CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 570/GT/2020

Coram:

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

Date of Order: **16th June, 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 period 2019-24 in respect of Units- 7 & 8 of Chandrapura Thermal Power Station (500 MW).

And

In the matter of

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

Vs

1. BSES Rajdhani Power Limited,
   PMG Office, 2nd Floor, B-Block,
   BSES Bhawan, Nehru Place,
   New Delhi – 110019

2. BSES Yamuna Power Limited,
   2nd Floor, A Block,
   Shakti Kiran Building,
   Karkardooma, Delhi – 110092

3. Tata Power Delhi Distribution Limited,
   1st Floor, CENNET SCADA Building,
   Near PP-3 Grid, Pitampura,
   New Delhi – 110034

4. Madhya Pradesh Power Management Company Limited,
   Shakti Bhawan, Vidyut Nagar,
   Jabalpur – 482008 **...Respondents**

5. Damodar Valley Power Consumers Association,
   9, AJC Bose Road, 4th Floor, Kolkata – 700017 ...**Objector**

Parties Present:

Shri M.G. Ramachandran, Advocate, DVC
Ms. Anushree Bardhan, Advocate, DVC
Shri Manik Rakshit, DVC
Shri Subrata Ghosal, DVC
Shri Samit Mandal, DVC
Shri Srikanta Pandit, DVC
Shri Mansoor Ali Shoket, Advocate, TPDDL
Shri Nitin Kala, Advocate, TPDDL
Shri Kunal Singh, Advocate, TPDDL
Shri Anurag Naik, Advocate, MPPMCL
Shri Aditya Ajay, Advocate, BYPL
Shri Rahul Kinra, Advocate, BYPL
Shri Hemant Khera, Advocate, BYPL
Shri Rajiv Yadav, Advocate, Objector, DVPCA

ORDER

This petition has been filed by the Petitioner, Damodar Valley Corporation, for truing-up of tariff of Chandrapura TPS, Units- 7 & 8 (500 MW) (in short "the generating station") for the period 2014-19, in terms of Regulation 8(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short "the 2014 Tariff Regulations") and for determination of tariff of the generating station for the period 2019-24, 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 (in short '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 capacity of 500 MW, comprising of two units of 250 MW each. The cut-off date of the generating station in terms of the 2014 Tariff Regulations is 31.3.2014. The date of commercial operation of

the units of the generating station are as under:

	Actual COD
Unit – 8	15.7.2011
Unit – 7	2.11.2011

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 'APTEL') on various issues. Similarly, appeals were also filed before 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. 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 denovo 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.45044508/2008) 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 denovo 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 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 17.2.2017 in Petition No. 180/GT/2015 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)	223108.23	223133.23	223133.23	223133.23	223133.23
Add: Additional Capital Expenditure allowed (B)	25.00	0.00	0.00	0.00	0.00
Closing Capital Cost (C) = (A) + (B)	**223133.23**	**223133.23**	**223133.23**	**223133.23**	**223133.23**
Average Capital Cost (D) = (A+C) / 2	223120.73	223133.23	223133.23	223133.23	223133.23

Annual fixed charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	16347.43	16348.35	16348.35	16348.35	16348.35
Interest on loan	11260.86	9576.31	7862.29	6159.85	4305.25
Return on Equity	10375.11	10375.70	10375.70	10375.70	10375.70
Interest on Working Capital	3756.31	3770.04	3774.45	3788.09	3801.64
O&M Expenses	11950.00	12700.00	13500.00	14350.00	15255.00
Sub-Total (A)	**53689.72**	**52770.39**	**51860.78**	**51021.98**	**50085.94**
Share of Common Office Expenses	79.08	72.83	68.03	67.96	67.17
Additional O&M on account of Ash Evacuation, Mega	0.00	0.00	0.00	0.00	0.00

	2014-15	2015-16	2016-17	2017-18	2018-19
Insurance, CISF Security and Share of subsidiary activities					
Share of Pension & Gratuity Contribution	0.00	0.00	0.00	0.00	0.00
Sinking fund contribution	2217.68	2372.92	2539.02	2716.75	2906.92
Sub-Total (B)	**2296.76**	**2445.75**	**2607.05**	**2784.71**	**2974.09**
Total Annual Fixed Charges (C = A+B)	**55986.48**	**55216.14**	**54467.83**	**53806.68**	**53060.03**

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)	223108.23	224178.76	224525.89	227591.10	228097.31
Add: Addition during the year / period (B)	1021.96	320.67	3074.20	557.67	418.82
Less: De-capitalization during the year / period (C)	-	-	-	58.20	12.02
Less: Reversal during the year / period (D)	-	-	-	-	-
Less: Undischarged liabilities (E)	304.21	-	8.99	2.25	-
Add: Discharges during the year / period (F)	352.78	26.46	-	8.99	2.25
Closing Capital Cost (G)=(A+B-C-D-E+F)	**224178.76**	**224525.89**	**227591.10**	**228097.31**	**228506.36**
Average Capital Cost (H)=(A+G/2)	223643.50	224352.33	226058.49	227844.21	228301.83

Annual Fixed Charges claimed

(Rs in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	16668.17	16726.43	16858.48	16978.83	17006.00
Interest on loan	11164.25	9342.49	7467.29	5969.97	4376.30
Return on Equity	13157.25	13262.90	13363.76	13469.32	13532.02
Interest on Working Capital	5026.58	5195.33	5228.27	5287.81	5212.22
O&M Expenses	11950.00	12700.00	13500.00	14350.00	15255.00
Water Charges	-	696.16	413.10	538.18	535.12
Compensation Allowance	-	-	-	-	-
Sub-Total (A)	**57966.24**	**57923.31**	**56830.89**	**56594.11**	**55916.66**
Capital Spares	0.00	30.30	273.97	117.72	328.78
Impact of Pay Revision due to recommendation of 7th Pay Commission	0.00	0.00	607.31	764.39	538.41
Impact of GST as "Change in Law"	-	-	-	115.19	212.94
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	2217.68	2372.92	2539.02	2716.75	2906.92
Share of P&G	731.02	1877.89	2067.76	4657.55	891.86
Share of Common Office Expenditure	97.40	91.13	77.47	83.89	89.77
Expenses due to Ash evacuation, Mega insurance, CISF expenditure & Expenditure for Subsidiary activity	2780.82	2791.87	3666.96	5359.01	4630.31
Sub-total: B	**5826.92**	**7164.12**	**9232.49**	**13814.50**	**9598.98**
Grand Total (A+B)	**63793.16**	**65087.43**	**66063.38**	**70408.61**	**65515.65**

9. The Petitioner vide affidavit dated 24.1.2022 had submitted the additional information along with revised forms for the period 2014-19, after correction of certain inadvertent errors, in the forms, and has served copies on the Respondents/Objector. The Objector, Damodar Valley Power Consumers Association (DVPCA) has filed its objections vide affidavit dated 19.4.2021 and the Petitioner has filed its response to the same vide affidavit dated 6.9.2021. The Respondents BRPL, BYPL, TPDDL and MPPMCL have filed their replies vide affidavit dated 31.12.2021, 23.7.2021, 15.7.2021 and 20.7.2021/27.9.2021 respectively and the Petitioner has filed its rejoinders to the said replies vide its affidavits dated 24.1.2022 (BRPL), 3.12.2021 (BYPL), 6.9.2021 (TPDDL), 6.9.2021 and 3.12.2021 (MPPMCL). The Petition was heard on 4.1.2022,

through video conferencing and the Commission, after hearing the parties, had directed the Petitioner to submit certain additional information. In compliance to the directions, the Petitioner vide affidavit dated 24.1.2022, has filed the additional information, after serving copies on the Respondents/Objector. The Petition was again heard on 14.7.2022 and the Commission reserved its order in the petition, after directing the Petitioner to submit certain additional information. The Petitioner has also filed the note of arguments (of hearing dated 14.7.2022). The Objector DVPCA has also filed its written note of submissions on 28.5.2022. The Petitioner, in compliance to the directions, has furnished the additional information, after serving copies on the Respondents/Objector and has also filed its reply vide affidavit dated 26.7.2022. Considering the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner, in this petition, on prudence check, as stated in the subsequent paragraphs.

Capital Cost

10. 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……."*

11. The Commission vide its order dated 9.2.2017 in Petition No. 181/GT/2015, had allowed the closing capital cost of Rs. 223108.23 lakh as on 31.3.2014. The same has been considered as the opening Capital Cost as on 1.4.2014. However, it is observed that the Petitioner has claimed initial spares, as part of additional capitalisation of Rs. 267.23 lakh (Rs. 219.61 lakh in 2014-15, Rs. 31.33 lakh in 2015-16 and Rs. 16.29 lakh in 2017-18). As per details of initial spares, as submitted by the Petitioner [which

was not available in the earlier Petitions i.e. Petition no.181/GT/2015 (Truing up 2009-14) as well as 180/GT/2015 (additional capital Expenditure on projection for 2014-19], the position of capitalized initial spares, as on 31.3.2014, is Rs. 5853.16 lakh. As such, in the absence of details being available in earlier petitions, there was no occasion for the Commission to verify, as to whether the initial spares are within the permissible ceiling limit in terms of the 2009 Tariff Regulations i.e. 2.5% of the allowed capital cost as on cut-off date (31.3.2014). Accordingly, it is observed that the total allowable initial spares for the generating station, based on the capital cost, as on the cut-off date works out to Rs. 5570.64 lakh {(223108.23-5853.16) x (2.5%/97.5%)}. In this background, it is evident that, the Petitioner has capitalised initial spares, higher than the ceiling limit of Rs. 5570.64 lakh, and therefore, the closing/opening capital cost as on 31.3.2014/1.4.2014 has been adjusted with the amount of initial spares, capitalized over and above the permissible limit i.e. adjusted by Rs. 282.52 lakh (Rs. 5853.16 lakh – Rs. 5570.64 lakh). Thus, the opening capital cost of Rs. 222825.71 lakh as on 1.4.2014 has been considered for the purpose of truing-up, as under:

(Rs in lakh)

Closing Capital Cost allowed, as on 31.3.2014, in order dated 17.2.2017 in Petition No. 180/GT/2015	**A**	**223108.23**
Initial spares already admitted	B	5853.16
Capital Cost as on 31.3.2014 (excluding already allowed Initial spares)	**C=A-B**	**217255.07**
Initial Spares norms	D	2.50%
Initial Spares allowable	E=C*D(1-D)	5570.64
Less: Spilled over initial spares capitalized by the Petitioner during 2009-14 period	F=B-E	282.52
Total Opening capital cost allowed, as on 1.4.2014	**G=A-F**	**222825.71**

Additional Capital Expenditure

12. 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."

13. The details of the projected additional capital expenditure allowed vide order dated 17.2.2017 in Petition No. 180/GT/2015 is summarized below:

(Rs. in lakh)

	2014-15
Online pollution parameter measurement from discharge of effluent treatment plant (PH, TSS, BOD, COD)	25.00
Total Additional Capital Expenditure	**25.00**

14. The Petitioner, in the present petition, has claimed additional capital expenditure for the period 2014-19, as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Buildings	(-) 963.04	26.60	(-) 57.00	19.69	253.48
Road Culverts & Railway Sidings	879.16	1.67	64.48	350.84	20.94
Barrage, Gates & Others	(-) 30.48	5.20	179.88	(-) 2.61	0.00
Powerhouse Plant & Machinery	909.84	158.03	2887.86	167.91	61.07
Switch Gear	39.49	3.31	(-) 9.97	(-) 1.41	-
Tower Poles & Fixtures	55.50	3.80	(-) 11.47	(-) 1.62	-
Computer / IT assets	18.65	9.58	8.80	0.72	67.44

	2014-15	2015-16	2016-17	2017-18	2018-19
Other assets (excluding Computer / IT Assets)	112.82	112.47	11.61	24.16	15.89
Total Additional capital expenditure claimed	**1021.96**	**320.67**	**3074.20**	**557.67**	**418.82**

15. The Respondents BYPL and BRPL have submitted that in order dated 17.2.2017 in Petition No. 180/GT/2015, the Commission had rejected the entire additional capital expenditure projected by the Petitioner under Regulation 14(3) read with Regulation 54 of the 2014 Tariff Regulations, except for an amount of Rs. 25 lakh towards Online Pollution parameter, since the:

a. Additional capital expenditure projected by the Petitioner was not within the original scope of work;
b. Petitioner had not provided any technical report or recommendation for justifying the projected additional capital expenditure; and
c. Power to Relax vested with the Commission could not be exercised in the absence of requisite justifications / documentary evidence.

16. The Respondents have submitted that despite the above, the Petitioner has once again sought to invoke the provisions of 'power to relax' for allowing the additional capital expenditure incurred during the period 2014-19. The Respondents have also submitted that the Petitioner has not challenged the order dated 17.2.2017 and therefore, the same has attained finality.

17. The Respondent TPDDL has submitted that any claim under Regulation 14(2) of the 2014 Tariff Regulations, is liable to be rejected as the aforesaid regulation is not applicable to this station and is applicable only to new projects i.e. the project achieving COD or anticipated to be achieving COD on or after 1.4.2014. The Respondent has further stated that the Petitioner is merely claiming residual expenditure, which was kept in CWIP and has been transferred from CWIP to fixed assets. The Respondent has further stated that the residual expense was kept for works which were still under the category of CWIP and hence, not completed. Accordingly, the Respondent has stated that this claim does not fall under Regulation

14(2)(iv) of the 2014 Tariff Regulations. The Respondent TPDDL has further submitted that Regulation 14(3)(vii) of the 2014 Tariff Regulations, under which the Petitioner has claimed additional capital expenditure for procurement of boiler equipment, electrical equipment, miscellaneous plant equipment, turbo generator accessories, computers, projectors, air-conditioner etc. is not applicable to the Petitioner since Regulation 14(3)(vii) of the 2014 Tariff Regulations, clearly states that the same is not applicable to coal based stations. It has further submitted that as regards to some of the specific items for which additional capital expenditure has been claimed by the Petitioner, such as upgradation of computer and IT assets, installation of scaffolding, fire tenders, etc., the replacement/ installation/ upgradation of these assets cannot be claimed under Regulation 14(3)(iii), since such replacement etc. is not associated with the safety of the plant or from a national/internal security stand point. The Respondent has stated that these items are in the nature of O&M/ R&M expenses and therefore, in terms of the proviso to Regulation 14(3) of the 2014 Tariff Regulations, the claim should be met from the O&M expenses already allowed to the Petitioner. The Respondent has also stated that since all the units of the station are covered under insurance, the cost of Rs. 31.79 crores claimed towards Procurement of rotor, may be recovered from the Insurance company and this cost ought not to be passed on to the beneficiaries. The Respondent TPDDL has further submitted that since the expenditure towards initial spares is allowed only up to the cut-off date of the plant, the additional capital expenditure for Rs. 2.67 crores in 2014-16 and 2017-18 towards initial spares for turbo generator, boiler feed pump, electrical equipment, power plant equipment, mechanical equipment etc., is inadmissible as the same is not in accordance with the provisions of the 2014 Tariff Regulations. The Respondent has stated that the Petitioner's prayer for relief under Regulations 54 and Regulation 55 of the 2014 Tariff Regulations, cannot be granted as they seek to override the express provisions of the 2014 Tariff Regulations. The Respondent has stated that the Petitioner has failed to provide any document, invoice, report etc. to justify that the cost claimed for such equipment/system is reasonable and not excessive.

18. The Objector, DVPCA has submitted that the expenses towards 'capital assets which are not in use' shall not be allowed to be recovered as a part of the capital cost. It has stated that in respect of the expenditure claimed towards Spare Generator Rotor, in terms of Regulation 9(6) of the 2014 Tariff Regulations, the same is in the nature of spares and is not in use and hence not admissible under the 2014 Tariff Regulations. It has further submitted that the Petitioner's claim for Rs. 3182.24 lakh towards Residual/ Balance capital expenditure for the period 2014-19, on account of the works carried out before the cut-off date (i.e. 31.3.2014) and that the expenditure claimed is the amount in CWIP for such works which got transferred to Fixed Assets in 2014-15, cannot be permitted, as the provisions of the 2014 Tariff Regulations, does not provide for the recovery of any such claims as Residual Expenditure. DVPCA has further submitted that Regulation 14(2) of the 2014 Tariff Regulations with regard to additional capital expenditure, on new projects, provides that, any capital expenditure for new project (i.e. within the original scope of work) does not provide for recovery of any balance expenditure under capital cost and therefore, the same ought to be disallowed.

19. In response, the Petitioner has submitted that the additional capitalization claimed, the liability created and discharged has been duly reconciled with the books of account and audited by the Comptroller & Auditor General (C&AG) of India. It has also submitted that 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 all the additional capital expenditures incurred by the Petitioner for the generating station, are critical in nature to ensure the reliable, safe and efficient operation and are therefore unavoidable. Accordingly, the Petitioner has stated that it has claimed additional capital expenditure under Regulation 14(2) and Regulation 14(3) of the 2014 Tariff Regulations, which is nearest to the provisions for such kind of claim. It has also submitted that in order to remove the difficulty, the Petitioner has claimed additional capital expenditure under Regulation 14(2) and Regulation 14(3) read with Regulation 54 (Power to Relax) requesting the Commission to relax the provisions of these regulations and through Regulation 55 (Power to Remove Difficulty) to support the Petitioner to remove the difficulty which arises in giving effect to the provisions of these regulations and allow the claims of the Petitioner.

20. The matter has been examined. Before we proceed to consider the truing up of the additional capital expenditure claimed by the Petitioner for the period 2014-19, we observe that the opening capital cost of the generating station is Rs. 4.46 crore/MW which is quite reasonable, as compared to some of the efficiently commissioned power plants of NTPC. As such, the Commission considers it reasonable to allow the additional capital expenditure which are within the original scope of the project and which could not be capitalized within the cut-off date (31.3.2014). Based on the submissions and documents on the record, the RCE dated 18.10.2017 and on prudence check, the claim of the Petitioner for additional capital expenditure, is examined on prudence check, and allowed as under:

<u>2014-15</u>

(Rs. in lakh)

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
A.	**Buildings**					
1	Cable Trenches & Acc. - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON /MECH/ CST-7&8/ 563 dated 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to fixed asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	10.32	10.32	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Ty. Other Office building - Ut. 7&8			1.39	1.39	
3	HT/OT/LT Line/ & St. Lighting - Ut. 7&8			89.30	89.30	
4	Powerhouse building - Ut. 7&8	14 (2) (iv), 54 & 55	Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-) 577.62	(-) 577.62	The negative entry in respect of adjustment in asset code is allowed.
5	Sub Station Building - Ut. 7&8			(-) 19.96	(-) 19.96	
6	Office Building - Ut. 7&8			(-) 4.76	(-) 4.76	
7	Store Building - Ut. 7&8			(-) 6.83	(-) 6.83	
8	Steel Structure - Ut. 7&8			(-) 340.21	(-) 340.21	
9	Other Building - Ut. 7&8	14 (2) (iv), 54 & 55		(-) 13.30	(-) 13.30	
10	D.B. - Ut. 7&8			(-) 0.23	(-) 0.23	
11	Residential Building - Ut. 7&8			(-) 0.55	(-) 0.55	
12	fencing - Ut. 7&8			(-) 0.43	(-) 0.43	
13	Sewerage & sanitary Systems (Ext.) - Ut. 7&8			(-) 1.60	(-) 1.60	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
14	Water works & water supply system - Ut. 7&8			(-) 92.86	(-) 92.86	
15	Plantation Colony - Ut. 7&8			(-) 0.29	(-) 0.29	
16	Colony Road - Ut. 7&8			(-) 5.40	(-) 5.40	
	Total			**(-) 963.04**	**(-) 963.04**	
B.	**Road Culverts & Railway Siding**					
1	Access Road - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3a of Sanction Order No. EDCON/ MECH/CST-7&8/ 563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	666.01	666.01	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Railway Siding - Ut. 7&8			213.15	213.15	
	Total			**879.16**	**879.16**	
C.	**Barrage, Gates & Others**					
1	Ash Bund - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). The work was already executed within	3.12	3.12	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.			reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Weir - Ut. 7&8_barrage		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-) 0.36	(-) 0.36	The negative entry in respect of adjustment in asset code is **allowed.**
3	Drainage & sewerage (PH) - Ut. 7&8			(-) 3.92	(-) 3.92	
4	Cooling Tower& circulating system - Ut. 7&8			(-) 29.32	(-) 29.32	
	Total - Barrage, Gates & Others			**(-) 30.48**	**(-) 30.48**	
D.	**Powerhouse Plant & Machinery**					
1	Boiler & Accs. Equipment - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/ MECH/CST-7&8/ 563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	250.93	250.93	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Feed Water Heater (HP Heater) - Ut. 7&8			15.25	15.25	
3	Deaerator - Ut. 7&8			0.49	0.49	
4	Piping Valve & Insul. - Ut. 7&8			44.30	44.30	
5	Turbo Generator & Accs. - Ut. 7&8			320.26	320.26	
6	Accessory Electrical Equipment - Ut. 7&8	14 (2) (iv), 54 & 55		87.81	87.81	
7	Transformer & H T Motors - Ut. 7&8			69.85	69.85	
8	Coal handling Yard - Ut. 7&8			0.35	0.35	
9	AHP - Ut. 7&8			6.86	6.86	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
10	Oil Equipment - Ut. 7&8			5.90	5.90	
11	Misc. Power Plant Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is for procurement of Hydraulic jacks of different capacities i.e., 25-ton, 50/55 ton and 150 ton; vide PO Not/7-8/ Initial Req of T&P/T/E/13-14/P-229/SE (M) TG/128 Dtd. 25.10.13. These jacks are used for overhauling/ maintenance of different equipment i.e., Turbine, Generator, vacuum pump, CT fans etc.	89.55	0.00	This asset does not form part of the original scope of work of the project. Moreover, the asset is in the nature of tools and tackles, which is not permissible for capitalisation as per the second proviso to Regulation 14(3). Accordingly, the claim of the Petitioner is **not allowed**.
12	Boiler Feed Pump - Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-) 40.74	(-) 40.74	The negative entry in respect of adjustment in asset code **is allowed.**
13	Accessary Mech. Equipment - Ut. 7&8			(-) 24.50	(-) 24.50	
14	CHP - Ut. 7&8			(-) 136.09	(-) 136.09	
15	**Initial Spares:**					
i	Turbo Generator & Accs. - Ut. 7&8	14 (2) (iv), 54 & 55	Procurement of Initial Spares is within the original scope (Sl. No. 2 and 3f of Sanction Order No. EDCON /MECH/CST-7&8/ 563 dtd 11/09/09).	117.10	0.00	The Petitioners claim towards initial spares have been not **allowed,** as per discussion in paragraph 11 above of this order
ii	Boiler Feed Pump - Ut. 7&8			18.00	0.00	
iii	Boiler & Accs. Equipment - Ut. 7&8			72.26	0.00	
iv	Accessory Electrical Equipment - Ut. 7&8			0.21	0.00	
v	Misc. Power Plant			12.04	0.00	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	Equipment - Ut. 7&8					
	Sub-total - Initial Spares			**219.61**	**0.00**	
	Total			**909.84**	**600.68**	
E.	**Switch Gear**					
1	Switch Gear - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/ MECH/CST-7&8/ 563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	29.21	29.21	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	K V Gen. Bus Duct (S/Gear) - Ut. 7&8			10.28	10.28	
	Total			**39.49**	**39.49**	
F.	**Tower Poles & Fixtures**					
1	Conductor with Accessory - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/ MECH/CST-7&8/563 dtd 11/09/09). The	11.47	11.47	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance
2	Ground Wire with Accs. - Ut. 7&8			12.38	12.38	
3	Insulator - Ut. 7&8			10.79	10.79	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
4	Tower - Ut. 7&8		work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	20.86	20.86	payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
	Total			**55.50**	**55.50**	
G.	**Computer / IT Assets**					
1	Computer - Ut. 7&8	14 (3) (iii)	The erection, testing and commissioning of the LAN Network in Unit #7&8, CTPS has already been competed as according to the Work Order. However, during the execution of the above said work, it was felt necessary to cover left over locations of the DVC CTPS offices under the LAN Network. Since efforts are being made to process most of the official jobs through the EBA Package, availability of LAN is a prerequisite criterion for the same. Also, the remotely located offices like DTI-CTPS, Civil Estate Office, Hospital has requested for extension of the DVC LAN facility to them. This expenditure is for carrying out the said work of LAN Facility. Connectivity	18.65	18.65	This asset does not form part of the original scope of work of the project. However, considering the fact that the expenditure has been incurred to cater to the safe and secure operation of the station, the expenditure claimed is **allowed**.

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			of DVC CTPS offices through the DVC LAN facility is also essential to ensure protection against cyber threat and compliance with the directives of the Ministry of Power, GOI dt. 12.04.2010 and dt. 02.08.2017 regarding steps to be taken to prevent cyber-attacks. The said directives of the Ministry of Power, GOI are enclosed **with the petition**			
	Total			**18.65**	**18.65**	
H.	**Other Assets (excluding Computer / IT Assets)**					
1	Scientific / Lab Instrument - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	4.74	4.74	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Pump (Other Assets) - Ut. 7&8			3.80	3.80	
3	Air Conditioning Plant - Ut. 7&8			7.85	7.85	
4	Internal Telephone Sys. (Other Assts) - Ut. 7&8			0.09	0.09	
5	Cranes (Other Assets) - Ut. 7&8			64.04	64.04	
6	Air Compressor (Other Assets) - Ut. 7&8			33.31	33.31	
7	Office Furniture - Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-) 0.18	(-) 0.18	The negative entry in respect of adjustment in asset code **is allowed.**
8	Residential Furniture - Ut. 7&8			(-) 0.03	(-) 0.03	
9	Office Equipment - Ut. 7&8			(-) 0.07	(-) 0.07	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
10	Refrigerator - Ut. 7&8			0.00	0.00	
11	Precision Tools - Ut. 7&8			0.00	0.00	
12	Bulldozer - Ut. 7&8			(-) 0.57	(-) 0.57	
13	Hospital Equipment - Ut. 7&8			(-) 0.02	(-) 0.02	
14	Misc. (other Assets) - Ut. 7&8			(-) 0.14	(-) 0.14	
	Sub-total - Other Assets (excluding Computer / IT Assets)			**112.82**	**112.82**	
	Total			**1021.96**	**712.80**	

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Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
A.	**Buildings**					
1	Powerhouse building - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	6.51	6.51	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Sub Station Building - Ut. 7&8			0.57	0.57	
3	Office Building - Ut. 7&8			11.44	11.44	
4	Store Building - Ut. 7&8			0.11	0.11	
5	Steel Structure - Ut. 7&8			3.43	3.43	
6	Cable Trenches & Acc. - Ut. 7&8			0.56	0.56	
7	Other Building - Ut. 7&8			0.26	0.26	
8	Ty. Other Office building - Ut. 7&8			0.03	0.03	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
9	D.B. - Ut. 7&8			0.03	0.03	
10	Residential Building - Ut. 7&8			0.08	0.08	
11	fencing - Ut. 7&8			0.20	0.20	
12	Sewerage & sanitary Systems (Ext.) - Ut. 7&8			0.02	0.02	
13	Water works & water supply system - Ut. 7&8			2.05	2.05	
14	HT/OT/LT Line/ & St. Lighting - Ut. 7&8			0.50	0.50	
15	Plantation Colony - Ut. 7&8			0.04	0.04	
16	Colony Road - Ut. 7&8			0.78	0.78	
	Total			**26.60**	**26.60**	
B.	**Road Culverts & Railway Sidings**					
1	Access Road - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed	0.29	0.29	The claim of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Railway Siding - Ut. 7&8			1.39	1.39	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			assets.			
	Total			**1.67**	**1.67**	
C.	**Barrage, Gates & Others**					
1	weir - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	0.05	0.05	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Ash Bund - Ut. 7&8			0.05	0.05	
3	Drainage & sewerage (PH) - Ut. 7&8			0.06	0.06	
4	Cooling Tower& circulating system - Ut. 7&8			5.04	5.04	
	Total			**5.20**	**5.20**	
D.	**Powerhouse Plant & Machinery**					
1	Boiler & Accs. Equipment - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/ MECH/CST-7&8/ 563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only	36.60	36.60	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v)
2	Boiler Feed Pump - Ut. 7&8			3.45	3.45	
3	Feed Water Heater (HP Heater) - Ut. 7&8			0.82	0.82	
4	Deaerator - Ut. 7&8			0.03	0.03	
5	Piping Valve & Insul. - Ut. 7&8			2.40	2.40	
6	Accessory Electrical			1.56	1.56	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	Equipment - Ut. 7&8		the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.			of the 2014 Tariff Regulations.
7	Accessary Mech. Equipment - Ut. 7&8			58.32	58.32	
8	Transformer & & H T Motors - Ut. 7&8			4.06	4.06	
9	CHP - Ut. 7&8			10.15	10.15	
10	Coal handling Yard - Ut. 7&8			0.01	0.01	
11	AHP - Ut. 7&8			3.00	3.00	
12	Oil Equipment - Ut. 7&8			1.38	1.38	
13	Misc. Power Plant Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is are special purpose tools to be used in coal mills for assisting in maintenance and thereby reducing equipment downtime, increasing productivity. Hydraulic Jack of capacity 75 TON with accessories is required to be used as gang jack for simultaneous & uniform lifting of APH Rotor Assy. These jacks along with other accessories are special purpose tools to be used during maintenance of APH which reduces the	4.93	4.93	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			equipment downtime & helps in increasing productivity.			
14	**Initial Spares:**					
i	Turbo Generator & Accs. - Ut. 7&8	14 (2) (iv), 54 & 55	Procurement of Initial Spares is within the original scope (Sl. No. 2 and 3f of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09).	23.65	0.00	Since initial spares has been capitalised as per ceiling limit specified under the 2009 Tariff Regulations, the claim is **not allowed** as discussed in paragraph 11 above of this order.
ii	Accessary Mech. Equipment - Ut. 7&8			2.48	0.00	
iii	Accessory Electrical Equipment - Ut. 7&8			5.19	0.00	
	Sub-total - Initial Spares			**31.33**	**0.00**	
	Total			**158.03**	**126.71**	
E.	**Switch Gear**					
1	Switch Gear - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	2.11	2.11	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	K V Gen. Bus Duct (S/Gear) - Ut. 7&8			1.20	1.20	
	Total			**3.31**	**3.31**	
F.	**Tower Poles & Fixtures**					

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
1	Conductor with Accessory - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/ MECH/CST-7&8/ 563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	0.76	0.76	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Ground Wire with Accs. - Ut. 7&8			0.67	0.67	
3	Insulator - Ut. 7&8			0.77	0.77	
4	Tower - Ut. 7&8			1.60	1.60	
	Total			**3.80**	**3.80**	
G.	**Computer / IT Assets**					
1	Computer - Ut. 7&8	14 (3) (iii)	LAN System had been established and commissioned at CTPS U-1,2 &3 in the year 2006 and in use since then. U#7&8 has also been brought under the LAN connectivity of the DVC Network in the year 2013. Presently, there are 02 nos. HP make (HP ProLiant 150 ML) servers that were installed during the commissioning of LAN at CTPS U-	9.58	9.58	This asset is not part of original scope. However, considering that the expenditure has been incurred to cater to the safe and secure operation of the station, the expenditure **is allowed** under Regulation 14(3)(iii).

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			1, 2, &3 in 2006. In the last commissioning activity of LAN i.e., LAN establishment at U# 7&8, no new servers were bought. Servers are used for the assignment of the IP Addresses to the computer besides acting as the central management unit for the whole LAN Network. EBA Package has already been rolled on to the CTPS site and all payments and procurement are being done through the same. The smooth functionality of the EBA system requires fast and reliable access through the LAN Network either to the intranet or to the internet. The number of computer system under the LAN Network, installed at CTPS and its associated offices, has increased significantly since 2006 but no new servers have been procured since then. Now, the available			

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			installed numbers of the systems have reached its uppermost limit for the server to handle it. For uninterrupted, smooth, and fast LAN network, upgraded servers have been procured to handle the present system efficiently and to ensure good load tolerance for the future increasing LAN network. Healthiness and reliability of the DVC LAN facility is also essential to ensure protection against cyber threat and compliance with the directives of the Ministry of Power, GOI dt. 12.04.2010 and dt. 02.08.2017 regarding steps to be taken to prevent cyber-attacks. The said directives of the Ministry of Power, GOI are enclosed with Petition			
	Total - Computer / IT Assets			**9.58**	**9.58**	
H.	**Other Assets (excluding Computer / IT Assets)**					
1	Office Furniture - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd.	0.03	0.03	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the
2	Residential Furniture - Ut. 7&8			0.00	0.00	
3	Office Equipment -			0.01	0.01	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	Ut. 7&8		11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.			balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
4	Scientific / Lab Instrument - Ut. 7&8			0.26	0.26	
5	Pump (Other Assets) - Ut. 7&8			0.63	0.63	
6	Air Conditioning Plant - Ut. 7&8			0.42	0.42	
7	Internal Telephone Sys. (Other Assts) - Ut. 7&8			60.30	60.30	
8	Refrigerator - Ut. 7&8			0.00	0.00	
9	Precision Tools - Ut. 7&8			0.00	0.00	
10	Cranes (Other Assets) - Ut. 7&8			0.80	0.80	
11	Bulldozer - Ut. 7&8			0.08	0.08	
12	Air Compressor (Other Assets) - Ut. 7&8			0.81	0.81	
13	Hospital Equipment - Ut. 7&8			0.00	0.00	
14	Misc. (other Assets) - Ut. 7&8			5.50	5.50	
15	Fire Tender	14 (3) (iii)	To comply with the IS 3034:1993 (Reaffirmed 2002), three numbers of fire tenders have been procured for CTPS Unit 7&8. Relevant pages of the said standard are enclosed with petition.	43.63	43.63	The asset does not form part of the original scope of work of the project. However, considering the fact that the expenditure has been incurred to cater to the safe and secure operation of the station, the

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
						expenditure claimed is **allowed.**
	Sub-Total			**112.47**	**112.47**	
	Total			**320.67**	**289.34**	

2016-17

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
A.	**Buildings**					
1	Office Building - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST -7&8/563 dtd. 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.	9.54	9.54	The claim of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Powerhouse building - Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)30.02	(-)30.02	The negative entry in respect of adjustment in asset code **is allowed.**
3	Sub Station Building - Ut. 7&8			(-)2.05	(-)2.05	
4	Store Building - Ut. 7&8			(-)0.51	(-)0.51	
5	Steel Structure - Ut. 7&8			(-)15.81	(-)15.81	
6	Cable Trenches			(-)1.56	(-)1.56	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	& Acc. - Ut. 7&8					
7	Other Building - Ut. 7&8			(-)1.19	(-)1.19	
8	Ty. Other Office building - Ut. 7&8			(-)0.12	(-)0.12	
9	D.B. - Ut. 7&8			(-)0.15	(-)0.15	
10	Residential Building - Ut. 7&8			(-)0.37	(-)0.37	
11	fencing - Ut. 7&8			(-)0.94	(-)0.94	
12	Sewerage & sanitary Systems (Ext.) - Ut. 7&8			(-)0.07	(-)0.07	
13	Water works & water supply system - Ut. 7&8			(-)8.38	(-)8.38	
14	HT/OT/LT Line/ & St. Lighting - Ut. 7&8			(-)1.55	(-)1.55	
15	Plantation Colony - Ut. 7&8			(-)0.20	(-)0.20	
16	Colony Road - Ut. 7&8			(-)3.61	(-)3.61	
	Total			**(-)57.00**	**(-)57.00**	
B.	**Road Culverts & Railway Siding**					
1	Access Road - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST -7&8/563 dtd 11/09/09). Major expenditure under	12.65	12.65	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have
2	Railway Siding - Ut. 7&8			51.83	51.83	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.			been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
	Total			**64.48**	**64.48**	
C.	**Barrage, Gates & Others**					
1	weir - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.	196.36	196.36	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Ash Bund - Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)0.24	(-)0.24	The negative entry in respect of adjustment in asset code is **allowed.**
3	Drainage & sewerage (PH) - Ut. 7&8			(-)0.25	(-)0.25	
4	Cooling Tower & circulating system - Ut. 7&8			(-)16.00	(-)16.00	
	Total			**179.88**	**179.88**	
D.	**Powerhouse Plant & Machinery**					
1	Turbo Generator	14 (3) (vii), 54 & 55	CTPS Unit-7 tripped several times	3179.43	0.00	Considering the submissions of the

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	& Accs. - Ut. 7&8		between 28.04.2015 and 06.11.2015 due to generator rotor earth fault. Even after several checks at site by M/s BHEL, the fault could not be detected. When the Unit-7 tripped again on 07.01.2016 due to rotor earth fault, the generator rotor was sent to the works of M/s BHEL for inspection and repairing as per advice of M/s BHEL. Since no spare rotor was available with DVC and the repair work would take considerable time, order was placed on M/s BHEL on 27.01.2016 for supply of a new rotor. At the same time, it was learnt that identical generator rotor was available at NTPC's Bongaigaon Thermal Power Project. As the lead time for supply of generator rotor from M/s BHEL was high, hence, to minimize downtime, the rotor was arranged from NTPC Bongaigaon and CTPS Unit-7 was synchronized on 07.03.2016. The rotor procured from M/s BHEL through purchase order dt. 27.01.2016 was sent to NTPC			Petitioner, it is observed that the expenditure incurred is for procurement of spare rotor which would increase availability/ PLF and would yield incentive to the generator. Since the asset is yet to be put to use, the claim under this head is **not allowed**. However, we permit the Petitioner to claim the expenditure as and when the asset is put to use, along with the details of the old rotor i.e. gross value, year put to use and depreciation recovered.

