CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 574/GT/2020

Coram:

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

Date of Order: 26th October, 2023

In the matter of:

Petition for truing up of tariff for the period 2014-19 and for determination of tariff for the period 2019-24, in respect of Bokaro 'A' Thermal Power Station Unit-I (500 MW)

And

In the matter of:

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

Vs

1. Punjab State Power Corporation Limited,
   Inter State Billing, Shed No. TI-A,
   Patiala-147001 **...Respondent**

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

Parties Present:

Shri M.G. Ramachandran, Senior Advocate, DVC
Ms. Anushree Bardhan, Advocate, DVC
Ms. Srishti Khindaria, Advocate, DVC
Shri Manik Rakshit, DVC
Shri Sandip Pal, DVC
Shri Samit Mandal, DVC
Shri A R Sinha, DVC
Ms. Suparna Shrivastava, Advocate, PSCPL
Ms. Saumya Singh, Advocate, PSPCL
Ms. Tushar Mathur, Advocate, PSPCL
Shri Rajiv Yadav, Advocate, DVPCA

ORDER

This petition has been filed by the Petitioner, Damodar Valley Corporation, for truing-up of tariff of Bokaro 'A' Thermal Power Station Unit-I (500 MW) (in short "the generating station") for the period 2014-19 in terms of Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (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, comprising of one unit of 500 MW. The date of commercial operation of the unit of the generating station is 23.2.2017 and the cut-off date of the generating station is 31.3.2020.

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 de novo consideration of the tariff order dated October 3, 2006 in terms of our findings and observations made hereinabove and according to the law. Appeal No. 271, 272 and 275 of 2006 and No. 08 of 2007 are also disposed of, accordingly"*

4. Against the above judgment dated 23.11.2007, some of the parties namely, the Central Commission (Civil Appeal No.4289/2008), the West Bengal State Electricity Regulatory Commission (Civil Appeal No.804/2008), M/s Bhaskhar Shrachi Alloys Ltd & Ors (Civil Appeal No 971-973/2008), the State of Jharkhand (Civil Appeal No.4504-4508/2008) and the State of West Bengal (Civil Appeal No.1914/2008) filed Civil Appeals before the Hon'ble Supreme Court. Thereafter, in terms of the directions contained in the judgment of APTEL dated 23.11.2007 in Appeal No. 273/2006 and other connected appeals, for a de novo consideration of the order dated 3.10.2006, the Petition No. 66/2005 (with I.A. Nos.19/2009 and 23/2009) was heard by the Commission and tariff of the generation and inter-state transmission systems of the Petitioner for the 2006-09 tariff period 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, was 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 being trued-up for the period 2014-19 period and is also determined for the period 2019-24,

as stated in the subsequent paragraphs.

6. The Investment Approval of the Project comprising of Unit-I of 500 MW was sanctioned on 26.8.2006 by the Board of the Petitioner at a tentative cost of Rs 231300.00 lakh, including the cost of dismantling and disposal of old BTPS 'A' Units-I, II, and III, Construction of new substation and IDC and WCM of Rs 17900.00 lakh. Thereafter, the Board of Directors vide Resolution dated 5.5.2011 had approved the revised sanction cost of Rs 355218.00 lakh, which was subsequently revised vide resolution dated 17.10.2017 and the total estimated cost of Rs 455553.00 lakh was approved. The Petitioner has entered into Power Purchase Agreements (PPA) with Punjab State Power Corporation Limited (PSPCL) on 7.11.2016 for sale of 200 MW power from the generating station.

