1	210.00	1-Mar-96	2020-21	0.00	0.00	1995.00	1995.00	1995.00
Unit – 2	210.00	1-Mar-98	2022-23	0.00	0.00	0.00	0.00	1995.00
Unit – 3	210.00	1-Sep-99	2024-25	0.00	0.00	0.00	0.00	0.00
Total				**0.00**	**0.00**	**1995.00**	**1995.00**	**3990.00**

<u>Operational Norms</u>

269. The provisions of Regulation 49 of the 2019 Tariff Regulations providing for operational norms for the generating station are as follows:

> ***"Norms of operation for thermal generating station***
>
> *49. The norms of operation as given hereunder shall apply to thermal generating stations:*
>
> ***(A) Normative Annual Plant Availability Factor (NAPAF)***
>
> *(a) For all thermal generating stations, except those covered under clauses (b), (c), (d), & (e) - 85%;*
>
> *xxx*
>
> ***(C) Gross Station Heat Rate***
>
> ***(a) Existing Thermal Generating Stations***
>
> *(i) For existing Coal-based Thermal Generating Stations, other than those covered under clauses (ii) and (iii) below:*

200/210/250 MW Sets	***500 MW Sets (Sub-critical)***
2,430kCal/kWh	*2,390kCal/kWh*

> XX
>
> ***(D)*** *Secondary Fuel Oil Consumption*
>
> *(a) For Coal-based generating stations other than at (c) below: 0.50 ml/kwh*
>
> *xx*
>
> *(E) Auxiliary Energy Consumption**:***
>
> *(a) For Coal-based generating stations except at (b) below:*

S. No.	*Generating Station*	*With Natural Draft cooling tower or without cooling tower*
(i)	*200 MW series*	*8.50%*
(ii)	*300 MW series and above*	
	Steam driven boiler feed pumps	*5.75%*
	Electrically driven boiler feed pumps	*8.00%*

Provided that for thermal generating stations with induced draft cooling towers and where tube type coal mill is used, the norms shall be further increased by 0.5% and 0.8% respectively:

Provided further that Additional Auxiliary Energy Consumption as follows shall be allowed for plants with Dry Cooling Systems:

Type of Dry Cooling System	*(% of gross generation)*
Direct cooling air cooled condensers with mechanical draft fans	*1.0%*
Indirect cooling system employing jet condensers with pressure recovery turbine and natural draft tower	*0.5%*

270. The operational norms claimed by the Petitioner are as follows:

Parameters	Value
Normative Annual Plant Availability Factor (NAPAF) (%)	85
Gross Station Heat Rate (kcal/kwh)	2430
Auxiliary Power Consumption (%)	9.80
Specific Oil Consumption (ml/kwh)	0.50

271. The Petitioner has submitted that the Plant Availability Factor has been adversely affected due to coal shortage during the period 2017-19. It has also prayed for grant of liberty, in case similar instances occur during the period 2019-22, the to claim relaxation of PAF in exercise of the power under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations, on account of unforeseen event or uncontrollable factors. We are not inclined to allow the prayer of the Petitioner, at this stage. Therefore, the NAPAF of 85% has been allowed in terms of the said regulations. It is observed that the Petitioner has submitted that the generating station is of 210 MW unit with induced draft and tube type coal mills. Accordingly, the AEC of 9.8% and specific oil consumption is 0.5 ml/kWh is allowed. Based on this, the operational norms as claimed by the Petitioner is allowed in terms of the 2019 Tariff Regulations.

Interest on Working Capital

272. Regulation 34(1)(a) of the 2019 Tariff Regulations provide as under:

"34. Interest on Working Capital: (1) The working capital shall cover:

(a) For Coal-based/lignite-fired thermal generating stations:
(i) Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20 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) Advance payment for 30 days towards cost of coal or lignite and limestone 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 including water charges and security exes;
(v) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and
(vi) Operation and maintenance expenses, including water charges and security expenses, for one month."

273. Clauses (3) and (4) of Regulation 34(3) of the 2019 Tariff Regulations provide as under:

"(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 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:

Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 224.

(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."