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			Bongaigaon as per arrangement between NTPC and DVC. DVC has incurred Rs. 3179.43 lakh in FY 2016-17 for procurement of the said rotor from M/s BHEL. Relevant correspondences between NTPC, M/s BHEL and DVC are enclosed with petition			
2	UPS	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.	0.02	0.02	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
3	Boiler & Accs. Equipment - Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)107.90	(-)107.90	The negative entry in respect of adjustment in asset code **is allowed.**
4	Boiler Feed Pump - Ut. 7&8			(-)11.50	(-)11.50	
5	Turbo Generator			(-)66.20	(-)66.20	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	& Accs. - Ut. 7&8					
6	Feed Water Heater (HP Heater) - Ut. 7&8			(-)2.31	(-)2.31	
7	Deaerator - Ut. 7&8			(-)0.07	(-)0.07	
8	Piping Valve & Insul. - Ut. 7&8			(-)6.71	(-)6.71	The negative entry in respect of adjustment in asset code is **allowed.**
9	Accessory Electrical Equipment - Ut. 7&8			(-)20.21	(-)20.21	
10	Accessary Mech. Equipment - Ut. 7&8			(-)4.33	(-)4.33	
11	Transformer & & H T Motors - Ut. 7&8			(-)11.53	(-)11.53	
12	CHP - Ut. 7&8			(-)33.41	(-)33.41	
13	Coal handling Yard - Ut. 7&8			(-)0.03	(-)0.03	
14	AHP - Ut. 7&8			(-)9.17	(-)9.17	
15	Oil Equipment - Ut. 7&8			(-)4.16	(-)4.16	
16	Misc. Power Plant Equipment - Ut. 7&8			(-)14.09	(-)14.09	
	Total			**2887.86**	**(-)291.57**	
E.	**Switch Gear**					
1	Switch Gear - Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset	(-)6.22	(-)6.22	The negative entry in respect of adjustment in asset code **is allowed**.
2	K V Gen. Bus Duct			(-)3.75	(-)3.75	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	(S/Gear) - Ut. 7&8		code in the same year for correct booking			.
	Total			**(-)9.97**	**(-)9.97**	
F.	**Tower Poles & Fixtures**					
1	Conductor With Accessory - Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)2.28	(-)2.28	The negative entry in respect of adjustment in asset code **is allowed**.
2	Ground Wire with Accs. - Ut. 7&8			(-)1.87	(-)1.87	
3	Insulator - Ut. 7&8			(-)2.34	(-)2.34	
4	Tower - Ut. 7&8			(-)4.97	(-)4.97	
	Total			**(-)11.47**	**(-)11.47**	
G.	**Computer / IT Assets**					
1	Computer - Ut. 7&8	14 (3) (iii)	This expenditure is towards procurement of Desktop Computers with pre-loaded operating systems and associated accessories, to be used for various office purposes at CTPS unit 7&8. Computers with updated operating systems are essential to ensure protection against cyber threat and compliance with the directives of the Ministry of Power, GOI dt. 12.04.2010 and dt. 02.08.2017 regarding steps to be taken to prevent cyber-attacks. The said directives of the Ministry of Power, GOI are enclosed with petition.	3.33	3.33	These assets do not form part of the of the original scope of work of the project. However, considering the fact that the expenditure has been incurred to cater to the safe and secure operation of the generating station, the expenditure claimed **is allowed.**
2	Computer -	14 (3) (iii)	**Supply of LAN**	5.48	5.48	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	Ut. 7&8		**component:** All the switches and other accessories were utilized during commissioning of U#7&8 and there is no L2 switch, L3 switch and CAT6 cable in stock. There is no ARC/AMC for last two years due to some unavoidable circumstance and warranty of above switches also expired. As repair of switch requires highly technical proficiency which IT CELL does not have currently, any damage may lead to partial or full internet blackout which cannot be recovered in a short time frame. In this emergency, IT Cell need to keep above items, to keep the maintenance time minimum and thus causing minimum loss of work during to LAN outage. Healthiness and reliability of the DVC LAN facility is also essential to ensure protection against cyber threat and compliance with the directives of the Ministry of Power, GOI dt. 12.04.2010 and dt. 02.08.2017 regarding steps to be taken to prevent **cyber-attacks.** The said directives of the			

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			Ministry of Power, GOI are enclosed with petition.			
	Total			**8.80**	**8.80**	
H.	**Other Assets (excluding Computer / IT Assets)**					
1	Office Furniture - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.	1.53	1.53	The claim of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Office Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of two most of projectors and three nos of split air conditioners. **Procurement of Projector-** The projectors are procured for use at the Conference Room of CTPS Unit 7&8. The projectors have high resolution and high projection strength which help to conduct conferences and presentations efficiently.	5.24	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. Accordingly, the expenditure incurred towards creation of additional facilities is **not allowed.**

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			A C Machine-Computerization budget: - The LAN components of the DVC CTPS LAN facility run on 24 X 7 basis all-round the year and the most crucial among them is the Servers, which act as a backbone for the whole network infrastructure. For efficient operation of the servers, a dust free cool environment is a prerequisite to cope the heat dissipated by the continuous operation of the server. Currently, IT Cell server room has no standby Air-Conditioner and in case of any outage or maintenance of the Air Conditioners the server room becomes dangerously hot for the equipment which may lead to the damage of the Equipment. Presently, the IT Cell, situated in U#1,2&3, is having two old Air Conditioners which need frequent maintenance as it is already more than 20 years old and hence are insufficient for keeping the server room temperature			

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			within the permissible limits. The Air Conditioners in IT Cell, U#7&8 are also old and requires maintenance. For proper operation of servers without causing any further damage to all IT related equipment, three air conditioners have been procured.			
3	Scientific / Lab Instrument - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/ MECH/CST-7&8/ 563 dtd 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.	7.74	7.74	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
4	Internal Telephone Sys. (Other Assts) - Ut. 7&8			1.76	1.76	
5	Misc. (other Assets) - Ut. 7&8	14 (2) (iv), 54 & 55		3.93	3.93	
6	Office Furniture - Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)0.12	(-)0.12	The negative entry in respect of adjustment in asset code **is allowed**.
7	Residential Furniture - Ut. 7&8			(-)0.02	(-)0.02	
8	Pump (Other Assets) - Ut. 7&8			(-)1.87	(-)1.87	
9	Air			(-)1.29	(-)1.29	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	Conditioning Plant - Ut. 7&8					
10	Refrigerator - Ut. 7&8			0.00	0.00	
11	Precision Tools - Ut. 7&8			0.00	0.00	
12	Cranes (Other Assets) - Ut. 7&8			(-)2.37	(-)2.37	
13	Bulldozer - Ut. 7&8			(-)0.38	(-)0.38	
14	Air Compressor (Other Assets) - Ut. 7&8			(-)2.44	(-)2.44	The negative entry in respect of adjustment in asset code is **allowed.**
15	Hospital Equipment - Ut. 7&8			(-)0.01	(-)0.01	
16	Fire Tender			(-)0.07	(-)0.07	
	Sub-total			**11.61**	**6.37**	
	Total			**3074.20**	**(-)110.47**	

2017-18:

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
A.	**Buildings**					
1	Store Building- Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). Major expenditure under this head was	32.94	32.94	The claim of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			already capitalized in earlier years. Balance payment has been made during this year and capitalized.			after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Powerhouse building- Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)6.04	(-)6.04	The negative entry in respect of adjustment in asset code **is allowed.**
3	Sub Station Building- Ut. 7&8			(-)0.35	(-)0.35	
4	Office Building- Ut. 7&8			(-)0.34	(-)0.34	
5	Steel Structure- Ut. 7&8			(-)3.18	(-)3.18	
6	Cable Trenches & Acc.- Ut. 7&8			(-)0.20	(-)0.20	
7	Other Building- Ut. 7&8			(-)0.24	(-)0.24	
8	Ty. Other Office building- Ut. 7&8			(-)0.02	(-)0.02	
9	D.B.- Ut. 7&8			(-)0.03	(-)0.03	
10	Residential Building- Ut. 7&8			(-)0.07	(-)0.07	
11	fencing- Ut. 7&8			(-)0.19	(-)0.19	
12	Sewerage & sanitary Systems (Ext.)- Ut. 7&8			(-)0.01	(-)0.01	
13	Water works & water supply			(-)1.57	(-)1.57	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	system- Ut. 7&8					
14	HT/OT/LT Line/ & St. Lighting- Ut. 7&8			(-)0.23	(-)0.23	
15	Plantation Colony- Ut. 7&8			(-)0.04	(-)0.04	
16	Colony Road- Ut. 7&8			(-)0.73	(-)0.73	
	Total			**19.69**	**19.69**	
B.	**Road Culverts & Railway Siding**					
1	Access Road- Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). The work was already executed within the cut-off date. The major expenditure was already transferred to Fixed Asset. Only the residual expenditure, which was kept in CWIP, is now being transferred from CWIP to fixed assets.	22.66	22.66	The claims of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Railway Siding- Ut. 7&8			328.17	328.17	
	Total			**350.84**	**350.84**	
C.	**Barrage, Gates & Others**					
1	Weir- Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)0.11	(-)0.11	The negative entry in respect of adjustment in asset code **is allowed.**
2	Ash Bund- Ut. 7&8			(-)0.05	(-)0.05	
3	Drainage & sewerage (PH)- Ut. 7&8			(-)0.05	(-)0.05	
4	Cooling			(-)2.40	(-)2.40	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	Tower& circulating system- Ut. 7&8					
	Total			**(-)2.61**	**(-)2.61**	
D.	**Powerhouse Plant & Machinery**					
1	Boiler & Accs. Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is for procurement of one set of Cup lock Scaffolding, which is required for carrying out complete inspection & thickness survey of boiler furnace wall tubes during annual & capital overhauling of boilers. The use of cup lock scaffolding for inspection of boiler furnace wall tubes is a safe & standard practice adopted by all power utilities. The non-availability of cup lock scaffolding for boilers of CTPS Unit 7&8 was also highlighted by M/s NTPC during technical audit carried out on 27/07/2017. Cup lock Scaffolding was not included in the Initial Scope of Supply of M/s BHEL during erection and commissioning of both the Units. Relevant pages of the NTPC Technical Audit	100.30	0.00	The expenditure is in the nature of O&M expenses. We also find no reason to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax) to consider the additional capitalization of such expenditure. Hence, the claim of the Petitioner is **not allowed.**

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			Report is enclosed with the Petition			
2	Boiler & Accs. Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of one portable oil centrifuge for filtration of lubricating oil of the coal mills of CTPS unit 7&8. Each Coal Mill of CTPS Unit 7&8 is equipped with lube oil system. The healthiness of the lube oil system, support bearings is required to be maintained for achieving desired lift of the coal mills. The healthiness of the lube oil system & support bearings is largely dependent on the quality of the lube oil & the amount of dust contamination. Due to coal dust leakage, the lube oil of the support bearing assembly gets contaminated, leading to reduced life of the system. The availability of Portable Oil Centrifuge helps in filtration of lube oils of all coal mills periodically.	10.15	0.00	The Petitioner has not furnished the details of the existing oil centrifuge procured within the original scope of work. As such, the creation of additional facilities over and above the items/asset, already procured within the original scope of work, cannot be considered in exercise of the power to relax. In view of this, the expenditure claimed is **not allowed.**
3	Accessory Electrical Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards replacement of the existing Battery Bank with a new one. Exide make	57.28	0.00	Considering the fact that the COD of the generating station, is in 2011, the elapsed life of battery is around 6-7 years

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			Battery Banks provide backup power to ACDB via UPS in case of power failure. ACDB supplies power to critical DCS HMI panels, all the workstations (OWS, EWS, LINK and STORIAN) etc. These are used for supervision, record keeping and control of all the equipment, processes, parameters etc. related to Unit#7. Therefore, battery bank is vital for smooth and safe running of Unit in emergency power failure situations. In Unit#7, heavy growth, and corrosion on the positive plates of majority of cells in Battery bank was noticed. The condition of the Battery Bank was alarming hence was kept out of Service. The OEM visited the site in this regard on 14.11.17 and submitted their report on 16.11.17 and advised that under that condition, the Battery Bank was beyond repair, hence should be replaced by a new			only. It is expected that battery banks should be maintained on a regular basis from O&M expenses. As such, we are not inclined to allow the claim of the Petitioner, in exercise of the power to relax under Regulation 54 of the 2014 Tariff Regulations. The claim is therefore **not allowed**.

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			one. (Report copy is enclosed with petition). In such a situation the unit would be devoid of any back up power during emergency power failure condition, resulting in disruption of power to DCS HMI panels and workstations. Then it would not be possible to view and control the status of all the equipment, processes, parameters etc. related to Unit#7. Therefore, the replacement of the faulty battery bank was done for the reliability of power supply and for the reliable and safe running of the Unit. The new battery bank is in service presently as a backup for UPS system.			
4	Accessory Electrical Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of Industrial PC with Windows 8.1 OS Loaded with antivirus and HMI server, which is used for PLC of AHP. The computer system (OWS) for PLC of AHP was running on Microsoft XP which has been	23.31	23.31	In view of the submissions, the claim of the Petitioner is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			declared obsolete by Microsoft in April 2014 and has withdrawn service support. In case of software failure, it may not be possible to revive the Windows XP based system. To take preventive, measure Up gradation of the system has been carried out. Upgradation from Windows XP to Windows 8.1 is also essential to ensure protection against cyber threat and compliance with the directives of the Ministry of Power, GOI dt. 12.04.2010 and dt. 02.08.2017 regarding steps to be taken to prevent cyber-attacks. The said directives of the Ministry of Power, GOI are enclosed with petition			
5	Accessory Electrical Equipment - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment	1.59	1.59	The claim of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			has been made during this year and capitalized.			these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
6	Transformer & H T Motors - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.	7.80	7.80	
7	Misc. Power Plant Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of Thermovision Camera which is used at CTPS Unit 7&8 for temperature mapping of electrical equipment's i.e., motor, breaker panel, cables, switch yard and bearings of rotary equipment's to find out any hot spot to avoid any failure / break down. This instrument is also being used for temperature mapping of thermal equipment's for boilers skin thermography, Insulation survey, valves passing, air ingress survey etc.	5.97	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. Accordingly, we find no justification to invoke Regulation 54/Regulation 55 of the 2014 Tariff Regulations to allow the expenditure. Therefore, the claim **is not allowed.**

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			to minimize the losses and to improve Net Heat Rate of our plant. Under PAT Cycle 1&2 CTPS is given stringent target. (Target mentioned in Sr. no. 49 at page no. 90 under head VIII Thermal Power Plant of Gazette of India - Extraordinary, Part II - Section 3 - Sub-section (ii) published on dated 31 March 2016) (relevant page of the Ministry of Power Notification on PAT Targets are enclosed with petition.			
8	Misc. Power Plant Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of portable digital vibration meter for use at CTPS 7&8 for vibration measurements of all the rotary equipment's of the plant. It gives the early indications of any type of failure which may occur in rotary equipment's with the aim to enhance equipment availability and reliability.	0.63	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. Moreover, the items claimed are in the nature of tool & tackles and hence, their capitalization is not permissible in terms of the second proviso to Regulation 14 of the 2014 Tariff Regulations. Accordingly, the claim is **not allowed**.
9	Misc. Power Plant Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of Portable Hardness Tester used for	0.57	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			measurement of hardness of heavy materials made of different metal and its alloys to ensure its quality in terms of hardness. As items which are heavier and large and cannot be brought to lab for hardness testing, these are being conveniently tested by portable hardness tester at stores & at their respective sites. Earlier these tests were carrying out by the outside agencies on paid basis and on advanced intimation. The use of this machine stopped the dependency on agency and cash flow. The Portable Hardness tester is handy in use and used for hardness testing of Liners, hammers, rollers, and other heavier materials having weight more than 5Kg.			being a coal-based thermal generating station. Moreover, the items claimed are in the nature of tool & tackles and hence, their capitalization is not permissible in terms of the second proviso to Regulation 14 of the 2014 Tariff Regulations. Accordingly, the claim is **not allowed**.
10	Misc. Power Plant Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of Rockwell hardness Tester. This tester has been procured to measure hardness of different metal and its alloys to ensure	0.50	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. Moreover, the items claimed are in the nature of tool &

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			its quality in terms of hardness. Earlier these tests were carrying out by the outside agencies on paid basis and on advanced intimation. The use of this machine stopped the dependency on agency and cash flow. The Rockwell hardness tester is table based and having high accuracy used for hardness testing of High chrome grinding media balls, shield, other alloy plates etc.			tackles and hence, their capitalization is not permissible in terms of the second proviso to Regulation 14 of the 2014 Tariff Regulations. Accordingly, the claim is **not allowed**.
11	Misc. Power Plant Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of one number of hand operated chain pulley block with chain lift and PVC conduit/casing used for various maintenance activities at CTPS Unit 7&8	0.15	0.00	
12	Misc. Power Plant Equipment - Ut. 7&8		This expenditure is towards procurement of Sling Steel Wire rope used for maintenance activities at CTPS 7&8.	0.02	0.00	
13	Boiler & Accs. Equipment- Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for	(-)14.85	(-)14.85	The negative entry in respect of adjustment in asset code **is allowed.**
14	Boiler Feed Pump- Ut. 7&8			(-)1.82	(-)1.82	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
15	Feed Water Heater (HP Heater)- Ut. 7&8		correct booking	(-)0.30	(-)0.30	
16	Deaerator- Ut. 7&8			(-)0.01	(-)0.01	
17	Piping Valve & Insul. - Ut. 7&8			(-)0.86	(-)0.86	
18	Turbo Generator & Accs. - Ut. 7&8			(-)24.78	(-)24.78	
19	Accessory Electrical Equipment- Ut. 7&8			(-)2.83	(-)2.83	
20	Accessary Mech. Equipment- Ut. 7&8			(-)0.70	(-)0.70	
21	Transformer & & H T Motors- Ut. 7&8			(-)1.51	(-)1.51	
22	CHP- Ut. 7&8			(-)5.21	(-)5.21	The negative entry in respect of adjustment in asset code **is allowed.**
23	Coal handling Yard- Ut. 7&8			(-)0.01	(-)0.01	
24	AHP- Ut. 7&8			(-)1.32	(-)1.32	
25	Oil Equipment- Ut. 7&8			(-)0.59	(-)0.59	
26	Misc. Power Plant Equipment- Ut. 7&8			(-)1.86	(-)1.86	
27	**Initial Spares:**					
i	Turbo Generator & Accs. - Ut. 7&8	14 (2) (iv), 54 & 55	Procurement of Initial Spares is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd	16.29	0.00	Since initial spares have been capitalised as per ceiling limit specified under the 2009 Tariff Regulations, the claim is **not allowed**

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			11/09/09).			as discussed in paragraph 11 above of this order.
	Sub-total - Initial Spares			**16.29**	**0.00**	
	Total			**167.91**	**(-) 23.94**	
E.	**Switch Gear**					
1	Switch Gear- Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)0.86	(-)0.86	The negative entries in respect of adjustment in asset code **is allowed.**
2	K V Gen. Bus Duct (S/Gear)- Ut. 7&8			(-)0.55	(-)0.55	
	Total			**(-)1.41**	**(-)1.41**	
F.	**Tower Poles & Fixtures**					
1	Conductor with Access. - Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)0.32	(-)0.32	The Petitioner has not substantiated the details of the adjustments made for the respective works during the same year. In the absence of details, such entries have been adjusted with the opening capital cost as on 1.4.2014
2	Ground Wire with Accs. - Ut. 7&8			(-)0.24	(-)0.24	
3	Insulator - Ut. 7&8			(-)0.33	(-)0.33	
4	Tower- Ut. 7&8			(-)0.73	(-)0.73	
	Total			**(-)1.62**	**(-)1.62**	
G.	**Computer / IT Assets**					
1	Computer - Ut. 7&8	14 (3) (iii)	This expenditure is towards procurement of Computer with pre-loaded operating systems and associated accessories, to be used for office purposes at CTPS unit 7&8. Computer with updated operating system is essential to ensure protection against cyber threat and compliance with the directives of the	0.52	0.00	The items claimed are in the nature of minor assets and their capitalization is **not allowed** in terms of second proviso to Regulation 14(3) of the 2014 Tariff Regulations.

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			Ministry of Power, GOI dt. 12.04.2010 and dt. 02.08.2017 regarding steps to be taken to prevent cyber-attacks. The said directives of the Ministry of Power, GOI are enclosed with petition.			
2	Computer - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of Hard Disk for the server computer used for vibration monitoring system of TG and HT Drives of CTPS Unit 7&8. The vibration monitoring system has server computer installed at Unit #7 for online monitoring & analysis of the vibration parameters. The hard disk of the computer got damaged and had to be replaced for the system to run smoothly. VMS records the critical vibration parameter of the TG & HT drives; therefore, the healthiness of the server computer must be always maintained. The procured Hard disk was used to replace the damaged hard disk. The same is presently in service.	0.20	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. Moreover, the items claimed are in the nature of tool & tackles and hence, their capitalization is not permissible in terms of the second proviso to Regulation 14 of the 2014 Tariff Regulations. Accordingly, the claim is **not allowed**.
	Total			**0.72**	**0.00**	
H.	**Other Assets (excluding Computer / IT Assets)**					

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
1	Office Equipment - Ut. 7&8	54 & 55	This expenditure is towards procurement of two numbers of water purifier for use at office building at CTPS Unit 7&8	0.21	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. Moreover, the items claimed are in the nature of tool & tackles and hence, their capitalization is not permissible in terms of the second proviso to Regulation 14 of the 2014 Tariff Regulations. We also find no justification to exercise the powers under Regulation 54/ Regulation 55 of the 2014 Tariff Regulations to consider the claim. Accordingly, the claim is **not allowed**
2	016/55 Hospital Equip- Ut 7&8 CTPS	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.	0.23	0.00	The items claimed is in the nature of minor assets and their capitalization is not permissible in terms of the second proviso to Regulation 14(3) of the 2014 tariff Regulations after the cut-off date. Accordingly, claim is **not allowed.**
3	Misc. (other Assets)- Ut.7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of **air conditioner machine** for	25.16	0.00	The claimed items being in the nature of minor assets, their capitalization is explicitly not allowed

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			chemical and environmental laboratory of CTPS Unit#7&8. Coal lab and General Chemical water lab of unit #7&8 (situated on the ground floor of the administrative building) have been commissioned in the year 2013. At that time there was no air conditioner machine in any of the labs like coal lab, environmental lab, DM plant testing lab and general water lab. Air-conditioned environment is essential for the smooth and error free running of the sophisticated and costly instruments at these labs. Therefore, procurement of the AC machine was necessary			in terms of second proviso to Regulation 14 of the 2014 Tariff Regulations, after cut-off date. As such, Commission finds no justification to invoke Regulation 54 and Regulation 55 of the 2014 Tariff Regulations for allowing the claimed expenditure. Accordingly, this claim is **not allowed.**
4	Office Furniture- Ut. 7&8		Withdrawal of excess amount from this asset code & transfer to the respective asset code in the same year for correct booking	(-)0.02	(-)0.02	The negative entries in respect of adjustment in asset code **is allowed.**
5	Residential Furniture- Ut. 7&8			0.00	0.00	
6	Office Equipment- Ut. 7&8			(-)0.01	(-)0.01	
7	Scientific / Lab Instrument- Ut. 7&8			(-)0.09	(-)0.09	
8	Pump (Other Assets)- Ut.			(-)0.26	(-)0.26	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
	7&8					
9	Air Conditioning Plant- Ut. 7&8			(-)0.19	(-)0.19	
10	Internal Telephone Sys. (Other Assts)- Ut. 7&8			(-)0.06	(-)0.06	
11	Refrigerator- Ut. 7&8			0.00	0.00	
12	Precision Tools- Ut. 7&8			0.00	0.00	
13	Cranes (Other Assets)- Ut. 7&8			(-)0.33	(-)0.33	
14	Computer- Ut. 7&8			(-)0.03	(-)0.03	
15	Bulldozer- Ut. 7&8			(-)0.08	(-)0.08	
16	Air Compressor (Other Assets)- Ut. 7&8			(-)0.34	(-)0.34	
17	Hospital Equipment- Ut. 7&8			0.00	0.00	
18	Fire Tender			(-)0.01	(-)0.01	
	Sub-Total			**24.16**	**(-)1.44**	
	Total			**557.67**	**339.50**	

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Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
A.	**Buildings**					
1	Other building - Ut. 7&8	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3	163.69	163.69	The claim of the Petitioner fall within the original scope of works and the expenditure pertains to works

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.			capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
2	Other building - Ut. 7&8	14 (3) (ii), 54 & 55	This expenditure is towards the work of repair and renovation of ITI building & staff trainee Hostel at CTPS to meet the NCVT (National Council of Vocational Training) requirement.	89.79	0.00	The Petitioner has not submitted any supporting documents to justify its claim for this asset under 'change in law' In addition to this, it is evident from the justification submitted by the Petitioner that the claim is in the nature of O&M expenses and does not fall within the scope of Regulation 14(3)(ii) of the 2014 Regulations. Hence, the claim is **not allowed**.
	Total			**253.48**	**163.69**	
B.	**Road Culverts & Railway Siding**					
1	Railway Siding	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). The work was already executed by 2014. Major expenditure under this head was already capitalized in earlier years. Only	20.94	20.94	The claim of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			the residual expenditure has been capitalized during this year.			Regulation 14(3)(v) of the 2014 Tariff Regulations.
	Total			**20.94**	**20.94**	
C.	**Powerhouse Plant & Machinery**					
1	Turbo Generator & Accs. - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of trolley mounted Turbine Oil Filling Machine for the TG Sets of CTPS Unit 7&8, with the aim to ensure oil quality and enhanced TG reliability. This Machines are suitable for maintaining NAS level below 5 for an Oil tank capacity of 38 KL.	14.37	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. Moreover, the creation of additional equipment's over and above those already put to use, within the original scope of work, has not been justified, in relation to the status of the existing assets. Further, the Petitioner has not furnished any justification in support of its claim to allow the expenditure in exercise of the power to relax under Regulation 54 of the 2014 Tariff Regulations. In view of the above, the claim of the Petitioner is **not allowed**.
2	Turbine Generator & Accs. - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of one portable oil centrifuge with accessories for filtration of lubricating oil of the rotating equipment's inside the TG Building of CTPS unit 7&8. The healthiness of the lube oil system & support bearings is largely dependent on the quality of the lube oil & the amount of dust contamination. The availability of Portable Oil Centrifuge helps infiltration of lube	10.15	0.00	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			oils of all rotating equipment's in TG building periodically thereby ensuring reliable operations of the equipment's.			
3	UPS	14 (2) (iv), 54 & 55	This expenditure is towards the work which is within the original scope (Sl. No. 2 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). Major expenditure under this head was already capitalized in earlier years. Balance payment has been made during this year and capitalized.	0.01	0.01	The claim of the Petitioner fall within the original scope of works and the expenditure pertains to works capitalized before the cut-off date. Also, the balance payments to vendors have been capitalized after reconciliation and closure of contracts. In view of these, the additional capital expenditure claimed **is allowed** under Regulation 14(3)(v) of the 2014 Tariff Regulations.
4	Accessory Electrical Equipment - Ut. 7&8	14 (2) (iv), 54 & 55		6.81	6.81	
5	Accessory Electrical Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This is balance expenditure towards procurement of Thermovision Camera which is used at CTPS Unit 7&8 for temperature mapping of electrical equipment's i.e., motor, breaker panel, cables, switch yard and bearings of rotary equipment's to find out any hot spot to avoid any failure / break down. This instrument is also being used for	4.84	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. The Petitioner has also not quantified the improvement in heat rate over and above the normative GSHR, which can be passed on to the beneficiaries. In the above background and in consideration of the submission of the Petitioner, we find no reason to allow the expenditure in exercise of the power to relax under Regulation 54 of

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			temperature mapping of thermal equipment's for boilers skin thermography, Insulation survey, valves passing, air ingress survey etc. to minimize the losses and to improve Net Heat Rate of our plant. Under PAT Cycle 1&2 CTPS is given stringent target. (Target mentioned in Sr. no. 49 at page no. 90 under head VIII Thermal Power Plant of Gazette of India - Extraordinary, Part II - Section 3 - Sub-section (ii) published on dated 31 March 2016) (relevant page of the Ministry of Power Notification on PAT Targets are enclosed with petition.			the 2014 Tariff Regulations. Accordingly, the claim is **not allowed**.
6	Accessory Electrical Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This amount is towards procurement of Contact Resistance meter with Standard accessories used for various maintenance activities at CTPS Unit 7&8	1.80	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. Moreover, the items claimed are in the nature of tool & tackles and hence, their capitalization is not permissible in terms of the second proviso to Regulation 14 of the 2014 Tariff Regulations.
7	Misc. Power Plant Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of **Portable Vibration**	23.09	0.00	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			Analyzer cum data collector. This instrument is being used at CTPS Unit 7&8, to find out the root cause of the vibration related any issue in rotary equipment's with the aim to enhance reliability of the equipment's. It is being also used for in-situ balancing of rotary equipment's along with CW Pumps.			We also find no justification to exercise the powers under Regulation 54/ Regulation 55 of the 2014 Tariff Regulations to consider the claim. Accordingly, the claim is **not allowed**.
	Total			**61.07**	**6.82**	
D.	**Computer / IT Assets**					
1	Computer - Ut. 7&8	14 (3) (iii), (vii), 54 & 55	This expenditure is towards procurement of Industrial PC with Windows 8.1 OS Loaded with antivirus and HMI server, which is used for PLC of AHP. The computer system (EWS) for PLC of DM plant was running on Microsoft XP which has been declared obsolete by Microsoft in April 2014 and has withdrawn service support. In case of software failure, it may not be possible to revive the Windows XP based system. To take preventive, measure Up	11.66	11.66	The asset does not form part of the original scope of work of the project. However, considering the fact that the expenditure has been incurred to cater to the safe and secure operation of the generating station, the expenditure **is allowed**.

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			gradation of the system has been carried out. Upgradation from Windows XP to Windows 8.1 is also essential to ensure protection against cyber threat and compliance with the directives of the Ministry of Power, GOI dt. 12.04.2010 and dt. 02.08.2017 regarding steps to be taken to prevent cyber-attacks. The said directives of the Ministry of Power, GOI are enclosed with petition.			
2	Computer - Ut. 7&8	14 (3) (iii), (vii), 54 & 55	The expenditure is towards replacement of the old antivirus server for the LAN facility with a new one. LAN System had been established and commissioned at CTPS U#1,2 &3 in the year 2006 and in use since then. U#7&8 has also been brought under the LAN connectivity of the DVC Network in the year 2013. EBA Package has already been rolled on to the CTPS site and all module like C&M, O&M, Finance,	4.53	4.53	The asset does not form part of the original scope of work of the project. However, considering the fact that the expenditure has been incurred to cater to the safe and secure operation of the generating station, the expenditure **is allowed**.

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			Accounts, Fuel, Payroll, Pension, Project, and ESS are running and the payments and procurement are being done through these modules only. The smooth functioning of the EBA system requires fast, reliable and virus free access through the LAN Network either to the intranet or to the internet, and for this an antivirus Server is of prime requirement. The role of this Server is to run "TrendMicro" as per schedule Programme to keep the LAN network of CTPS virus free. Presently, there is 01 nos. HP make (HP ProLiant 150 ML) antivirus server, which was installed during the commissioning of LAN at CTPS U#1, 2, & 3 in the year 2006. The existing antivirus server is not working since 30th January 2018 due to lack of technical up gradation which			

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			support upgraded version of window server 2008 or higher. Therefore, installation of the new version of antivirus server is essential for protection of all Computer system from malware or virus of whole LAN network of CTPS. This upgradation is also essential to ensure protection against cyber threat and compliance with the directives of the Ministry of Power, GOI dt. 12.04.2010 and dt. 02.08.2017 regarding steps to be taken to prevent **cyber-attacks**. The said directives of the Ministry of Power, GOI are enclosed with petition.			
3	Computer - Ut. 7&8	14 (3) (iii)	This expenditure is towards procurement of Desktop Computers with pre-loaded operating systems and associated accessories, to be used for various office purposes at CTPS unit 7&8. Computers with updated operating systems are	51.05	51.05	The asset does not form part of the original scope of work of the project. However, considering the fact that the expenditure has been incurred to cater to the safe and secure operation of the generating station, the claim of the Petitioner **is allowed**

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			essential to ensure protection against cyber threat and compliance with the directives of the Ministry of Power, GOI dt. 12.04.2010 and dt. 02.08.2017 regarding steps to be taken to prevent **cyber-attacks**. The said directives of the Ministry of Power, GOI are enclosed with petition.			
4	Computer - Ut. 7&8	14 (3) (vii), 54 & 55	This is balance expenditure towards procurement of Hard Disk for the server computer used for vibration monitoring system of TG and HT Drives of CTPS Unit 7&8. The vibration monitoring system has server computer installed at Unit #7 for online monitoring & analysis of the vibration parameters. The hard disk of the computer got damaged and had to be replaced for the system to run smoothly. VMS records the critical vibration parameter of the TG & HT drives; therefore, the healthiness of the	0.20	0.00	The expenditure claimed is in the nature of a minor asset and in terms of the second proviso to Regulation 14(3) of the 2014 Tariff Regulations, the claim is **not allowed**.

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			server computer must be always maintained. The procured Hard disk was used to replace the damaged hard disk. The same is presently in service.			
	Total			**67.44**	**67.24**	
E.	**Other Assets (excluding Computer / IT Assets)**					
1	Other Assets - LED Projector, Monitor etc.(24" LED Monitor for MaxDNA DCS System)	14 (3) (vii), 54 & 55	This expenditure is towards replacement of the existing LED Monitor for MaxDNA DCS System with new LED monitor. CTPS Unit#7&8 have maxDNA based DCS. For interfacing of data from field to control room there is HMI system. The monitor is a part of human-machine interface (HMI) system. It is the operator window of the supervisory syste m. It provides plant information to the operating personnel in the form of mimic diagrams which are a schematic representation of the plant being controlled and trends and event logging pages. So, the monitor plays a vital role	1.19	0.00	Regulation 14(3)(vii) of the 2014 Tariff Regulations, is not applicable to this generating station being a coal-based thermal generating station. Moreover, the items claimed are in the nature of tool & tackles and hence, their capitalization is not permissible in terms of the second proviso to Regulation 14 of the 2014 Tariff Regulations. We also find no justification to exercise the powers under Regulation 54/ Regulation 55 of the 2014 Tariff Regulations to consider the claim. Accordingly, the claim is **not allowed**.