7. The Commission vide its order dated 30.5.2018 in Petition No. 196/GT/2016 had approved the capital cost and the annual fixed charges of the generating station for the period 2014-19 as under:

Capital cost allowed

(Rs. in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	2017-18	2018-19
Opening Capital Cost (A)	299415.51	299415.51	338094.17
Add: Additional Capital Expenditure allowed (B)	0.00	33955.00	22990.00
Less: Reversal (C)	0.00	3396.00	2299.00
Add: Discharge of Liability (D)	0.00	8119.00	3396.00
Closing Capital Cost (E) = (A++B -C+D)	**299415.51**	**338094.17**	**362180.67**
Average Capital Cost (F) = (A+E) / 2	299415.51	318754.84	350137.42

Annual fixed charges allowed

(Rs. in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	2017-18	2018-19
Depreciation	21020.34	22378.05	24581.25
Interest on loan	22595.66	21669.31	21497.71
Return on Equity	13922.82	14822.10	16281.39
Interest on Working Capital	4376.90	4501.88	4613.58
O&M Expenses	9040.00	9610.00	10215.00
Total Annual Fixed Charges	**70955.72**	**72981.34**	**77188.94**

Truing-up of tariff for the period 2014-19

8. 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."*

9. 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 revised the annual fixed charges claim in Form-1(vide affidavit dated 15.11.2021) for the period 2014-19, as under:

Capital Cost claimed

(Rs. in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	2017-18	2018-19
Opening Capital Cost (A)	383190.50	378913.06	380723.32
Add: Addition during the year / period (B)	(-)3927.22	2585.67	21555.17
Less: De-capitalization during the year / period (C)	-	-	-
Less: Reversal during the year / period (D)	-	-	-
Less: Undischarged liabilities (E)	672.64	911.23	431.26
Add: Discharges during the year / period (F)	322.43	135.82	3002.83
Closing Capital Cost (G)=(A+B-C-D-E+F)	**378913.06**	**380723.32**	**404850.06**
Average Capital Cost (H)=(A+G/2)	381051.78	379818.19	392786.69

Annual fixed charges claimed

(Rs in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	2017-18	2018-19
Depreciation	2902.36	28984.17	30011.55
Interest on loan	2779.39	25567.63	23321.19
Return on Equity	2283.50	22453.48	23281.46
Interest on Working Capital	540.36	5487.90	5316.97
O&M Expenses	916.38	9610.00	10215.00
Water Charges	49.93	632.62	561.82
Sub-Total (A)	**9471.93**	**92735.79**	**92707.99**
DVC's share of savings in interest cost due to loan restructuring	-	704.03	678.42
Cost associated with loan restructuring	-	4756.60	-
Impact of Pay Revision due to recommendation of 7th Pay Commission	61.56	764.39	538.41
Impact of GST as change in law	-	66.25	144.07
Share of P&G expenses	209.61	4657.55	891.86
Share of Common Office Expenditure	7.85	83.89	89.77
Expenses due to Ash evacuation, Mega insurance, CISF expenditure & Expenditure for Subsidiary activity	424.68	2777.73	2575.43
Sub-Total (B)	**703.70**	**13810.44**	**4917.96**
Total annual fixed charges claimed (C = A+B)	**10175.63**	**106546.23**	**97625.95**

10. The Petitioner vide affidavit dated 17.6.2020, has furnished certain additional information, along with the revised forms for the period 2019-24, after correction of certain inadvertent errors in the forms. The Objector, DVPCA has filed its comments/ objections vide affidavit dated 19.4.2021 and the Petitioner has filed its rejoinder to the same vide affidavit dated 1.10.2021. The Respondent PSPCL has filed its reply vide affidavit dated 16.9.2021 and the Petitioner, vide affidavit dated 1.10.2021, has filed its rejoinder to the same. The Petition was heard through virtual conference, on 25.1.2022 and the Commission, after directing the Petitioner to file certain additional information, reserved its order in the petition. In response, the Petitioner vide affidavit dated 14.2.2022, has filed the additional information, after serving copy to the Respondent/ Objector. 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

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

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

12. The Commission vide its order dated 30.5.2018 in Petition No. 196/GT/2016, had allowed the opening capital cost of Rs. 299415.51 lakh, as on 23.2.2017. However, the Petitioner has revised the opening capital cost, as on 1.4.2016, to Rs. 383190.50 lakh (Rs. 299415.51 lakh + Rs. 83774.99 lakh) by addition of Rs. 83774.99 lakh, which is a difference between the actual IDC and FC as claimed by the Petitioner now and the IDC and FC allowed by Commission's order dated 30.5.2018 in Petition No. 196/GT/2016.