274. Regulation 3(7) of the 2019 Tariff Regulations defines Bank Rate as under:

"In these regulations, unless the context otherwise requires: - Bank Rate" means the one-year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;"

275. The Petitioner has claimed the weighted average GCV and Cost of coal as 3558.55 kCal / kg and Rs. 3912.20/kg, respectively, and those of Secondary oil as 10000 kCal/kg and Rs. 47263.46/kg. Accordingly, the Interest on working capital as claimed by the Petitioner is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Coal / Lignite for Stock and Generation (A)	17417.22	17369.64	17369.64	17369.64	17417.22
Cost of oil for 2 months (B)	185.27	184.76	184.76	184.76	185.27
O&M –Expenses - 1 month (C)	2004.78	2085.49	2169.88	2259.28	2352.87
Maintenance– Spares - 20% of O&M (D)	4811.48	5005.18	5207.71	5422.27	5646.88
Receivables – 45 days (E)	21482.97	21696.18	22130.59	22540.02	23198.45
Total Working Capital (F) = (A+B+C+D+E)	**45901.72**	**46341.25**	**47062.58**	**47775.96**	**48800.70**
Rate of Interest (G)	12.05%	12.05%	12.05%	12.05%	12.05%
Total Interest on Working capital (H) = (F)x(G)	**5531.16**	**5584.12**	**5671.04**	**5757.00**	**5880.48**

a) Fuel Cost and Cost of Liquid Stock for Working Capital

276. The Petitioner has claimed the following fuel components as part of working capital, based on the price and GCV of coal 'as received' and secondary fuel oil for the preceding three months of October 2018 to December 2018, as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for 50 days	17417.22	17369.64	17369.64	17369.64	17417.22
Cost of Secondary fuel oil 2 months	185.27	184.76	184.76	184.76	185.27

277. Regulation 34(2) of the 2019 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 third quarter of preceding financial year of financial year for which tariff is to be determined. Regulation 43(2) of the 2019 Tariff Regulations provides as under:

> *"(2) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following foae:*
>
> ***(a)*** *For coal based and lignite fired stations:*
> *ECR = {(SHR – SFC x CVSF) x LPPF / CVPF+SFC x LPSFi + LC x LPL} x 100 / (100UX)*
>
> *(b) For gas and liquid fuel based stations:*
> *ECR = SHR x LPPF x 100 / {(CVPF) x (100 – AUX)}*
> *Where,*
> *AUX = Normative auxiliary energy consumption in percentage.*
> *CVPF = (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations less 85 Kcal/Kg on account of variation during storage at generating station;*
> *(b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based*

sIions;
(c) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio:
CVSF = Calorific value of secondary fuel, in kCal per ml;
ECR = Energy charge rate, in Rupees per kWh sent out;
SHR = Gross station heat rate, in kCal per kWh;
LC = Normative limestone consumption in kg per kWh;
LPL = Weighted average landed cost of limestone in Rupees per kg;
LPPF = Weighted average landed fuel cost of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month. (In case of blending of fuel from different sources, the weighted average landed fuel cost of primary fuel shall be arrived in proportion to blending ratio);
SFC= Normative specific fuel oil consumption, in ml per kWh;
LPSFi= Weighted Average Landed Fuel Cost of Secondary Fuel in Rs./ ml during the month:
Provided that energy charge rate for a gas or liquid fuel based station shall be adjusted for open cycle operation based on certification of Member Secretary of respective Regional Power Committee during the month."

278. In line with the above Regulations, a margin of 85 kCal/kg in weighted average Gross Calorific value (GCV) of coal on 'as received' for coal based generating stations on account of variation during storage at the generating station has been considered for computation of IWC. Accordingly, the fuel components of working capital have been worked out and allowed as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Cost of coal for 20 Days Corresponding to NAPAF	7020.37	7020.37	7020.37	7020.37	7020.37
Cost of coal for generation for 30 days Corresponding to NAPAF	10530.55	10530.55	10530.55	10530.55	10530.55
Cost of Secondary fuel oil 2 months Corresponding to NAPAF	185.27	184.76	184.76	184.76	185.27

279. It is pertinent to mention that the computation of working capital is based on the GCV and fuel cost, as furnished for the third quarter of the year 2018-19. However, Regulation 34(C)(2) of the 2019 Tariff regulations provides that the cost of fuel shall be based on the landed fuel cost (taking into account normative transit and handling losses, in terms of Regulation 39 of these Regulations) by the generating station and GCV of fuel, as per actual weighted average for the third quarter of the preceding financial year of financial year, for which tariff is to be determined. In terms of this, the fuel cost has been computed above, based on the actual data to be furnished by

Petitioner, for each year, at the time of truing-of tariff.

b) Energy Charge Rate for Working Capital

280. The Petitioner has claimed Energy Charge Rate (ECR) of Rs.2.982/kWh based on the weighted average price and GCV of coal as received, during the preceding three months i.e., October 2018, November 2018 and December 2018 as follows:

	Unit	Claimed
Landed Fuel Cost (Domestic Coal)	Rs./Ton	3912.20
(%) of Fuel Quantity	(%)	100
Energy Charge Rate Secondary fuel-ex-bus	Rs./kWh	0.026
Energy Charge Rate Primary fuel-ex-bus	Rs./kWh	2.956

281. Based on the operational norms, price and GCV of the generating station during the preceding three months i.e., October 2018, November 2018 and December 2018 (including the margin of 85 kCal/kg allowable as per Regulation 43(2)(b) of the 2019 Tariff Regulations), the ECR, for the purpose of working capital, has been worked out and allowed for the 2019-24 tariff period as under:

(Rs./kWh)

Energy Charge Rate Secondary fuel-ex-bus	0.026
Energy Charge Rate Primary fuel-ex-bus	3.028
Total Energy Charge Rate ex-bus (rounded off to three decimal pes)	3.054

c) Energy Charges for 45 days for Working Capital

282. Energy charges for 45 days, on the basis of weighted average GCV and weighted average cost, for the purpose of interest on working capital, has been worked out as follows:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
15931.58	15931.58	15931.58	15931.515931.58	

d) Working Capital for Maintenance Spares

283. The Petitioner has claimed the maintenance spares in the working capital as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
4811.48	5005.18	5207.71	5422.27	5646.88

284. Maintenance spares for working capital is allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
4804.19	4997.57	5199.76	5413.97	5638.22

e) Working Capital for Receivables

285. Receivables equivalent to 45 days of capacity charge and energy charges for working capital is worked out and allowed as follows:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges (45 days - Corresponding to NAPAF)	15931.58	15931.58	15931.58	15931.58	15931.58
Fixed Charges (45 days)	4604.75	4690.42	4873.28	5161.70	5044.58
Total	**20536.33**	**20622.00**	**20804.86**	**21093.28**	**20976.16**

f) Working Capital for O&M Expenses

286. The O&M expenses for 1 (one) month claimed by the Petitioner for working capital is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2004.78	2085.49	2169.88	2259.28	2352.87

287. The O&M expenses for 1 (one) month allowed for working capital is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2001.75	2082.32	2166.57	2255.82	2349.26

g) Rate of Interest for Working Capital

288. Regulation 34(3) of the 2019 Tariff Regulations provides for the rate of interest on working capital considered on projection basis, for the 2019-24 Tariff Period as 12.05% (i.e., 1-year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for the 2019-24 Tariff Period, is being determined during the year 2022-23, the SBI MCLR as on 1.4.2020 (7.75%), as on 1.4.2021 (7.00%) and as on 1.4.2022 (7.00%) is also available. Since, the rate of interest on working capital is subject to revision at the time of truing-up of tariff, based on the ba^{nk} rate as on 1st April of each financial year, we find it prudent to allow the rate of interest as on 1.4.2020, 1.4.2021 and 1.4.2022, for the subsequent financial years. Accordingly, the

rate of interest for the year 2019-20 is 12.05%, 2020-21 is 11.25%, 2021-22 is 10.50%, 2022-23 is 10.50% and for the subsequent years the rate of interest of 10.50% has been considered (i.e., 1year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points, 1-year SBI MCLR of 7.75% as on 1.4.2020 + 350 basis points; 1-year SBI MCLR of 7.00% as on 1.4.2021 + 350 basis points; and 1year SBI MCLR of 7.00% as on 1.4.2022 + 350 basis points). Accordingly, Interest on working capital is allowed as follows:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
A	Cost of Coal towards Stock – 20 days Corresponding to NAPAF	7020.37	7020.37	7020.37	7020.37	7020.37
B	Cost of Coal towards Generation – 20 days Corresponding to NAPAF	10530.55	10530.55	10530.55	10530.55	10530.55
C	Cost of Secondary fuel oil – 2 months Corresponding to NAPAF	185.27	184.76	184.76	184.76	185.27
D	Maintenance Spares @ 20% of O&M Expenses	4804.19	4997.57	5199.76	5413.97	5638.22
E	Receivables - 45 days	20536.33	20622.00	20804.86	21093.28	20976.16
F	O&M expenses - 1 month	2001.75	2082.32	2166.57	2255.82	2349.26
G	**Total Working Capital (A+B+C+D+E+F)**	**45078.45**	**45437.57**	**45906.87**	**46498.75**	**46699.83**
H	Rate of Interest	12.05%	11.25%	10.50%	10.50%	10.50%
I	**Interest on Working capital (G x H)**	**5431.95**	**5111.73**	**4820.22**	**4882.37**	**4903.48**