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			for efficient and smooth running of power plant. The visibilities of few of the monitors were decreasing day by day. Due to this operator were facing some problem during continuous monitoring of powerhouse. So, the faulty monitors were replaced with new LED monitor.			
2	Other Assets - LED Projector, Monitor etc.	54 & 55	This expenditure is towards procurement of 01(one) no. of 55" LED TV Monitor to be used for day-to-day meeting/video conferencing in conference hall.	0.89	0.00	
3	Office Equipment - Ut. 7&8	14 (3) (vii), 54 & 55	This expenditure is towards procurement of one number of water purifier for use at office building at CTPS Unit 7&8	0.07	0.00	
4	Scientific / Lab Instrument	14 (3) (vii), 54 & 55	This expenditure is towards procurement of Digital pyrometer and F1 Class weight box for Chemical and Environmental laboratory. From the inception of the chemical laboratory in the year 2011, it is	1.05	0.00	

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			not provided with the any Digital pyrometer and F1 Class weight box. So, at least 1 Nos. of Digital pyrometer and F1 Class weight box (Common for general chemical lab, Environmental lab, and coal lab of U#7&8) are needed for the smooth functioning of lab. As Chandrapura coal laboratory are on the way of NABL accreditation, so, it is mandatory to have these instruments in the laboratory for the intermediate checking the variation of operational environment of the lab instrument. As per the GAP analysis performed by the consultant engaged for NABL accreditation (M/S Consultation management services-Kolkata), these two instruments are felt necessary for maintaining the proficiency of laboratory. Copy			

Sl. No.	Head of Work/ Equipment (Asset name as per ledger)	Regulation	Justification	Claimed	Allowed	Remarks
			of the Gap analysis report is enclosed with petition			
5	Misc. (other Assets) - Ut. 7&8	14 (3) (iii)	This expenditure is towards procurement of different types of Fire extinguishers for CTPS Unit 7&8 in compliance with the IS 3034:1993 (Reaffirmed 2002).	12.69	12.69	The asset does not form part of the original scope of work of the project. However, considering the fact that the expenditure has been incurred to cater to the safe and secure operation of the generating station, the claim of the Petitioner **is allowed** under Regulation 14 (3) (iii) of the 2014 Tariff Regulations.
	Sub-total			**15.89**	**12.69**	
	Total			**418.82**	**271.39**	

21. Accordingly, the summary of additional capital expenditure allowed for the period 2014-19 is summarised below:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Buildings	(-) 963.04	26.60	(-) 57.00	19.69	163.69
Road Culverts & Rly. Sidings	879.16	1.67	64.48	350.84	20.94
Barrage, Gates & Others	(-) 30.48	5.20	179.88	(-) 2.61	0.00
Power House	600.68	126.71	(-) 291.57	(-) 23.94	6.82
Switch Gear	39.49	3.31	(-) 9.97	(-) 1.41	0.00
Tower Poles & Fixtures	55.50	3.80	(-) 11.47	(-) 1.62	0.00
Computer / IT Assets	18.65	9.58	8.80	0.00	67.24
Other Assets (excluding Computer / IT Assets)	112.82	112.47	6.37	(-) 1.44	12.69
Total Additional Capitalization allowed	**712.80**	**289.34**	**(-) 110.47**	**339.50**	**271.39**

22. Accordingly, additional capital expenditure claimed and allowed for the period 2014-19 is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed	1021.96	320.67	3074.20	557.67	418.82
Allowed	712.80	289.34	(-) 110.47	339.50	271.39

De-capitalization

23. The Petitioner has submitted the asset wise details of de-capitalization of Rs. 70.22 lakh (Rs. 58.20 lakh in 2017-18 and Rs. 12.02 lakh in 2018-19) in 2014-19. The decapitalization claimed by the Petitioner against the replacement of additional capital expenditure assets/items which have been allowed, have been considered. However, the decapitalization of items claimed by the Petitioner wherein, additional capital expenditure was not allowed, has been excluded. Accordingly, the de-capitalization allowed is as under:

(Rs. in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
0.00	0.00	0.00	16.52	11.07

Un-discharged liabilities

24. The Petitioner has submitted that the total undischarged liabilities created during the period 2014-19, is Rs. 315.45 lakh (Rs. 304.21 lakh in 2014-15, Rs. 8.99 lakh in 2016-17, and Rs. 2.25 lakh in 2017-18). The Petitioner has further 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 observed that the information submitted by the Petitioner is not in line with the 2014 Tariff Regulations i.e., item-wise details of undischarged/discharged liabilities has not been furnished. 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 period 2014-19. Due to negative additional capital expenditure allowed in 2016-17, corresponding undischarged liabilities allowed during the year has been considered as 'Nil'. Accordingly, as against an un-discharged liability of Rs. 315.45 lakh claimed by the Petitioner, a

corresponding amount of Rs. 213.55 lakh has been allowed.

Discharge of Liabilities

25. The Petitioner has submitted the year-wise total liability discharged for Rs. 390.47 lakh (Rs. 352.78 lakh in 2014-15; Rs. 26.46 lakh in 2015-16; Rs. 8.99 lakh in 2017-18; and Rs. 2.25 lakh in 2018-19), instead of the item-wise liability discharges. It is observed that the information submitted by the Petitioner does not contain the item-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 period 2014-19. Accordingly, as against the discharged liability of Rs. 390.47 lakh claimed by the Petitioner, a corresponding amount of Rs. 276.86 lakh has been allowed as part of the additional capital expenditure, corresponding to the assets allowed, as detailed below:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Un-discharged liabilities (A)	3234.50	3200.62	3176.75	3176.75	3172.65
Additions during the period 2014-19 (corresponding to allowed additional capital expenditure) (B)	212.18	0.00	0.00	1.37	0.00
Discharges during the period 2014-19 (corresponding to allowed additional capital expenditure) (C)	246.06	23.87	0.00	5.47	1.46
Reversal of Liabilities out of liabilities added during the period 2014-19 (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)	**3200.62**	**3176.75**	**3176.75**	**3172.65**	**3171.19**

Capital cost allowed for the period 2014-19

26. Accordingly, the capital cost approved for the period 2014-19 for the generating station, is as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Capital Cost (A)	222825.71	223572.39	223885.61	223775.14	224102.23
Add: Addition during the year / period (B)	712.80	289.34	(-)110.47	339.50	271.39

	2014-15	2015-16	2016-17	2017-18	2018-19
Less: De-capitalization / Assumed Deletion during the year /period (C)	0.00	0.00	0.00	16.52	11.07
Less: Undischarged liabilities (D)	212.18	0.00	0.00	1.37	0.00
Add: Discharges during the year/period (E)	246.06	23.87	0.00	5.47	1.46
Closing Gross Block (F) = (A+B-C-D+E)	**223572.39**	**223885.61**	**223775.14**	**224102.23**	**224364.00**
Average Gross Block (F) = (A+F)/2	223199.05	223729.00	223830.37	223938.68	224233.11

Debt-Equity Ratio

27. 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."

28. The gross normative loan and equity amounting to Rs. 156175.76 lakh and Rs. 66932.47 lakh, as considered in the order dated 17.2.2017 in Petition No.

180/GT/2015, after considering the adjustment on account of initial spares, Rs. 155978.00 lakh and Rs. 66847.71 lakh, is considered as gross normative loan and equity as on 1.4.2014, 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, allowed is as under:

(Rs. in lakh)

	Capital Cost as on 1.4.2014	**%**	**Net Additional Capital Expenditure for the period 2014-19**	**%**	**Capital Cost as on 31.3.2019**	**%**
Debt	155978.00	70%	1076.80	70%	157054.80	70%
Equity	66847.71	30%	461.48	30%	67309.20	30%
Total	**222825.71**	**100%**	**1538.28**	**100%**	**224364.00**	**100%**

<u>Return on Equity</u>

29. 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:

30. 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%

(2) 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."

31. The base rate of Return on Equity (ROE), as allowed under Regulation 24 of the 2014 Tariff Regulations, is required 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 period 2014-19, on actual gross income of any financial year.

32. DVPCA has submitted that though the Petitioner has considered the effective tax rate of 19.610%, 19.705%, 19.705%, 19.705% and 19.758% for computation of ROE for the period 2014-19, the Audited accounts reveals that the Petitioner has not paid any actual tax during the period from 2014-18. It has stated that for the year

2018-19, 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, DVPCA 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. The Respondent TPDDL has submitted that the Petitioner company as a whole has booked a loss as per its audited accounts and thus, no tax has been paid by the Petitioner company during the period 2014-19, thus the applicable tax rate for these years shall be considered as 'Nil'. 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, to arise in future.

33. The matter has been considered. Since, the Petitioner has not been paying any income tax in any of the financial year for the period 2014-19, '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)	66847.71	67071.72	67165.68	67132.54	67230.67
Addition of Equity due to additional capital expenditure (B)	224.00	93.96	-33.14	98.13	78.53
Normative Equity-Closing (C) = (A) + (B)	67071.72	67165.68	67132.54	67230.67	67309.20
Average Normative Equity (D) = (A+C)/2	66959.72	67118.70	67149.11	67181.61	67269.93
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)	**10378.76**	**10403.40**	**10408.11**	**10413.15**	**10426.84**

<u>Interest on Loan</u>

34. 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."

35. DVPCA, has submitted that the Petitioner has claimed the total Interest on Loan at Rs. 38321.26 lakh for the period 2014-19. It has submitted that based on aforesaid proposed disallowance on additional capitalization, the loan balances have got changed and as a result interest on loan amount has also undergone change. Thus, DVPCA has requested to allow the Interest on loan to the tune of Rs. 37154.19 lakh as against Rs. 38321.26 lakh, claimed by the Petitioner. In response, the

Petitioner has submitted that the additional capitalisation for the period during 2014-19 to 2018-19 as submitted by DVPCA is based on their arbitrary assumptions of disallowance which are devoid of any merit and may be rejected.

36. The submissions have been considered. Interest on loan has been worked out as under:

a. The Gross normative loan of Rs. 155978.00 lakh has been considered on 1.4.2014, in the line with the approved capital cost as on COD of the station. 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 has been considered as Rs. 40318.50 lakh 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 for repayment of normative loan during the respective years of the period 2014-19.

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. The 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)	155978.00	156500.67	156719.92	156642.60	156871.56
Cumulative repayment of loan upto previous year (B)	40318.50	56953.54	73633.50	90325.81	107004.51
Net Loan Opening (C) = (A) - (B)	115659.50	99547.13	83086.42	66316.79	49867.05
Addition due to additional capital expenditure (D)	522.68	219.25	-77.33	228.96	183.24
Repayment of loan during the year (E)	16635.04	16679.96	16692.31	16687.79	16702.92
Less: Repayment adjustment on account of de-capitalization (F)	0.00	0.00	0.00	9.10	6.92
Net Repayment (G) = (E) - (F)	16635.04	16679.96	16692.31	16678.70	16696.00
Net Loan Closing (H) =(C) +(D) -(G)	99547.13	83086.42	66316.79	49867.05	33354.29
Average Loan (I) = (C+H)/2	107603.31	91316.78	74701.60	58091.92	41610.67

	2014-15	2015-16	2016-17	2017-18	2018-19
Weighted Average Rate of Interest of loan (J)	10.3471%	10.1885%	9.8126%	9.8773%	9.9912%
Interest on Loan (K) = (I)*(J)	**11133.77**	**9303.78**	**7330.21**	**5737.89**	**4157.41**

Depreciation

37. 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."

38. 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."

39. Cumulative depreciation of Rs. 40318.50 lakh as per order dated 9.2.2017 in Petition No. 181/GT/2015, has been considered as the opening cumulative depreciation, as on 1.4.2014, for the purpose of tariff. The weighted average rate of depreciation calculated in terms of the Regulation 53(2)(iii) read with Regulation 27 of the 2014 Tariff Regulations, has been considered for calculation of depreciation. 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)	223199.05	223729.00	223830.37	223938.68	224233.11
Value of freehold land included in average capital cost (B)	0.00	0.00	0.00	0.00	0.00
Aggregated Depreciable Value (C)= (A-B)*90%	200879.15	201356.10	201447.34	201544.81	201809.80
Remaining aggregate depreciable value at the beginning of the year (D) = [(C) - (Cumulative Depreciation of Previous year)]	160560.66	144402.57	127813.85	111219.01	94796.20
No. of completed years at the beginning of the year (E)	2.56	3.56	4.56	5.56	6.56
Balance useful life at the beginning of the year (F) = 25 - (E)	22.44	21.44	20.44	19.44	18.44
Weighted Average Rate of Depreciation (WAROD) (G)	7.4530%	7.4554%	7.4576%	7.4519%	7.4489%

	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Depreciation during the year/ period (H) = Minimum of [(A)*(G) or (D)]	**16635.04**	**16679.96**	**16692.31**	**16687.79**	**16702.92**
Cumulative depreciation at the end of the year (before adjustment for de-capitalisation) (I) = (H) + (K of the previous year)	56953.53	73633.49	90325.80	107013.59	123707.42
Less: Depreciation adjustment on account of de-capitalisation (J)	0.00	0.00	0.00	9.10	6.92
Cumulative depreciation at the end of the year* (K) = (I) - (J)	56953.53	73633.49	90325.80	107004.50	123700.50

Operation & Maintenance Expenses

40. 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

41. The O&M expenses claimed by the Petitioner are as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
11950.00	12700.00	13500.00	14350.00	15255.00

42. The normative O&M expenses claimed by the Petitioner, are in terms of Regulation 29(1)(a) of the 2014 Tariff Regulations and hence allowed.

Water Charges

43. 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:*

44. 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	696.16	413.10	538.18	535.12

45. The Petitioner has submitted the detailed break-up of the water charges claimed along with justification for incurring the same. The cumulative water charges claimed is Rs. 2182.56 lakh for the period 2014-19, out of the total actual water charges of Rs. 2975.46 lakh incurred for all the units of CTPS (i.e Units 1 to 3 and Units 7& 8).

46. The Respondents BRPL and BYPL have submitted that the Petitioner has merely provided a comparative statement of actual water consumption vis-à-vis the normative water consumption for the same gross generation, and year-wise actual water consumption, applicable water rates and the total water charges based on the rates charged to CTPS for the period 2014-19. The Respondents have therefore requested the Commission to direct the Petitioner to provide all necessary details required for accurately computing water charges in terms of the 2014 Tariff Regulations.

47. The matter has been considered. It is noticed that as per the Ministry of Environment, Forest and Climate Change (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 as part of its original Petition has furnished the computation for the actual water consumption for the period 2014-19. In addition, the Petitioner also furnished the actual water charges incurred, for the period 2014-19, for all Units of CTPS viz. Unit 1 to 3 and Unit 7 & 8. 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	10473569	5.70	596.99	0.00
	Domestic	1346931	1.15	15.49	
	Total	**11820500**		**612.48**	
2015-16	Industrial	10631104	5.70	605.97	1233.69
	Domestic	1325047	1.15	15.24	
	Total	**11956151**		**621.21**	
2016-17	Industrial	10618800	5.70	605.27	622.44
	Domestic	1493050	1.15	17.17	
	Total	**12111850**		**622.44**	
2017-18	Industrial	9952351	5.70	567.28	584.20
	Domestic	1471174	1.15	16.92	
	Total	**11423525**		**584.20**	
2018-19	Industrial	9085966	5.70	517.90	535.12
	Domestic	1497484	1.15	17.22	
	Total	**10583450**		**535.12**	
Total for 2014-19 tariff period		**57895476**		**2975.46**	**2975.45**

48. It is observed that, the Petitioner has apportioned total water charges of Rs.2975.45 lakh between all units of CTPS viz. Unit 1 to 3 and Unit 7 & 8, based on the actual generation recorded for the respective years of these units during the period 2014-19. Accordingly, the total apportioned water charges for this generating station i.e. CTPS (7&8) claimed are Rs.2182.56 lakh.

49. It is further observed that the water consumption includes domestic water consumption, charges for 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	696.16	413.10	538.18	535.12
Allowed	0.00	678.82	401.70	522.59	517.90

Capital Spares

50. 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."*

51. The Petitioner has claimed total actual expenditure of Rs. 750.77 lakh towards capital spares consumed during the period 2015-19 (Rs. 30.30 lakh in 2015-16, Rs. 273.97 lakh in 2016-17, Rs. 117.72 lakh in 2017-18 and Rs. 328.78 lakh in 2018-19) and has prayed that capital spares replaced / consumed by the generating station during the period 2014-19, may be allowed.

52. The Respondents BYPL, BRPL, MPPMCL and TPDDL have submitted that as per second provision of Regulation 29(2) of the 2014 Tariff Regulations, the Petitioner has not provided the required information and while making the claims the Petitioner has only provided the justification that the spares were required for ensuing efficient and reliable operation of the generating station. Thus, in absence of such necessary details and justifications, the claims of the Petitioner towards the capital spares ought to be disallowed.

53. The Objector, DVPCA has submitted that the Petitioner may be directed to submit proper justification for incurring the expenditure on capital spares and to substantiate 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 also submitted

that the Petitioner has also not provided any documentary evidence to substantiate its claim of expenditure towards capital spares for the period 2014-19.

54. 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 which become damaged / unserviceable are replaced / consumed, so that the machine continue to perform at expected efficiency on sustained basis. The Petitioner being a government entity, follows best maintenance practices for its power plants and also follows a set procedure regarding any capital expenditure related to power plants including capital spares through approval of competent authority as and when necessary. The Petitioner further submitted that the capital spares claimed for respective years has already been consumed as well as put to use. Any of the capital spare item consumed for replacement of original item are not pre-mature one. Petitioner’s competent technical team and O&M personnel reviews prevalent conditions of the machinery performance at regular intervals and only after consultation with OEM as well as taking reference of OEM manuals, the required parts/components are replaced by the concerned departments. The Petitioner has further submitted that generally there is standard 1 - 1.5 years warranty available as per DVC purchase manual regarding the capital spares items as a standard defined practice.

55. The matter has been considered. It is pertinent to mention that 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 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.

56. 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 of tariff. 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)	0.00	30.30	273.97	117.72	328.78
Value of Capital Spares (of Rs. 1 lakh and below) disallowed on individual basis (B)	0.00	0.00	0.00	0.00	0.00
Net total value of capital spares considered (D) = (A) - (B) - (C)	**0.00**	**30.30**	**273.97**	**117.72**	**328.78**

57. 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)	0.00	30.30	273.97	117.72	328.78
Salvage value @ 10% (B)	0.00	3.03	27.40	11.77	32.88
Net Claim allowed (C) = (A)*(B)	**0.00**	**27.27**	**246.57**	**105.95**	**295.90**

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

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
Installed Capacity (MW) (A)		500.00	500.00	500.00	500.00	500.00
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	11950.00	12700.00	13500.00	14350.00	15255.00
	Approved	11950.00	12700.00	13500.00	14350.00	15255.00
Water Charges (in Rs. lakh) (D)	Claimed	0.00	696.16	413.10	538.18	535.12
	Approved	0.00	678.82	401.70	522.59	517.90
Capital Spares Consumed (in Rs. lakh) (E)	Claimed	0.00	30.30	273.97	117.72	328.78
	Approved	0.00	27.27	246.57	105.95	295.90
Total O&M Expenses as allowed (including Water Charges and Capital Spares Consumed) (F) = (C+D+E)	**Claimed**	**11950.00**	**13426.46**	**14187.07**	**15005.89**	**16118.90**
	Approved	**11950.00**	**13406.09**	**14148.27**	**14978.54**	**16068.80**

Operational Norms

59. The operational norms for the generating station 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%	85%	85%	83%	83%
Gross Station Heat Rate (kCal/kWh)	2357.34	2357.34	2357.34	2357.34	2357.34
Auxiliary Power Consumption (%)	9.0%	9.0%	9.0%	9.0%	9.0%
Specific Oil Consumption (ml/kWh)	0.50	0.50	0.50	0.50	0.50

(a) Normative Annual Plant Availability Factor (NAPAF)

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."*

60. The Petitioner has claimed NAPAF of 83% (except 85% in 2015-16 and 2016-17) and has submitted that the Commission, in the 2014 Tariff Regulations, has provided for consideration of coal shortage, while specifying NAPAF. However, it has submitted that in order dated 17.2.2017 in Petition No. 180/GT/2015, the Commission has specified NAPAF as 85% for the entire period 2014-19. The Petitioner has submitted that during the period 2014-19 (except 2015-16 and 2016-17), PAF of the generating station was adversely impacted during the season of monsoon, due to inadequate 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 for the period 2014-19 (Except 2015-16 and 2016-17) from 85% to 83%, in exercise of the 'Power to Relax' under Regulation 54 of 2014 Tariff Regulations.

61. The Respondents, TPDDL and Objector, DVPCA have submitted that the arrangement of the adequate coal supply is the sole responsibility of the Petitioner. They have also submitted that the coal supply is being governed by a separate bilateral Fuel Purchase Agreement (FPA) signed between the Petitioner and Coal Supplier, and the beneficiaries are in no way responsible for coal linkage shortage. Hence, the burden should not be passed on to the beneficiaries, for any lapses which are attributable to the Petitioner/ Coal Supplier. The Respondent MPPMCL has

submitted that plea of the Petitioner for relaxation in norms is without any basis and the same is in gross violation of Tariff Regulations as well as Tariff Policy of the Government of India, which categorically states that norms should be based on normative value and not on normative or actuals, whichever is lower.

62. The matter has been considered. Considering the nationwide coal shortage scenario, Regulation 36(A) of 2014 Tariff Regulations provides for relaxed NAPAF of 83 % for first three (3) years i.e., from 2014-15 to 2016-17 and for review of the same thereafter. In line with this, the coal availability was reviewed, and it was observed that the availability of coal to the thermal generating stations in the country became normal and therefore, the NAPAF of 85% for 2017-18 and 2018- 19 has been adopted by the Commission for all thermal generating stations under the purview of the Commission. 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). Accordingly, NAPAF of 83% for 2014-15, 2015-16 and 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.

(b) Gross Station Heat Rate

63. The Petitioner has claimed Gross Station Heat Rate (GSHR) of plant as 2357.34 kCal /kWh. As the Gross Station Heat Rate claimed by the Petitioner is same as was allowed vide order dated 17.2.2017 in Petition No. 180/GT/2015 and also is in accordance with the provisions of Regulation 36(C)(b) of the 2014 Tariff Regulation. Accordingly, the same is allowed.

(c) Auxiliary Energy Consumption

64. The Petitioner has claimed Auxiliary Energy Consumption (AEC) of 9.00% for the plant. Regulation 36(E)(a) of the 2014 Tariff Regulations provides for Auxiliary Energy Consumption of 8.5%, for coal based generating stations of 250 MW sets, with Natural Draft cooling tower. It further provides that for thermal generating stations with induced. draft cooling towers, the norms shall be further increased by 0.5%. Accordingly, AEC as claimed by the Petitioner, is in line with the Regulations and hence, the same is allowed.

(d) Secondary Fuel Oil Consumption

65. The Petitioner has claimed secondary fuel oil consumption as 0.5 ml / kWh. In this regard, it is noted that the Regulation 36(D)(a) of the 2014 Tariff Regulations provides for secondary fuel oil consumption of 0.5 ml/kWh for coal based generating stations. 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.

66. 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)	2357.34	2357.34	2357.34	2357.34	2357.34
Auxiliary Power Consumption (%)	9.0%	9.0%	9.0%	9.0%	9.0%
Specific Oil Consumption (ml/kWh)	0.50	0.50	0.50	0.50	0.50

Interest on Working Capital

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

"28. Interest on Working Capital:

(1) The working capital shall cover:

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

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

(ii) Cost of coal or lignite and limestone for 30 days for generation corresponding to

the normative annual plant availability factor;

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

(iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29;
(v) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and

(vi) Operation and maintenance expenses for one month.

(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this regulation shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period.
(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof as the case may be is declared under commercial operation whichever is later.

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

68. The Petitioner, vide its additional submissions, has revised its claims towards Interest on working capital, due to the revision made in its P&G claims. The details of the revised interest on working capital, as submitted 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)	11436.17	11743.83	11711.74	11436.17	11436.17
Cost of oil for 2 months (B)	171.77	176.39	175.91	171.77	171.77
O&M expenses - 1 month (C)	995.83	1116.35	1159.42	1240.68	1315.84
Maintenance Spares - 20% of O&M (D)	2390.00	2679.23	2782.62	2977.64	3158.02
Receivables - 2 months (E)	22240.13	22768.12	22898.21	23342.71	22527.21
Total Working Capital (F) = (A+B+C+D+E)	**37233.91**	**38483.92**	**38727.90**	**39168.97**	**38609.02**
Rate of Interest (G)	13.5%	13.5%	13.5%	13.5%	13.5%
Total Interest on Working capital (H) = (F)x(G)	**5026.58**	**5195.33**	**5228.27**	**5287.81**	**5212.22**

(a) Fuel Cost for Working Capital

69. Sub-clauses (i), (ii) and (iii) of Regulation 28(1) of the 2014 Tariff Regulations provides cost of coal towards stock for 30 days, 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.

70. 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

71. 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."*

72. The Petitioner has furnished the average GCV of coal as 3357.87 kcal/kg on "as received" basis for the period from January 2016 to March 2016.

73. 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 2016 to March 2016, 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 A. It is 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 for computation of working capital is allowed as under:

	Allowed
Weighted Average GCV of Oil (kcal/ltr)	9320.06
Weighted Average cost of Oil (Rs/kl)	56698.49
Weighted Average GCV of Coal (kcal/kg)	3357.87
Weighted Average cost of Coal (Rs/Tonne)	2612.73

74. Based on the operational norms, GCV and price of primary and secondary fuel allowed as above the cost of fuel components in working capital is worked out and allowed as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (30 days - Corresponding to NAPAF)	5469.85	5469.85	5469.85	5601.65	5601.65
Cost of Coal towards Generation (30 days - Corresponding to NAPAF)	5469.85	5469.85	5469.85	5601.65	5601.65
Cost of Secondary fuel oil 2 months (Corresponding to NAPAF)	171.77	172.24	171.77	175.91	175.91

(b) Working capital for Maintenance Spares

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
2390.00	2679.23	2782.62	2977.64	3158.02

76. It is noticed that the Petitioner has claimed working capital for maintenance spares by excluding the capital spares. 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
2390.00	2681.22	2829.65	2995.71	3213.76

(c) Working Capital for O&M Expenses

77. 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
995.83	1116.35	1159.42	1240.68	1315.84

78. 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
995.83	1117.17	1179.02	1248.21	1339.07

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

79. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of 204.28 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 Coal and Oil as claimed by the Petitioner have been allowed under paragraph 73 above. Accordingly, the ECR allowed is as under:

	Unit	2014-19
Capacity	MW	500
Gross Station Heat Rate	kCal/kWh	2357.34
Aux. Energy Consumption	%	9.00%
Weighted average GCV of oil	Kcal/lit	9320.06
Average GCV of Coal for Jan to March 2016	Kcal/kg	3357.87
Weighted average price of oil	Rs. /KL	56698.49
Weighted average price of Coal	Rs. /MT	2612.73
Rate of Energy Charge ex-bus (rounded off to 3 decimals)	Rs. /kWh	2.043

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

a) ECR of Rs. 2.043 /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 500 MW (2x250 MW), normative availability of 83% for first year and 85% for last two years, and Auxiliary Energy Consumption of 9.00%.

81. 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
11264.47	11295.33	11264.47	11535.90	11535.90

(e) Working Capital for Receivables

82. 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)	11264.47	11295.33	11264.47	11535.90	11535.90
Fixed Charges – for two months (B)	9134.77	9093.09	8890.17	8778.15	8706.59
Total (C) = (A+B)	**20399.24**	**20388.42**	**20154.64**	**20314.05**	**20242.49**

(f) Rate of interest on working capital

83. 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 under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
WC towards Coal for Stock (30 days generation Corresponding to NAPAF) (A)	5469.85	5469.85	5469.85	5601.65	5601.65
WC towards Coal for Generation (30 days generation Corresponding to NAPAF) (B)	5469.85	5469.85	5469.85	5601.65	5601.65
WC towards oil for 2 months Corresponding to NAPAF (C)	171.77	172.24	171.77	175.91	175.91
WC towards O&M expenses - 1 month of O&M Expenses (D)	995.83	1117.17	1179.02	1248.21	1339.07
WC towards Maintenance Spares - 20% of O&M Expenses (E)	2390.00	2681.22	2829.65	2995.71	3213.76
Receivables - 2 months (F)	20399.24	20388.42	20154.64	20314.05	20242.49
Total Working Capital (G) = (A+B+C+D+E+F)	**34896.53**	**35298.75**	**35274.77**	**35937.17**	**36174.52**
Rate of Interest (H)	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital (I) = (G)*(H)	**4711.03**	**4765.33**	**4762.09**	**4851.52**	**4883.56**

Additional O&M Expenses claims

84. 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. 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

85. The Petitioner has claimed total of Rs. 7886.78 lakh (Rs. 1052.75 lakh in 2014-15, Rs. 1067.16 lakh in 2015-16, Rs. 1671.13 lakh in 2016-17, Rs. 2617.17 lakh in 2017-18 and Rs. 1478.59 lakh in 2018-19) during the period 2014-19, towards 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 Ministry of Environment, Forest and Climate Change (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 Central Coalfields Ltd.

(CCL) has allowed the Petitioner to utilize its abandoned mines for this. Accordingly, the Petitioner has engaged various transporters for evacuation and transportation of ash from ash ponds of the generating station to the abandoned open cast mines of CCL. Further, the Petitioner has further submitted that the expenses for such ash evacuation and transportation activities for Unit 1 to 3 and Unit 7 and 8 of the Project (CTPS) have been booked in the annual accounts in the consolidated manner and subsequently have been apportionment among the various units of CTPS based on the gross generation of the units for the respective years of the 2014-19 tariff period. The Petitioner has prayed that, the Commission may approve the 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.

86. The Objector DVPCA has submitted that, actual O&M expenses for the FY 2014-19 including Ash Evacuation expenses is lower than the normative O&M expenses which means there is no requirement to consider it separately. It has further submitted that the separate claim towards ash evacuation was disallowed in the tariff order for the period 2014-19 and the Statement of Reasons to the 2014 Tariff Regulations, categorically specifies such expenses being factored in the normative O&M expenses. The Respondent MPPMCL has submitted that claim of Petitioner on account of ash disposal is not prudent since the same is varying drastically over the period. It has further submitted that no information regarding the income generated from sale of ash has been submitted by the Petitioner and therefore, the claim of the Petitioner may be rejected. The Respondents BRPL and BYPL have submitted the following:

a) MOEF&CC Notification dated 14.9.1999 issued under the provisions of

Environment (Protection) Act, 1986 (“EP Act”) required all new coal based TPPs or expansion units to achieve 100% ash utilization within four years from COD.

b) MOEF&CC Notification dated 3.9.2009 inter alia amended the timelines for 100% ash utilization to five years from the 3.9.2009. Further, the Notification dated 3.9.2009 also provided that:

   i. Unutilized fly ash in relation to the target during a year, if any, shall be utilized within the next two years in addition to the targets stipulated for those years.

   ii. The balance unutilized fly ash accumulated during the first five years (difference between the generation and utilization target) shall be utilized progressively over the next five years in addition to 100% utilisation of current generation of fly ash.

c) MOEF&CC Notification dated 25.1.2016 further amended the Notification dated 14.9.1999 and inter alia provided that the transportation cost of fly ash generated at the power stations would be borne by the Generating Companies. It was directed the TPPs shall comply with the said provision in addition to 100% ash utilization before 31.12.2017.

d) MOEF&CC Notification dated 25.1.2016 is purely punitive in nature and was notified as the coal-based TPPs had failed to achieve 100% ash utilization.

e) The intent of the MOEF&CC Notification dated 25.1.2016 was to penalise TPPs which failed to achieve 100% ash utilization within the timelines provided under the said Notifications.

f) The Petitioner cannot be allowed to pass through the expenses incurred by it due to non-compliance with the MOEF&CC Notifications.

g) Further, reliance placed by the Petitioner on Order dated 25.4.2019 in Petition No. 16/RP/2018 is erroneous, where the claim of MPL was allowed by the Hon’ble Commission by its order dated 25.4.2019 as the same was on account of limited ash pond capacity considering the peculiar facts of MPL as such the Order cannot be considered in rem. Accordingly, the Petitioner cannot claim allowance of additional expenditure towards ash disposal relying upon MPL’s case. The Petitioner has not provided any details / justification to prove that there is deficiency in the ash pond capacity to accommodate fly ash generated from CTPS. Hence, reliance placed by the Petitioner on the order dated 25.4.2019 in Petition No. 16/RP/2018 is erroneous and misplaced.

h) Accordingly, the alleged claim amounting to Rs. 7886.8 lakh is liable to be rejected by the Commission. Without prejudice to the above, it is submitted that:

   i. Petitioner is being allowed to generate income from the sale of fly ash even after contravening the requirement under the MOEF&CC Notifications. However, the burden of increased tariff has been put on the beneficiaries, who are being put to prejudice due to acts and omissions of the Petitioner.

ii. The income received by the Petitioner through sale of fly ash ought to be utilized to meet the additional capital expenditure on storage / transportation of fly ash and compensate the change in Tariff.

87. The Petitioner, in its rejoinder, has clarified that the Commission in its order dated 5.11.2018 in Petition No. 172/MP/2016 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 period 2014-19. 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 based on '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 notification 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."

88. The Petitioner has stated that in compliance to the above, 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

89. 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."

90. 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 areas (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.

91. 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

92. In consideration of the 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**

93. 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, are 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**

94. 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**

95. Accordingly, the ash transportation charges allowed as above during the period

2014-19 in respect of this generating station (CTPS) 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**
CTPS 1 to 3	0.00	135.17	846.88	223.02	0.00	1205.06
CTPS 7 & 8	**0.00**	**175.05**	**1671.13**	**2607.91**	**1478.59**	**5932.69**
CTPS (all stages)	0.00	310.22	2518.01	2830.93	1478.59	7137.75

96. 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. 5932.69 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 (without interest), starting from the date of this order, 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.

(B) Mega Insurance Expenses

97. The Petitioner has claimed total amount of Rs. 337.33 lakh (Rs. 62.34 lakh in 2014-15, Rs. 8.18 Lakh in 2015-16, Rs. 57.69 lakh in 2016-17, Rs. 149.16 lakh in 2017-18 and Rs. 59.96 lakh in 2018-19) during the period 2014-19, 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 in high alert security zone and therefore, the Petitioner must ensure substantial safeguard measures through Mega Insurance, against damage or destruction of the assets. The Petitioner has further submitted that, the expenses for Mega Insurance for CTPS have been booked in annual accounts in a consolidated manner. Therefore, the

accounted Mega Insurance expenses for CTPS have been apportioned amongst CTPS Unit 1 to 3 and Unit 7 & 8 based on the installed capacity and the same are claimed in this petition.

98. The Objector, DVPCA has submitted that actual O&M expenses for the period 2014-19 including Mega Insurance expenses is lower than the normative O&M expenses which means there is no requirement to consider it separately. Further, separate claim towards Mega Insurance was disallowed in the Tariff Order for FY 2014 19. The Statement of Objects and Reasons (SOR) to the 2014 Tariff Regulations categorically specifies such expenses being factored in the normative O&M expenses. The Respondents BYPL, BRPL, MPPMCL and TPDDL have submitted that the Petitioner has claimed Mega Insurance over and above the normative expenses allowed by the Commission and hence, the said claim ought to be rejected.

99. The Petitioner, in its rejoinder, has submitted that the Commission vide its order dated 13.12.2005 in Petition No. 163/2004 (approval of tariff of Tanda TPS) and in the case of MTPS, Units-1 to 3 (vide tariff order dated 9.7.2013 in Petition no. 269/GT/2012) and True-up order dated 29.7.2016 in Petition no. 465/GT/2014) and CTPS Units-1 to 3 (vide tariff order dated 7.8.2013 in Petition no. 275/GT/2012) and True-up order dated 29.7.2016 in Petition no. 470/GT/2014) had allowed the expenditure claimed on Mega insurance. It has also stated that the Mega Insurance claimed as additional O&M Expenses as per the 2014 Tariff Regulations does not include these expenses under the O&M expense norms.