13. The Respondent PSPCL has submitted that the Commission has allowed the time over-run of and revised the SCOD for the Project to 16.4.2014 for the purpose of computation of IDC. However, it has submitted that the Petitioner has now claimed IDC (including notional IDC) and FC (Finance Charges) and provided information pertaining to interest on loan from various sources during the construction period till the actual COD in Appendix-15, Appendix-16, Appendix-17, Appendix-19 and Appendix-20 of the tariff forms for the period 2014-19. The Respondent has further submitted that the Petitioner's claim may be allowed only after prudence check.

14. The Objector, DVPCA has submitted that the Petitioner has not provided proper reconciliation or details or justification for considering higher rates of 12% and above in Appendix-15. Accordingly, it has requested the Commission to consider the lowest average rate of Interest for the IDC purposes till revised SCOD date. In response, the Petitioner has clarified that the Commission vide its order dated 30.5.2018 in Petition No.196/GT/2016 had acknowledged the total period taken by the project starting from the zero date to actual COD as 101 months. It has also stated that in Appendix-15, it is evident that the Petitioner has incurred 80% (Rs. 2298.68 crores out of Rs. 2870.70 crores) of its total cash expenditure during the period of 60 months starting from 2010-11 to 2015-16.

15. The matter has been considered. It is observed that the Incidental Expenditure during Construction (IEDC) has been approved for Rs. 6333.42 lakh [Rs. 9548.00 lakh minus Rs.3214.18 lakh (pro-rata reduction on account of time over run not condoned)] vide Commission's order dated 30.5.2018. As regards the claim for Notional IDC of Rs.116935.80 lakh, it is observed that the Petitioner, in Petition No. 196/GT/2016, had claimed notional IDC, as a part of IDC & Finance Charges (FC). However, the Commission vide its order dated 30.5.2018 had not allowed notional IDC, as extracted below:

> *"IDC & FC*
> *42. Interest During Construction including notional IDC claimed by the petitioner as on the COD of Unit-I (23.2.2017) is ₹116528.24 lakh. Since the claim of the petitioner for Notional IDC has been disallowed, the total IDC & FC is worked out as ₹35151.17 lakh as on 23.2.2017 and allowed.*
> *43. In the absence of the details of the amounts drawn against bonds, the same has not been considered in IDC. The petitioner is however granted liberty to furnish the complete details of IDC on bonds and notional IDC at the time of truing-up of tariff of the generating station."*

16. The Petitioner has submitted the details pertaining to the amount drawn against bonds and has claimed IDC of Rs.116935.80 lakh up to the actual COD and actual FC

of Rs. 1990.36 lakh, as part of the capital cost. Further, the Petitioner's claim towards 'Notional IDC' for the period prior to the first date of drawl of 'actual loan', the Petitioner has submitted that the 'Weighted Average of Actual Rate of Interest' (WAROI) for the 'actual loan' drawn for 'DSTPS' has been considered as the 'WAROI for BTPS-A (this generating station) from the period from August, 2006 to April 2014, due to unavailability of actual loan. However, in Petition No. 421/GT/2020 commission was of the view that Normative IDC is an opportunity cost (without actual outflow) and there will be subjectivity in applying Interest rates of other stations which may vary from Petitioner to Petitioner Hence, weighted average SBI base rate as applicable for the relevant Financial Year is to be considered for the purpose of calculating normative IDC for the period prior to date of actual drawl which will be in the interest of both the beneficiaries and the Petitioner. Hence, while computing IDC in this Petition the 'annual weighted average SBI Base Rate' as applicable for the relevant financial year has been considered for the purpose of calculating 'Normative IDC' for the period from 26.8.2006 till date of actual loan infusion i.e. 1.1.2011, in line with computation of 'Notional IDC' for the period from 'Investment Approval' date till the infusion of 'actual debt'. It is submitted that the 'Base Rate' was first released on 1.7.2010, therefore the 'Annual Weighted Average SBI Benchmark Prime Lending Rate' i.e. 'BPLR' is adjusted with the spread (based on difference between SBI BPLR and SBI Base Rate as on 1.7.2010) to arrive at an equivalent SBI 'Base Rate'. The Petitioner has claimed total IDC of Rs. 116935.80 lakh (including notional IDC) up to the date of actual COD i.e., 23.2.2017, however, the revised SCOD including condoned period is 16.4.2014. The claimed IDC up to revised SCOD i.e., 16.4.2014 amounts to Rs. 47086.39 lakh. Hence, the balance IDC of Rs. 69849.41 lakh (Rs.116935.80 lakh - Rs. 47086.39 lakh) for non-condoned period is not allowed. Now, after verifying the computation of IDC amounting to