Additional Claims

289. In addition to the Depreciation, Interest on Loan, Return on Equity, O&M Expenses, Water Charges, Security Expenses, Interest on Working Capital, share of savings in interest cost due to loan restructuring and Special Allowance in accordance with the 2019 Tariff Regulations, the Petitioner has also claimed expenditure towards Share of P&G, Share of Common Office Expenditure, Ash Evacuation Expenses, Mega Insurance Expenses and Expenditure for Subsidiary activity as given below:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Share of P&G contribution	2347.66	2458.01	2573.56	2694.53	2821.19
Share of Common Office Expenditure	123.89	132.96	134.64	115.79	105.54
Expenses due to Ash evacuation,	1518.81	1585.64	1655.41	1728.26	1804.31

	2019-20	2020-21	2021-22	2022-23	2023-24
Mega insurance & expenditure for Subsidiary activity					
Total	**3990.36**	**4176.61**	**4363.61**	**4538.58**	**4731.04**

Share of P&G Contribution

290. The Petitioner has claimed P&G contribution, over and above, the normative O&M expenses, on projection basis, as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2347.66	2458.01	2573.56	2694.53	2821.19

291. DVPCA has reiterated its submissions made on this issue for the period 2014-19. It has also pointed out that the projected P&G contribution for the period 2019-24, has been claimed by considering a yearly escalation of 4.70% on the Actuarial value, as on 31.3.2019 i.e., Rs.619420.12 lakh and the same has been apportioned to various stations, based on apportionment on Plant capacity basis. The Objector has also stated that the P&G contribution claimed in 2019-20 is higher by 108% than the P&G contribution claimed in 2018-19. It has further stated that the Petitioner has not furnished any justification for claiming such higher amount in 2019-20. DVPCA has further pointed out that during the process of framing the 2019 Tariff Regulations, all the generating companies including the Petitioner, had submitted the operational data for the past years, including O&M expenses, which also included the contribution towards P&G. It has added that the normative O&M expenses specified under Regulation 35 of the 2019 Tariff Regulations was only after giving due consideration to the requirement of the various generating companies including P&G contribution. In response, the Petitioner has reiterated its submissions in the matter of P&G fund in terms of its response to theobjections raised in the period 2014-19.

292. The matter has been considered. It is observed that the normative O&M expenses includes a portion of contribution towards gratuity and pension, which is not

separately quantifiable for the Petitioner. It is also noted that under the heading P&G contribution for the period 2014-19, the actual O&M expenses including P&G during the period 2014-19 are lower than the O&M expense norms allowable under the 2014-19 Tariff Regulations. Further, the normative O&M expenses determined by the Commission, while framing the 2019 Tariff Regulations, are based on the information furnished by various generating stations. In view of this, we are not inclined to allow P&G contribution for the 2019-24 tariff period.

Ash Evacuation Expenses, Mega Insurance Expenses and Expenditure for Subsidiary activity

293. The Petitioner has claimed projected expenditure towards Ash Evacuation, Mega Insurance and share of Subsidiary Activities, as additional O&M expenses as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Ash Evacuation Expenses	1207.37	1260.50	1315.97	1373.87	1434.33
Mega Insurance Expenses	56.17	58.65	61.23	63.92	66.73
Share of Subsidiary Activities	255.26	266.49	278.22	290.46	303.24
Total	**1518.81**	**1585.64**	**1655.41**	**1728.26**	**1804.31**

Ash Transportation Expenses

294. The Petitioner has claimed total expenditure of Rs. 6592.05 lakh (Rs. 1207.37 lakh in 2019-20, Rs. 1260.50 lakh in 2020-21, Rs. 1315.97 lakh in 2021-22, Rs. 1373.87 lakh in 2022-23 and Rs. 1434.33 lakh in 2023-24) towards Ash Evacuation Expenses. In justification of the same, the Petitioner has submitted that due to statutory directives by the MOEF&CC notification dated 14.9.1999, the fly ash generated during the course of operation of the coal power plant is required to be utilized under various designated modes. Accordingly, the Petitioner has claimed Ash evacuation expenses under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

295. DVPCA has submitted that the Commission had disallowed the claim of the Petitioner for ash evacuation expenses during the 2009-14 tariff period on the ground that the same form part of the normative O&M expenses. Accordingly, the Respondent has stated that there is no rationale to allow such expenses over and above the normative O&M expenses for the period 2019-24.