100. 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 period 2014–19 and in exercise of its Power to Relax. However, the same was not allowed for other projects of the Petitioner. It is pertinent to mention that the Commission, while specifying the O&M expense norms for the period 2014-19, had considered insurance expenses as part of the O&M expense calculations and had factored the same in the said norms. Considering the above, we do not find any reason to allow expenses towards Mega Insurance over and above the O&M expense norms. Accordingly, the expenses claimed towards Mega Insurance is not allowed.

(C) CISF Security Expenses

101. The Petitioner has claimed total amount of Rs.9627.90 lakh (Rs. 1385.61 lakh in 2014-15, Rs. 1374.05 lakh in 2015-16, Rs. 1652.61 lakh in 2016-17, Rs. 2317.93 lakh in 2017-18 and Rs. 2897.70 lakh in 2018-19) during the period 2014-19, towards CISF security expenses, as additional O&M expenses for the generating station. In justification of the same, the Petitioner has submitted that:

(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 Commission had allowed the CISF expenses in case of Mejia Thermal Power Station Units-1 to 3 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

102. The Objector, 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. The Respondents BYPL, BRPL, MPPMCL and TPDDL has submitted that the Petitioner has claimed CISF Security Expenses over and above the normative expenses allowed by the Commission and hence, ought to be rejected.

103. The matter has been considered. As regards the submission of the Petitioner that the Commission had allowed CISF security expenses in 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 Chandrapur Thermal Power Station (Units-1 to 3) projects of the Petitioner during the period 2009-14, in exercise of its Power to Relax, but was not allowed for 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)

104. The Petitioner has claimed additional O&M expenses of Rs. 115.19 lakh in 2017-18 and Rs. 212.94 lakh in 2018-19 as impact towards Goods and Service Tax (GST), including the apportioned impact with respect to DVC HQ, during the period 2014-19. The Objector, DVPCA has submitted that GST on O&M Expenses was disallowed by the Commission as per para. 149 of vide Order dated 19.9.2018 in Petition No. 50/MP/2018. Thus, the additional claim over normative O&M expenses cannot be allowed. 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".

105. 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 expense calculations and accordingly, had factored the same in the said norms. This is evident from paragraph 49.6 of the SOR (Statement of Objects and Reasons) issued with the 2014 Tariff Regulations, which is extracted hereunder:

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

106. 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 period 2014-19, 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

107. The Petitioner has claimed total amount of Rs.1376.95 lakh (Rs. 280.13 lakh in 2014-15, Rs. 342.49 lakh in 2015-16, Rs. 285.53 lakh in 2016-17, Rs. 274.75 lakh in 2017-18 and Rs. 194.05 lakh in 2018-19) during the period 2014-19, 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 of the judgment of the Appellate Tribunal for Electricity ('APTEL') 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. The Petitioner has stated that above judgment of APTEL has been affirmed by the Hon'ble Supreme Court vide its judgment dated 23.7.2018 in Civil Appeal Nos. 971-973 of 2008 along with Civil Appeal Nos. 4289 of 2008 (Bhaskar Shrachi Alloys Ltd. Vs. DVC) referred to in (2018) 8 SCC 281. The Petitioner has further submitted that the expenses toward share of subsidiary activities allowed 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 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.

108. The Objector, 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. The Objector has further 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 17.2.2017 in Petition No. 180/GT/2015. It has 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.

109. 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 Regulations provides as under:

"the submissions have been considered. The expenses of subsidiary (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 ct tion of tariff of the projects owned by DVC: Damodar Valley Corporation (DVC).48, to the extent of its apportionment to generation and inter-state transmission, shall form the basis of 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.
The provisions in clause (2) of this regulation shall be subject to the decision of the Hon'ble Court and shall stand modified to the extent they are inconsistent with the decision.

110. 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 flood control, 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."*

111. 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. Accordingly, the expenses towards the sharing for subsidiary activity is allowed as claimed by the Petitioner during the period 2014-19.

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

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

113. It is noticed that the Petitioner, in its truing-up of tariff petitions for the period 2009-14, 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:

114. *"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 the time of truing up of tariff in terms of Regulation 8 of the2014 Tariff Regulations*

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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/information shall be furnished by the Petitioner at the time of truing up of tariff and the same will be considered in accordance with law."

115. Based on the above, the Petitioner, in its petitions for truing-up of tariff for the period 2014-19, has submitted its claim towards Share of P&G contribution and towards the Impact of pay revision, as additional O&M expenses, which are examined below:

(i) Impact of Pay revision

116. The Petitioner has claimed total amount of Rs. 1910.11 lakh (Rs. 607.31 lakh in 2016-17, Rs. 764.39 lakh in 2017-18 and Rs. 538.41 lakh in 2018-19) towards impact on account of Pay revision during the period 2014-19, due to recommendations of 7th Pay Commission. Further, the Petitioner has submitted that the CERC, 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.

117. 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)."*

118. 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 by the Petitioner, in respect of the generating station, 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
14505.11	15581.80	19796.09	25213.20	20330.51

119. 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 Security personnel 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.

120. 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.

121. 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

122. 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
741.83	1904.97	2093.49	4739.55	895.52

123. 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.

124. 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.

125. The Objector, 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.

126. 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, DVC is 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 as per 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. The actuarial 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 DVC for 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 required to 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.

127. 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 contribution on following grounds:

a. The Contributory Provident Fund is in respect of the actual amount of contribution during 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 to the 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 which it 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 21 and 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 contribution along 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 directed for 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.

128. 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

129. 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.

130. 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.

131. 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 period 2014-19, 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 period 2014-19 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 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**

132. 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**

143. 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 period 2014-19, 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.675.69 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)

144. 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
2217.68	2372.92	2539.02	2716.75	2906.92

145. The Petitioner has allocated sinking fund contribution and interest for DVC Bonds of Rs. 3100 Crore amongst the generating stations of DVC as follows:

(Rs. in Crore)

	2014-15	2015-16	2016-17	2017-18	2018-19
Total Contribution and Interest for Debt Borrowing	**152.77**	**163.47**	**174.91**	**187.15**	**200.25**
MTPS5&6	12.22	13.08	13.99	14.97	16.02
CTPS 7&8	22.18	23.73	25.39	27.17	29.07
MTPS 7&8	20.99	22.46	24.04	25.72	27.52
DSTPS	43.37	46.40	49.65	53.13	56.85
KTPS	47.26	50.57	54.11	57.90	61.95
RTPS-I	6.75	7.22	7.73	8.27	8.85
BTPS-A	-	-	-	-	-
Total	**152.77**	**163.47**	**174.91**	**187.15**	**200.25**

145. 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 Civil Appeal Nos. 971-973 of 2008 & batch matters.

146. The objector, DVPCA has submitted that under the 2014 Tariff Regulations, the Petitioner is allowed all expenses related to energy charges and fixed charges and the tariff regulation 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.

147. 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.*

148. 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.*

149. The objector, 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 judgment 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 fund in 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 duplicationin 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"

150. Though the Objector has filed review against 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
2217.68	2372.92	2539.02	2716.75	2906.92

(B) Share of Common Office Expenditure

151. 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	-	(-)550.49	-
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	-	-	-	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**

152. 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	-	-	508.33	70.80
Buildings	1.49	38.31	-	34.91	130.47
Power House	-	-	38.84	-	5.42
Sub Station equipment	-	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	-	-	-	-	97.85
EBA	37.69	-	-	-	-
Machinery & equipment	-	(-)0.88	(-)0.88	(-)0.01	-
Tower Pole & Fixtures	-	-	-	(-)0.28	-
Assets Held for Disposal	-	-	-	-	0.76
Total	**119.82**	**174.04**	**163.88**	**1173.23**	**386.48**

153. 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 approved as on 31.3.2014. Further, the Petitioner has allocated the cost of common offices among generating stations of the Petitioner on the basis of the 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 apportioned to T&D	105.10	99.82	99.43	107.37	112.07
Total	**1323.73**	**1257.14**	**1252.29**	**1352.25**	**1411.48**

154. 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
Common Office Expenditure apportioned to CTPS Unit 7 & 8	97.40	91.13	77.47	83.89	89.77

155. 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, 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

156. 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, de-capitalization of asset from R&D etc., considering the nature of expenses, the expenditure claimed as additional capitalization and de-capitalization is allowed under the 2014 Tariff Regulations.

Buildings

157. 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.

Powerhouse Plant & Machinery

158. 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

159. 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

160. 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 & Fixtures

161. 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

162. 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

163. 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

164. 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**

165. 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 period 2014-19. The Petitioner has also submitted that the expenditure was essential to copeup 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 de-capitalization is not allowed, in terms of first proviso to Regulation 14(3) of the 2014 Tariff Regulations.

Assets Held for Disposal

166. 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.

167. 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**

168. Based on the above, the additional capitalization allowed for various offices under common offices during the period 2014-19, 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**

169. 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 the period 2014-19, '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.

170. The annual fixed charges for Common offices have been worked out by considering 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
CTPS U 7 & 8 *(this generating station)*	85.41	77.56	61.55	60.78	64.26

Annual Fixed Charges for the period 2014-19

171. 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	16635.04	16679.96	16692.31	16687.79	16702.92
Interest on loan	11133.77	9303.78	7330.21	5737.89	4157.41
Return on Equity	10378.76	10403.40	10408.11	10413.15	10426.84
Interest on Working Capital	4711.03	4765.33	4762.09	4851.52	4883.56
O&M Expenses	11950.00	12700.00	13500.00	14350.00	15255.00
Water charges	0.00	678.82	401.70	522.59	517.90
Capital spare	0.00	27.27	246.57	105.95	295.90
Compensation Allowance	0.00	0.00	0.00	0.00	0.00
Sub-Total (A)	**54808.60**	**54558.56**	**53341.00**	**52668.89**	**52239.53**
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	280.13	342.49	285.53	274.75	194.05
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	2217.68	2372.92	2539.02	2716.75	2906.92

	2014-15	2015-16	2016-17	2017-18	2018-19
Fund (As per section 40, Part IV of DVC Act)					
Share of Common Office Expenses	85.41	77.56	61.55	60.78	64.26
Sub-Total (B)	**2583.23**	**2792.96**	**2886.10**	**3052.28**	**3165.24**
Total Annual Fixed Charges (C)= (A) + (B)	**57391.83**	**57351.52**	**56227.10**	**55721.17**	**55404.77**
Annual fixed charges allowed vide order dated 17.2.2017 in Petition No. 180/GT/2015	**55986.48**	**55216.14**	**54467.83**	**53806.68**	**53060.03**

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

172. Ash disposal expenses to be reimbursed in six equal monthly instalments (without interest), in terms of paragraph 96 above is as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018 -19
0.00	175.05	1671.13	2607.91	1478.59

173. 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

174. As stated, the Petitioner, in the present petition, has also sought determination of tariff of the generating station for the period 2019-24, in terms of the 2019 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the Petitioner (in Form I and Form I(i) of the petition) for the period 2019-24, are as under:

Capital Cost claimed

(Rs. In lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	228506.36	232349.52	236055.92	245517.07	246615.74
Add: Addition during the year / period (B)	4186.62	4159.70	9546.30	1145.80	886.32
Less: De-capitalization during the year / period (C)	343.45	453.30	85.15	47.13	82.85
Less: Reversal during the year / period (D)	-	-	-	-	-
Less: Undischarged liabilities (E)	-	-	-	-	-

	2019-20	2020-21	2021-22	2022-23	2023-24
Add: Discharges during the year / period (F)	-	-	-	-	-
Closing Capital Cost (G) = (A+B-C-D-E+F)	232349.52	236055.92	245517.07	246615.74	247419.21
Average Capital Cost (H) = (A+G)/2	**230427.94**	**234202.72**	**240786.49**	**246066.40**	**247017.47**

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	17164.37	17445.55	17935.97	18329.27	18400.11
Interest on Loan	2857.46	1400.41	335.20	4.56	4.59
Return on Equity[1]	13634.53	13804.00	14160.70	14469.59	14523.82
Interest on Working Capital	3780.66	3808.04	3855.44	3914.55	3978.35
O & M Expenses	16480.00	17060.00	17655.00	18280.00	18920.00
Water Charges	1390.24	1525.09	1677.60	1845.36	2035.46
Security Expenses	3107.42	3244.16	3386.91	3535.94	3691.54
Sub-total: A	**58414.68**	**58287.24**	**59006.81**	**60379.26**	**61553.87**
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	3110.41	3328.14	3561.11	3810.39	4077.11
Share of P&G	1863.22	1950.80	2042.51	2138.52	2239.04
Share of Common Office Expenditure	98.33	105.52	106.85	91.89	83.76
Expenses for Ash Evacuation, Mega Insurance and Subsidiary Activities	1810.82	1890.51	1973.69	2060.54	2151.21
Sub-total: B	**6882.78**	**7274.97**	**7684.16**	**8101.34**	**8551.13**
Grand Total (A+B)	**65297.46**	**65562.21**	**66690.97**	**68480.60**	**70105.00**

Capital Cost

175. 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.*
> *….*
> *(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.
….
(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."

176. The opening capital cost, claimed by the Petitioner, as on 1.4.2019 is Rs. 228506.36 lakh. However, the closing capital cost of Rs. 224364.00 lakh as on 31.3.2019, as approved by the Commission, while truing up the tariff of the generating station for the period 2014-19, in this order, as above, has been considered as the opening capital cost as on 1.4.2019, for the purpose of determination of tariff for the period 2019-24, in accordance with the 2019 Tariff Regulations.

Additional Capital Expenditure

177. 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."

178. The year-wise projected additional capital expenditure, claimed by the Petitioner, vide affidavit dated 25.7.2022 for the period 2019-24 are as under:

(Rs. In lakh)

Head of Work /Equipment	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total**
Net Additional Capitalization	1027.22	318.62	772.35	5117.87	2424.20	**9660.25**

179. The Respondents BYPL, BRPL and TPDDL have submitted that as per Regulation 25(2)(a) of the 2019 Tariff Regulations, the Petitioner is entitled to additional capital expenditure if 'the useful life of the assets is not commensurate with the useful life of the project'. They have stated that under Regulation 25(2)(c) of the 2019 Tariff Regulations, the Petitioner is entitled to additional capital expenditure if 'the replacement of such asset or equipment is necessary on account of obsolescence of technology', but contrary to the letter and spirit of these Regulations, the Petitioner has failed to submit any details / document to substantiate its claim that a particular technology has become obsolete or that the useful life of a particular asset is not the same as that of the units and hence, these need to be replaced. Accordingly, these Respondents have submitted that in the absence of requisite details / documents, the claim of the Petitioner is liable to be rejected. They have also stated that the Petitioner has failed to satisfy the conditions laid down by APTEL in Tata Power Company Limited v. Jharkhand State Electricity Regulatory Commission to substantiate its prayer for invocation of the power to relax and power to remove difficulties, vested with the Commission and these are limited powers and cannot be used to change the essential provisions of the Regulations. The Objector DVPCA has submitted the following:

a. The Petitioner has claimed additional capital expenditure for the procurement of Rake (with 61 wagons) under regulation 76 and 77 of the Tariff Regulations 2019, with approval letter issued by Ministry of Railways, GoI as justification for procurement of Rake. The Computation of Cost w.r.t the claim of Rs. 2,192.64 lakh is nowhere substantiated. In this regard it has requested the Commission to allow such expenses only after due prudence check.

b. The Petitioner has claimed additional capital expenditure under the Regulation 26(1)(d), 76 and 77 of the 2019 Tariff Regulations. Such claims of the Petitioner are specific to enhancement of higher security and safety requirements inside the plant premises and same are allowed on the direction of appropriate Authority. In justification to the claim, Petitioner has not provided any documentary evidence (Statutory Directive, Need for additional security, etc.) in support of such claims.

c. For the additional capital expenditure claimed under Regulation 25(2), 26(1), 76 & 77 of the 2019 Tariff Regulation, the Petitioner has not provided any proper justification or documentary evidence for claim as per the regulatory provisions of the Regulation.

d. It is well settled in law that the Power to Relax and Power to Remove Difficulty has to be exercised in rare cases and not ordinarily. The Petitioner has not presented/ cited any extra-ordinary circumstances or events which may lead to incurring such additional capitalization. In view of the same, the items claimed under additional capitalization in terms of Regulation 76 and 77 ought to be rejected.

180. The Petitioner, in its rejoinder, has submitted that detailed justification and supporting documents for the additional capital expenditures claimed under the Regulations 25 and 26 of the 2019 Tariff Regulations, have been furnished under Form-9 with the tariff forms with the original petition. The Petitioner has stated that all additional capital expenditure proposed by the Petitioner for the generating station are critical to ensure reliable, safe and efficient operation of the station and are therefore unavoidable. Accordingly, the Petitioner has prayed before this Commission to allow the claimed additional capitalization under Regulations 76 and 77 of the 2019 Tariff Regulation, wherever the same could not be claimed under the Regulations 24, 25 and 26 of the 2019 Tariff Regulations.

181. The matter has been considered. Based on the submissions and documents on record, and on prudence check, the claim of the Petitioner for additional capital

expenditure claimed for the period 2019-24, is examined and allowed as under:

2019-20:

(Rs. In lakh)

Sr. No.		Regulation	Justification by Petitioner	Claimed	Allowed	Remarks for Admissibility
1	Hydraulic Jacks & Accessories	25 (2)(a)	Various types of rotary equipment's are installed in boiler & coal mills of CTPS Unit 7&8. Alignment of rotary equipment's of boiler & coal mills is required to be carried out for running the equipment's within desired operating parameters. Alignment process. These special purpose tools and tackles shall help in proper maintenance & improving quality of works in minimum time.	9.78	0.00	Regulation 25(2)(a) of the 2019 Tariff Regulations is applicable for replacement of the assets within the original scope of work of the project, which have been fully depreciated in accordance with the provisions of the regulations. In addition, the assets/ items claimed are in the nature of tools & tackles. In view of this, the claim of the Petitioner is **not allowed.**
2	PORTABLE TUBE BEVELLING & FACING MACHINE FOR BOILER	25 (2) (a)	There are two nos. of boilers in CTPS Unit 7&8, and the availability of boilers have direct impact on generation. Various sizes of tubes are installed in boilers and damaged boiler tubes are required to be replaced for maintaining the availability and reliability of boilers. One of the important aspects of boiler tube failure management involves execution of quality repair jobs. One no. Each of Electric Operated Tube Bevelling machine is required to carry out jobs inside and outside boilers simultaneously. These special purpose tools and tackles shall help in proper maintenance & improving quality of works in minimum time.	2.71	0.00	
3	Digital Motor	25 (2) (a)	Measuring and testing instrument like Motor	0.43	0.00	Regulation 25(2)(a) of the 2019 Tariff

Sr. No.		Regulation	Justification by Petitioner	Claimed	Allowed	Remarks for Admissibility
	Checker with 3 ½ digit display, facility to measure IR (up to 1000MὨ), Resistance (0-200Ὠ) with max resolution of 0.001&#8040, Inductance (0-2H) with max resolution 0.001mH		Checker used for checking and testing the healthiness of motors. It plays an essential role in day-to-day maintenance as well as operation activity. Availability of these instruments is very much essential for reliable and smooth operation of units.			Regulations is applicable for replacement of the assets within the original scope of work of the project, which have been fully depreciated. In addition, the assets/ items claimed are in the nature of O&M expenses. In view of this, the claim of the Petitioner is **not allowed.**
4	220V / 1605AH (YHP31) Exide make Plante type Lead Acid Battery Bank consisting of 110 Nos. YHP31 cells in dry and uncharged condition, along with Acid, MS Stand, Inter Row/ Inter tier Connector & other Accessories	25 (2) (a)	There are two number of 220-volt battery bank (Exide make, type-YHP31, manufactured in the year 2006) in unit no.-7&8 used for supplying 220-volt DC in GRP Panel and various 6.6 KV/415 V boards. Cracks were found in a good number of batteries on the top lid and several containers got damaged for which the few cells have been bypassed. Moreover, heavy corrosion in the positive plates and positive straps was noticed in a good no of cells. This DC supply plays a vital role for safe operation of the generator and other electrical auxiliaries. Considering condition of battery bank, it was felt necessary to go for health assessment of battery bank of both units from OEM, M/S. Exide Industries Ltd. Accordingly, M/S. Exide Industries Ltd, the OEM, has visited the site on 19-	127.92	0.00	The Petitioner has claimed replacement of this item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for replacement of items which have fully depreciated. Considering the fact that the COD of the generating station is in the year 2011, the elapsed life of battery is around 8-9 years only. It is observed from Annexure-I submitted by the Petitioner, that the year of manufacture of the old battery bank being replaced was 2006, as against the COD in 2011. Further, the Annexure-I does not contain the recommendations of BHEL towards replacement of the battery bank as stated in the note

Sr. No.		Regulation	Justification by Petitioner	Claimed	Allowed	Remarks for Admissibility
			07-2018 and carried out the necessary health survey. After carrying out health survey, M/S. Exide INDUSTRIES Ltd. have submitted a detailed report (Report copy attached) and it will not be possible to revive the battery bank and recommended to replace the battery bank of unit#7 by a new one at the earliest as the condition of battery bank is not satisfactorily. Moreover, M/S. Exide Industries Ltd, the OEM has submitted a letter against our email dated-13/08/2018 stating that the cells have reached end of life.			sheet. Normally, it is expected that battery banks should be maintained on regular basis from the O&M expenses allowed to the generating station. In view of the above, the claim of the Petitioner is **not allowed.**
5	10 kva voltage stabilizer for thermogravi metric analyzer (tga-701)	25 (2) (a)	TGA- 701 (Thermo gravimetric analyzer) used for the determination of the proximate analysis of the coal. one No. of 10 KVA stabilizer of TGA-701 which was present in the coal lab, CTPS, U#7&8 was of not reputed brand and out of order since long. Our attempt to get it repaired could not be finalized for the non-availability of electronic equipment's (Copy of all communications in this regard are attached herewith). Considering the cost and sophistication of TGA unit such situation is not recommended and as thus it is very much necessary to procure one 10 KVA stabilizer of capacity 10 KVA.	0.25	0.00	As the expenditure claimed on the asset is in the nature of O&M expenses, the claim of the Petitioners is **not allowed.**
6	C&I Lab instruments	25 (2) (a)	The lab instruments Microprocessor based temperature and pressure calibrators are required for accurate and error free calibration of C&I	4.64	0.00	Regulation 25(2)(a) of the 2019 Tariff Regulations is applicable for replacement of the assets within the

Sr. No.		Regulation	Justification by Petitioner	Claimed	Allowed	Remarks for Admissibility
			equipment's across wide range of temperature and pressure. These instruments will enhance the capacity as well as the quality of calibration and testing of C&I laboratory which will ultimately improve the plant performance.			original scope of work of the project, which have been fully depreciated in accordance with the provisions of the regulations. In addition, the assets/ items claimed are in the nature of O & M Expenses.
7	desktop computers with pre-loaded operating system (including monitor, keyboard, mouse etc)	25 (2) (a)	DVC Training Institute, Chandrapura conducts various types of training Programme i.e., Induction level training, short term training, workshops, Seminars etc. for DVC employees. There were 26 nos. of computers available at Training Institute. Out of 26 nos. of computer 19 nos. was needed to be upgraded to prevent **Cyber-attack** as per office Circular No. HQ/IT/Security/1336, dt.06.12.2018. Out of 26 of computer 15 nos. of computers were connected to DVC LAN network for office establishment work (EBA etc.) and other 05 nos. were also required to be upgraded to facilitate EBA related work.	1.48	1.48	In terms of the submissions of the Petitioner, the claim is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations
8	Cable 1.1 KV copper conductor PVC 10 core, 2.5 mmsq	25 (2) (a)	The material was used to replace the damaged cable in switchyard area for the control and indication of 132KV Line 36.	0.85	0.00	As the expenditure claimed on the asset is in the nature of O&M expenses, the claim of the Petitioners is **not allowed.**
9	maxLINK Workstation for maxDNA DCS with Windows 10 OS, Preloaded with	25 (2) (a)	The upgradation of max DNA system of CTPS Unit-8 was initiated as per the direction of OS&U Kolkata following an MOM with M/s BHEL (the OEM) dated 29.08.18. In the MOM it has already been mentioned that BHEL will	339.87	339.87	After prudence check of the information submitted by the Petitioner, the claim is **allowed** under Regulation 25(2) (c) of the 2019 Tariff Regulations, along with the de-

Sr. No.		Regulation	Justification by Petitioner	Claimed	Allowed	Remarks for Admissibility
	maxDNA software and dongles with lifetime license validity		not be able to provide support for Windows XP due to it obsolesce since 2014.			capitalisation of Rs. 286.92 lakh towards original value of the old asset.
10	Water tender type b fabricated on the chasis tata model & multipurpose nozzels	25 (2) (a)	The items have reached its useful life. It was necessary to change the smooth operation of power plant.	47.90	47.90	Regulation 25(2)(a) of the 2019 Tariff Regulations is applicable for the replacement of items which have fully depreciated. The Petitioner has furnished the recommendation of the Standing Fire Advisory Council (SFAC) according to which the life of the fire tender is 5000 hrs. or 10 years whichever is earlier. In view of this, the claim of the Petitioner is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. However, as the Petitioner has not provided the gross value of the replaced asset and depreciation recovered, the gross value of the old asset has been considered as Rs. 32.42 lakh (under assumed deletions)
11	5 KVA ONLINE UPS	25 (2) (a)	5 KVA UPS to be used for providing back up to our Server room to make our DHCP Server, L3 Switch, L2 Switch, Router, and other active devices live for providing the uninterrupted internet service in CTPS to deliver the official jobs through EBA package as well as	0.75	0.00	As the expenditure claimed on the asset is in the nature of O&M expenses, the claim of the Petitioners is **not allowed.**

Sr. No.		Regulation	Justification by Petitioner	Claimed	Allowed	Remarks for Admissibility
			other applications. Old UPS was installed at Old Plant Server Room 10(ten) year ago which has been in function for more than 05(five) year of life. Presently, Old UPS is not in working condition and needed replacement with new one UPS. There is no back up UPS to providing uninterrupted power to Server Room.			
12	Cable Drum	25 (2) (a)	Cable utilized for switchyard area for replacement of the damaged cables.	2.11	0.00	
13	switch fuse unit dp for 32a 415 ac along with fuse	25 (2) (a)	The items have reached its useful life. It was necessary to change the smooth operation of power plant.	0.01	0.00	
14	220V / 965AH (YHP19) Exide make Plante type Lead Acid Battery Bank consisting of 110 Nos. 2V High Discharge Type YHP19 cells in dry and uncharged condition in specially molded Transparent plastic SAN boxes complete with Plante positive plates, pasted negative plates, along with Sulphuric	25 (2) (a)	Battery Bank #3 has already given more than 20 years of service. As on date there are many problems like boiling of electrolyte, cracked body of cells, breaking of stand etc. In the recent past it has been seen that these banks do not give required back up in event of AC power failure. The DC voltage drops very rapidly rendering the vital 220KV/132KV/33KV systems nonresponsive to any control or protection commands. Health survey of the Bank No 3 was done by the OEM recently and their report is also enclosed. They have mentioned that the present condition of the battery bank is alarming, and it should be replaced by new one.	84.06	0.00	The Petitioner has claimed replacement of this item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for replacement of items which have fully depreciated. Considering the fact that the COD of the generating station is in the year 2011, the elapsed life of battery is around 8-9 years only. It is observed from Annexure-6 submitted by the Petitioner, that the year of installation of the old battery bank being replaced was 1990 as against the COD year of 2011. Normally, it is expected that battery banks should be maintained on regular basis from the O&M expenses allowed to

Sr. No.		Regulation	Justification by Petitioner	Claimed	Allowed	Remarks for Admissibility
	Acid 1.19SpG, Non-Seismic MS Stand, Inter Row/ Inter tier Connector & other Accessories					the generating station. In view of the above, the claim of the Petitioner is **not allowed.**
15	6600 V, 150KW,1481 RPM TGDMCW motor, Stator Amps-17 A, Phase -3, Hz-50, Frame size ILA7500-4P, BHEL make	25 (2) (a)	There are Six (06) no's of BHEL make H.T. 6.6KV ,150KW ,1481 RPM TGDMCW motor installed in CTPS (Unit#7&8). TGDMC motors are very critical which are always in service while unit is running for cooling of, Generator Hydrogen, Turbine lube oil, BFP, CEP, Vacuum Pump and other Turbine side Auxiliaries using demineralized water. Currently there is **no spare motor** available in stock for these motors. As these motors are directly linked to Unit generation, so procurement of TGDMC motor is required for replacement in case of damage /failure of motor to prevent loss of generation on account of such failure and for sustained generation of unit.	27.32	0.00	Since capitalization of spare items is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the same may be claimed as capital spares consumed, as and when put to use.
16	Remote Calibration System for Sox NOx Analyzer	25 (2) (a)	Continuous Monitoring System (OCEMS) for emission parameters for stack emissions has already been installed and is in service at CTPS Unit7&8. Now with reference to the CPCB notice vide file no. 12011/33/2018/IT-RCAL dated 25/06/2018 and memo no/JSPCB/17 Cat./-B-810 dated 26/07/2018 of JSPCB, the	11.52	11.52	In view of the submissions of the Petitioner, the claim of the Petitioner is **allowed** under Regulation 26(1)(b) of the 2019 Tariff Regulations.

Sr. No.		Regulation	Justification by Petitioner	Claimed	Allowed	Remarks for Admissibility
			performance of OCEMS is required to be checked and accuracy of the data which is sent to CPCB and SPCB has to be ensured. In this connection remote calibration facility of OCEMS for emission parameters has to be provided as a mandatory requirement for verification of OCEMS performance. Also, a letter from EM&PC section, DVC, Kolkata has been received vide no- EM&PC/Env.Genl-7/336 Dated:17/08/2018 for the installation and communication of the same.			
17	Transformer	25 (2) (a)	Out of five colony Transformers two have already completed more than 25 years of service life. Apart from ageing, these transformers have gone through a lot of stress due to faults in the downstream network etc. Considering the increasing trend of load demand and deterioration in condition of transformers it is felt prudent to procure two numbers of 2MVA, 3KV/11KV transformers immediately. Recently there was a failure of the 2MVA 3KV/11KV Jharnadih power transformer. There was no spare available with us. One 2MVA transformer of G type was shifted and installed in place of the damaged Jharnadih 2MVA transformer. Load shedding was resorted to in G Type colony area. As	52.68	0.00	Since capitalization of spare items is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the same may be claimed as capital spares consumed, as and when put to use.

Sr. No.		Regulation	Justification by Petitioner	Claimed	Allowed	Remarks for Admissibility
			a result of this there was huge unrest among the residents of G Type colony area. To avoid such incidents in the future and maintain flexibility in operation/maintenance, it is proposed that procurement of TWO number of 2MVA/11KV transformers may be done. Accordingly, 4 nos of transformers were procured and put to use			
	Sub Total (Electrical)			**714.27**	**400.77**	
	Civil Construction Works					
18	Oil equipment	25 (1)	No justification provided.	222.00	0.00	As the Petitioner has not furnished any justification or supporting documents for the claim, same is **not allowed** at this stage.
19	RAILWAY SIDINGS	25 (1)	This expenditure is towards the work which is within the original scope (Sl. No. 3 of Sanction Order No. EDCON/ MECH/CST-7&8/563 dtd 11/09/09). The work was already executed by 2014. Major expenditure under this head was already capitalized in earlier years. Only the residual expenditure has been capitalized during this year.	90.95	90.95	As the asset/works form part of the original scope of work of the project, the claim of the Petitioner is **allowed**.
B	**Sub Total (Civil)**			**312.95**	**90.95**	
	Total			**1027.22**	**491.71**	

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Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
1	Spares of	25 (2) (a)	One no. 800TPH	15.93	0.00	Since the

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	ABB make PLC at Stacker Reclaimer		(rated)/960TPH (design) Stacker cum Re-claimer is under operation at Coal Handling Plant CTPS Unit-7&8. It is very vital equipment, and its healthiness/ availability is quite important. It is in running condition since its commissioning during 2009-10. Its operation is entirely dependent on Programmable Logic Controllers of ABB make (AC31 series) which is based on Windows operating SystemWindows®3.1 or greater e.g., Windows® NT or Windows®95/98(P/c-4). M/s ABB has notified in their website that AC31 series PLC which is installed presently at Stacker cum Re-claimer is now **obsolete** (P/c-2). The operating system is obsolete too. Notification no. EDCON/ ELEC/16(DDC)/ C&I/176 dated 29.05.2014 may please be referred in this context which recommends for up gradation of old PLC system with obsolete operating system. The matter was taken up with M/s ABB Limited for further confirmations vide e-mail as referred under (2) & (6). They have confirmed the obsolescence of the PLC vide e-mail dated 28.06.2018 (P/c-17 & 18) as referred above under(8). In view of above it is highly essential to replace the existing PLC with latest AC500 series at the			capitalization of spare items is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed.** However, the same may be claimed as capital spares consumed, as and when put to use.