Rs.47086.39 lakh and considering the submissions of the Petitioner pertaining to actual loan particulars/bond details as well as the above mentioned equivalent SBI base rate for notional IDC, the IDC, including 'Notional IDC', up to the revised SCOD (16.4.2014) works out to Rs.42954.35 lakh as part of the capital cost, against the provisionally allowed IDC, vide order dated 30.5.2018 in Petition No. 196/GT/2016.

17. As regards FC, the Petitioner had claimed the actual FC of Rs. 1990.36 lakh, as part of the capital cost, which was provisionally allowed vide order dated 30.5.2018 in Petition No. 196/GT/2016. The Petitioner has submitted the detail of actual FC in Form 5B of Tariff Format. Against the total IDC claim of Rs.116935.80 lakh up to the actual COD, the Petitioner has been allowed total IDC of Rs. 42954.35 lakh which works out to 36.73% of the IDC claimed amount. On the same lines after verifying the Petitioner's claim, the actual FC has been allowed for Rs. 731.12 lakh which is 36.73% of the FC claimed amount of Rs.1990.36 lakh (i.e. the same percentage of IDC allowed vis a vis IDC claimed).

18. Thus, the opening capital cost, as on COD i.e. 23.2.2017, allowed for the purpose of tariff, before adjustment of additional capital expenditure and undischarged liabilities for 2016-17 after the station COD is as under:

(Rs. in lakh)

Capital Cost allowed as on COD (A) (order in Petition No. 196/GT/2016)	299415.51
Less: IDC & FC allowed in order (B) (order in Petition No. 196/GT/2016)	35151.17
Capital Cost as on COD (C = A-B) (excluding IDC/FC allowed in order in Petition No. 196/GT/2016)	**264264.34**
Add: IDC allowed (up to revised SCOD) (D)	42954.35
Add: FC allowed in this order (E)	731.12
Total Capital Cost allowed as on COD (Incl. IDC, IEDC, FC) (F=C+D+E)	**307949.82**

19. It is observed that the entire additional capital expenditure of (-) Rs. 3927.22 lakh claimed for 2016-17 after station COD comprises of the following rectification entries:

Sl. No.	Asset / Work	Amount Claimed (In lakh)	Regulations	Petitioner's Submission
1	Railway Bridge for BTPS A (0111030106)	(-)2743.94	14 (1) (i) and (ii)	Rectification entry and reversal of excess amount booked. .
2	Boiler & Accs. Equipment (0111080212)	(-)1204.59		
3	Pump (O/assets) (0111160310)	(-)732.55		
4	Air Conditioning Plant (O/assets) (0111160311)	(-)781.97		
5	Cranes (O/assets) (0111160317)	(-)627.97		
6	Air Compressor (O/assets) (0111160325)	(-)459.68		
7.	Misc. Power Plant Equipment (0111080267)	(+)2623.48		Rectification entry and reversal of excess amount booked.
	Total	**(-)3927.22**		

20. It is observed that entire additional capital expenditure for the period from COD of the station to 31.3.2017 (2016-17), comprises of rectification entries without incurring any further additional capital expenditure. Further, the Petitioner has not interlinked these rectification entries with corresponding reverse entries. As such, the net amount of (-) Rs. 3927.22 lakh, qualifies to be adjusted with opening capital cost as on COD of the station. In view of the above deliberations, the opening capital cost allowed for the purpose of truing up of tariff is as under:

(Rs. in lakh)

Opening Capital Cost allowed as on COD (Incl. IDC & FC) (para 18 above)	307949.82
Adjustment entries for the period 2016-17 without incurring any further actual additional capital expenditure	(-)3927.22
Opening Capital Cost (Incl. IDC & FC) allowed as on station COD i.e., 23.2.2017	**304022.60**

Additional Capital Expenditure

21. 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."