296. The matter has been examined. The MoEF&CC notification dated 31.12.2021 provides for the following:

(i) Thermal power plants w.e.f. 1.4.2022, preferably utilise 100 % ash generated during that year and in no case, utilisation shall fall below 80 % in any year subjected to 100 % utilization in a three years cycle. In addition, the unutilised accumulated ash i.e., legacy ash, which is stored before the publication of this notification, shall be utilised progressively and completed fully within ten years, by 31.12.2031.

(ii) All agencies (Government, Semi-government and Private) engaged in construction activities such as road laying, road and flyover embankments, shoreline protection structures in coastal districts and dams within 300 kms from the thermal power plants shall mandatorily utilise ash in these activities in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government Agencies.

(iii) Provided that it is delivered at the project site free of cost and transportation cost is borne by such thermal power plants.

(iv) Provided further that thermal power plant may charge for ash cost and transportation as per mutually agreed terms, in case thermal power plant is able to dispose the ash through other means and those agencies makes a request for it and the provisions of ash free of cost and free transportation shall be applicable, if thermal power plant serves a notice on the construction agency for the same.

(v) Non-compliance of these provisions by Thermal Power plants attracts an environmental compensation of annual Rs.1000 / ton of unutilised ash and that of users is Rs.1500 per ton of ash for the quantity they fall short off.

297. The Petitioner has proposed ash transportation charges for the 2019-24 tariff period, based on the ash transportation charges, associated with the generating station for 2018-19 with an annual escalation rate of 4.40% thereof. As noted, the ash transportation charges for the generating station in 2018-19, are based on

apportioned audited ash transportation charges of Mejia TPS and the same was allowed in the 2014-19 tariff period. However, the actual expenses will depend on actual generation, quality of coal, quantity of ash utilized locally, quantity of ash transported, type of end user, distance of end user etc and may be in variance with projected claim of the Petitioner. Also, the Petitioner may generate some revenue by sale of ash. In this background, we are inclined to allow only 90% of the projected ash transportation charges claimed, as additional O&M expenses, for the 2019-24 tariff period. The Petitioner is permitted to recover the said expenses from 1.4.2019 upto the date of the instant order, in 6 equal instalments commencing from March 2023, in accordance with the Regulation 10 of the 2019 Tariff Regulations and thereafter, the recovery of the same, may be effected through monthly bills. The Petitioner is however, directed to submit all relevant documents in terms of the MoEF&CC notification and the provisions of the 2019 Tariff Regulations, including the year-wise audited statements, detailed justification, the ash available, plant wise income from sale of ash, quantity of ash produced, quantity of ash transported within 100 kms and beyond, revenue received, interest accrued, the statement of ash fund account as on 31.3.2014, 25.1.2016 and 31.3.2019, transportation cost borne by the end consumer, scheduled rate, etc., at the time of truing up of tariff. It is noticed that in the past, the Petitioner has used road transportation (trucks) for transportation of ash. In terms of this, the Petitioner is directed to explore other economic and environmental friendly alternatives for ash disposal such as ash slurry pipeline, wagons instead of road transportation. Accordingly, the ash transportation charges allowed are as follows:

(Rs. in lakh)

2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
1086.64	1134.45	1184.37	1236.49	1290.90

Mega Insurance Expenses

298. The Petitioner has claimed total expenditure for Rs. 306.70 lakh (Rs. 56.17 lakh in 2019-20, Rs. 58.65 lakh in 2020-21, Rs. 61.23 lakh in 2021-22, Rs. 63.92 lakh in

2022-23 and Rs. 66.73 lakh in 2023-24) towards Mega Insurance Expenses under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

299. DVPCA has submitted that the Petitioner has not referred to any extraordinary factors that have necessitated additional insurance cover for its units. It has also submitted that any comprehensive insurance is always cost effective in comparison to individual insurance policies and hence, it is not clear as to how mega insurance could lead to additional O&M expenses. The Petitioner in its rejoinder has reiterated its submissions made in its petition for the period 2014-19, on this issue.

300. The matter has been considered. It is observed that the Commission while specifying the O&M norms for the period 2019-24 had considered and factored the 'insurance expenses' as part of its calculations for O&M expense norms. Since the said regulations have been notified after extensive stakeholder consultations, we find no reason to exercise the power under Regulation 76 or Regulation 77 of the 2019 Tariff Regulations and grant relief to the Petitioner. In view of this, claim of the Petitioner under this head is not allowed.