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			earliest.			
2	VHF walkie talkie and base receiver set	25 (2) (a)	After continuous demands from CISF and discussions with HRD section and CISF, procurement of walkie-talkie set had been done for fulfilling the minimum required infrastructure for better communication in the DVC plant.	4.20	4.20	In view of the submissions of the Petitioner, the claim is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations. However, the Petitioner is directed to submit the letter from CISF in respect of the claim, at the time of truing up of tariff.
3	SS drive shaft with coupling	25 (2) (a)	SS drives shaft are utilized for driving CT fan which finally cools the inlet water to condenser and finally maintains the condenser vacuum. Condenser vacuum is critical parameter related to the efficiency of unit and to maintain unit heat rate within designed limit. The defective drive shaft was replaced with new one. The said item was used in CT Fan 7/9.	15.13	0.00	As the expenditure claimed for the asset is in the nature of O&M expenses, the claims of the Petitioner, is **not allowed.**
4	BOTTOM ASH OVERFLOW TRANSFER PUMP INCLUDING BASE PLATE, COUPLING FOUNDATION BOLTS COLUMN AND DELIVERY PIPE STAR SUPPORT &STRAINER AND WITHOUT MOTOR	25 (2) (a)	This pump used to replace the BAOT Pump 7A. The previous pump was developing low discharge pressure (1.4 kg/cm2 and was consuming more time (9-10 min) to evacuation the sump. With the replacement with this new pump, evacuation time of sump has decreased to 7 minutes. It is also developing pressure of about 2kg/cm2. Thus, it helped in reducing power consumption in respect of total time.	4.80	0.00	The ash pumps do have a shorter span life as these have to handle abrasive ash. The Petitioner has also submitted letter from OEM which declares the life of such pumps as 3-4 years. Considering this submission, it is clear that the said expenditure is of a recurring nature and is covered under the normative O&M expenses of the generating station. Accordingly, the

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	PUMP MODEL-150/400+TCH+N					claim of the Petitioner is **not allowed**.
5	Gear box of CT fan 7/4	25 (2) (a)	CT fan Gear Box are utilized for driving CT fan which finally cools the inlet water to condenser and finally maintains the condenser vacuum. Condenser vacuum is critical parameter related to the efficiency of unit and to maintain unit heat rate within designed limit. one number of defective Gear Box was replaced with new one. Ref: PO. DVC/Contract/CTPS/BOP(M) U-7 and 8/ C&M/ Supply/00039 dated 15/02/2020, The said item was used in CT Fan 7/4.	8.98	0.00	It is noticed that the annexure referred to by the Petitioner, as supporting document in support of the claim, has not been furnished by the Petitioner. In addition, the expenditure on the asset, is in the nature of O&M expenses. Hence, the claim of the Petitioner is **not allowed.**
6	Cable PVC Insulated, Armoured, 1.1 kV, Cu Conductor 16 Core, 2.5 SQ MM.	25 (2) (a)	Required to replace the damaged and worn-out cable of 220KV switch yard.	2.72	0.00	
7	High pressure portable handheld & backpack water mist system.	25 (2) (a)	High Pressure Portable Handheld & Backpack Water Mist Systems are the new generation of high-performance fire extinguishers in Thermal Power Stations for functionality, effectiveness and profitability based on the alternate production of flowing wet-foam or perfect light foam up to a range of water-mist function. Only one equipment allows the production of three different extinguishing results with infinitely variables dosages. The	3.71	0.00	Regulation 25(2)(a) of the 2019 Tariff Regulations is applicable for replacement of the assets within the original scope of work of the project, which have been fully depreciated in accordance with the provisions of the regulations. In addition, the assets/ items claimed are in the nature of O & M Expenses. In view of this, the claim of the Petitioner is

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			Water Mist based System that utilizes very fine water spray to extinguish fire and consumes very small amount of water. It is considered as most efficient firefighting agent for Class-A, Class-B, & live electrical fire up to 1000 V/1 m distance with exceptionally high heat absorbing capacity and less heat of vaporization. Since this equipment is used to suppress fire in less time so cost of maintenance of conventional fire extinguishers will be minimized by using this type of equipment.			**not allowed.**
8	Double Flanged, Short Body, Single Ecentric Gear Operated Butterfly Valve Rating Cl 75a, Manufactured as per Awwa C504 With Two Nos. Of Companion Flanges, Nuts, BOLTS And Gaskets. Size700mm Nb, Make; Kirloskar Brother Ltd, Drg No.266.06	25 (2) (a)	Butterfly valves are installed in CW hot line for proper distribution of hot water, which is required to be cooled for maintaining cooling water inlet temperature to condenser, which in turn related to maintaining condenser vacuum. Condenser vacuum is vital parameter related to efficiency of the unit and to maintain heat rate within designed limit. one number of of defective cell valve of CTPS unit# 8 was replaced for proper distribution of hot water to be cooled, thus got utilized for increasing the unit efficiency. Ref, PO: DVC/Contract/CTPS/BOP(M) U# 7 and 8/C&M/Supply/00033 Dated 09/01/2020, The said item was used in CT Fan 8/6.	5.21	0.00	It is noticed that the annexure referred to by the Petitioner, as supporting document in support of the claim, has not been furnished by the Petitioner. In addition, the expenditure on the asset, is in the nature of O&M expenses. Hence, the claim of the Petitioner is **not allowed.**

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	.095.1 KBL O/A NO. V2156K0 069					
9	220V / 1605AH (YHP31) Exide make Plante type Lead Acid Battery Bank consisting of 110 Nos. YHP31 cells in dry and uncharge d condition, along with Acid, MS Stand, Inter Row/ Inter tier Connector & other Accessori es	25 (2) (a)	The 220-volt battery bank of Unit#8 (Exide make, type-YHP31, manufactured in the year 2006) used for supplying 220-volt DC in GRP Panel and various 6.6 KV/415 V boards. Heavy corrosion in the positive plates and positive straps was noticed in a good no of cells due to which few cells have been bypassed. This DC supply plays a vital role for safe operation of the generator and other electrical auxiliaries. Considering condition of battery bank, it was felt necessary to go for health assessment of battery bank of Unit#8 from OEM, M/S. Exide Industries Ltd. Accordingly M/S. Exide Industries Ltd, the OEM, visited the site on 05/02/2020 and carried out the necessary health survey. After carrying out health survey, M/S. Exide INDUSTRIES Ltd. Submitted a detailed report (copy attached). As per the report the condition of the battery bank is deteriorating rapidly and to achieve a trouble-free service, they have recommended to replace it by a new bank at the earliest. Hence procurement of new 220 V DC Battery bank is justified.	132.13	0.00	The Petitioner has claimed replacement of the item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for replacement of items which have fully depreciated. Considering the fact that the COD of the generating station is in the year 2011, the elapsed life of battery is around 8-9 years only. Normally, it is expected that battery banks should be maintained on regular basis from the O&M expenses, allowed to the generating station. In view of the above, the expenditure claimed by the Petitioner, is **not allowed**
10	MOTOR, 415V AC,		There are 22Nos. 415 V,90KW, Marathon	3.19	0.00	As capitalization of spares is not

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	RATING 90 KW, SPEED 1485 RPM, FRAME-K280M, IP-55, INSULATION CLASS-F, AMBIENT TEMP-50 DEG C		(erstwhile Alstom) make CT FAN Motors have been in service at different bases of Unit#7&8 since inception (more than 8 to 9 years). There are not any spare available with us for 22 nos. of running motors at different base of CT FAN of Unit#7&8. Condition of the running motors are also not good. The CT FAN Motors are vital equipment of plant and are directly linked to power generation. To ensure maximum availability of the system, **it is proposed to procure 02 nos of motor.**			permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner ay claim the same as capital spare as and when it is put to use.
11	SYSTEM1 POWER GEN 210MW/250 MW Package		Due to obsolesce of existing system then. Certificate from OEM obtained for the same. Item received; supply part payment made.	34.81	0.00	The details of the item claimed have not been furnished. In the absence of any details, the scope of work cannot be comprehended. In view of this, the claim of the Petitioner is **not allowed.** However, the Petitioner is at liberty to claim this asset, with proper justification/details regarding obsolescence certificate from OEM, at the time of truing up of tariff.
12	Desktop Computers with Pre-Loaded Operating System (including Monitor, Keyboard, Mouse etc,	25 (2) (a)	DVC Training Institute, Chandrapura conducts various types of training Programme i.e., Induction level training, short term training, workshops, Seminars etc. for DVC employees. There were 26 nos. of computers available at Training	1.90	1.90	In view of the submissions of the Petitioner, the claim is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations.

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			Institute. Out of 26 nos. of computer 19 nos. was needed to be upgraded to prevent **Cyber-attack** as per office Circular No. HQ/IT/Security/1336, dt.06.12.2018. Out of 26 of computer 15 nos. of computers were connected to DVC LAN network for office establishment work (EBA etc.) and other 05 nos. were also required to be upgraded to facilitate EBA related work.			
13	Spares of Portable flue gas analyser & Dew point apparatus)	25 (2) (a)	Commissioning of two equipment's, namely, Dew point apparatus (Model no: 2000 DCD, SL. No: 03/2013/01) and portable flue gas analyser (Model: PA-2400, SL. No: 03/2014/01) were under the scope of M/S BHEL-PSER and have been lying pending since long. Necessary arrangement is being done from DVC-CTPS end for commissioning of the two instruments at risk and cost of M/S BHEL-PSER as per the MOM'S held at DVC, HQ between DVC, and M/S BHEL dated 15-16.10.204, 20-21.08.2015 and 11.03.2016. In line of that a work order regarding Commissioning of these two-laboratory equipment's, CTPS, UNIT#7&8 at risk and cost of M/S BHEL-PSER has been issued to M/S ENDEE Engineers Pvt Ltd	1.42	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner may claim the same as capital spares as and when put to use.
14	KARL FISHER	25 (2) (a)	The Karl Fischer Titrator is used in laboratory for determining the quantity of water contents in all different grade of oils used in power plant. It can measure moisture ranges	5.13	0.00	The Petitioner has submitted that the completion of remaining laboratory equipment shall be at the risk and cost of M/s BHEL. In

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			from 10 ppm to 100% of moisture. CTPS-LAB, U#7&8 has one microprocessor-controlled Karl Fisher (K. F) Titrator (Model-1760, Sl. No: 0903120). This instrument was supplied by BHEL-PSER. The commissioning and calibration of this instrument was also under the scope of work of M/S BHEL-PSER, but this instrument could not be made operational since its supply. BHEL-PSER won't be able to make this instrument operational even after several persuasion in this regard. However, as per MOM dated 15-16.10.2014, 16.09.2015 and 17.09.16 held at MTPS BHEL agreed on the completion of remaining lab from the DVC side at risk and cost of BHEL.			view of this, the same is **not allowed.** However, the Petitioner is granted liberty to claim the said asset/item, at the time of truing up of tariff, along with complete details stating as to whether the claimed amount has been recovered/adjusted against the pending bills of BHEL.
15	Atomic Absorption Spectrophotometer & Its Associated Accessories	25 (2)	One number of instruments named atomic absorption spectroscopy (AAS) supplied by the M/S BHEL-PCRI has not been commissioned since the inception of units. Commissioning of this equipment has been lying pending since long. AAS is an analytical instrument that measures the content of various metals up to ppb range present in the boiler and other effluent water samples. The availability of this instrument is necessary for smooth functioning of laboratory and plant thereof.	29.85	0.00	
16	Gas Chromatograph	25 (2) (a)	One number of instruments named Gas chromatography (GC) supplied by the M/S	0.59	0.00	

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			BHEL-PCRI has not been commissioned since the inception of units. Commissioning of this equipment has been lying pending since long. A gas chromatograph (GC) is an analytical instrument that measures the content of various components in a sample. The availability of this instrument is necessary for smooth functioning of laboratory and plant thereof. As per MOM dated 15-16.10.2014 and 16.09.2015 held at MTPS, BHEL agreed on the completion of remaining lab related work from the DVC side at **risk and cost** of BHEL.			
17	INSTALLATION & CIVIL WORK	25 (2) (a)	Major cracks at the joints between the main structure frame and diagonal bracings of CT fan - 03 & 04 of U#8 had been observed on checking. When referred to the HQ, it had been directed to get the job done at the risk and cost of M/s BHEL. To rectify the defective construction by Gammon India Limited (BHEL's subcontractor), BHEL agreed to carry out the rectification work of diagonal bracing for all the cell of both U#7&8 (total 88 nos. in 22 cells) as per MOM dtd 11.09.2013 between DVC & BHEL. However, rectification was carried out for 12 cells only (10 nos. in U#8 and 02 nos. in U#7) in the year 2016 by Gammon India Ltd. BHEL did not carry out the balance work although it was insisted from CTPS for all the cells. In view of the recent failure	48.91	0.00	The Petitioner has submitted that the works claimed shall be at the risk and cost of M/s BHEL. In view of this, the same is **not allowed.** However, the Petitioner is granted liberty to claim the said asset/item, at the time of truing up of tariff, along with complete details stating as to whether the claimed amount has been recovered/adjusted against the pending bills of BHEL.

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			in two more CT cells, it had become necessary to replace all remaining RCC diagonal bracing in balance 10 nos. cells by SS pipe structures as agreed upon by M/s BHEL in the MOM dtd. 11.09.2013.			
18	**Total**			**318.62**	**6.10**	

2021-22

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
1	HVR TRANSFORMER, 100KVA, DC output 95KV Peak, 1000mA, MAKE - BHEL	25 (2) (a)	There are 64 (Sixty-Four) nos. BHEL make 100KVA, DC output 95KV Peak, 1000mA, HVR TRANSFORMER, installed in ESP CTPS (Unit#7&8). HVR transformers provide power to ESP fields and these transformers are specially designed for ESP application, it works as step-up transformer as well as a rectifier and feeds DC power to ESP fields. These HVR transformers are almost in continuous service during running of the units and have direct links with the performance of the ESP. 01 (one) no. of HVR Transformer was procured and same replaced in place of ESP Field 2A1 of Unit#7 as the performance of transformer is not satisfactory.	18.98	18.98	The Petitioner has claimed replacement of the item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for replacement of items which have been fully depreciated. Hence, the replacement of the asset is not admissible under Regulation 25(2)(a) of the 2019 Tariff Regulations. However, considering the requirement of meeting the stringent environment norms, the expenditure claimed is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The de-capitalisation of the replaced asset is considered in assumed

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
						deletions. Accordingly, the gross value of the old asset has been assumed as Rs. 11.65 lakh.
2	6.6KV 325 KW motor frame Size 11 -7560 4RPM Connection str sector AMP 36, BHEL Make	25 (2) (a)	CEP motors are very critical and are always in service while unit is running. The motor is directly linked to the generation of unit and failure may result in loss of generation. The motor was changed due to high vibration, abnormal sound and temperature rise issue in Unit 8.	38.94	38.94	The Petitioner has claimed replacement of the item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for replacement of items which have fully depreciated. Hence, the replacement of the asset is not admissible under Regulation 25(2)(a) of the 2019 Tariff Regulations. However, considering the importance of the asset in successful and efficient operation of the station, the expenditure claimed is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The de-capitalisation of the replaced asset is considered in assumed deletions. Accordingly, the gross value of the old asset has been assumed as Rs. 23.91 lakh
3	Transformer Differential Relay (87T) & Feeder Protection	25 (2) (a)	These numerical relays were used in 33 KV lines and Auto transformers and Reserve Transformers as replacement for old electromechanical relays	8.44	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claim is **not allowed**.

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	relay Dir/ Non-directional O/C&E/F with Sensitive E/Fault locator failure, SOTF, Broken conductor functions' 61850, AUX i/p (110-250) V DC-11		which are sluggish, for fast and precise operation. Disturbance analysis is also possible with these numerical relays.			
4	Horizontal Centrifugal pump AR150/510	25 (2) (a)	There are 04 series of Ash slurry pumps in CTPS Unit#7&8 each having 02 nos. of pumps. These Pumps are critical in nature for evacuation of ash. So, the availability of Pump/series is very crucial for maintaining generation. Any breakdown or schedule overhauling takes at least two days for its availability. Thus, availability of one complete set helps in readily availability of the system and to maintain generation. (Relevant documents attached as Annexure-1).	12.99	12.99	The Petitioner has claimed replacement of the item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for replacement of items which have fully depreciated. Hence, the replacement of the asset is not admissible under Regulation 25(2)(a) of the 2019 Tariff Regulations. However, considering the importance of the asset in successful and efficient operation of the station, the expenditure claimed is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The de-capitalisation of the replaced asset is considered in assumed deletions. Accordingly, the

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
						gross value of the old asset has been considered as Rs. 7.98 lakh
5	Cable PVC Insulated, Armoured , 1.1 Kv, Cu Conductor , 16,12 & 19 Core, 2.5 Sq Mm.	25 (2) (a)	Cable was laid for bus bar protection scheme in old 220 KV switchyard.	5.05	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claim is **not allowed**
6	Rope ladder fabricated with poly propylene ropes (Día- 16 mm) conformin g to IS 5175 with Aluminum rungs and auto locking hook, length 25 meter each.	25 (2) (a)		0.49	0.00	
7	Complete bowl assembly, AHP Seal Water Pump	25 (2) (a)	During past years several extensive works has been performed in present section on all four installed AHP Seal Water Pumps, where many parts of pumps has been locally repaired and refurbished as per existing local available resources. These parts include works in Thrust Bearing Assembly, repairing of shafts and bowl assemblies mainly. Shafts, sleeves, Bushes, gland packing etc. are fast moving items and are replaced, as and when	17.52	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner ay claim the same as capital spare as and when put to use.

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			required. However, repairing of Complete Bowl Assemblies as whole could only be done few times, as it is complex part of pump assembly and extensive work is restricted with our limited resources. As many multiple works has been done on Bowl Assemblies throughout last few years its useful life has been consumed. Hence one set of Bowl Assembly was proposed for procurement, and it was used AHP Seal Water Pump#1. (Relevant documents attached as Annexure-2).			
8	SILASTIC 732 RTV SILICON SEALANT 300 ML PACK	25 (2) (a)	No justification Provided.	0.17	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claim is **not allowed**
9	MOTOR, 415V AC, RATING 90 KW, SPEED 1485 RPM, FRAME-K280M, IP-55, INSULATION CLASS-F, AMBIENT TEMP-50 DEG C	25 (2) (a)	The vacuum pump motor#8A1 is running with high vibration and high DE bearing temperature. Also, the performance of the said motor is not satisfactory. Thus, the same was replaced by new one for smooth functioning of ash disposal system of ash plant.	3.19	0.00	
10	Complete set of BERE VACUUM PUMP (WITHOUT MOTOR) WATER RING VACUUM	25 (2) (a)	There are 08 nos. of Vacuum pump installed in CTPS unit#7&8 for 04 nos. of passes in Ash handling plant. These vacuum pumps are one of the critical equipment of Ash handling plant. These vacuum pumps are used for evacuation of wet or dry ash from hoppers on	12.97	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner ay claim the same as and when put to

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	PUMP WITH FOLLOWING ACCESSCRIES, MODEL: -200, CAPACITY:400 M3/SR.NO.06033428		round the clock basis thus have direct impact on generation. Any breakdown or overhauling of the pump takes 2/3 days for its readiness. So, the availability of complete set helps in quick replacement of the pump and thus helps in maintaining generation. (Relevant documents attached as Annexure-3).			use.
11	Hollow Plunger Cylinders (Double Acting, Hydraulic Return), Cylinder Capacity (Push) - 95 to 100 Ton, Stroke-257 mm (min), Max Operating Pr-700 bar, along with Hydraulic Pump (Two Speed, Double Acting), Usable Oil Capacity7400 cm3(min) & Hyd. Hose, Pressure Gage, Adapter	25 (2) (a)	There are six numbers of coal mills, four no's each of PA, FD and ID Fans installed in CTPS Unit 7&8. The availability of coal mills and fans have direct bearing on generation. High Capacity & Heavy Weight Couplings are installed in Coal Mills and Draft Fans. The installation & removal of these couplings are required to be carried out during replacement of gear box/ main motor/coupling in case of coal mills and during replacement of main motor/coupling in case of draft fans. As the couplings are heavy & large size, special fixtures are required for removal. Hollow Plunger Cylinders are best suited to provide the desired force required for removal of the couplings with the help of special fixtures. The entire work of coupling removal & assembly is required to be carried out within the shortest possible time to reduce the downtime period of critical equipment's. Reduction of coal mill downtime for this	1.75	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claim is **not allowed**

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			maintenance activity becomes highly critical when the unit is running. Proper T&P suited for this application shall help in reducing the maintenance duration. As the coupling are heavy & have large size, hence high cylinder capacity of approx. 100 tons is required for applying the desired force. Also, as the hydraulic cylinders are to be placed in horizontal position within the fixture, hence hollow plunger cylinders are best suited for the application. Hollow Plunger Cylinders with accessories shall be utilized for this application in addition to day-to-day maintenance activities of coal mill & other boiler auxiliaries. This is a special T&P which shall have multiple uses in maintenance activities of coal mills & other auxiliaries. In view of the above requirements, the procurement of hollow plunger cylinder with accessories is justified. (Relevant documents attached as Annexure-4).			
12	CABLE CONTROL PVC INSULATED, ARMOURED, 7 CORE, 2.5 SQ MM, CU CONDUCTOR, 1100V.	25 (2) (a)	Cable was laid for bus bar differential protection scheme in old 220 Switchyard.	8.50	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claim is **not allowed**
13	Valve position	25 (2) (a)	The valve position module is an important module in	71.91	0.00	As capitalization of spares is not

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	Module, MODEL NO.- 692 29 S907A		DCS System and used for smooth generation of power plant.			permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner ay claim the same as capital spare as and when put to use.
14	VALVE:25 MM-GLV-C2500SW -HO-F22	25 (2) (a)	No justification provided.	0.40	0.00	The Petitioner has not furnished any justification for the said claim. In addition, the Petitioner has also not indicated the relevant clause of the regulation, under which the work has been claimed. Further, the claim is of minor nature. In this background, the claim of the Petitioner is **not allowed.**
15	Bi-Dir UWS with Tower (3.6 m Hit), RFID Reader, 6" Display,100 cards,3x P&FSensors,2xCamera, Audio Sys	25 (2) (a)	1) CTPS is having 2x 250 MW generating units which needs around 6500-7000 MT (apex) of coal on daily basis for the uninterrupted and sustain generation of both units. At CTPS, we have three nos. of Road weighbridges for weighment of coal received through road mode. At all the weighbridges, data like vehicle number carrying coal, date, and time IN & OUT of vehicle at CTPS etc. are entered manually by weighbridge operators. This manual entry leads to undesirable delay in weighment and manual errors can't be neglected. For setting up of	30.18	30.18	In consideration of the submissions of the Petitioner and since the RIFD system in operation of weighbridges would help in keeping accurate record of coal carrying vehicles the claim of the Petitioner is **allowed** under Regulation 26 of the 2019 Tariff Regulations, in exercise of the power to relax under Regulation 76 of the 2019 Tariff Regulations.

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			automated system to transfer electronically challan data, we need a RFID system and same be incorporated in DVC EBA. 2) Vigilance Department, DVC, HQ has also suggested for adoption of various guidelines ACoS DVC to overcome shortcomings and to streamline the functioning of weighbridge. The suggestions include the RFID system shall be operated with RFID TAG attached to the vehicle only as well as EBA integration with software. So that the entry of RFID tag/sticker fitted vehicle information in weighbridge computer system to be done without any manual intervention. In view of the above, the installation of RFID system is justified.			
16	continuous Passive Motion Machine	25 (2) (a)	No justification Provided.	0.46	0.00	The Petitioner has not furnished any justification for the said claim. In addition, the Petitioner has also not indicated the relevant clause of the regulation, under which the work has been claimed. Further, the amount claimed is of minor nature. In this background, the claim of the Petitioner is **not allowed**
17	Shaft excentre (Part No.: 41008048) of Gear Box of	25 (2) (a)	Sky Climber is required to be installed & operated inside Boiler for attending tube leakages in furnace (Ist pass of Boiler). Quick Installation & dismantling	6.31	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claim is

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	Make: Sky climber having Model No.: Alpha 800		of sky climbers can be done inside boiler furnace and therefore it helps in saving time required for repair maintenance of furnace waterwalls. The sky climber is provided with platforms, two nos of hoists with motor, brake assembly, Over-speed & Anti-tilting safety components and other accessories. Several safety protections have been provided in the sky climber to operate in case of any emergency like power failure, equipment malfunction, wrong operation etc. Servicing of the sky climber hoists, brake assembly, over-speed devices is required to be carried out to maintain the healthiness of the system. The indented items are required for servicing & replacing the damaged components of sky climber. (Relevant documents attached as Annexure-6).			**not allowed**
18	Complete Clinker grinder Assembly	25 (2) (a)	There are 08 nos. of Clinker grinder installed in CTPS AHP Unit#7&8. Clinker grinder is used to dispose Clinker of the Bottom hopper and slurry ash of Eco. Hopper. Operation of Bottom ashing is must do and one of the critical operation in generation of the power plant. unavailability of the clinker grinder may lead to the shutdown of the Unit. In case of breakdown, availability of one complete assembly will helps in readily availability of the system and thus will help to maintain generation. (Relevant	5.17	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			documents attached as Annexure-7).			
19	Up Gradation of Mx DNA System	25 (2) (a)	Due to technology obsolesce of operating system, the upgraded system was procured for smooth running of DCS system of power plant.	339.87	339.87	In view of the submissions of the Petitioner, the claim is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations, with a direction to submit the supporting documentary evidence recommending the replacement of the older assets due to obsolescence, at the time of truing up of tariff. As the de-capitalised value of the old asset has not been furnished, the same is considered as Rs. 277.23 lakh
20	System 1 Software Bently Newada	25 (2) (a)	Due to technology obsolescence of operating system, the upgraded system was procured for smooth running of Vibration system of power plant.	35.98	35.98	In view of the submissions of the Petitioner, the claim is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations, with a direction to submit the supporting documentary evidence recommending the replacement of the older assets due to obsolescence, at the time of truing up of tariff. The gross value of the old asset has been considered as Rs. 22.09 lakh (under Assumed deletion)
21	Seal Air Fan Motor	25 (2) (a)	Seal air fans are high rpm motors and are in service since commissioning and	8.55	8.55	The Petitioner has claimed replacement of the

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			were subject to wear and tear over time. In case of failure of motor the stability of the running coal mill will be affected and shall directly affect the generation of respective Unit. The motor was changed due to high vibration and high DE bearing temperature in the base of SAF#8 E in Unit 8.			item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for replacement of items which have fully depreciated. Hence, the replacement of the asset is not admissible under Regulation 25(2)(a) of the 2019 Tariff Regulations. However, considering the importance of the asset in successful and efficient operation of the station, the expenditure claimed is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The de-capitalisation of the replaced asset is considered in assumed deletions. Accordingly, the gross value of the old asset has been considered as Rs. 5.25 lakh (under assumed deletions)
22	ESKTOP COMPUTERS WITH PRE-LOADED OPERATING SYSTEM (INCLUDING MONITOR, KEYBOARD,	25 (2) (a)	DVC Training Institute, Chandrapura conducts various types of training Programme i.e. Induction level training, short term training, workshops, Seminars etc. for DVC employees. There were 26 nos. of computers available at Training Institute. Out of 26 nos. of computer 19 nos. was needed to be upgraded to prevent **Cyber-attack** as per office Circular No.	7.12	7.12	In view of the submissions of the Petitioner, the claim is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations.

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	MOUSE ETC)		HQ/IT/Security/1336, dt.06.12.2018. Out of 26 of computer 15 nos. of computers were connected to DVC LAN network for office establishment work (EBA etc) and other 05 nos. were also required to be upgraded in order to facilitate EBA related work.			
23	Laptop	25 (2) (a)		28.62	0.00	The Petitioner has not furnished any justification for the said claim. In addition, the Petitioner has also not indicated the relevant clause of the regulation, under which the work has been claimed. In this background, the claim of the Petitioner is **not allowed**
24	Spares Sensor for Claibration of Dew Point apparatus of Chemical Lab U 7&8	25 (2) (a)	Commissioning of one equipment, namely, Dew point apparatus (Model no: 2000 DCD, SL.No: 03/2013/01) was under the scope of M/S BHEL-PSER and have been lying pending since 2012. A work order regarding Commissioning of this item at risk and cost of M/S BHEL-PSER has been issued to M/S ENDEE Engineers Pvt. Ltd (CT/ CE/U,1,2,3/T-SE(M)-OS-7&8/Works & Services/623 dated 12.09.16). As per the MOM between M/S Endee Engineers Pvt. Ltd and DVC officers dated 05.06.17 some parts (batteries and molecular sieves) are in damaged/ exhausted condition and	1.80	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claim is **not allowed**

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			need to be get replaced in addition to calibration activity. So, accordingly a new W.O (DVC/Contract/ CTPS/CHEMICAL/C&M/Supply/00017 dated 23.03.2021) has been placed for the procurement of these spares on the risk and cost of M/S BHEL-PSER (P-C/22-28). OEM supplied the spares and calibrated the instrument but while calibration they found that the Sensor of the instrument is also not functioning well and giving abrupt data due to its long idleness and again suggested to replace the sensor too. So, another P.O palced to M/S ENDEE engineers for the replacement of the same for the sensor of the same instrument at the risk and cost of M/S BHEL(DVC/ Contract/CTPS/CHEMICAL/C&M/Supply/00024Dated 22/02/2022).Now , the instrument is in working condition.			
25	Portable Digital Vibration Meter	25 (2) (a)	There are wide range of load carrying critical rotating equipments in CTPS Unit No. 7&8 and common section like Boiler Feed Pump, ID Fan, FD Fan, Coal Mill, Condensate Pump, CT Fan, CW pump, Intake Pumps etc. Vibration measurement, condition monitoring, spectrum analysis and its balancing are the main requirement to keep the equipment healthy and to avoid equipment outage. This is a matter of concern from the point of view of effectiveness of these	3.33	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claim is **not allowed**

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			critical equipments. Vibration Meter is used for various equipments Vibration measurement and condition analysis with advance features on site. This machine is be used to monitor vibration related problem of load bearing equipment and other machines for both the units of CTPS (2x250MW). In view of the above, one portable, handy, light weight and easy to carry Vibration Meter with advance features is necessary for CTPS. Therefore, one set of above proposed Vibration Meter along with accessories is required to be procured			
	Sub-Total			**668.68**	**492.62**	
26	Railway Siding - Ut. 7&8	25 (1)	This expenditure is towards the work which is within the Original scope (Sl. No. 3 of Sanction Order No. EDCON/MECH/CST-7&8/563 dtd 11/09/09). The work was already executed by 2014. Major expenditure under this head was already capitalized in earlier years. Only the residual expenditure has been capitalized during this year.	85.80	85.80	In view of the submission of the Petitioner and since these works form part of the original scope of work of the project, the claim of the Petitioner is **allowed** under Regulation 25(1)(d) of the 2019 Tariff Regulations
27	Misc. Power Plant Equipment	25 (1)	No justification Provided.	17.86	0.00	The Petitioner has not furnished any justification nor any supporting documents for the said claim. Moreover, the expenditure claimed for the asset is in the nature of O&M expenses. In view of this, the claim of

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
						the Petitioner, is **not allowed**
	Sub-Total			**103.66**	**85.80**	
	Total			**772.35**	**578.42**	

2022-23

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
1	ASH HANDLING DISPOSAL SYSTEM: 1. Gear box of Ash slurry pump-H1-160 ratio-1.4186/1P2 2. Fluid coupling - model 20SCR25B	25 (2) (a)	1. Gear box of Ash slurry pump- Gear box is used in the second stage of Ash slurry disposal pump series system. Ash slurry disposal system is used to dispose bottom ash, Economiser hopper ash, APH and ESP hopper ash. So the availability and healthiness of slurry series pump is very vital to sustain the generation. Gear box installed in second stage of B2 series pump and ended its useful life due to continuous service and requires replacement. Unavailability of gear box will lead to unavailability of disposal line which will in turn affect generation. 2. There are 04 nos. of Ash slurry disposal pump series and Fluid coupling is used in second stage of slurry pump. Fluid coupling of 2nd stage ash slurry A22 series is in repaired condition which develops less discharge and vibration. It is installed since commissioning (11 years). Its useful service life is ended. Availability of Ash slurry	21.00	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner ay claim the same as capital spare as and when put to use.

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			series system directly depends on healthiness of Fluid coupling. Unhealthiest or unavailability of fluid coupling will affect critical operations of Ash handling plant like-Bottom Ashing, Ash evacuation from APH hoppers and sometimes from ESP hoppers etc. So procurement of one number of Fluid coupling is justified.			
2	WATER SYSTEM OF ASH HANDLING PLANT 1. HP WATER PUMP MODEL F5826-200X150 2.LP water pump,Model F 5823 200x150 3.Seal Water Pump MODEL 5625-65X40	25 (2) (a)	1.HP (high pressure) water system is used to supply water for critical operations of Ash handling plant like-Bottom Ashing, Ash evacuation from APH hoppers and sometimes from ESP hoppers etc. HP pump #A is installed since inception (11 years). Due to the low discharge of the pump, more time is required to execute the operation. Some of the spares were replaced earlier but due to continuous service, performance of the pump is not healthy (developing low discharge pressure). Now it demands replacement. As these operation is very vital to sustain the generation which depends on the performance of HP pump, so its procurement is justified. 2.Low pressure water system is used for make up of sea trough, refractory cooling, suction to Eco. Water pump. LP water	51.45	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner may claim the same as capital spares as and when put to use.

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			Pump#A is in service since inception (11 years). But due to continuous service, performance of the pump is not healthy. Its useful service life has ended and demands replacement 3. There are 02 nos. of seal water pumps installed in AHP unit#7&8CTPS. The pump is used to seal Ash slurry pump which remains in service on round the clock basis. As the operation in Ash handling system requires availability/ running of Ash slurry pump, so healthiness and availability of seal water pump is must for smooth generation. As it remained in service on continuous basis, it demands replacement after end of its service life. So procurement of one seal water pump is justified to sustain the generation			
3	ASH SLURRY SYSTEM: 1. Horizontal centrifugal pump AR 150/510(Ash slurry pump) 2. Bottom Ash Overflow Transfer Pump Model No-150/400+TCH+N	25 (2) (a)	1. Ash slurry pump plays a vital role in ash handling plant operation as it handles ash slurry of bottom ash, Economiser hopper ash, APH hopper ash and sometime ESP hopper ash. There are 04 nos of Ash slurry disposal pump series. But the discharge of Ash slurry pump A11 is not healthy. This pump is in service with most of its spares repaired with the application of putty. It useful service life will exhaust soon and will	23.51	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner ay claim the same as capital spare as and when put to use.