22. The additional capital expenditure allowed in order dated 30.5.2018 in Petition No. 196/GT/2016 is summarized as under:

(Rs. in lakh)

Sl. No.	**Head of Works/ Equipment**	**Additional Capital Expenditure Claimed**	**De-capitalization claimed**	**Net Additional Capital Expenditure allowed**
	2017-18			
1	Main Plant incl. ERV, PVC, Taxes & Package duties – EPC Package	119.21	0.00	119.21
2	Coal Handling Plant i) Inter-connecting route & ii) Balance part with Stacker-reclaimer incl. taxes & duties – EPC Package	77.44	0.00	77.44
3	Water System Package – EPC Package	11.35	0.00	11.35
4	Switch Yard Package (400 KV GIS SW Yard and associated works) – EPC Package	15.91	0.00	15.91
5	Mandatory Spares (for Main plant package)	10.00	0.00	10.00
6	Combined Ash slurry disposal system & Electrical works for LAN & Weigh bridge for Ash	7.48	0.00	7.48

Sl. No.	Head of Works/ Equipment	Additional Capital Expenditure Claimed	De-capitalization claimed	Net Additional Capital Expenditure allowed
	pond and High Mast Light			
7	Construction of Bridge on Konar River along with Approach Road	60.00	0.00	60.00
8	Railway-infrastructure	20.00	0.00	20.00
9	Shifting of HT lines (220/132 KV lines) for Rail infrastructure plus Barhi line diversion for ROB & OPGW diversion in the links 220 KV BTPS "B"-Ramgarh 220 KV, BTP-CTPS B and 132 KV BTPS "B"- Barhi- Konar.	3.36	0.00	3.36
10	Colony Augmentation	3.49	0.00	3.49
11	Overheads	3.00	0.00	3.00
12	Social Economic program (SIP / CSR)	0.60	0.00	0.60
13	Green-belt development, rain water harvesting	1.00	0.00	1.00
14	Contingency Works (in-built project requirement viz. Construction of Retaining wall at River side of Old Ash dyke, Installation of CAAQMS for Pollution norms)	5.00	0.00	5.00
15	Computerization/Networking and Procurement of furniture, A/C machine, Xerox m/c etc.	0.58	0.00	0.58
16	Others for Dismantling of existing underground CW channel, Operator's Training, Preliminary Investigation, Shifting of existing Switch yard and Misc. work	1.13	0.00	1.13
	Total Additional Capital Expenditure	**339.55**	**0.00**	**339.55**
	2018-19			
1	Main Plant incl. ERV, PVC, Taxes & Package duties – EPC Package	33.88	0.00	33.88
2	Coal Handling Plant i) Inter-connecting route & ii) Balance part with Stacker-reclaimer incl. taxes & duties – EPC Package	81.00	0.00	81.00
3	Water System Package – EPC Package	2.18	0.00	2.18
4	Switch Yard Package (400 KV GIS SW Yard and associated works) – EPC Package	5.01	0.00	5.01
5	Mandatory Spares (for Main plant package)	32.72	0.00	32.72
6	Combined Ash slurry disposal system & Electrical works for LAN & Weigh bridge for Ash pond and High Mast Light	2.10	0.00	2.10
7	Construction of Bridge on Konar River along with Approach Road	49.49	0.00	49.49
8	Railway-infrastructure	5.40	0.00	5.40
9	Shifting of HT lines (220/132 KV lines) for Rail infrastructure plus Barhi line diversion for ROB & OPGW diversion in the links 220 KV BTPS"B"-Ramgarh 220 KV, BTP-CTPS B and 132 KV BTPS"B"- Barhi- Konar.	1.00	0.00	1.00
10	Colony Augmentation	4.00	0.00	4.00