Share of Subsidiary Activities

301. The Petitioner has claimed total expenditure for Rs. 1393.68 lakh (Rs. 255.26 lakh in 2019-20, Rs. 266.49 lakh in 2020-21, Rs. 278.22 lakh in 2021-22, Rs. 290.46 lakh in 2022-23 and Rs. 303.24 lakh in 2023-24) towards Share of Subsidiary Activities under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

302. DVPCA has submitted that the Petitioner has also claimed contribution to subsidiary funds and has claimed the Return on Equity, Interest on Loan and Depreciation on the common assets namely Direction Office, Subsidiary Activities, Other Offices, R&D, IT Centre and Central Office for the 2019-24 tariff period under the nomenclature "share of common office expenditures". As such, the contribution to

subsidiary fund is not allowable as the Return on Equity, Interest on Loan and Depreciation on the common assets have already been claimed separately. DVPCA has further submitted that the Commission, in its order dated 31.8.2016 in Petition No. 347/GT/2014, had disallowed the expenditure on subsidiary activity and the same was to be recovered as part of the normative O&M expenses. DVPCA has also submitted that it has demonstrated that the actual O&M expenses, including the expenditure on subsidiary activity, for the period 2014-19, have been lower than the normative O&M expenses specified under the 2014 Tariff Regulations. Similarly. the normative O&M expenses provided under the 2019, Tariff Regulations would be sufficient to cover such expenses in 2019 – 24 tariff period also. In response, the Petitioner has reiterated its submissions in the matter of expenses for subsidiary activities made for the period 2014-19.

303. The matter has been considered. It is noted that APTEL vide its judgement dated 23.11.2007 and Hon'ble Supreme Court judgement dated 23.7.2018 had observed that the apportioned expenditure associated with subsidiary activities can be recovered through electricity tariff. Since the amount claimed is small, we are not allowing the share of subsidiary activities at this juncture. However, the Petitioner, may, at the time of truing up of tariff for the period 2019-24, furnish the actual audited apportioned expenditure associated with subsidiary activities for consideration of the Commission.

Share of Common Office Expenditure

304. The Petitioner has submitted that the projected expenditure pertaining to common office expenditure such as Direction Office, Central Office, Other Offices, Subsidiary activities, IT centre and R&D caters services to all generating stations as well as composite transmission and distribution systems. The Petitioner has stated that it has allocated the cost of common offices amongst its generating stations, on

the basis of installed capacity and has claimed additional capital expenditure, as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Direction Office	0.00	0.00	0.00	0.00	0.00
Subsidiary Activities	0.00	0.00	0.00	0.00	0.00
Other Offices	132.00	66.39	222.42	15.52	0.00
R&D	0.00	0.00	0.00	0.00	0.00
IT	960.00	1240.00	0.00	0.00	0.00
Central Office	0.00	0.00	0.00	0.00	0.00
Total	**1092.00**	**1306.39**	**222.42**	**15.52**	**0.00**

305. The head-wise, additional capital expenditure claimed by the Petitioner towards various offices are as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Sub Station equipment	132.00	66.39	222.42	15.52	0.00
Network Access Controller and Data Centre	960.00	1240.00	0.00	0.00	0.00
Total	**1092.00**	**1306.39**	**222.42**	**15.52**	**0.00**

306. The Petitioner has computed the Return on Equity, Interest on Loan and Depreciation on the Common Assets for the period 2019-24, based on the opening capital cost as on 1.4.2019, for different offices, and has apportioned them to each generating stations and T&D system, in proportion to the capital cost, claimed as on 31.3.2019. Further, the Petitioner has allocated the cost of common offices, amongst its generating stations, on the basis of installed capacity. Accordingly, the annual fixed charges claimed for assets of common offices are as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Direction Office	60.21	60.21	60.21	60.21	60.21
Subsidiary Activities	114.93	114.93	114.93	114.93	114.93
Other Offices	219.28	231.91	250.29	265.43	151.45
R&D	183.01	175.44	167.87	165.66	165.66
IT	149.74	319.41	407.60	394.52	381.44
Central Office	809.38	747.16	668.93	435.29	435.29
Total	**1536.55**	**1649.04**	**1669.83**	**1436.05**	**1308.98**

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Common Office expenditure apportioned to all DVC generating stations	1423.20	1527.40	1546.65	1330.11	1212.42

	2019-20	2020-21	2021-22	2022-23	2023-24
Common Office expenditure apportioned to T&D	113.35	121.65	123.18	105.93	96.56
Total	**1536.55**	**1649.04**	**1669.83**	**1436.05**	**1308.98**

307. In line with the above, the Petitioner has claimed apportioned common office expenses, for this generating station as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Common Office Expenditure apportioned to Mejia- I to III (this generating station)	123.89	132.96	134.64	115.79	105.54