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			demands replacement. Due to the poor discharge all these operation gets affected and takes more time. Slurry pump is one of the critical equipment of Ash handling plant. Unavailability of the slurry pump may lead to shutdown of the unit. 2.BAOTP (Bottom ash overflow transfer pump) is used to dispose overflow slurry water of bottom and Eco. Hopper. Non-availability of the pump will lead to scattering of slurry water which will arise pollution issue and may lead to shutdown of the unit. BAOTP #7A has discharge less in comparison to other pumps. Most of the spares were replaced earlier along with casing. Presently it is service but will demand replacement after some months.			
4	VACUUM SYSTEM OF ASH HANDLING PLANT: Complete set of bare vacuum pump without motor Model-200 capacity 400m3/hr	25 (2) (a)	Evacuation system of Ash handling plant operates on Vacuum system and So the vacuum pump is required for the same. There are 08 nos. of vacuum pumps installed in AHP unit#7&8 of CTPS.As Vacuum pump used to pull dry ash its spare is more prone to erosion in less time. Vacuum pump is one of the critical equipment of Ash handling plant. There is Body leakage and poor discharge of Vacuum Pump 7A2.Un	17.50	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			healthiness of the pump increase the ash evacuation time and its unavailability will lead to shut down of that pass, affect generation or shutdown of the unit. So, to avoid any breakdown of the system or generation, procurement of one vacuum is justified.			
5	**Sub-Total**			**113.46**	**0.00**	
	BOILER & AUX					
6	Boroscope with Accessories	25 (2) (a)	As the boilers & other equipment's are aging, proper & scientific monitoring of different components shall help in timely maintenance action. This shall help in improving the reliability & availability of boilers & other machines. **The portable videoscope** shall be used for inspection of boiler tubes, headers, boiler drum & coal mill gear boxes. These instruments can also be used in other equipment's /areas where inspection by naked eyes is not possible.	18.00	0.00	Procurement of new assets without replacement of the existing assets procured within the original scope of work, cannot be considered under Regulation 25(2) (a) of the 2019 Tariff Regulations. Accordingly, the claim of the Petitioner is **not allowed.** However, the Petitioner is at liberty to claim the same at actuals, with proper justification as regard the inadequacy of the original equipment procured under original scope of work under the relevant provisions of the regulations, at the time of truing-up of tariff.
7	Other Assets (Induction Heater, Battery Operated Torque Wrench,	25 (2) (a)	Bearing Induction Heater helps in precise heating of bearings & temperature control and enables reducing of maintenance time & cost. The advanced maintenance practices	7.99	0.00	Procurement of maintenance tools without the replacement of the existing tools, procured within the original scope of work, cannot be

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	Portable Tube Bevelling Machine, Accessories for Radiography Dark Room, Sky Climber Items, Inflatable Jack)		require documentation of heating data of bearings which form a part of analysis of bearing failures. The advanced design of the power electronics including current and overheating control, combined with user friendly features incorporated in the induction heater helps to improve efficiency, reliability & low maintenance cost.			considered under Regulation 25(2) (a) of the 2019 Tariff Regulations. Accordingly, the claims of the Petitioner are **not allowed.** However, the Petitioner is at liberty to claim the same at actuals, with proper justification as regard the inadequacy of the original equipment procured under original scope of work under the relevant provisions of the regulations, at the time of truing-up of tariff.
8	Inflatable Pneumatic Jack (03 nos)	25 (2) (a)	Inflatable Jacks (lifting bags) are advantageous for creating access between LTSH coil assemblies as the jacks require only 30 mm of clear space for positioning. The inspection & repair work of LTSH coil assemblies is required to be carried out during the overhauling period to avoid subsequent tube leakages. This helps is quick inspection and avoiding secondary damage to tubes.	6.05	0.00	
9	DIRTY AIR FLOW TEST & AIR FUEL RATIO TEST M/C	25 (2) (a)	Dirty Air flow test and Air-fuel ratio test is required to be carried out periodically during running of the units to maintain Pulverised Fuel line balancing which shall ensure efficient combustion. This shall help in improving efficiency & save fuel cost. (Necessary documents attached as Annexure-4)	18.00	0.00	
10	Ultrasonic	25 (2) (a)	Oxide scale thickness	6.15	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	Thickness Gage (with Oxide Scale & Corrosion Mapping). Make-Olympus		measurement plays a vital role in assessing the remaining life of the tubes since the temperature of the tube rises where considerable oxide scale thickness exists. Conventionally oxide thickness is measured by destructive method, but ultrasonic method is used non – destructively and remaining life is arrived using software. It is possible to measure the inside oxide scale more than 0.1mm. Portable Ultrasonic thickness gage with oxide scale measurement facility helps in in-situ measurement of thickness as well as oxide scale and helps to assess the maximum locations of superheater & reheater coils within the limited time frame of unit overhauling. (Necessary documents attached as Annexure-5)			
11	Complete Magnetic Particle Inspection Kit	25 (2) (a)	MPI machine is required for inspection of header stubs during overhauling of boilers. Carrying out MPI of header stubs shall help in detection of cracks in stub weld joints. This shall help in preventing boiler tube leakage and thereby increasing the reliability & availability of boilers. MPI machine shall also be helpful in detecting cracks in gear tooths of Coal Mill gear boxes and gear	3.00	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claim is **not allowed**

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			couplings. This shall help in preventing force outage of the equipment's and help in increasing the availability of the system thereby helping in increased generation. (Necessary documents attached as Annexure-6)			
12	DIGITAL CRANE SCALE - 5 TON	25 (2) (a)	Crane Scale is required for weighing of heavy components where weight is an important criterion in determining the performance of the components. Heavy components of coal mill i.e- hi chrome liners & grinding media balls are required to weighed. Hi chrome liners are required to be weighed initially during supply to check conformance with drawings and weighed periodically during service to ascertain the wear. Similarily APH baskets are required to be weighed to check the basket replacement criteria as the baskets are rejected if the weight variation is more than 20% of design weight. (Necessary documents attached as Annexure-7)	6.00	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**
13	Measuring Instruments	25 (2) (a)	Measuring Instruments i.e- Non-Contact Thermometer, Digital Vernier Callipers, Bevel Box, Portable Digital Shore Hardness Tester shall help in measuring critical dimensions of various equipment's. This shall help in increasing the performance of the	3.00	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			equipment's. (Necessary documents attached as Annexure-8)			
	Sub-Total			**68.19**	**0.00**	
	Balance of Plant (M)					
14	CT Fan Gear Box	25 (2) (a)	This material will be used during overhauling and maintenance of CT fan Unit 7 and 8. Equipment reached its useful life. As per NTPC recommendation to replace non-energy efficient Fan blade Assembly with energy efficient fan blade assembly.	10.33	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use. .
15	Fan Blade Assy. Complete With Spider Hub	25 (2) (a)		26.76	0.00	
16	CT Fan Drive Shaft	25 (2) (a)		14.40	0.00	
17	Shafts Of CW Pump (Head / Drive /Intermediate / Impeller)	25 (2) (a)	Equipment reached its useful life. BHEL useful life for CW Pump/ Spares certified document enclosed	18.20	0.00	
18	Shafts of CW Pump (Head/Drive/Intermediate/Impeller)	25 (2) (a)		62.37	0.00	
19	CW Pump Bowl Assembly with all Shafts Assembly	25 (2) (a)		389.04	0.00	
20	Thrust Bearing assembly of CW pump	25 (2) (a)		3.80	0.00	
21	Impeller Casing Assembly	25 (2) (a)		31.20	0.00	
22	Raw Water Intake, complete pump assembly (Vertical)	25 (2) (a)	Equipment has reached its useful life.	39.69	39.69	The Petitioner has claimed replacement of the item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for replacement of items which have

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
						fully depreciated. Hence, the replacement of the asset is not admissible under Regulation 25(2)(a) of the 2019 Tariff Regulations. However, considering the importance of the asset in successful and efficient operation of the station, the expenditure claimed is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The de-capitalisation of the replaced asset is considered in assumed deletions. Accordingly, the gross value of the old asset has been considered as Rs. 23.21 lakh (under assumed deletion).
23	Bowl Assembly (Potable Water Pump/AHP Seal Water Pump/CW Makeup Pump/APH Wash Pump/CHP Dust Suppression Pump)	25 (2) (a)		17.30	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
24	De Watering pump	25 (2) (a)		86.50	86.50	The Petitioner has claimed replacement of the item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
						replacement of items which have fully depreciated. Hence, the replacement of the asset is not admissible under Regulation 25(2)(a) of the 2019 Tariff Regulations. However, considering the importance of the asset in successful and efficient operation of the station, the expenditure claimed is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The de-capitalisation of the replaced asset is considered in assumed deletions. Accordingly, the gross value of the old asset has been considered as Rs. 50.57 lakh (under Assumed deletion).
25	Complete Rotating Assembly of New Intake Pump/New Reservoir Transfer Pump	25 (2) (a)		8.80	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claim is **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
26	Erection of fire line	25 (2) (a)	Equipment has reached its useful life and Long pending trouble regarding safety registered in MPC	36.11	36.11	The Petitioner has claimed the replacement of the item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
						is applicable for replacement of items which have fully depreciated. Hence, the replacement of the asset is not admissible under Regulation 25(2)(a) of the 2019 Tariff Regulations. However, considering the importance of the asset for safe operation of the station, the expenditure claimed is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The de-capitalisation of the replaced asset is considered in assumed deletions. Accordingly, the gross value of the old asset has been considered as Rs. 21.11 lakh (under assumed deletion).
27	ERW pipes of different sizes	25 (2) (a)	Equipment has reached its useful life and Long pending trouble regarding safety registered in MPC	136.27	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
28	SWING CHECK VALVE ASSEMBLIES >100 NB	25 (2) (a)	Equipment has reached its useful life. This material will be used during overhauling maintenance of CT fan Unit 7 & 8 .	10.24	0.00	
29	BUTTERFLY VALVE, 700 MM NB	25 (2) (a)	Required during Overhauling of Cooling Tower Unit 7&8 for proper cooling tower flow distribution.	5.90	0.00	
30	SUMP PUMP/NEUTRALISING	25 (2) (a)	Required during overhauling. Equipment reached its useful life.	9.88	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	PIT PUMP ASSEMBLY					
31	ETP EFFLUENT TREATMENT PUMP/ CMD DISPOSAL PUMP WITHOUT MOTOR & ACCESSORIES	25 (2) (a)	Equipment has reached its useful life.	6.61	0.00	
32	GEARBOX ASSEMBLY OF CLARIFLOCULATOR	25 (2) (a)	The condition and performance of Clarifier Bridge#4 is severely hampered due to frequent breakdown of these flocculator and other drive trains etc. as most of these spares has reached their useful running life. These Flocculator gearbox requires huge maintenance in the form of comprehensive repairing of many internal parts like gear arrangements, sleeve bearings, casing cover, bearings, Oil Seals etc. Hence Clarifier Bridge #4 remains in shut down from time to time due following said reasons. The stock position of Flocculator Gearbox of Clarifier Bridge#4 is NIL. Therefore, we will be left with no inventory to meet any future unforeseen situation. Hence it is indented to procure Gear Box of Flocculator of Clarifier Bridge#4 whose stock position is zero.	2.00	0.00	
33	**Sub-Total**			**915.41**	**162.31**	
	CISF (Fire)					
34	9 Lts Mechanical	25 (2) (a)	As Fire Safety Manual CISF demand through	2.40	2.40	In view of the submissions of the

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	Foam Extinguishers		different letter i.e E-32097/CISF/CTPS©/ FIRE/2022/59 dtd.07/02/2022			Petitioner and since the asset is required for safety purpose, the claims are **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations. However, the Petitioner is directed to furnish the copy of the CISF letter dated 7.2.2022 at the time of truing-up of tariff.
35	DCP 9 Kg fire Extinguisher squeeze grip release type			1.89	1.89	
36	Computer set with all accessories			1.90	1.90	
37	Breathing Apparatus set carbon composite			24.00	24.00	
38	DCP 4Kg fire Extinguisher squeeze grip release type			2.56	2.56	
39	High Pressure portable pump	25 (2) (a)		5.14	5.14	
40	BA Set Compressor			4.50	4.50	
41	9 Lts water type fire Extinguisher			2.36	2.36	
	Sub Total			**44.75**	**44.75**	
	Chemical Lab					
42	pH meter (Portable)	25 (2) (a)	Efficiency will increase (MPC Report/Recommendation)	0.20	0.00	Procurement of these assets without replacement of the existing corresponding assets procured within the original scope of work, cannot be considered under Regulation 25(2)(a) of the 2019 Tariff Regulations. Further, these are of the nature of O & M expenses. Accordingly, the claim of the
43	Other assets (Lab instruments - oil particle counter, Spectro quant UV Spectrophotometer, portable flue gas analyzer., humidity chamber, hot air oven,		Advance Infrared Moisture Balance: it is a very reliable and sturdy instrument for an accurate determination of the moisture contents of materials like coal which do not undergo chemical change when exposed to infrared radiation, Since drying and weighing of the samples is done simultaneously. In this	37.00	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	hot plate)		instrument analysis can be done quickly and the results obtained are accurate. The instrument has been profitable utilized for a reliable determination of moisture contents of various type of solid fuel and other similar materials. So, it is hereby proposed to procure 2 nos. of Infrared Moisture analyser to determine moisture of indigenous and imported coal instantly. Liquid/ oil particle counter: It is used for monitoring and diagnosing particle contamination in new or in-service fluids like hydraulic oil & lub-oil of different equipment in Power Plant. Permanent condition monitoring of hydraulic and lubrication oil systems is a pre-requisite for continuous operation of the various equipment. Oil particle count of in-service oil is a very important parameter to assess the quality of oil and also to perform condition-based monitoring and maintenance as the particles contained in the lubricating oil carry detailed and important information about the healthiness of the machine. Presently there are no such instruments available in the Chemical Laboratory of CTPS, U#7-8. So, this item is going to be procured as			Petitioner is **not allowed.**

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			"New Item" for testing of the oil samples as well as infrastructure development of the Chemical Laboratory			
44	Abrasive Index Machine	25 (2) (a)	Efficiency will increase (MPC Report/Recommendation)	4.10	0.00	Procurement of these assets without replacement of the existing corresponding assets procured within the original scope of work, cannot be considered under Regulation 25(2)(a) of the 2019 Tariff Regulations. Accordingly, the claim of the Petitioner is **not allowed,** at this stage. However, the Petitioner may claim the same at actuals, under the relevant provision of the regulations along with the justification with as to the inadequacy of the original equipment procured within the original scope of work, at the time of truing up of tariff.
45	CHNS Analyser	25 (2) (a)	The Chandrapura coal testing lab is equipped with one no. of Thermogrametric analyzer for the proximate analysis of coal with the help of which we can determine, moisture, ash content, volatile matter and fixed carbon content of coal only. For the ultimate analysis of coal i.e to analyse the chemical composition of coal, the chandrapura lab has not been provided any element analyser (CHNS Analyzer) since from its inception. So, considering the future requirement of chemical characterisation of imported coal, biomass and the sulphur determination in them it has been felt necessary to procure one No of CHNS analyzer for the element analysis of coal and other organic compounds.	77.00	0.00	
46	Conductivity Meter (Portable)	25 (2) (a)	Efficiency will increase (MPC Report /Recommendation)	0.20	0.00	The Petitioner has not furnished any justification nor any supporting documents for the said claim. Also, the expenditure claimed in respect of the asset is in the nature of O&M expenses. Accordingly, the

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
						claim of the Petitioner is **not allowed.**
	Sub Total			**118.50**	**0.00**	
	Coal Handling Plant					
47	1015220500 22- DISC ROLL HALF, P/N-1-709-046B (FOR ROLLER SCREEN)	25 (2) (a)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. Disc Roll which are mounted on Roller shafts in Roller Screen undergo excessive wear & abrasion due to handling of different sizes of coal & coal boulders. Disc Roll cam profile undergo wear & abrasion due to handling of different sizes of lumpy coal, impact with stone, boulders and other extraneous materials carried with coal precipitates on Roller Screen. So, to keep the Roller Screen in healthy condition and to get optimum output, schedule replacement of the worn-out roll discs & roller shaft required during RS overhauling for reliable & effective availability of Roller Screen	3.82	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
48	1015220500 19- DISC ROLL FULL, P/N-1-709-046A	25 (2) (a)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. Disc Roll which are mounted on Roller shafts in Roller Screen undergo excessive wear & abrasion due to handling of different sizes of coal & coal boulders. Disc Roll cam	47.58	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			profile undergo wear & abrasion due to handling of different sizes of lumpy coal, impact with stone, boulders and other extraneous materials carried with coal precipitates on Roller Screen. So, to keep the Roller Screen in healthy condition and to get optimum output, schedule replacement of the worn-out roll discs & roller shaft required during RS overhauling for reliable & effective availability of Roller Screen.			
49	SET OF PADDLE BLADE ANTICLOC KWISE DIA. 3100 AS PER DRAWING NO. MO-9048/2 WITH LINER TIP FOR PADDLE FEEDER	25 (2) (a)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. All Plough Feeder have been running continuously since last two years and are required to change some of rotor blade by new one due to its wear & tear. Both items are critical spare of CHP#7&8, CTPS and minimum critical quantity one set has to be maintained and will be utilized to cope up with any unforeseen breakdown & replacement of damaged paddle blade as per requirement. The unavailability of this item may hamper track hopper evacuation and coal feeding through track hopper & consequently generation loss.	5.00	0.00	
50	BLADE	25 (2) (a)	For maintaining the	5.00	0.00	As capitalization of

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	SET OF PADDLE BLADE CLOCK WISE DIA. 3100 AS PER DRAWING NO. MO-9048/2 WITH LINER TIP FOR PADDLE FEEDER		minimum level of defined inventory already identified as insurance spares/critical spares. All Plough Feeder have been running continuously since last two years and are required to change some of rotor blade by new one due to its wear & tear. Both items are critical spare of CHP#7&8, CTPS and minimum critical quantity one set has to be maintained and will be utilized to cope up with any unforeseen breakdown & replacement of damaged paddle blade as per requirement. The unavailability of this item may hamper track hopper evacuation and coal feeding through track hopper & consequently generation loss.			spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
51	220 V Battery Bank	25 (2) (a)	DC power supply system Is one of the most vital and critical backup source that required to handle all critical situations in case of total power failure situation. For this purpose, a battery bank consisting of 110 nos. Exide make batteries (Capacity 100 AH, Model: 110YKP9) have been in service since 2006 to cater the DC power. It has been found during last periodical visit for healthiness checking dated 23/03/21 carried out by the O.E.M, M/S Exide Industries that	11.71	0.00	The Petitioner has claimed replacement of the item under Regulation 25(2)(a) of the 2019 Tariff Regulations, which is applicable for replacement of items which have fully depreciated. Considering the fact that the COD of the generating station is in the year 2011, the elapsed life of battery is around 8-9 years only. Normally, it is expected that battery banks

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			the condition of all the cells in battery banks is not satisfactory due to deposition of active materials and scaling. In addition to this it has been observed that condition of most of the vent plugs, Rubber grommet, Fastener & separators got damaged due to ageing. So as per recommendation of OEM/OES as the battery bank is running 15 years of service, the battery bank should be replaced and a new battery bank should be installed for smooth service.			should be maintained on regular basis from the O&M expenses, allowed to the generating station. In view of the above, the expenditure claimed by the Petitioner, is **not allowed**.
52	240 KW, 6.6 KV Motor for belt conveyor	25 (2) (a)	There are four (04) nos. of 240KW ,6.6KV , 3 - Phase induction Motors, Make-BHEL used for Belt Conveyor#9A &9B and Belt Conveyor#2A &2B . Belt Conveyor#9A & 9B of CHP, CTPS, Unit#7&8 which is the most vital belt of Power Plant linked to the Bunker having a length of around 300mtr.Both Conveyor belts #9A&9B convey crushed coal to the bunker via belt conveyor #10A and 10B which directly feeds coal to bunker of Main Plant. Whereas crushed Coal from both these belt receives coal from RC#1 and RC#2 from source RH / Track Hopper / Stacker Reclaimer, due to the common link, conveyor belt#9A and 9B runs on continuous basis ,	38.50	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as and when put to use.

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			therefore it also plays vital role in generation. These belt conveyor motors are in service without any major break down since 10years since commissioning of the Units. As the time line increases aging of insulation, wear and tear of bearing and dust and moisture deposition or any winding problem in stator can cause breakdown which would lead to higher time for attending problem . As there is no spare motor for Conveyor#9A and Conveyor#9B placed nearby therefore any breakdown electrical or mechanical, can cause direct effect on generation. The disadvantage is that motors are placed in the head of TP#9 , which is highest location of all the TP's of CHP & plant,Unit#7&8 and therefore shifting of heavy motor (approx. 3tonne) to highest location and placing on its base will requires lot of logistical support and very time taking. Therefore to reduce the time of rectification or replacement by spare motor, proposed spare motor of Conveyor#9A &9B to be placed in the head of TP#9 which would significantly reduce the time of breakdown due to fault in motor. In view of the			

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			above and considering the Stock position of subject material as nil, the procurement is justified.			
53	Split AC-2 Ton for switchyard	25 (2) (a)	Installed Package AC is Very Old and Very prone to breakdown. To keep electrical panel in good condition ambient temperature is required.	10.80	0.00	Considering the submissions of the Petitioner, the claim is **not allowed**, at this stage. However, the Petitioner is at liberty to claim the same at actuals, with proper justification under the applicable regulation at the time of truing up of tariff, with details of de-capitalisation.
54	Workstation for PLC system in CHP	25 (2) (a)	Up gradation of main PLC System and 04 Paddle Feeder is required as existing PLC System is very old and its part is not manufactured by OEM. Since the existing PLC System supports only Window XP and as Window XP is outdated and Microsoft has discontinued its support to Window XP w.e.f April 2014. Keeping all these points up gradation of existing system is required for smooth Operation of CHP system .	30.00	30.00	In view of the submissions of the Petitioner, the expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. However, the Petitioner, shall submit the certificate of obsolescence from OEM at the time of truing -up of tariff. The de-capitalised value of the old asset has been considered as Rs. 17.54 lakh (under assumed deletion).
55	Improved version of Belt weigher panel for Belt Weigher System of CHP, CTPS Unit#7&8	25 (2) (a)	M/S Prayas Engineering Limited (PEL) make belt weighers are installed in the coal handling plant of CTPS Unit# 7&8. Belt weighers are critical components of the CHP. At present	8.67	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			belt weighers in conv 2A,2B and S/R#1 are not working due to faulty and bad condition of panel.			
56	Up-gradation of Rockwell Automation make PLC system of CHP for 4 no. Paddle feeders.	25 (2) (a)	Up gradation of main PLC System and 04 Paddle Feeder is required as existing PLC System is very old and its part is not manufactured by OEM. Since the existing PLC System supports only Window XP and as Window XP is outdated and Microsoft has discontinued its support to Window XP w.e.f April 2014. Keeping all these points up gradation of existing system is required for smooth Operation of CHP system .	45.00	45.00	In view of the submissions of the Petitioner, the expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. However, the Petitioner, shall submit the certificate of obsolescence from OEM at the time of truing-up of tariff. The de-capitalised value of the old asset has been considered as Rs. 26.31 lakh (under assumed deletion).
	Sub Total			**206.08**	**75.00**	
	Civil-POWER HOUSE					
57	Construction of maintenance way for Boiler area	25(2)	The Boiler Maintenance Bay is required for maintenance of boiler and coal mill heavy machines.	5.00	0.00	The reasons for the construction of maintenance bay after 11-12 years of plant operation is not understood. As such, in absence of proper justification, the expenditure claimed is **not allowed.**
58	Renovation of Railway line Plant Area CTPS yard	25(2)	The total track length of CTPS yard is 10.5 KM (approx), out of which 6 km [(a) Line 3 – 1.865 KM, (b) Line 4 – 1.915 KM (c) BOBR (Track Hopper line) - 2.180 KM] is considered in this estimate. The railway track play vital role in feeding fuel (coal/ Oil) to CTPS.	70.00	0.00	It is evident from the justification furnished by the Petitioner that there has been total lack of maintenance of this asset, on the part of the Petitioner. Accordingly, the claim of the Petitioner is **not**

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			The railway track at CTPS yard is not in a good condition. The previous renovation work was taken up by M/s RITE Ltd. almost 10 year back in the period 2011-12. With the passage of time the ballast of the railway has been caked and due to ingressing of considerable amount of dust, there is very fast growing wild vegetation and grass in the track. In rainy season the track is almost cover with wild vegetation it is very difficult for the operative personals to work in the railway track due to presence of snakes and other wild reptiles. The matter is discussed several time in the daily morning meeting to take the renovation work of railway track.			**allowed**. The same shall be met from the O&M expenses allowed to the generating station.
59	Construction of 2 Wheeler stand inside Plant	25(2)	At Present two wheelers are being parked in haphazard manner around technical building of U #7 &8, this situation not only gives shabby look but also leads to the situation which becomes very much prone to accidents at any point of time. In this connection, the matter has been discussed on many occasions with CE & HOP, CE (O&M) and others wherein it has been decided for construction of two wheeler stand at suitable locations convenient to	12.98	0.00	In our considered view, the creation of such additional facilities, over and above the works, within the original scope cannot be loaded to the consumers. Thus, the claim of the Petitioner is **not allowed.**

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			employees towards parking their two wheelers around U#7&8. In this regard necessary fund has been allocated under Capital Head of Power house (civil), Unit#7&8			
	Sub Total			**87.98**	**0.00**	
60	Installation of 100MT Weigh Bridge dedicated for the sale of Dry Fly Ash	25(2)	Presently, weighment of dry fly ash is going on at weight bridge of ash pond having capacity of 60 MT only. DFA has been sale through e-auction and agencies engaged has been restricted to deploy vehicles less than 60 MT to CTPS for lifting of DFA. In addition to the above, Weigh Bridge of ash pond is being used for both weighment of pond ash and also for dry fly ash. In this process, a long queue of both types of vehicles i.e Hywas & Bulkers is occurred on road before Weigh Bridge of ash pond. To overcome this situation, it was decided at plant level to install one no. of 100 MT weight bridge near Ash silos of CTPS to facilitate smooth operation of dry fly ash evacuation.	36.56	36.56	Since the incidental expenditure is for compliance to the directions of MOEF&CC, GOI towards 100% ash utilization, the same is allowed under Regulation 26(1)(a) of the 2019 Tariff Regulations.
	Sub Total			**36.56**	**36.56**	
	Electrical Switchyard					
61	Bus Differential Relay for 220 KV Switchyard	25(2) (c)	Become obsolete. During the commissioning three nos of panels are to be installed at 220 kv control room old plant. The commissioning of panels require laying of 5300 and 3400 mtrs of CT cables from CT JB	76.48	0.00	The submissions of the Petitioner, which involves the commissioning of three nos. of panels at 220 kV control room old plant, is vague. Moreover, the procurement of

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			to offered Bus Bar protection panel and also control cable from existing line/transformer control panel respectively.			new assets without replacement of existing assets procured within the original scope of work, cannot be considered under Regulation 25(2) (a) of the 2019 Tariff Regulations. In view of the above, the claim of the Petitioner is **not allowed.** However, the Petitioner is granted liberty to calm the same on actuals, at the time of truing up of tariff, subject to furnishing proper justification with regard to obsolescence, inadequacy of the original equipment procured under original scope along with the gross value of the decapitalized assets etc. as per regulations.
62	Procurement of Laptop for metering purpose	25(2)	Laptop is required for metering purpose of major consumers such as SAIL bokaro,coal feeders and Jbvnl as present laptop has become obsolete	0.90	0.00	
63	MEASURING INSTRUMENTS AND TOOLS	25(2)	Required for daily maintenance activities.	6.70	0.00	
64	ENERGY METER	25(2)	Spare Energy meter is required for different consumer.	4.20	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**
65	SURGE ARRESTER		For replacement in case of emergency. File is already moved for procurement.	5.00	0.00	
66	220kV/132kV/33KV/CTPT		For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares	13.50	0.00	
67	33KV Vaccum Circuit Breaker			11.85	0.00	
68	Numerical Relays			18.30	0.00	
	Sub Total			**136.93**	**0.00**	
	FIELD QUALITY ASSURANCE					

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
69	SPECTRO METER	25(2)	For enhancing the efficiency of Field Quality Assurance Department, CTPS towards ensuring quality of the various steel materials received at store supplied through various vendors without any time delay. This will also reduce our dependency on any outside agency for determining and ascertaining the chemical composition of any steel material at site.	25.96	0.00	Procurement of new assets without the replacement of the existing corresponding assets procured within the original scope of work, cannot be considered under Regulation 25(2)(a) of the 2019 Tariff Regulations. Accordingly, the claim of the Petitioner is **not allowed,** at this stage. However, the Petitioner may claim the same at actuals, under the relevant provision of the regulations along with the justification with as to the inadequacy of the original equipment procured within the original scope of work, at the time of truing up of tariff.
70	Portable Hand-held XRF Analyzer or PMI (Positive Material Identification) Machine with light element capability	25(2)	Portable Alloy Analyzer /Positive Material Identification (PMI) Machine is non-destructive testing method used to inspect the metal/alloy composition of any item.The machine will provide better Quality Control and ensuring products are of high and consistent value, proper material verification for their composition and alloy quality assurance at site. It will be helpful in quality control of important spares and parts which play a very significant role for longer and trouble free running of the equipment where they are to be used. Further it will remove our dependency on utilizing the service of third party for PMI testing of materials like Hi-Chrome Grinding Media balls, alloy steel materials of higher	22.00	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			grades etc. at CTPS site. We will be able to utilize the machine as and when required without any dependency on third party agency thus saving valuable time and extra money.			
	Sub Total			**47.96**	**0.00**	
	Inside Power House (IPH)					
71	Areca Controller	25(2)	For maintaining the minimum level of defined inventory already identified as assigned pool spares for that station	13.22	0.00	The Procurement of these assets without the replacement of the existing corresponding assets procured within the original scope of work, cannot be considered under Regulation 25(2)(a) of the 2019 Tariff Regulations. Accordingly, the claim of the Petitioner is **not allowed,** at this stage. However, the Petitioner may claim the same at actuals, under the relevant provision of the regulations along with the justification with as to the inadequacy of the original equipment procured within the original scope of work, at the time of truing up of tariff.
72	Screw Compressor	25(2)		18.59	0.00	
73	Measuring Instruments & Loose Tools	25(2)		2.50	0.00	
74	Coal Mill Seal Air Fan Motor	25(2)		35.20	0.00	
75	Relays for GRP	25(2)		21.26	0.00	
76	Electronic Modules of Automatic Voltage Regulator	25(2)		9.04	0.00	
	Sub Total			**99.80**	**0.00**	
77	MT SECTION (Rehabilitation and modification of Electrical & Air circuit diagram for	25(2)	CTPS is having 03 nos of Locos. All locos are approximately 15 years old. Pneumatic and Electrical system of locos are getting damaged day by day. Hence rehabilitation	50.00	0.00	From the submissions of the Petitioner, it is evident that the asset has not been maintained properly, after sending the final

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
	'Loco)		and modification of same in phase manner is required. Final drive of Loco-484 was sent to Bangalore for overhauling in 2016. But after overhauling, it reached our site in 2021. Loco-484 laid down our site without running for which electrical and air circuit has been mostly damaged. Its rehabilitation and modification is essential for running the same Loco. As per verbal discussion to OEM, M/s San Engineering, Rehabilitation and modification of electrical and air circuit of Loco-484 is essential for running the Loco.			drive of the same to the OEM for overhauling. In view of this, the claim of the Petitioner is **not allowed**. However, the Petitioner is granted liberty to claim the same at the time of truing up of tariff, along with all relevant details/ justification.
78	O&E CELL (Flue gas analyzer)	25(2)	Identification of leakage & to take corrective measures. Efficiency will increase	9.21	0.00	The Procurement of these assets without the replacement of the existing corresponding assets procured within the original scope of work, cannot be considered under Regulation 25(2)(a) of the 2019 Tariff Regulations. Accordingly, the claim of the Petitioner is **not allowed,** at this stage. However, the Petitioner may claim the same at actuals, under the relevant provision of the regulations along with the justification with as to the inadequacy of the original

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
						equipment procured within the original scope of work, at the time of truing up of tariff.
	Sub Total			**59.21**	**0.00**	
	SAFETY					
79	Safety Park & Safety Training	25(2)	As per Corporation directive	1.23	0.00	The Petitioner has not provided any justification for the claims. In addition, the Petitioner has also not referred to the relevant clauses the of the 2019 Tariff Regulations, under which the said work is claimed. In this background, the claim of the Petitioner is **not allowed.**
80	Computer set with all accessories	25(2)	Safety will increase	0.45	0.00	
	Sub Total			**1.68**	**0.00**	
	Switchyard T&D CTPS					
81	240KV HT Bushing for GT	25(2)		8.05	0.00	The Petitioner has not provided any justification for the said claim. As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
82	220 KV CT	25(2)	Twelve numbers of 220 KV Current Transformers (with Primary Current 1600 Amp) are installed in Tie-Line bays and Bus-tie bay of Switch Yard, Unit7&8. Considering the trend of	13.40	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			consumption for the last years and the lead-time of procurement, it is essential to keep at least 03(three) numbers of Current Transformers in stock for Unit# 7&8. Presently, we have only 01(one) CT in stock. Thus, 02(two) more Current Transformer is essentially required to be procured for Unit# 7&8 from its OEM, i.e M/s BHEL.			claim the same as capital spare as and when put to use.
83	Other Assets (Measuring Instruments & Loose Tools, 2 Ton Split AC)	25(2)	No justification Provided.	0.90	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**
	Sub Total			**22.35**	**0.00**	
	TURBINE & AUX					
84	HRH Strainer Element Assembly, Part NO.113144 7100000000	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. HRH Strainer Element, Drg. No.: 113144710000, BHEL make is a critical item of TG & Aux, 250 MW Units. As per the critical spare list 01 set of HRH Strainer element must be kept. Moreover, this item may be required during upcoming overhauling of Units and to be kept 01 set as a critical spare. The availability of aforesaid items at site are most important for smooth & trouble-free maintenance/servicing works of TG & Auxiliary. As it restricts	39.10	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			the foreign material entry to IP Turbine to avoid it's damage.			
85	Fully Bladed LP Rotor for 250 MW Turbine	25(2)	For maintaining the minimum level of defined inventory already identified as assigned pool spares for that station. Any trouble in LP rotor of 250 MW KWU LP turbine. The spare rotor will be replaced by the existing rotor which reduce the down time of unit.	2511.00	0.00	
86	Item Description: - U Seal Ring of HP Turbine Casing Assembly	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. Sealing rings (U types) are vital spares for HP Turbine. It has been observed that after long period of operation its pre-compression value reduces, which may lead to leakage of steam and may be troublesome. Overhauling is a good opportunity to check the pre-compression values of the sealing ring and take remedial measures accordingly. To execute overhauling and also to meet any unforeseen exigency in Turbine Unit#7&8, it is prudent to possess these U-seal rings.	12.48	0.00	
87	Complete coupling for (Booster pump, Boiler Feed Pump, and Hydraulic Coupling)	25(2)	Boiler Feed Pump is the most critical equipment for continuous rated generation. The coupling between BFP and the hydraulic coupling is transmitting torque to BFP. Due to	9.15	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			continuous running any part of the coupling may damage due to which the BFP becomes not available and generation may hamper due to this. to avoid this situation procurement of this coupling is prudent.			claim the same as capital spare as and when put to use.
88	Complete Assembly of Leakage Stem Valve (MAW 50)	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. The performance of this valves is directly related to condenser vacuum. Hence this spare should be available with us to cater any unforeseen situation.	17.65	0.00	
89	HPT Front Sealing Ring	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. Hence possession of this indented item is prudent to meet any exigency of any of the Units at CTPS. The purpose of front sealing ring is to restrict the steam leakage through turbine gland of HP turbine exhaust side. If this seal ring get damage then it will hamper the generation.	36.90	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**
90	Sealing Ring Assembly In 8 Parts	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. The purpose of sealing ring is to restrict the steam leakage/ air ingress through turbine	6.00	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			gland. The number of sealing rings selected on the basis of pressure existing in the turbine, are split into several segments. To minimise the gland steam losses, gland sealing ring strip profile should be in proper manner with design clearance. If more loss from gland observed more steam input required to attain desire generation.			
91	Backwash rotor assembly/ Accessories of ACW self cleaning strainer for 250 MW Unit	25(2)	ACW self-cleaning strainer play an important role for the cooling of DM water which is further used for cooling of Lub oil of most of the critical equipment, generator seal oil, generator hydrogen cooling, exciter air cooling, vacuum pump seal water cooling etc. Here cooling water system directly affects the power generation. Auxiliary cooling water is clarified water hence wear/tear and damage of spare part of ACW self-cleaning filter is high. Backwash rotor is one of the most important part of it which is used for rotation of the screen of ACW self-cleaning filter.	10.75	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
92	Vacuum Pump / Rotor Assembly	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spare. Vacuum pump is the critical equipment for continuous rated	64.80	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			generation. The coupling between motor and the pump is taking torque. Due to continuous running any part of the coupling may damage due to which the vac. pump becomes not available and generation may hamper due to this. to avoid this situation procurement of this coupling is prudent.			
93	Emergency/ HP Stop Valve Assembly	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spare. Emergency/HP Stop Valve Assembly There are 04 numbers of HP stop valves installed for Unit # 7 & 8. Each no. of stop valve attached to HP Turbine one at LHS and other at RHS. The main function of HP stop valve is to start/ stop the supply of Main Steam to HP Turbine. any wear/ tear or damage of Emergency/HP Stop Valve Assembly may hamper the power generation. If this spare is available then it will reduce the overhauling time for replacement of item.	66.50	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
94	IP Stop Valve Assembly, Assembly Drg. No.: 01132002000	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spare. IP Stop Valve Assembly are 04 numbers of IP stop valves installed for Unit # 7 & 8. Each no. of stop valve attached	101.00	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			to IP Turbine one at LHS and other at RHS. The main function of IP stop valve is to start/ stop the supply of Reheat Steam to IP Turbine. any wear/ tear or damage of IP Stop Valve Assembly may hamper the power generation. If this spare is available then it will reduce the overhauling time for replacement of item.			
95	Test Valve of HP Stop Valve, Drg No. : 1-11418-08000	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. There are 04 numbers of HP stop valves installed for Units-7 & 8. Each no. of stop valve attached to HP Turbine one at LHS and other at RHS. The main function of HP stop valve is to start/ stop the supply of Main Steam to HP Turbine. The function of the test valve is to open and close the stop valve either by start-up circuit or manual operation, especially when the stop valve is being checked for easy. Each stop valve is served by one test valve. Any problem in test valve interupt oil supply to HP stop valve due to this unit may trip.	8.55	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
96	Test Valve of IP Stop Valve	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. There are 04 numbers	8.55	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			of IP stop valves installed for Unit # 7 & 8. Each no. of stop valve attached to IP Turbine one at LHS and other at RHS. The main function of IP stop valve is to start/ stop the supply of reheat Steam to IP Turbine. The function of the test valve is to open and close the stop valve either by start-up circuit or manual operation, especially when the stop valve is being checked for easy. Each stop valve is served by one test valve. Any problem in test valve interupt oil supply to IP stop valve due to this unit may trip.			
97	IP Stop Valve Cone, Part No. : 0113200200 000007, IP Stop Valve	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. There are 04 numbers of IP stop valves installed for Unit # 7 & 8. Each no. of stop valve attached to IP Turbine one at LHS and other at RHS. The main function of IP stop valve is to start/ stop the supply of Reheat Steam to IP Turbine. The valve cone is prevented from rotating while the IP stop valve is open. A relief cone forming a part of the valve spindle is incorporated in the cone of the stop valve to reduce the forces required to open the valve. Hence valve cone play an important	29.95	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			role for the operation of IP stop valve. Generally checking of valve cone is done during overhauling and if valve cone is found defected its replacement is required and if we have the said spare then it will take minimum time to replace it hence reduce the overhauling time.			
98	Complete set of HPBP spray valve without actuator	25(2)	Unit 7 Capital Overhauling was carried out in Feb-Mar 2019 under the supervision of M/s BHEL Engineers. During servicing of the BPE-2 HP Bypass Spray Valve, steam cut was noticed inside the Valve gland portion. BHEL recommended for replacing the valve. This valve will be change during AOH of U 07.	6.17	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as and when put to use.
99	Complete Bowl Assembly/ Internal Assembly Of Condensate Extraction Pump	25(2)	Availability of unit will increase on the account of reduction of equipment outage. CEP isa load bearing equipment. For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. Hence possession of this indented item is prudent to meet any exigency of any of the Units at CTPS.	182.66	0.00	
100	TG Jigs and Fixtures / Tools and Tackles	25(2)	During capital overhauling HPT module is lift to the turbine bay area to dismantle it. BRACKET Spare Part is used during lifting of HPT	3.20	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			module. Without this spare we could not lift the HP turbine.			
101	Complete Cartridge Assembly of Boiler Feed Pump, Model: FK6D30	25(2)	There are total 06 numbers of Boiler Feed Pump (Model No. FK6D30) installed at 250 MW, CTPS, Unit 7&8. These pumps are load bearing equipment's and its availability is utmost urgent for optimum generation of Units. BFP cartridge is complete assembly of shaft, impeller, diffuser, bearings etc., which if available at site can be easily replaced at the quickest time in case of troublesome in running pumps without compromising with Unit generation. As such, at least one cartridge should be always available at our end to cater any unforeseen requirement.	16.00	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
102	Extraction Valve for HPH	25(2)	Different types of BHEL make Valves are installed at HPH 5, HPH 6, etc. During the overhauling of the units and different activity of maintenance it was observed that the spindle movement of few valves were not smooth and creates hurdle for complete isolation of the said equipment and thus hampers the maintenance of the said equipment. These valves are in operation since inception and there is normal wear and tear due to its long service. We have NIL spare of its spindle	6.49	0.00	

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			which may be required for availability of these valves in long term.			
103	LPBP VALVE CONE	25(2)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares. There are 04 numbers of LPBP stop valves installed for Unit # 7 & 8. The main function of LPBP stop valve is to bypass the steam to IP/ LP Turbine. The valve cone is prevented from rotating while the LPBP stop valve is open. A relief cone forming a part of the valve spindle is incorporated in the cone of the stop valve to reduce the forces required to open the valve. Hence valve cone play an important role for the operation of LPBP stop valve. Generally checking of valve cone is done during overhauling and if valve cone is found defected its replacement is required and if we have the said spare then it will take minimum time to replace it hence reduce the overhauling time.	8.60	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
104	Gear box for ball separator screen actuator of Condenser onload tube cleaning system (COLTCS)	25(2)	We are equipped with two numbers of COLTCS system each for Unit # 7 & 8 separately for Condenser onload tube cleaning of condenser tubes on, as and when required basis. Clogging and scaling of condenser tubes is one of the main reasons for deterioration of Unit	11.50	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.