Sl. No.	Head of Works/ Equipment	Additional Capital Expenditure Claimed	De-capitalization claimed	Net Additional Capital Expenditure allowed
11	Overheads	3.00	0.00	3.00
12	Social Economic program me (SIP / CSR)	-	0.00	-
13	Green-belt development, rain water harvesting	-	0.00	-
14	Contingency Works (in-built project requirement viz. Construction of Retaining wall at River side of Old Ash dyke, Installation of CAAQMS for Pollution norms)	9.38	0.00	9.38
15	Computerization/Networking and Procurement of furniture, A/C machine, Xerox m/c etc.	0.74	0.00	0.74
16	Others for Dismantling of existing underground CW channel, Operator's Training, Preliminary Investigation, Shifting of existing Switch yard and Misc. work	-	0.00	-
	Total Additional Capital Expenditure	**229.90**	**0.00**	**229.90**

23. The Petitioner has submitted that the un-discharged liabilities included in the additional capital expenditure, cash expenditure, and IDC included in additional capital expenditure for individual items could not be furnished, as the datas are not recorded in this manner and therefore, the additional capital expenditure claimed for each item is on 'accrual basis'. Accordingly, the additional capital expenditure claimed by the Petitioner for the period 2014-19 on 'accrual basis' is as under:

(Rs. in lakh)

Sl. No.	Asset / Work	Amount claimed*	Regulations
	COD (i.e. 23.2.2017) to 31.3.2017		
1	**Buildings**		
	Various Miscellaneous Small Entries	0.00	14 (1) (i) and (ii)
	Sub-total	**0.00**	
2	**Roads Bridges & Railway Sidings**		
	Railway Bridge for BTPS A (0111030106)	(-) 2743.94	14 (1) (i) and (ii)
	Access Road	0.00	
	Sub-total	**(-)2743.94**	
3	**Barrage Gates & Other Civil Works**		
	Various Miscellaneous Small Entries	0.00	14 (1) (i) and (ii)
	Sub-total	**0.00**	
4	**Power House Plant & Machinery**		
	Boiler & Accessories Equipment (0111080212)	(-)1204.59	14 (1) (i) and (ii)
	Misc. Power Plant Equipment (0111080267)	2623.48	

Sl. No.	Asset / Work	Amount claimed*	Regulations
	Various Miscellaneous Small Entries	0.00	
	Sub-total	**1418.89**	
5	**Switchgear**		
	Various Miscellaneous Small Entries	0.00	14 (1) (i) and (ii)
	Sub-total	**0.00**	
6	**Other Assets**		
	Pump (O/assets) (0111160310)	(-)732.55	14 (1) (i) and (ii)
	Air Conditioning Plant (O/assets) (0111160311)	(-)781.97	
	Cranes (O/assets) (0111160317)	(-)627.97	
	Air Compressor (O/assets) (0111160325)	(-)459.68	
	Sub-total	**(-)2602.17**	
	Total amount claimed	**(-)3927.22**	
	2017-18		
1	**Buildings**		
	30. Power House Building (Main Plant & Building in Equipment Tree) (0111020101)	16.67	14 (1) (i) and (ii)
	30. Power House Building (Main Plant & Building in Equipment Tree) (0111020101)	(-)9822.91	
	Water Works & Water Supply System (0111020134)	(-)9283.22	
	Sub-total	**(-)19089.46**	
2	**Power House Plant & Machinery**		
	Boiler & Accessories Equipment (0111080212)	65.05	14 (1) (i) and (ii)
	Boiler & Accessories Equipment (0111080212)	3125.47	14 (1) (i) and (ii)
	Turbo Generator & Accessories (0111080230)	31.16	
	Coal Handling Plant (0111080260)	1879.44	
	10. Water System (0111080108)	493.24	
	10. Water System (0111080108)	9283.22	
	Chimney (0111080258)	6697.44	
	Initial Spares		
	Boiler & Accessories Equipment (0111080212)	2.64	14 (1) (iii)
	Turbo Generator & Accessories (0111080230)	1.26	
	Coal Handling Plant (0111080260)	76.21	
	10. Water System (0111080108)	20.00	
	Sub-total: Initial Spares	**100.11**	
	Sub-total	**21675.13**	
	Total amount claimed	**2585.67**	
	2018-19		
1	**Buildings**		
	30. Power House Building (Main Plant & Building in Equipment Tree) (0111020101)	1067.78	14 (1) (i) and (ii)
	Steel Structure (0111020107)	42.65	
	Other Building (0111020122)	67.88	