308. The matter has been considered. It is observed that the common office expenditures are associated with the various offices of the Petitioner, but not to subsidiary activities. In order to work out the common office expenses to be allowed as a part of determination of tariff for the period 2019-24, we have examined the additional capital expenditure claimed by the Petitioner. The Petitioner has claimed projected additional capital expenditure during the period 2019-24 as under:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
1	Fully automated microprocessor-based portableCT&PT Analyzer (CRITL)	35.00	0.00	0.00	0.00	0.00
2	10 kV Digital Insulation Tester (CRITM)	17.00	0.00	0.00	0.00	0.00
3	Relay Test Kit (CRITL)	80.00	0.00	0.00	0.00	0.00
4	Dielectric Frequency Response Analysis(DFRA) Test Kit (CRITL)	0.00	36.17	0.00	0.00	0.00
5	Flash Point of Transformer Oil Measurement Kit(CRITL)	0.00	4.70	0.00	0.00	0.00
6	3-Phase Portable Power Source (CRITM)	0.00	21.00	21.00	0.00	0.00
7	Laptop (CRITM)	0.00	4.52	4.52	0.00	0.00
8	Fully Automatic Three Phase Transformer TestKit (CRITM)	0.00	0.00	75.58	0.00	0.00
9	Swift Frequency Response Analysis (SFRA)Test Kit (CRITL)	0.00	0.00	21.72	0.00	0.00
10	Furan Test Kit (CRITL)	0.00	0.00	60.00	0.00	0.00
11	3-Phase Portable Reference Standard Meter(0.02 Class) (CRITM)	0.00	0.00	39.60	0.00	0.00
12	Line Impedance Measurement Kit	0.00	0.00	0.00	15.52	0.00
13	Network Access Controller, Next Generation Firewall (NGFW) and Networking Switches	160.00	40.00	0.00	0.00	0.00
14	Data Centre (Hardware & Licenses)	800.00	1200.00	0.00	0.00	0.00
	Total	**1092.00**	**1306.39**	**222.42**	**15.52**	**0.00**

309. As regards additional capital expenditure claimed for fully automated microprocessor-based portable CT&PT Analyser and 10 kV Digital Insulation Tester, the Petitioner has submitted that CT&PT analyser is required for replacement of the existing 220 KV & 132 KV CTs in DVC grid with 0.2 Accuracy Class CTs, as per CEA guidelines. As regards Relay Test Kit (CRITL); Dielectric Frequency Response Analysis (DFRA) Test Kit (CRITL); Flash Point of Transformer Oil Measurement Kit(CRITL); 3-Phase Portable Power Source (CRITM); Laptop (CRITM); Fully Automatic Three Phase Transformer Test Kit (CRITM); Swift Frequency Response Analysis (SFRA) Test Kit (CRITL); Furan Test Kit (CRITL); 3-Phase Portable Reference Standard Meter (0.02 Class) (CRITM); and Line Impedance Measurement Kit, the Petitioner has submitted that these items are required to facilitate testing, condition monitoring of various power equipment's and smart meters. As regards additional capital expenditure claimed for Network Access Controller, next generation Firewall (NGFW) and networking Switches, the Petitioner has submitted that in order to complywith cyber security guidelines, of MOP, GOI, NCIIPC network security layer are proposed to be established, so that access to the system is provided to authenticated users only. As regard claim for Data centre, the Petitioner has submitted that the procurement of hardware and licenses for Oracle to host EBA and other DVC applications, website, Firewall, Managed Back-up services, Load Balancer, IPS and Log Servers, IT infrastructure servers like DHCP, Ex-Bus, DNS, Virtualization, Security Appliances and storage in a DRC at different seismic zone, has been planned to be completed during the year 2019-20 and 2020-21.

310. The matter has been considered. It is observed that the items mentioned under the head 'Substation Equipment's' are required for the efficient functioning of the substations (including generating stations' switchyards) and therefore, the claim is

allowed. As regards Network Access Controller, next Generation Firewall (NGFW), Networking switches and Data Centre, it is observed that the proposed additional expenditure is for measures taken to strengthen cyber security, in terms of the MOP, GOI guidelines dated 12.4.2010 and therefore the claim is allowed. Further, considering the nature of works, additional capitalization claimed against the head 'IT Equipment' are allowed. Further, the Petitioner is directed to furnish additional information regarding the total expenditure incurred on this count, segregated claims during the periods 2014-19 and 2019-24, expenditure envisaged in future etc., along with supporting documents.