Sr. no.		Regulations	Justification by Petitioner	Claimed	Allowed	Reason for Admissibility
			Vacuum. Operation of COLTCS is required for optimum performance of the condenser and Unit. The COLTCS system is not in service in both Unit 7 8, DVC, CTPS since long. For reviving and there after continuous in operation of the system we may require spares in stock for this system. The installed quantity of indented item is 04 in numbers for COLTCS Unit 7 8, CTPS. **The indented spare is** vital for reviving the COLTCS. This item is not available with us.			
105	STORE (Vacuum Cleaner with all Std. accessories, Single phase 2000W Portable Industrial duty Wet & Dry Intermittent Duty)	25(2)	a) To remove accumulated dust from body and adjacent area of spare which are stored inside & outside of Store Godowns of Uint # 7 & 8. b) To remove accumulated water from Godowns floor during heavy rain.	2.00	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**
	Sub Total			**3159.00**	**0.00**	
	Total			**5117.87**	**318.62**	

2023-24

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
A	**2023-24**					
	Ash Handling Plant					
1	Economizer Water Pump	25 (2) (a)	No justification Provided. .	12.00	0.00	The Petitioner has not provided any justification for the said claims. As capitalization of spares is not permissible under Regulation 25(2)(a)
2	Horizontal centrifugal pump AR 150/510(Ash slurry pump)			33.92	0.00	
3	Complete set	25 (2) (a)	No justification Provided.	18.55	0.00	

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
	of bare vacuum pump without motor Model-200 capacity 400m3/hr		.			of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner ay claim the same as capital spare as and when put to use.
4	Fluid coupling - model 20SCR25B			11.66	0.00	
	Sub Total			**76.13**	**0.00**	
	Balance of Plant (M)					
	Cooling Tower Equipment's					
5	CT Fan Gear Box	25 (2) (a)	No justification Provided.	21.90	0.00	The Petitioner has not provided any justification for the said claims. As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
6	CT Fan Drive Shaft			7.63	0.00	
7	Butterfly Valve , 700 MM NB			6.31	0.00	
8	Fan Blade Assy. Complete with Spider Hub			16.21	0.00	
	Circulating Water System					
9	Shafts of CW Pump (Head / Drive / Intermediate / Impeller)	25 (2) (a)	No justification Provided. .	181.40	0.00	
10	CW Pump Bowl Assembly with all Shafts Assembly			218.56	0.00	
11	Thrust Bearing assembly of CW pump			40.00	0.00	
	WATER TREATMENT SYSTEM					
12	Backwash Blower without Motor	25 (2) (a)	No justification Provided.	7.57	0.00	The Petitioner has not furnished any justification or

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
	and Accessories Type/Mod-RL-110AC					supporting documents for the claims. In this background, the Petitioner's claims towards the such works are not allowed at this juncture/stage. However, the Petitioner is granted liberty to claim the same under the relevant regulation, with proper justifications/ supporting documents at the time of truing-up of tariff
13	Filter Backwash Pump/Blower Assembly	25 (2) (a)	No justification Provided.	10.00	0.00	
14	Bevel Gear Pinion Arrangement for Flocculator Drive	25 (2) (a)	The condition and performance of Clarifier Bridge#4(Old plant), Clarifier Bridge#1 & 2(new plant) is severely hampered due to frequent breakdown of these flocculator and other drive trains etc. as most of these spares has reached their useful running life. These Flocculator gearbox requires huge maintenance in the form of comprehensive repairing of many internal parts like gear arrangements, sleeve bearings, casing cover, bearings, Oil Seals etc. Hence Clarifier Bridge #4, Clarifier Bridge#1 & 2(new plant) remains in shut down from time to time due following said reasons. The stock position of Flocculator Gearbox of Clarifier Bridge#4,Clarifier Bridge#1 & 2(new plant) is NIL. Therefore we will be left with no inventory to meet any future unforeseen situation.	1.27	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
15	Gearbox Assembly of Clariflo-culator	25 (2) (a)		6.05	0.00	

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			Hence it is indented to procure Gear Box of Flocculator of Clarifier Bridge#4, Clarifier Bridge#1 & 2(new plant) whose stock position is zero.			
16	De watering pump	25 (2) (a)	Equipment has reached its useful life	15.00	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
17	SWING CHECK VALVE ASSEMBLIES >100 NB	25 (2) (a)	We have various types of Non-return valves (NRV) of sizes 100 mm NB (Filter water Pp, AHP Seal Pp, IBD Spray Pp, ETP Pp, Boiler Blowdown Pp), 150 mm NB (HVAC Pp & Desludge Pp), 200 mm NB (APH wash Pp, Old Colony Filter Water Pp, New Colony Filter Water Pp), 300 mm NB (Ash water Pp & Clear water Pp), 500 mm NB (Raw Water Pp & Old Intake pump) installed at discharge line of various low pressure pumps like mentioned above, etc. In recent past we have marked that these pumps have back rotation. This phenomenon is frequently observed due to passing of the NRV installed at discharge line of the pumps. This quantity is bare minimum and to avoid any lapse in maintaining non-availability of the WTP equipments.	3.69	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**
18	DM Makeup	25 (2) (a)	The subject item consist	9.79	0.00	As capitalization of

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
	Pump Assembly		Complete Assembly of DM Make Up Pump which is used for supply and transfer of DM water to Hotwell and Condensate Storage Tank for plant requirement. The same DM water is further converted into steam for power generation of CTPS plant Unit 7&8. Total three DM-Make Up Pump have been installed to cater the DM water requirement at Power House for Unit#7&8. Most of the time these pumps are running continuously for powerhouse generation. We are doing overhauling of these pumps once in every year. During overhauling it is noticed that most of parts of DM-Make Up Pump were having high wear and tear and hence their efficiencies have got badly affected. From past few years we are facing frequent troubles from all three pumps due to reason cited above. We are arranging these spares by metal-up job and further machining in machine shop. However, these spares are repaired and refurbished multiple times from past few years and their useful life of majority of these spares has been consumed as above item was procured in 2020 vide PO No: CT/U#7&8/INS/BOP/MECH/37-933.In view of above further usages of these damaged and worn out **spares are not recommended and needs to be replaced as soon as possible.**			spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spares as and when put to use

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
19	Bowl Assembly (Raw Water Pump/Ash Water Makeup Pump/Intake Pump)	25 (2) (a)	Equipment has reached its useful life	45.00	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use .
20	SUMP PUMP/NEUTRALISING PIT PUMP ASSEMBLY	25 (2) (a)	Required during overhauling. Equipment reached its useful life.	15.40	0.00	
21	ETP Effluent Treatment Pump/ CMD Disposal Pump Without Motor & Accessories	25 (2) (a)	Total 04 numbers of M/S SU Pumps Make, ETP Effluent Treatment Pump/ CMD Disposal Pump have been installed to cater the waste water requirement at various section for unit#7&8. Most of the time the pumps are running continuously as per requirement of plant. These pumps are extremely important to treat the dirty, waste and polluted water inside the plant. Hence proper functioning of these pumps helps to maintain the desired chemical parameter of effluent water, which ultimately ensures Powerplant runs in environmentally friendly manner obeying all pollution norms. The above-mentioned pumps are rendering their service since inception and no spares are procured since inception. However we have procured one set pump and its is consumed. Due to some Civil foundation/structural base problem, our pumps are getting badly damaged and are out of services for most of the times. However, we are	7.01	0.00	

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			continuously doing repair/refurbishment work on these pumps to keep them in operational condition. It is to be noted that these pumps are getting damaged and somehow, we are managing to repair these pumps with the help of local machine shop, but this is very time consuming and don't get the desired result. Hence, we need to procure the complete Pump set of ETP Disposal pumps two number to run the Effluent Treatment Plant trouble free.			
22	Bowl Assembly (Potable Water Pump/AHP Seal Water Pump/CW Makeup Pump/APH Wash Pump/CHP Dust Suppression Pump)	25 (2) (a)	There are many water pipeline systems installed in CTPS new and old plant. These pipe lines include Fire Hydrant Pipe lines, Fire Spray Water Pipelines, New/Old Raw water Pipelines, ORT Seal water Pipelines, New/Old Ash water Pipelines, Old River Intake Pipelines, New River intake pipelines, the pipelines are primary originated from outskirt of Powerhouse and enter powerhouse of both new and old plant. Other types of pipelines existing under BOP Section of powerhouse are those which originate inside the plant and concludes inside the plant as well. Such pipelines are HVAC , AHP Seal, CT Make Up, APH wash , CHP Dust Suppression, DM Make Up, Boiler Fill , Boiler blow down, ETP Pipelines, CW/CT pipelines etc. The above said pipelines of Boiler Blowdown, De –Sludge ,	58.00	0.00	The justification furnished by the Petitioner is not consonance with the nature of the assets claimed. As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			ETP,AHP Seal Water, HVAC, Filter Water Line and IBD ,Old Plant Seal Water Pipe line are 250NB and have been found with leakages many a times since last few years. It is also to be noted that the situation gets worse when these pipelines are located underground and maintenance becomes extremely challenging on earth excavation and water logging there to. As such pipelines belonging to Fire Water System needs to be attended as soon as possible, else delay in completion of work will directly jeopardise the safety of the entire plant. Presently the area near Store 2A & 3 of new plant are getting frequent fire line leakages as these pipelines are undergrounded so attending leakages in these pipelines requires earth excavation and de-watering which are time consuming process. In view of above a committee has been constituted for proper site inspection of frequent fire line leakages. Vide Office order No. CT/CE &HOP/72/33 Dated 04/08/2021. The committee members after through site inspection and thread bare discussion recommended to erect new pipelines as required over the ground (in lieu of existing underground pipes) to avoid frequent leakage and smooth maintenance to improve hydrant			

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			pressure in DM Plant and stores vicinity.			
23	Erection of fire line	25 (2) (a)	There are many water pipeline systems installed in CTPS new and old plant. These pipe lines include Fire Hydrant Pipe lines, Fire Spray Water Pipelines, New/Old Raw water Pipelines, ORT Seal water Pipelines, New/Old Ash water Pipelines, Old River Intake Pipelines, New River intake pipelines, the pipelines are primary originated from outskirt of Powerhouse and enter powerhouse of both new and old plant. Other types of pipelines existing under BOP Section of powerhouse are those which originate inside the plant and concludes inside the plant as well. Such pipelines are HVAC, AHP Seal, CT Make Up, APH wash, CHP Dust Suppression, DM Make Up, Boiler Fill, Boiler blow down, ETP Pipelines, CW/CT pipelines etc. The above said pipelines of Boiler Blowdown, De – Sludge , ETP,AHP Seal Water, HVAC, Filter Water Line and IBD ,Old Plant Seal Water Pipe line are 250NB and have been found with leakages many a times since last few years. It is also to be noted that the situation gets worse when these pipelines are located underground and maintenance becomes extremely challenging on earth excavation and water logging there to. As such pipelines belonging to Fire Water System needs to be attended as	28.00	0.00	It is not clear from the submissions, the reasons for replacement of fire water system piping only after 12-13 years of operation of plant. Hence, the claim of the Petitioner is **not allowed.** It is advised to maintain the underground piping in place of going in for replacement of the whole piping. The expenses are of O&M nature.

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			soon as possible, else delay in completion of work will directly jeopardise the safety of the entire plant. Presently the area near Store 2A & 3 of new plant are getting frequent fire line leakages as these pipelines are undergrounded so attending leakages in these pipelines requires earth excavation and de-watering which are time consuming process. In view of above a committee has been constituted for proper site inspection of frequent fire line leakages. Vide Office order No. CT/CE &HOP/72/33 Dated 04/08/2021. The committee members after through site inspection and thread bare discussion recommended to erect new pipelines as required over the ground (in lieu of existing underground pipes) to avoid frequent leakage and smooth maintenance to improve hydrant pressure in DM Plant and stores vicinity.			
	Sub Total			**206.78**	**0.00**	
	Control & Instrumentation (C&I)					
24	Procurement, Installation & Comm. of Battery Bank (Exide Make)	25 (2) (a)	Recommendation for changing the spares (trip committee, equipment outage, technical audit, OEM Report)	11.80	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spares and when put to use.
25	Electronic module for DCS		For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares	212.90	0.00	
26	Supply, erection, and commissioning of Generator		Recommendation for changing the spares (Trip committee, equipment outage, technical audit, OEM Report)	50.00	0.00	

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
	End Winding Vibration Monitoring system of CTPS U#7&8					
27	**Sub Total**			**274.70**	**0.00**	
	CISF (Fire)					
28	High Pressure portable pump	25 (2) (a)	CISF Demand letter No. E-32011/ CISF/ CTPS©/ FW/2019/27 dated 22/02/2019	12.00	12.00	Keeping in view that the expenditure claimed is for the safety of the generating station, the claims of the Petitioner are **allowed**.
29	Multipurpose Fire Tender		As per Fire Safety Manual	6.50	6.50	
	Sub Total			**18.50**	**18.50**	
	CHEMICAL LAB					
30	Fume Hood	25 (2) (a)	Recommendation of NTPC audit report.	3.70	0.00	As the Petitioner has not furnished any justification for the said claim nor has submitted any supporting documents for the claim, the claim of the Petitioner is **not allowed**.
31	Digital table top balance		A top loading balance is used for weighing solid material when an accuracy of 0.1 g is needed. The top loading balance is in the precision class of balances with a readability of 1 mg or less. These handy instruments and can measure up to 5 kg of solid samples.	3.00	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**
32	Ultra-pure water system		fully-integrated Ultra water purification system is one of the ultimate lab water solution, providing superior quality of water directly from tap water. This ultra-pure water system has been used for the many chemicals reagents preparation and analysis of chemical parameters with enhanced	8.00	0.00	The Procurement of these assets without the replacement of the existing corresponding assets procured within the original scope of work, cannot be considered under Regulation 25(2)(a) of the 2019 Tariff

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			accuracy and free from the interference of other contamination. Ultra-pure water is water nearly or completely devoid of contaminants. Ultrapure water systems are an important component for laboratories. These ultra-pure water systems remove chemical contaminants through de-ionization (DI) and reverse osmosis. An ultra-pure water system eliminates bacteria with UV radiation. There is no such system is present in CTPS lab since from the inception. As, for the better accurate and error free estimation the chemical reagents are always advised to be prepared in this ultra-pure water in the lab.			Regulations. Accordingly, the claim of the Petitioner is **not allowed,** at this stage. However, the Petitioner may claim the same at actuals, under the relevant provision of the regulations along with the justification with as to the inadequacy of the original equipment procured within the original scope of work, at the time of truing up of tariff.
33	IR moisture Analyzer	25 (2) (a)	Availability of unit will increase on the account of reduction of equipment outage/ Unit Outage (MPC data).1. Advance Infrared Moisture Balance is a very reliable and sturdy instrument for an accurate determination of the moisture contents of materials in a very less time. In a conventional IS method the minimum time required to find out moisture is 48 hrs, whereas the IR moisture analysers determines the moisture within 4-5 hrs.	4.50	0.00	
34	Thermo gravimetric analyzer TGA	25 (2) (a)	The CTPS, Coal lab is equipped with 1 NO.of Thermo gravimetric Analyzer (TGA) which was received here after the retirement of the CTPS old units. This instrument has been procured in the year 2007 and more than 15 years old. Keeping in view,	55.00	0.00	

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			the increased no of coal sample(indigenous and imported coal) from this year, the coal proximate analysis by ASTM method has been increased .As Thermo gravimetric Analyzer (TGA) measures the proximate parameters of coal by ASTM method So, the need of One more TGA is felt necessary. TGA is very useful in making valid predictions of the chemical and physical properties of coal. TGA's foremost advantages are the precision, speed, and ease that samples can be analyzed. Proximate analysis is the determination of the moisture, ash, and volatile matter of coal using ASTM standard methods.			
35	Laboratory hot plate with magnetic stirrer	25 (2) (a)	Presently, three no of Hot plates are in use in the chemical lab (01 No. in DM Plant, 01 No. in coal lab and 01 No. in Environmental lab). These instruments are very old and due to extensive use over the years wear & tear sign are visible and accuracy of the instrument has been decreased considerably, remains out of order and need maintenance frequently.	0.60	0.00	The expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**
	Sub Total			**74.80**	**0.00**	
	Coal Handling Plant (CHP) (M)					
36	Belt Vulcanising Machine	25 (2) (a)	The jointing of conveyor belt is either carried out by Hot Vulcanizing Process or by Cold Jointing method. The life of joint carried out by hot vulcanizing process is very good as there is minimal risk of snagging, tearing of the belt joint. The procurement of Conveyor	12.50	0.00	The procurement of these assets without the replacement of the existing corresponding assets procured within the original scope of work, cannot be considered under Regulation 25(2)(a)

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			Belt Vulcanizing machine shall help in improving the service life of conveyor belt joints and shall help in avoiding untimely breakdown of the system. Also as per the present requirement of minimizing equipment downtime, special tools tackles are required for carrying out the work effectively shall help in reducing maintenance time.			of the 2019 Tariff Regulations. Accordingly, the claim of the Petitioner is **not allowed,** at this stage. However, the Petitioner may claim the same at actuals, under the relevant provision of the regulations along with the justification with as to the inadequacy of the original equipment procured within the scope of work, at the time of truing up of tariff.
	Sub Total			**12.50**	**0.00**	
	CIVIL-POWER HOUSE					
37	Construction of maintenance way for Boiler area	25 (2) (a)	The Boiler Maintenance Bay is required for maintenance of boiler and coal mill heavy machines.	20.00	0.00	The reasons for the construction of maintenance bay after 11-12 years of plant operation is not understood. As such, in absence of proper justification, the expenditure claimed is **not allowed.**
38	Renovation of Railway line Plant Area CTPS yard	25 (2) (a)	The total track length of CTPS yard is 10.5 KM (approx), out of which 6 km [(a) Line 3 – 1.865 KM, (b) Line 4 – 1.915 KM (c) BOBR (Track Hopper line) - 2.180 KM] is considered in this estimate. The railway track play vital role in feeding fuel (coal/ Oil) to CTPS. The railway track at CTPS yard is not in a good condition. The previous renovation work was taken up by M/s RITE Ltd. almost 10 year back in the period 2011-12. With the passage of time the ballast	42.29	0.00	It is evident from the justification that there has been total lack of maintenance of the asset on the part of the Petitioner. As the expenditure claimed for the asset is in the nature of O&M expenses and hence, the claims are **not allowed**

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			of the railway has been caked and due to ingressing of considerable amount of dust, there is very fast growing wild vegetation and grass in the track. In rainy season the track is almost cover with wild vegetation it is very difficult for the operative personals to work in the railway track **due to presence of snake**s and other wild reptiles. The matter is discussed several time in the daily morning meeting to take the renovation work of railway track.			
39	Construction of 2 Wheeler stand inside Plant	25 (2) (a)	At Present two wheelers are being parked in haphazard manner around technical building of U #7 &8, this situation not only gives shabby look but also leads to the situation which becomes very much prone to accidents at any point of time. In this connection, the matter has been discussed on many occasions with CE & HOP, CE (O&M) and others wherein it has been decided for construction of two wheeler stand at suitable locations convenient to employees towards parking their two wheelers around U#7&8. In this regard necessary fund has been allocated under Capital Head of Power house (civil), Unit#7&8	2.00	0.00	In our considered view, the creation of such additional facilities, over and above those created within the original scope of work of the project, cannot be loaded on to the consumers. In view of this, the claim of the Petitioner is **not allowed.**
	Sub Total			**64.29**	**0.00**	
	Electrical Switchyard (ES-I)					
40	Battery Bank with Charger	25 (2) (a)	Battery bank has completed its life and plates have corroded.	19.00	0.00	The Petitioner has claimed the replacement of the asset/item under Regulation 25(2)(a) of the 2019 Tariff

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
						Regulations, which provides for the replacement of items which have fully depreciated. Considering the fact that the COD of the generating station is in the year 2011, the elapsed life of battery is around 12-13 years only. Normally, it is expected that battery banks should be maintained on regular basis from the O&M expenses, allowed to the generating station. In view of the above, the expenditure claimed by the Petitioner, is **not allowed**
41	MEASURING INSTRUMENTS AND TOOLS	25 (2) (a)	Required for daily maintenance activities.	1.20	0.00	The Procurement of the new assets without the replacement of the existing corresponding assets procured within the original scope of work, cannot be considered under Regulation 25(2)(a) of the 2019 Tariff Regulations. Accordingly, the claim of the Petitioner is **not allowed,** at this stage. However, the Petitioner may claim the same at actuals, under the relevant provision of the regulations along with the justification with as to the inadequacy of the original equipment
42	ENERGY METER		Spare Energy meter required for different consumer.	0.50	0.00	
43	HT bushings of transformer		Recently RT#1 bushings got damaged which had to be replaced using in house arrangements. Bushings of these transformers are not available and need to be procured to be kept as spare for handling any exigency	21.00	0.00	
44	Procurement of ATR 220/132 KV for Switchyard		One no of ATR is required at old plant switchyard to evacuate power. presently there are three ATRs in service, however shutdown of one causes others to overload.	0.50	0.00	
45	220kV/132 kV/33KV/CT PT		For maintaining the minimum level of defined inventory already identified as insurance	14.40	0.00	

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			spares/critical spares			procured within the original scope of work, at the time of truing up of tariff.
46	Float cum boost charger of 245V 200A	25 (2) (a)	Become obsolete	21.00	0.00	
47	Numerical Relays		For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares	10.20	0.00	
	Sub Total			**87.80**	**0.00**	
	Inside Power House (IPH)					
48	Areca Controller	25 (2) (a)	For maintaining the minimum level of defined inventory already identified as assigned pool spares for that station	6.61	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
49	Measuring Instruments & Loose Tools			3.00	0.00	
50	6.6 KV/415V, 2000 KVA Dry Type Transformer			31.00	0.00	
51	6.6KV Compressor Motor			73.00	0.00	
52	ESP HVR Transformer			20.00	0.00	
53	Insulation Resistance Tester, Motor Checker and Earth Resistance Tester			5.44	0.00	
54	110 KW, 415 V Vacuum Pump Motor			15.00	0.00	
	Sub Total			**154.05**	**0.00**	
	MT SECTION					
55	Bulldozer BEML make (Model no - BD355)	25 (2) (a)	All dozers pertaining to MTSHOP, CTPS have been approx.. 20 years old. At least one new dozer required for smooth feeding of coal. If coal feeding is not made in bunker properly then generation may hamper. As per verbal discussion to OEM, BEML, All dozers	512.51	0.00	It is noticed that the SCOD of the generating station is 2.11.2011. However, the Petitioner has stated dozers are in service for around 20 years. It appears that the claim in respect of some other plant has been

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			that are running in MT shop, CTPS have already crossed the life.			inadvertently booked to this station. In view of this, the claim of the Petitioner is **not allowed**. However, in case the items pertain to this plant, the Petitioner is granted liberty to claim the expenditure at the time of truing up of tariff, along with proper details/justification along with details of decapitalization of the replaced asset.
56	Transmission Model BD 155, Sl no - H&P1387 B 03 BEML Part no - 125TBM0029	25 (2) (a)	Availability of unit will increase on the account of reduction of equipment outage/ Unit Outage. All dozers pertaining to MTSHOP, CTPS have been approx. 20 years old. Torque flow assembly is the vital part of dozer. All installed torque flow assembly has become old. It may damage anytime. A New torque flow assembly is required for smooth running of dozer. As per verbal discussion to OEM, BEML, All dozers that are running in MT shop, torque flow assembly may damage anytime.	63.87	0.00	
	Sub Total			**576.37**	**0.00**	
	O&E CELL					
57	Thermo vision camera	25 (2) (a)	This is a proven tool for condition monitoring/ efficiency Thermo Vision Camera involves the use of thermal imagers, which are sophisticated devices that measure the natural emission of infrared radiation from a heated object to produce a thermal picture or video. Modern infrared cameras are portable and easy to operate, meaning that they can be used for many different applications. It helps in accurate diagnosis of heated object of any power house equipment.	15.00	0.00	The Procurement of the new assets without the replacement of the existing corresponding assets procured within the original scope of work, cannot be considered under Regulation 25(2)(a) of the 2019 Tariff Regulations. Accordingly, the claim of the Petitioner is **not allowed,** at this stage. However, the Petitioner may claim the same at actuals, under the relevant provision of the regulations along with the justification with as to the inadequacy of the original equipment
58	Portable spectrum cum vibration analyser		This is a proven tool for condition monitoring. It helps in accurate diagnosis of vibration of any power house equipment, in result reliability of load bearing equipment/ any other	35.00	0.00	

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			power house equipment will increase			procured within the original scope of work, at the time of truing up of tariff.
	Sub Total			**50.00**	**0.00**	
59	SAFETY (Safety Park & Safety Training)	25 (2) (a)	As per Corporation Directive	**0.50**	**0.00**	As the Petitioner has not furnished any details/justification for the claims nor has submitted any supporting documents, the claim on this count is **not allowed.** Further, the clam is of minor nature to be met from O&M expenses.
	Switchyard T&D CTPS					
60	220 KV CT	25 (2) (a)	Twelve numbers of 220 KV Current Transformers (with Primary Current 1600 Amp) are installed in Tie-Line bays and Bus-tie bay of Switch Yard, Unit7&8. Considering the trend of consumption for the last years and the lead-time of procurement, it is essential to keep at least 03(three) numbers of Current Transformers in stock for Unit# 7&8. Presently, we have only 01(one) CT in stock. Thus, 02(two) more Current Transformer is essentially required to be procured for Unit# 7&8 from its OEM, i.e M/s BHEL.	16.14	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spares as and when put to use. However, the Petitioner is given liberty to approach the Commission at the time of truing-up of tariff, along with the proper justification.
61	Numerical Relays (Distance Relays)		Four numbers of CURRENT DIFFERENTIAL, MAKE - SEL, MODEL-SEL 311L numerical relays are installed in Tie lines (L#245 and L#246) between CTPS-A and CTPS-B switchyards. Consumer's feeders are installed at CTPS-A switchyards hence almost all generated power is	13.00	0.00	

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
			evacuated from CTPS-B through these tie lines. The availability of these tie lines are most important for running of Unit #7&8. Considering the importance of relays and the lead-time of procurement, it is essential to keep at least 02(two) numbers of Current Differential Relays in stock. Presently, we have NIL stock. Thus, 02(two) of Relays are essentially required to be procured from its OEM, i.e M/s SEL.			
	Sub Total			**29.14**	**0.00**	
	TURBINE & AUX					
62	Bare Unit of Recirculation Pump TYPE-IS65-40-2500(J)	25 (2) (a)	For maintaining the minimum level of defined inventory already identified as insurance spares/critical spares	7.40	0.00	As capitalization of spares is not permissible under Regulation 25(2)(a) of the 2019 Tariff Regulations, the claims are **not allowed**. However, the Petitioner may claim the same as capital spare as and when put to use.
63	U Seal Ring of HP Turbine Casing Assembly			60.78	0.00	
64	Vacuum Pump / Rotor Assembly			5.55	0.00	
65	IP Stop Valve Cone, Part No.: 0113200200 000007, IP Stop Valve			30.00	0.00	
66	TG Jigs and Fixtures / Tools and Tackles		During capital overhauling HPT module is lift to the turbine bay area to dismantle it. BRACKET Spare Part is used during lifting of HPT module. Without this **spare** we could not lift the HP turbine.	7.90	0.00	
67	Complete Cartridge Assembly of Boiler Feed		No justification Provided.	195.00	0.00	The Petitioner has not provided any justification for the claim. In addition,

Sr. No.		Regulations	Justification by Petitioner	Claimed	Allowed	Reasons for Admissibility
	Pump, Model: FK6D30					the Petitioner has also not referred to the relevant clause of the 2019 Tariff Regulations, under which the said work is claimed. In view of this, the claim of the Petitioner is **not allowed.** However, the Petitioner is given liberty to approach the Commission at the time of true up under the relevant provision of the regulations along with the proper justification.
	Sub Total			**306.63**	**0.00**	
	Total			**2424.20**	**18.50**	

182. Accordingly, additional capital expenditure claimed by the Petitioner and those allowed as above, are summarised below:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24	Total
ACE-Claimed	1027.22	318.62	772.35	5117.87	2424.20	9660.25
ACE-Allowed	**491.71**	**6.10**	**578.42**	**318.62**	**18.50**	**1413.34**
Allowed under ROE	490.23	0.00	541.11	237.31	0.00	1268.65
Allowed under WAROI	1.48	6.10	37.31	81.31	18.50	144.69

De-capitalization

183. The Petitioner has submitted the asset-wise details of de-capitalization of Rs. 1011.88 lakh (Rs. 343.45 lakh in 2019-20, Rs. 453.30 lakh in 2020-21, Rs. 85.15 lakh in 2021-22, Rs. 47.13 in 2022-23; and Rs. 82.85 lakh in 2023-24). We have considered the de-capitalization of assets claimed by the Petitioner. The de-capitalisation against the assets allowed has only been considered for the purpose of tariff in the relevant year of corresponding capitalisation. Accordingly, the de-capitalisation allowed against the assets allowed are as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24	Total
286.92	0.00	284.19	0.00	0.00	571.11

Assumed Deletion

184. 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”.

185. Accordingly, the gross value of the assets de-capitalized under ‘assumed deletions’ as considered by the Petitioner based on WPI and capitalized value of new asset is not acceptable. 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 2011-12. 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, as the Petitioner has not furnished the de-capitalization value of assets which was claimed

and allowed as additional capital expenditure, the same is determined under 'Assumed Deletions' for the period 2019-24 as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Assumed Deletion (Normal ROE)	32.42	0.00	70.87	138.75	0.00	242.04

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

(Rs. in lakh)

S. No.	Name of the Asset	2019-20	2020-21	2021-22	2022-23	2023-24	Total
1	Assumed Deletion	32.42	0.00	70.87	138.75	0.00	242.04
2	De-capitalization	286.92	0.00	284.19	0.00	0.00	571.11
3	**Total Decapitalization**	**319.34**	**0.00**	**355.06**	**138.75**	**0.00**	**813.15**

Discharge of Liabilities

187. The Petitioner has submitted that the entire additional capital expenditure projections submitted under Form-9 are on accrual basis and un-discharged liabilities, if any, will be submitted on actual basis at the time of truing-up. Accordingly, the Commission has also not allowed any discharge of liabilities in this order for the 2019-24 tariff period. However, the Petitioner is directed to submit the item-wise and year-wise reconciliation statement, showing the details of such liabilities as per the balance sheet for the period 2019-24, duly certified by the auditor and furnish the break-up of discharges included in the liabilities discharged within the original scope of work and beyond the original scope, at the time of truing-up exercise.

Capital cost allowed for the period 2019-24

188. Accordingly, the capital cost approved 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)	224364.00	224536.36	224542.47	224765.82	224945.69
Add: Addition during the year / period (Net of	491.71	6.10	578.42	318.62	18.50

	2019-20	2020-21	2021-22	2022-23	2023-24
Exclusion not allowed) (B)					
Less: Decapitalization during the year /period (C)	319.34	0.00	355.06	138.75	0.00
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
Net Additional Capitalization (F) = (B-C-D+E)	172.37	6.10	223.35	179.87	18.50
Closing Gross Block (G) = (A+F)	224536.36	224542.47	224765.82	224945.69	224964.19
Average Gross Block (H) = (A+G)/2	**224450.18**	**224539.42**	**224654.14**	**224855.75**	**224954.94**

Debt Equity Ratio

189. 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.*

(2) 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."
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

(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."*

190. The gross loan and equity amounting to Rs. 157054.80 lakh and Rs. 67309.20 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 accordance with the 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 details of debt and equity in respect of the generating station is as under:

	Capital Cost as on 1.4.2019 (Rs. in lakh)	%	Net Additional Capital Expenditure for 2019-24 tariff period (Rs. in lakh)	%	Capital Cost as on 31.4.2024 (Rs. in lakh)	%
Debt	157054.80	70%	420.14	70%	157474.93	70%
Equity	67309.20	30%	180.06	30%	67489.26	30%
Total	**224364.00**	**100%**	**600.19**	**100%**	**224964.19**	**100%**

Return on Equity

191. Regulations 30 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."

192. Regulation 31 of the 2019 Tariff Regulations provide as follows:

"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."

193. The Objector DVPCA has submitted the following:

i. Effective Tax rate for RoE to be considered as per actual tax paid – Clause 31 of 2019 Tariff Regulations.
ii. Similar approach has been adopted by Commission in tariff determination for the period 2014-19.

194. Further, the Petitioner has considered effective tax rate of 21.5488% for the computation of Return on Equity for the period 2019-24, the same is premature and needs to be claimed under true-up based on actual tax paid in terms of Regulation 31 of the 2019 Tariff Regulations. Regarding the Petitioner's claim with regard to ROE at weighted average rate of interest on actual loan portfolio as per submission in the Form-1(I) of the tariff formats for additional capitalization, the Objector, DVPCA has submitted that the Petitioner has neither submitted any details of assets nor any justification for claiming the additional capitalization after cut-of date and beyond the original scope of work. The Petitioner in its rejoinder has submitted and prayed to the Commission to compute the RoE without considering the income tax rates for the

period 2019-24. However, the Petitioner has craved leave of the Commission to claim the income tax liability, if any, for any year of the period 2019-24 as and when arising in the future. Further, regarding the Objector DVPCA contention in the matter of additional capitalization, which is eligible for ROE at weighted average rate of interest on actual loan portfolio, the Petitioner has submitted that details of assets and detailed justifications have already been furnished in Form-9 as part of the petition for determination of tariff for the generating station for the period 2019-24.