Sl. No.	Asset / Work	Amount claimed*	Regulations
	Fencing (0111020132)	53.99	
	Office Building (0111020104)	33.65	
	Sub-total	**1265.95**	
2	**Barrage Gates & Other Civil Works**		
	Drainage & sewage (Power house area) (0111050107)	2.44	14 (1) (i) and (ii)
	Cooling tower & circulating water system (0111050108)	1701.61	
	Sub-total	**1704.05**	
3	**Power House Plant & Machinery**		
	Boiler & Accessories Equipment (0111080212)	6745.80	14 (1) (i) and (ii)
	Boiler Feed Pump (0111080213)	635.80	
	Deaerator (0111080218)	19.47	
	Piping Valve & Insul. (0111080224)	487.85	
	Turbo Generator & Accessories (0111080230)	3383.73	
	Accessory Elec. Equipment (0111080241)	1458.65	
	Accessory Mechanical Equipment (0111080252)	305.85	
	Coal Handling Plant (0111080260)	688.99	14 (1) (i) and (ii)
	A H P (0111080261)	1150.88	
	Oil Equipment (0111080266)	169.41	
	Misc. Power Plant Equipment (0111080267)	1148.62	
	Transformer and HT Motors (0111080269)	479.74	
	ESP (0111080270)	0.00	
	400 Kv GIS Switchyard (0111080271)	16.27	
	Combined Ash Slurry Disposal system (0111080272)	477.80	
	33 KV Switchyard (0111080273)	6.29	
	10. Water System (0111080108)	246.84	
	Chimney (0111080258)	406.64	
	Transformer (0111080259)	24.93	
	Initial Spares:		
	Boiler & Accessories Equipment (0111080212)	183.63	14 (1) (i) and (ii)
	Turbo Generator & Accessories (0111080230)	92.11	
	Coal Handling Plant (0111080260)	18.75	
	10. Water System (0111080108)	6.72	
	Sub-total: Initial Spares	**301.21**	
	Sub-total	**18154.78**	
4	**Switch Gear**		
	Switchgear (0111130102)	342.28	14 (1) (i) and (ii)
	Sub-total	**342.28**	
5	**Sub Station Equipment**		
	Station Lighting & Fans (S.S. Equipment) (0111120116)	61.03	14 (1) (i) and (ii)

Sl. No.	Asset / Work	Amount claimed*	Regulations
	Sub-total	**61.03**	
6	**Other Assets**		
	Office Equipment (O/assets) (0111160301)	4.02	14 (1) (i) and (ii)
	Hospital Equipment (O/assets) (0111160330)	2.75	
	Personal Computer (PC) Fixed asset(0111160318)	19.49	
	Office Furniture-Elec. (O/assets) (0111160103)	0.83	
	Sub-total	**27.09**	
	Total amount claimed	**21555.17**	

**Note- It is noted that the amount claimed during 2016-17 consists of various small entries which do not have impact on subtotal and total amount claimed rounded off to Rs.one thousand. As such, these small entries have been ignored for further deliberations.*

24. The Respondent PSPCL has submitted that the additional capital expenditure incurred after the date of COD and up to the cut-off date may be admitted by the Commission, subject to the Petitioner furnishing details of the works (asset-wise/work wise) included in the original scope of work, along with estimates of the future deferred payments. It has further submitted that all additional capitalization elements for 2017-19 are found to be less than the respective package value approved by the Commission except for the "Water System Package–EPC Package".