311. Based on the above, the total additional capital expenditure allowed under Common Office expenses for the 2019-24 tariff period is summarised as follows:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Sub Station Equipment	132.00	66.39	222.42	15.52	0.00
Network Access Controller	960.00	1240.00	0.00	0.00	0.00
Total	**1092.00**	**1306.39**	**222.42**	**15.52**	**0.00**

312. It is observed that that the Petitioner has worked out Common Office expenses for various offices, including Subsidiary activities. However, expenses of subsidiary activities will be dealt at the time of truing-up of tariff for the period 2019-24.

313. Accordingly, the annual fixed charges for Common offices have been worked out by considering the opening capital cost as on 1.4.2014. The annual fixed charges for Common Offices, as worked out has been apportioned to the generating stations / T&D systems of the Petitioner, based on the approved capital cost as on 31.3.2014 and the same is subject to truing-up for the period 2019-24. Accordingly, the share of common office expenses, worked out and allocated to the generating station are as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	458.06	357.82	300.14	310.67	232.58
Interest on Loan	91.10	136.51	163.38	148.52	135.87
Return on Equity	517.46	553.96	577.23	580.86	581.10
Total	**1066.62**	**1048.29**	**1040.75**	**1040.05**	**949.55**

(Rs. in lakh)

	Capital Cost as on 1.4.2014	2019-20	2020-21	2021-22	2022-23	2023-24
All DVC Generating stations	2036943.91	981.93	965.06	958.12	957.47	874.16
T&D	175678.95	84.69	83.23	82.63	82.58	75.39
Total	**2212622.86**	**1066.62**	**1048.29**	**1040.75**	**1040.05**	**949.55**

(Rs. in lakh)

Common Office Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
MTPS (1-3)-this generating station	85.48	84.01	83.40	83.35	76.10

Annual Fixed Charges allowed for the period 2019-24

314. Based on the above discussion, the annual fixed charges allowed for the generating station is summarized as follows:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	429.78	370.38	1036.39	2182.96	244.05
Interest on loan	7.15	3.48	47.62	47.62	0.00
Return on Equity	7562.16	7571.09	7624.64	7684.30	7690.64
Interest on Working Capital	5431.95	5111.73	4820.22	4882.37	4903.48
O&M Expenses	20764.80	21495.60	22245.30	23032.80	23839.20
Water Charges	1751.71	1921.61	2113.77	2325.15	2564.67
Security Expenses	1504.43	1570.63	1639.75	1711.90	1787.23
Special Allowance	0.00	0.00	1995.00	1995.00	3990.00
Sub-Total (A)	**37451.98**	**38044.52**	**41522.69**	**43862.10**	**45019.27**
Share of P&G	0.00	0.00	0.00	0.00	0.00
Share of Common Office Expenditure	85.48	84.01	83.40	83.35	76.10
Mega Insurance Expenses	0.00	0.00	0.00	0.00	0.00
Share of subsidiary activities	0.00	0.00	0.00	0.00	0.00
Sub-Total (B)	**85.48**	**84.01**	**83.40**	**83.35**	**76.10**
Total Annual Fixed Charges (C=A+B)	**37537.46**	**38128.53**	**41606.09**	**43945.45**	**45095.37**

Note: (1) All figures are on annualized basis. (2) 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.

(Rs. in lakh)

Ash Transportation Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
	1086.64	1134.45	1184.37	1236.49	1290.90

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

Application Fee and Publication expenses

316. The Petitioner has sought the reimbursement of filing fee paid by it for filing the tariff petition for the 2019-24 tariff period and for publication expenses. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

317. Similarly, RLDC Fees & Charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2019, shall be recovered from the beneficiaries. In addition, the Petitioner is entitled for recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2019 Tariff Regulations.

Summary

318. The annual fixed charges claimed and allowed for the period 2019-24 are summarized below:

(Rs. in lakh)

Annual Fixed Charges	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Claimed	45348.14	47399.46	50874.74	54150.21	59072.00
Allowed	**37537.46**	**38128.53**	**41606.09**	**43945.45**	**45095.37**

(Rs. in lakh)

Ash Transportation Expenses	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
	1086.64	1134.45	1184.37	1236.49	1290.90

319. Ash transportation expenses shall be recovered in term of para 296 of this order.

320. Petition No. 577/GT/2020 is disposed of in terms of the above.

Sd/-	***Sd/-***	***Sd/-***
(Pravas Kumar Singh)	**(Arun Goyal)**	**(I.S. Jha)**
Member	**Member**	**Member**