195. The matter been considered. The Petitioner has not been paying any income tax till any of the financial year of the period 2014-19. Also, considering the above submissions of the Petitioner, 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 period 2019-24. Accordingly, ROE is worked out and allowed as follows:

(a) <u>Return on Equity at Normal Rate:</u>

(Rs. In lakh)

		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross Normative Equity - Opening	A	67309.20	67360.47	67360.47	67416.28	67445.85
Less: Adjustment to equity in terms of first proviso to Regulation 18(3) of 2019 Tariff Regulations	B	0.00	0.00	0.00	0.00	0.00
Normative Equity - Opening	C=(A-B)	67309.20	67360.47	67360.47	67416.28	67445.85
Addition to Equity due to additional capital expenditure	D	51.27	0.00	55.81	29.57	0.00
Normative Equity - Closing	E=(C+D)	67360.47	67360.47	67416.28	67445.85	67445.85
Average Normative Equity	F=Avg. (C,E)	67334.83	67360.47	67388.37	67431.07	67445.85
Return on Equity (Base Rate) (%)	G	15.500%	15.500%	15.500%	15.500%	15.500%
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)**	**10436.90**	**10440.87**	**10445.20**	**10451.82**	**10454.11**

(b) Return on Equity at WAROI

(Rs. In lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Normative Equity - Opening	A	0.00	0.44	2.27	13.46	37.86
Addition to Equity due to additional capital expenditure	B	0.44	1.83	11.19	24.39	5.55
Normative Equity - Closing	C=A+B	0.44	2.27	13.46	37.86	43.41
Average Normative Equity	D=Average (C,A)	0.22	1.36	7.87	25.66	40.63
Return on Equity (Base Rate) (%)	E	10.097%	10.097%	10.097%	10.097%	10.097%
Tax Rate for the year (%)	F	0.000%	0.000%	0.000%	0.000%	0.000%
Rate of Return on Equity (Pre-Tax) (%)	G=E/(1-F)	10.097%	10.097%	10.097%	10.097%	10.097%
Return on Equity (Pre-Tax) annualized	**J=(DxG)**	0.02	0.14	0.79	2.59	4.10

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	10436.90	10440.87	10445.20	10451.82	10454.11
Return on Equity at WAROI	B	0.02	0.14	0.79	2.59	4.10
Total Return on Equity allowed	**C=(A+B)**	**10436.92**	**10441.01**	**10445.99**	**10454.41**	**10458.21**

Interest on Loan

196. Regulation 32 and 61 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."

*"**61. Sharing of saving in interest due to re-financing or restructuring of loan:** (1) If re-financing or restructuring of loan by the generating company or the transmission licensee, as the case may be, results in net savings on interest after accounting for cost associated with such refinancing or restructuring, the same shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 50:50.*

(2) 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 for settlement of the dispute:

Provided that the beneficiaries or the long term customers 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."

197. The Objector DVPCA has submitted that since the additional capital expenditure claimed by the Petitioner for period 2019-24 is not in order, the interest on loan for the period may be allowed, only after deducting the additional capital expenditure which are disallowed in this tariff order. The Petitioner in its rejoinder has submitted that, the reply raised by the Objector DVPCA against the additional capitalisation for the period 2019-24 is arbitrary and devoid of any merit.

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

a. Gross normative loan amounting to Rs. 157054.80 lakh on 31.3.2019 as considered in for the period 2014-19' in this order, has been considered as on 1.4.2019.

b. Cumulative repayment of Rs. 123700.51 lakh as on 31.3.2019 as considered in in for the period 2014-19' in this order has been considered as on 1.4.2019.

c. Accordingly, the net normative opening loan as on 1.4.2019 works out to

Rs. 33354.29 lakh.

d. Weighted average rate of interest on loan, as claimed by the Petitioner has been considered.

e. The repayments for the respective years of the period 2019-24, has been considered equal to the depreciation allowed for that year.

f. Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest.

199. 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	157054.80	157175.45	157179.73	157336.07	157461.98
Cumulative repayment of loan upto previous year	B	123700.51	140196.18	156921.92	157336.07	157461.98
Net Loan Opening	C=(A-B)	33354.29	16979.27	257.80	0.00	0.00
Addition due to additional capital expenditure	D	120.66	4.27	156.35	125.91	12.95
Repayment of loan during the year	E	16719.09	16725.74	662.69	223.03	12.95
Repayment adjustment on account of decapitalization	F	223.42	0.00	248.54	97.12	0.00
Ney repayment of the loan during the year	G=(E-F)	16495.67	16725.74	414.15	125.91	12.95
Net Loan Closing	H=(C+D -G)	16979.27	257.80	0.00	0.00	0.00
Average Loan	I=Avg. (C,H)	25166.78	8618.54	128.90	0.00	0.00
Weighted Average Rate of Interest of loan	J	10.0967%	10.0967%	10.0967%	10.0967%	10.0967%
Interest on Loan	**K=(IxJ)**	**2541.01**	**870.19**	**13.01**	**0.00**	**0.00**

Depreciation

200. 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.

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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:

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***(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."*

201. The Objector DVPCA has submitted that since the additional capital expenditure claimed by the Petitioner for period 2019-24 is not in order, the depreciation for the period may be allowed only after deducting the additional capital expenditure which is disallowed in this tariff order. The Petitioner in its rejoinder has submitted that, the reply raised by the Objector DVPCA against the additional capitalisation for the period 2019-24 is arbitrary and devoid of any merit. Thus, the contentions are misconstrued in the matter of depreciation for the period 2019-24 and may be rejected by the Commission.

202. Depreciation has been worked out considering the admitted capital cost of Rs. 224364.00 lakh, as on 1.4.2019, and the cumulative depreciation of Rs. 123700.50 lakh as on 31.3.2019, as determined in for the period 2014-19 in this order. Accordingly, in terms of Regulation 33 read with Regulation 72 (2) (iii) of the 2019 Tariff Regulations, depreciation is worked out and allowed as under:

(Rs. In lakh)

		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Capital Cost (A)		224364.00	224536.36	224542.47	224765.82	224945.69
Add: Net Additional Capital Expenditure (B)		172.37	6.10	223.35	179.87	18.50
Closing Capital Cost (C) = (A+B)		224536.36	224542.47	224765.82	224945.69	224964.19
Average Capital Cost	A	224450.18	224539.42	224654.14	224855.75	224954.94
Value of freehold land	B	0.00	0.00	0.00	0.00	0.00
Aggregated Depreciable Value	C= [(A-B)x90%]	202005.16	202085.47	202188.73	202370.18	202459.44
Remaining Aggregate Depreciable value at the beginning of the year	D=[(C)-(Cumulative Depreciation of	78304.66	61889.30	45266.82	29015.29	12480.13

		2019-20	2020-21	2021-22	2022-23	2023-24
	Previous year)]					
Balance useful life at the beginning of the year	E	17.44	16.44	15.44	14.44	13.44
Weighted Average Rate of Depreciation (WAROD)	F	7.4489%	7.4489%	7.4489%	7.4489%	7.4489%
Depreciation (annualized)	**G = [Min (D, Ax F)]**	**16719.09**	**16725.74**	**16734.29**	**16749.30**	**12480.13**
Cumulative depreciation (at the end of the year)	H= [(Cumulative Depreciation of Previous year) +(G)]	140419.59	156921.91	173656.20	190104.19	202459.44
Less: Depreciation adjustment on account of de-capitalization	I	223.42	0.00	301.31	124.87	0.00
Cumulative depreciation at the end of the year	J=(H - I)	140196.17	156921.91	173354.89	189979.32	202459.44

Operation & Maintenance Expenses

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
16480.00	17060.00	17655.00	18280.00	18920.00

204. Regulation 35(1)(1) of the 2019 Tariff Regulations provides for the following O&M expenses for 250 MW series generating station:

	2019-20	2020-21	2021-22	2022-23	2023-24
(lakh/MW)	30.51	32.96	34.12	35.31	36.56

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

Water Charges, Security Charges and Capital Spares

206. Regulation 35(1)(6) of the 2019 Tariff Regulations (First Amendment) 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 and considering the norms of specific water consumption notified by the Ministry of Environment, Forest and Climate Change, subject to prudence check. The details regarding the same shall be furnished along with the petition;

xxxxxxxx."

Water Charges

207. 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 m^3/MWh, generation as per NAPAF and claimed as follows:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1390.24	1525.09	1677.60	1845.36	2035.46

208. The Respondents BRPL and BYPL have submitted that the Petitioner has only provided the overall estimate of Water Charges for each financial year and has failed to provide the details and supporting documentary evidence as to how the said estimate has been computed. The Respondent TPPDL has submitted that water charges are to be allowed separately based on the details furnished by the Petitioner and based on the type of the generating station and the actual water consumption, subject to prudence check, but the Petitioner has failed to provide details of the quantity of water consumed and the rate at which water charges have been calculated. The Respondent has also submitted that the Petitioner, in Appendix-4, has only provided the plant-wise apportionment of water charges and no other detail has been provided.

209. The Objector DVPCA has submitted that the actual water charge rate was Rs. 5.7/KL and Rs. 1.15/KL for industrial use and domestic use respectively, for each year of the period 2014-19. Accordingly, objector has worked out the weighted average water charge rate Rs. 5.68/KL. It has submitted that as against this, the Petitioner has

considered water charge rate of Rs. 10.64/KL for 2019-20 and thereafter, a yearly escalation rate of 10% for the remaining years of the period 2019-24. The Objector has stated that the Petitioner has not furnished the relevant OM dated 23.7.2019. It has further stated that that the increase sought is more than 85% which is certainly unreasonable and arbitrary and has requested that the Commission may conduct a strict prudence check, on arriving at the allowable water charge rate, such that, the same is comparable with the rates prevailing in other States, derived at arms' length and there should be no cross-subsidisation of other activities of the Petitioner. The objector has added that the arbitrary escalation of 10% ought to be rejected as there is neither any basis for the same nor provided in the 2019 Tariff Regulations. The Petitioner in its rejoinder has submitted that the water charges of the generating stations, w.e.f. 1.4.2019 and escalation thereof, are governed by the water tariff as notified by DVC vide OM dated 23.7.2019.

210. The matter has been considered. In view of the above submissions and considering the fact that the MOEF&CC, GOI has revised specific water consumption norms of 3.5 m^3/MWh for the Thermal Power Plants vide MoEFCC, GOI Notification No. 3305 dated 7.12.2015, and considering the water charges rate of Rs 10.64/KL with 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	3733.20	3723.00	3723.00	3723.00	3733.20
Normative Specific Water Consumption as per MoEF&CC stipulations	Cubic Meter/MWh	3.50	3.50	3.50	3.50	3.50
Normative Water Consumption as per MoEF&CC's Norms	Cubic Meter	13066200	13030500	13030500	13030500	13066200
Rate of Water Charges	Rs. / Cubic	10.64	11.70	12.87	14.16	15.58

	Units	2019-20	2020-21	2021-22	2022-23	2023-24
	Meter					
Total Normative Water Charges	**(in Rs. lakh)**	**1390.24**	**1525.09**	**1677.60**	**1845.36**	**2035.46**

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

Security Expenses

212. The Petitioner has claimed the following security expenses, on projection basis, for the period 2019-24, in terms of the second proviso to Regulation 35(6) of the 2019 Tariff Regulations.

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
3107.42	3244.16	3386.91	3535.94	3691.54

213. It is observed that the Petitioner has escalated the actual Security expenses of Rs. 2976.45 lakh for the year 2018-19 at the CAGR rate of 4.40% per annum to project the security expenses figures for the period 2019-24. The Petitioner has also submitted that escalation of Security expenses has been proposed to accommodate the year-on-year growth of salary expenditures and associated CISF activities that are primarily governed by the CISF Rules.

214. The Objector DVPCA has submitted that the actual O&M expenses including, P& Gratuity expenses, Pay Revision expenses, CISF security expenses, Ash evacuation expenses, expenditure for Subsidiary Activities, Mega Insurance expenses, GST on O&M, etc. are lower than the normative O&M expenses for the period 2014-19. Thus, there is no requirement for separate allowance of CISF security expenses as they are covered under normative O&M expenses and separate allowance of the same would lead to unjust enrichment of the Petitioner. The objector

has also submitted that past analysis of all stations of the Petitioner reveal CISF Man/MW ratio varies between station to station and ranges from 0.19 to 3.96 person/MW. It has also submitted that the cost of CISF personnel/MW also varies from station to station and ranges from Rs. 24084/- per annum in case of MHS (hydel) to a high of Rs. 1186779/- per annum in case of MTPS station and the OM issued by CISF/MHA all pertain to previous control period and no other document is provided for FY 2019-24 period. In response, the Petitioner has submitted that the actual Security expenses for 2018-19 has been escalated at 4.40% (which is the CAGR of normative O&M expenses of generating station from 2018-19 to 2023-24) per annum, to obtain the projected figures for the period 2019-24. The Petitioner has also submitted that escalation of Security expenses has been proposed to accommodate the year-on-year growth of salary expenditures and associated CISF activities that are primarily governed by the CISF Rules.

215. The matter has been considered. It is observed that the security expenses for 2018-19 is Rs. 2976.45 lakh and the same has been considered along with an annual escalation rate of 4.40%, as proposed by the Petitioner. Accordingly, the Security expenses as claimed by the Petitioner are allowed as follows:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
3107.42	3244.16	3386.91	3535.94	3691.54

216. 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.

<u>Capital spares</u>

217. The Petitioner has not projected any capital spares for the period 2019-24 and

has submitted that the same shall be claimed at the time of truing-up of tariff, on actual basis. In view of this, liberty has been granted to the Petitioner. The Petitioner shall also substantiate that the capital spares are not funded through compensatory allowance or Special Allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization during the true-up.

218. Based on the above discussion, the O&M expenses allowed under Regulation 35(1)(1) of the 2019 Tariff Regulations and Water Charges, Security Expenses and Capital Spares allowed is summarised as follows:

(Rs. in lakh)

		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Installed Capacity (MW)		500.00	500.00	500.00	500.00	500.00
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	16480.00	17060.00	17655.00	18280.00	18920.00
	Allowed	16480.00	17060.00	17655.00	18280.00	18920.00
Water Charges (B)	Claimed	1390.24	1525.09	1677.60	1845.36	2035.46
	Allowed	1390.24	1525.09	1677.60	1845.36	2035.46
Security Expenses (C)	Claimed	3107.42	3244.16	3386.91	3535.94	3691.54
	Allowed	3107.42	3244.16	3386.91	3535.94	3691.54
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**	**20977.66**	**21829.25**	**22719.51**	**23661.30**	**24646.99**
	Allowed	**20977.66**	**21829.25**	**22719.51**	**23661.30**	**24646.99**

Operational Norms

219. 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:

xx
(b) Thermal Generating Stations achieving COD on or after 1.4.2009:

(i) For Coal-based and lignite-fired Thermal Generating Stations:

1.05 X Design Heat Rate (kCal/kWh)

Where the Design Heat Rate of a generating unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure.

Provided that the design heat rate shall not exceed the following maximum design unit heat rates depending upon the pressure and temperature ratings of the units:

Pressure Rating (Kg/cm2)	150	170	170
SHT/RHT (0C)	535/535	537/537	537/565
Type of BFP	Electrical Driven	Turbine Driven	Turbine Driven
Max Turbine Heat Rate (kCal/kWh)	1955	1950	1935
Min. Boiler Efficiency			
Sub-Bituminous Indian Coal	0.86	0.86	0.86
Bituminous Imported Coal	0.89	0.89	0.89
Max. Design Heat Rate (kCal/kWh)			
Sub-Bituminous Indian Coal	2273	2267	2250
Bituminous Imported Coal	2197	2191	2174

Pressure Rating (Kg/cm2)	247	247	270	270
SHT/RHT (0C)	537/565	565/593	593/593	600/ 600
Type of BFP	Turbine Driven	Turbine Driven	Turbine Driven	Turbine Driven
Max Turbine Heat Rate (kCal/kWh)	1900	1850	1810	1800
Min. Boiler Efficiency				
Sub-Bituminous Indian Coal	0.86	0.86	0.865	0.865
Bituminous Imported Coal	0.89	0.89	0.895	0.895
Max. Design Heat Rate (kCal/kWh)				
Sub-Bituminous Indian Coal	2222	2151	2105	2081
Bituminous Imported Coal	2135	2078	2034	2022

Provided further that in case pressure and temperature parameters of a unit are different from above ratings, the maximum design heat rate of the unit of the nearest class shall be taken:

Provided also that where heat rate of the unit has not been guaranteed but turbine cycle heat rate and boiler efficiency are guaranteed separately by the same supplier or different suppliers, the design heat rate of the unit shall be arrived at by using guaranteed turbine cycle heat rate and boiler efficiency:

Provided also that where the boiler efficiency is lower than 86% for Sub-bituminous Indian coal and 89% for bituminous imported coal, the same shall be considered as 86% and 89% for Sub-bituminous Indian coal and bituminous imported coal respectively, for computation of station heat rate:
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%*

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

Parameter	**Value**
Normative Annual Plant Availability Factor (NAPAF) (%)	85.00
Gross Station Heat Rate (kcal/kwh)	2369.17
Auxiliary Power Consumption (%)	9.80
Specific Oil Consumption (ml/kwh)	0.50

221. The Petitioner has sought liberty to claim relaxation of NAPAF as per Regulation 76 and Regulation 77 of the 2019 Tariff Regulations, for unforeseen event or uncontrollable factors.

222. The matter has been considered. We find no merit in the claim of the Petitioner to allow relaxation in NAPAF and hence the same is not allowed. It is observed that the Petitioner has submitted that the generating station is of 250 MW units with induced draft cooling. The operational norms in line with the Regulation 49(A), 49(C)(b)(i), 49(D) and 49(E) of the 2019 Tariff Regulations have been allowed as follows:

Parameter	**Value**
Normative Annual Plant Availability Factor (NAPAF) (%)	85.00
Gross Station Heat Rate (kcal/kwh)	*2368.62

Parameter	**Value**
	(1.05x1954/0.8662)
Auxiliary Power Consumption (%)	9.80
Specific Oil Consumption (ml/kwh)	0.50

**Based on guaranteed Turbine Heat rate of 1954kcal/kWh and guaranteed boiler efficiency of 86.62% as submitted in Petition no. 196/GT/2013*

Interest on Working Capital

223. The Petitioner has claimed the weighted average GCV and Cost of Coal as 4158.40 kCal/kg and Rs. 3026.30/MT, respectively, and those of Secondary fuel oil as 9421 kCal/L and Rs. 58230.52/KL. 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)	8922.07	8897.69	8897.69	8897.69	8922.07
Cost of oil for 2 months (B)	181.16	180.66	180.66	180.66	181.16
O&M expenses - 1 month (C)	1748.14	1819.10	1893.29	1971.78	2053.92
Maintenance Spares - 20% of O&M (D)	4195.53	4365.85	4543.90	4732.26	4929.40
Receivables – 45 days (E)	16327.91	16338.69	16479.79	16703.49	16928.85
Total Working Capital (F) = (A+B+C+D+E)	**31374.80**	**31602.00**	**31995.33**	**32485.88**	**33015.39**
Rate of Interest (G)	12.05%	12.05%	12.05%	12.05%	12.05%
Total Interest on Working capital (H) = (F)x(G)	**3780.66**	**3808.04**	**3855.44**	**3914.55**	**3978.35**

224. 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 expenses;
(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.”

225. Regulations 34(3) and 34(4) 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 2019-24.

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

Fuel Cost and Cost of Liquid Stock for Working Capital

226. 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 from 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	8922.07	8897.69	8897.69	8897.69	8922.07
Cost of Secondary fuel oil 2 months	181.16	180.66	180.66	180.66	181.16

227. 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 in case of each financial year for which tariff is to be determined.

228. 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 formulae:

(a) For coal based and lignite fired stations:
ECR = {(SHR – SFC x CVSF) x LPPF / CVPF+SFC x LPSFi + LC x LPL} x 100 / (100 – AUX)

(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

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;
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."

229. 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.

230. Accordingly, the GCV and price of fuel as claimed by the Petitioner and as allowed are as under:

	Claimed	**Allowed**
Weighted average price of coal (Rs./MT)	3026.30	3026.30
Weighted average GCV of coal (kCal/kg)	4158.40	4073.40*
Weighted average price of oil (Rs./kl)	58230.52	58230.52
Weighted average GCV of oil (kCal/l)	9421.00	9421.00

**After adjustment of 85kcal/kg as per Regulation 43(2)(b)*

231. Accordingly, based on the operational norms, GCV and price of Coal and Oil allowed as above, the fuel components of working capital is 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	3582.74	3582.74	3582.74	3582.74	3582.74
Cost of coal for generation for 30 days	5374.11	5374.11	5374.11	5374.11	5374.11
Cost of Secondary fuel oil 2 months	181.16	180.66	180.66	180.66	181.16

232. In the present petition, the computation of working capital is based on the GCV, and fuel cost furnished for third quarter of the year 2018-19. However, Regulation 34 (C) (2) provides that the cost of fuel shall be based on the landed fuel cost (considering normative transit and handling losses, in terms of Regulation 39 of these Regulations) by the generating station and gross calorific value of fuel, as per the actual weighted average for the third quarter of preceding financial year, in case of each financial year for which tariff is to be determined. In terms of above, the fuel cost computed above is subject to the truing-up, based on the actual data to be furnished by Petitioner, for each year.

Energy Charges for 45 days for Working Capital

233. The Petitioner has claimed Energy Charge Rate (ECR) of 193.998 Paise/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
Energy Charge Rate Secondary fuel	paisa/kWh	2.91
Energy Charge Rate Primary fuel	paisa/kWh	172.075
Total Energy Charge Rate ex-bus	paisa/kWh	193.998

234. Based on the operational norms and the price and GCV of the oil and price and GCV of coal [after adjusting margin of 85kCal/kg allowable as per Regulation 43(2)(b) of the 2019 Tariff Regulations], received at the generating station during the stipulated three months i.e., October 2018, November 2018 and December 2018 the ECR, for the purpose of working capital, has been worked out and allowed for the 2019-24 Tariff Period as under:

Gross Station Heat Rate (kcal/kwh)	2368.62
Auxiliary Power Consumption (%)	9.80%
Specific Oil Consumption (ml/kwh)	0.5
Weighted average price of coal (Rs./MT)	3026.30

Weighted average GCV of coal (kCal/kg)	4073.40*
Weighted average price of oil (Rs./kl)	58230.52
Weighted average GCV of oil (kCal/l)	9421.00
Energy Charge Rate ex-bus (Rs./kWh)	**1.979**

**After adjustment of 85kcal/kg as per Regulation 43(2)(b)*

235. 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
8193.42	8193.42	8193.42	8193.42	8193.42

Working Capital for Maintenance Spares

236. 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
4195.53	4365.85	4543.90	4732.26	4929.40

237. Maintenance spares for the purpose of interest on working capital in accordance with Regulation 34(1)(b)(iii) of the 2019 Tariff Regulations, has been worked out as follows:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
4195.53	4365.85	4543.90	4732.26	4929.40

Working Capital for Receivables

238. Receivables equivalent to 45 days of capacity charge and energy charges for the purpose of working capital has been worked out and allowed as follows:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges (45 days)	8193.42	8193.42	8193.42	8193.42	8193.42
Fixed Charges (45 days)	6674.21	6565.10	6546.06	6668.49	6245.18
Total	**14867.63**	**14758.52**	**14739.47**	**14861.91**	**14438.59**

Working Capital for O&M Expenses

239. The O&M expenses for 1 (one) month claimed by the Petitioner for the purpose

of working capital is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1748.14	1819.10	1893.29	1971.78	2053.92

240. One month O&M expenses allowed for the purpose of working capital is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1748.14	1819.10	1893.29	1971.78	2053.92

Rate of Interest for Working Capital

241. Regulation 34(3) of the 2019 Tariff Regulations provides for the rate of interest on working capital considered on projection basis, for the period 2019-24, 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 period 2019-24, is being determined during the year 2023-24, 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 bank 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
	Working Capital for non-pit-head Thermal Generating Station					
A	Working Capital for Cost of Coal towards Stock – 20 days	3582.74	3582.74	3582.74	3582.74	3582.74
B	Working Capital for Cost of Coal towards Generation – 20 days	5374.11	5374.11	5374.11	5374.11	5374.11
C	Working Capital for Cost of Secondary fuel oil – 2 months	181.16	180.66	180.66	180.66	181.16
D	Working Capital for Maintenance Spares @ 20% of O&M expenses	4195.53	4365.85	4543.90	4732.26	4929.40
E	Working Capital for Receivables - 45 days	14867.63	14758.52	14739.47	14861.91	14438.59
F	Working Capital for O&M expenses - 1 month	1748.14	1819.10	1893.29	1971.78	2053.92
G	**Total Working Capital (A+B+C+D+E+F)**	**29949.30**	**30080.98**	**30314.18**	**30703.45**	**30559.91**
H	Rate of Interest	12.05%	11.25%	10.50%	10.50%	10.50%
I	**Interest on Working capital (G x H)**	**3608.89**	**3384.11**	**3182.99**	**3223.86**	**3208.79**

Additional Claims

242. 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 Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act), 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
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	3110.41	3328.14	3561.11	3810.39	4077.11
Share of P&G	1863.22	1950.80	2042.51	2138.52	2239.04
Share of Common Office Expenditure	98.33	105.52	106.85	91.89	83.76
Expenses due to Ash evacuation, Mega insurance & expenditure for Subsidiary activity	1810.82	1890.51	1973.69	2060.54	2151.21
Total	**6882.78**	**7274.97**	**7684.16**	**8101.34**	**8551.13**

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

243. The Petitioner has claimed expenditure towards Interest & Contribution on

Sinking Fund (As per section 40, Part IV of DVC Act), as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
3110.41	3328.14	3561.11	3810.39	4077.11

244. The Petitioner has allocated sinking fund contribution and interest for DVC Bonds of Rs. 3100 Crore amongst the generating stations of DVC as follows:

(Rs. in Crore)

	2019-20	2020-21	2021-22	2022-23	2023-24
Total Contribution and Interest for Debt Borrowing	**214.27**	**229.27**	**245.32**	**262.49**	**280.87**
MTPS5&6	17.14	18.34	19.63	21.00	22.47
CTPS 7&8	31.10	33.28	35.61	38.10	40.77
MTPS 7&8	29.45	31.51	33.71	36.07	38.60
DSTPS	60.83	65.08	69.64	74.51	79.73
KTPS	66.29	70.93	75.89	81.20	86.89
RTPS-I	9.47	10.13	10.84	11.60	12.41
BTPS-A	0.00	0.00	0.00	0.00	0.00
Total	**214.27**	**229.27**	**245.32**	**262.49**	**280.87**

245. The Respondent TPDDL has submitted that while Regulation 72(2)(iv) of the 2019 Tariff Regulations permits the Contribution and Interest to Sinking Fund to be considered an item of expense to be recovered through tariff, it does not specify the way it is to be calculated/apportioned between units. In this regard, it is submitted that the Petitioner's present methodology of computing the contribution by apportionment (based on station capacity) is arbitrary and tends to wrongly burden consumers. Accordingly, it is prayed that, the Commission should direct the Petitioner to compute the station-wise contribution by making the redemption of bonds station specific.

246. The Objector, DVPCA submitted that the linkage of Bonds has to be established with each specific generating station. Allocation of principal cannot be the norm as different power plants of the DVC supply power to different entities/ beneficiaries. The Objector, DVCPA has further submitted that neither the provisions of Electricity Act, 2003 nor of Tariff Regulations, 2019 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 realised through bonds as normative debt. In the past tariff orders relating to DVC's old plants, the Commission has treated the amount realised through bonds as normative debt, and accordingly proceeded to grant interest thereon over and above the allowance of contribution to Sinking Fund in terms of Regulation 72(2)(iv) of the 2019 Tariff Regulations. However, Regulation 72(2)(iv) of the 2019 Tariff Regulations will be applicable only in such cases where normative debt is not allowed for funding capital cost and the Petitioner cannot be allowed both contributions to Sinking Fund, as well as depreciation and interest on loan by treating the funds realised through bond issue as normative loan. The Objector, DVPCA has further submitted that Petitioner is allowed all expenses related to Energy Charges and Fixed Charges under 2019 Tariff Regulations, including capital cost IDC, time over run & cost overrun to the extent permissible and also funding of the approved capital cost and interest/ returns on the debt/ equity components on actual / normative basis. The Objector, DVPCA while pointing out that the loan repayment is also taken care through higher depreciation for initial 12 years has submitted that the creation of funds without any specific purpose cannot be allowed to be recovered as expenditure in tariff even if it is mentioned in the DVC Act and/ Tariff Regulations, 2019. Hence, the Objector, DVPCA has requested the Commission to seek details about the purpose of borrowing of such funds when all expenses related to capital funding and working capital funding is allowed. The Petitioner in its rejoinder dated 16.7.2021 in response to the Objections submitted by DVPCA, reiterated that the matter related to Sinking Fund has already been settled through various litigations by the Hon'ble APTEL from the period 2007 to 2019 in favour of the Petitioner, which subsequently, has also been upheld by the Hon'ble

Supreme Court vide judgement dated 23.07.2018 in Bhaskar-Shrachi Alloys Ltd. v. Damodar Valley Corporation (2018) 8 SCC 281. The Petitioner further submitted that though Review Petition No. 4 of 2019 has been filed by the Respondent, DVPCA in the matter of Maithon Alloys Ltd. vs CERC & ors, there is no stay of the above decision of the APTEL and therefore for all purposes the same is binding on all the parties. The Petitioner has submitted the Respondent's contentions are not logical and has wrongly mixed the issue of Sinking Fund with depreciation.

247. We have examined the matter. Section 40 of the DVC Act 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. It is observed that the sinking funds have been created only for redemption of bonds. Accordingly, the amount approved for this generating station is as under:

(Rs. in lakh)

2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
3110.41	3328.14	3561.11	3810.39	4077.11

Share of P&G Contribution

248. 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**
1863.22	1950.80	2042.51	2138.52	2239.04

249. 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.

250. The matter has been considered. It is observed that the normative O&M expenses include 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

251. The Petitioner has claimed projected expenditure towards 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	1545.63	1613.65	1684.65	1758.78	1836.17
Mega Insurance Expenses	62.60	65.36	68.23	71.23	74.37
Share of Subsidiary Activities	202.59	211.50	220.81	230.53	240.67
Total	**1810.82**	**1890.51**	**1973.69**	**2060.54**	**2151.21**

252. The Respondent TPDDL has submitted that the claim for expenses towards ash evacuation, mega insurance and subsidiary activities ought to be rejected by the Commission as such expenses are already built-in in the normative O&M expenses, which are in the nature of a price-cap. Thus, these expenses ought to be met from the normative O&M expenses allowed to the Petitioner and cannot be allowed separately.

<u>Ash Evacuation Expenses</u>

253. The Petitioner has claimed total amount of Rs. 8438.89 lakh 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. The Objector, DVPCA has submitted that the Commission had disallowed the claim of the Petitioner for ash evacuation expenses during the period 2009-14 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.

254. 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.

255. The Petitioner has proposed ash transportation charges for the period 2019-24, 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 Chandrapura TPS, and the same was allowed during the period 2014-19. 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 period 2019-24. The Petitioner is permitted to recover the said expenses from 1.4.2019 up to the date

of this order, in 6 equal instalments commencing from the succeeding month of this order, in accordance with Regulation 10 of the 2019 Tariff Regulations and thereafter, the recovery of the same, shall be affected through monthly bills. The Petitioner is however, directed to submit all relevant documents in terms of the MoEF&CC notification, 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 environmentally friendly alternatives for ash disposal such as ash slurry pipeline, wagons instead of road transportation. Accordingly, the ash transportation charges provisionally allowed are as follows:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1391.07	1452.28	1516.19	1582.90	1652.56

Mega Insurance Expenses

256. The Petitioner has claimed total Rs. 314.79 lakh in the period 2019-24, towards Mega Insurance expenses under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

257. The Objector, 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.

258. 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

259. The Petitioner has claimed total Rs. 1106.10 lakh in the 2019-24 Tariff Period towards Share of Subsidiary Activities under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

260. The Objector, 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 period 2019-24 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. The Objector has further submitted that the Commission, in its order dated 17.2.2017 in Petition No. 180/GT/2015, had disallowed the expenditure on subsidiary activity and the same was to be recovered as part of the normative O&M expenses. The Objector, 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 the period 2019–24 also. In response, the Petitioner has reiterated its submissions in the matter of expenses for subsidiary activities made w.r.t. the replies for the period 2014-19.

261. The matter has been considered. It is noted that APTEL vide its judgement dated 23.11.2007 and the 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

262. 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, based on the 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	-	-	-	-	-
Subsidiary Activities	-	-	-	-	-
Other Offices	132.00	66.39	222.42	15.52	-
R&D	-	-	-	-	-
IT	960.00	1240.00	-	-	-
Central Office	-	-	-	-	-
Total	**1092.00**	**1306.39**	**222.42**	**15.52**	**-**

263. The head-wise, additional capital expenditure claimed by the Petitioner towards various offices is 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	-
Network Access Controller and Data Centre	960.00	1240.00	-	-	-
Total	**1092.00**	**1306.39**	**222.42**	**15.52**	**-**

264. 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
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**

265. 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 CTPS- 7 & 8	98.33	105.52	106.85	91.89	83.76

266. 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	-	-	-	-
2	10 kV Digital Insulation Tester (CRITM)	17.00	-	-	-	-
3	Relay Test Kit (CRITL)	80.00	-	-	-	-
4	Dielectric Frequency Response Analysis(DFRA) Test Kit (CRITL)	-	36.17	-	-	-
5	Flash Point of Transformer Oil Measurement Kit(CRITL)	-	4.70	-	-	-
6	3-Phase Portable Power Source (CRITM)	-	21.00	21.00	-	-
7	Laptop (CRITM)	-	4.52	4.52	-	-
8	Fully Automatic Three Phase Transformer TestKit (CRITM)	-	-	75.58	-	-
9	Swift Frequency Response Analysis (SFRA)Test Kit (CRITL)	-	-	21.72	-	-
10	Furan Test Kit (CRITL)	-	-	60.00	-	-
11	3-Phase Portable Reference Standard Meter(0.02 Class) (CRITM)	-	-	39.60	-	-
12	Line Impedance Measurement Kit	-	-	-	15.52	-
13	Network Access Controller, Next Generation Firewall (NGFW) and Networking Switches	160.00	40.00	-	-	-
14	Data Centre (Hardware & Licenses)	800.00	1200.00	-	-	-
	Total	**1092.00**	**1306.39**	**222.42**	**15.52**	**-**

267. 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 comply with cyber security guidelines of MOP, 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.

268. The matter has been considered. It is observed that the items mentioned under the head 'Substation Equipments' 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.

269. Based on the above, the total additional capital expenditure allowed under Common Office expenses, is summarised 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**

270. 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.

271. 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 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
CTPS 7 & 8	67.84	66.67	66.19	66.15	60.39

<u>Annual Fixed Charges allowed for the period 2019-24</u>

272. Based on the above discussion, the annual fixed charges allowed for the generating station for the period 2019-24 is summarized below:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	16719.09	16725.74	16734.29	16749.30	12480.13
Interest on loan	2541.01	870.19	13.01	0.00	0.00
Return on Equity	10436.92	10441.01	10445.99	10454.41	10458.21
Interest on Working Capital	3608.89	3384.11	3182.99	3223.86	3208.79
O&M Expenses	16480.00	17060.00	17655.00	18280.00	18920.00
Water Charges	1390.24	1525.09	1677.60	1845.36	2035.46
Security Expenses	3107.42	3244.16	3386.91	3535.94	3691.54
Special Allowance	0.00	0.00	0.00	0.00	0.00
Sub-Total (A)	**54283.58**	**53250.29**	**53095.79**	**54088.87**	**50794.12**
Interest & Contribution on Sinking Fund	3110.41	3328.14	3561.11	3810.39	4077.11
Share of P&G	0.00	0.00	0.00	0.00	0.00
Share of Common Office Expenditure	67.84	66.67	66.19	66.15	60.39
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)	**3178.25**	**3394.81**	**3627.30**	**3876.53**	**4137.51**
Total Annual Fixed Charges (C=A+B)	**57461.82**	**56645.10**	**56723.09**	**57965.41**	**54931.62**

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

273. The Ash Evacuation expenses, which shall be recovered separately in terms of this order, is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Ash Evacuation Expenses	1391.07	1452.28	1516.19	1582.90	1652.56

274. 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

275. The Petitioner has sought the reimbursement of filing fee paid by it for filing the tariff petition for the period 2019-24 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.

276. 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.

277. Petition No. 570/GT/2020 is disposed of in terms of the above.

Sd/-	Sd/-	Sd/-
(Pravas Kumar Singh)	**(Arun Goyal)**	**(I.S. Jha)**
Member	**Member**	**Member**