25. DVPCA has submitted that the Petitioner has not provided appropriate justification and / or documentary evidence as per Regulation 14(3) of the 2014 Tariff Regulations. The objector has also submitted that the Petitioner has not presented/cited any extra ordinary circumstances for claiming certain additional capitalization, under Regulations 54 and Regulation 55 of the 2014 Tariff Regulations, which can be exercised by the Commission only in rare cases and not ordinarily. DVPCA has also submitted a comparative table indicating the additional capital expenditure originally claimed in the petition (which was subsequently revised vide affidavit dated 13.7.2022)

and the claims which may be allowable, as under:

(Rs. in lakh)

	2017-18 Claimed in Petition	2018-19 Claimed in Petition	Total Allowable as per DVCPA
Main Plant incl. ERV, PVC, Taxes & duties – EPC Package	(-)9170	16817	7647
Coal Handling Plant i) Interconnecting Route & ii) Balance part with Stacker-reclaimer incl. taxes & duties – EPC Package	1879	3654	5533
Water System Package – EPC Package (element 18 & 19)	9776	247	1353
Switch Yard Package (400 KV GIS SW Yard and associated works) – EPC Package	-	25	25
Mandatory Spares (for Main plant package)	100	301	401
Combined Ash slurry disposal system & Electrical works for LAN & Weigh bridge for Ash pond and High Mast Light	-	478	478
Computerization/ Networking and Procurement of furniture, A/C machine, Xerox m/c etc.	-	27	27
Others for Dismantling of existing underground CW channel, Operator's Training, Preliminary Investigation, Shifting of existing Switch yard and Misc. work	-	6	6
Total Additional Capitalization	**2586**	**21555**	**15471**

26. In response, the Petitioner has submitted that the additional capital expenditure claimed, the liability created and discharged has been duly reconciled with books of account and audited by the Comptroller & Auditor General (C&AG) of India. The Petitioner has further submitted that detailed justification against each item has been furnished along with documentary evidence, wherever necessary. It has also submitted that all the additional capital expenditure items incurred by the Petitioner for the generating station are critical in nature to ensure reliable, safe and efficient operation of the station and are therefore unavoidable. Accordingly, the Petitioner has claimed additional capital expenditure under the Regulations 14(1)(i), 14(1)(ii) and 14(1)(iii) of the 2014 Tariff Regulations read with Regulations 54 (Power to Relax) and Regulation 55 (Power to Remove Difficulty) to remove any difficulty which arises in giving effect to the provisions of these Regulations.

27. 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 2014-19, is examined and allowed as under:

(Rs. in lakh)

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
	COD (i.e. 23.2.2017) to 31.3.2017					
1	**Roads Bridges & Railway Sidings**					
	Railway Bridge for BTPS A (0111030106)	(-) 2743.94	14 (1) (i) and (ii)	Rectification entry and reversal of excess amount booked.	Since negative entry has not been linked with the corresponding positive entry, in 2016-17, the same has been adjusted from the opening capital cost.	0.00
	Sub-total	**(-) 2743.94**				**0.00**
2	**Power House Plant & Machinery**					
	Boiler & Accessory Equipment (0111080212)	(-) 1204.59	14 (1) (i) and (ii)	Rectification entry and reversal of excess amount booked.	Since negative entries have not been linked with the corresponding positive entries, in 2016-17, the rectification entries have been adjusted in the opening capital cost.	0.00
	Misc. Power Plant Equipment (0111080267)	2623.48	14 (1) (i) and (ii)	Rectification entry and reversal of excess amount booked.		0.00
	Sub-total	**1418.89**				**0.00**
3	**Other Assets**					
	Pump (O/assets) (0111160310)	(-)732.55	14 (1) (i) and (ii)	Rectification entry and reversal of excess amount booked.	Since negative entries have not been linked with the corresponding positive entries, in 2016-17, the same has been adjusted from the opening capital cost.	0.00
	Air Conditioning Plant (O/assets) (0111160311)	(-)781.97				0.00
	Cranes (O/assets) (0111160317)	(-)627.97				0.00
	Air Compressor (O/assets) (0111160325)	(-)459.68				0.00

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
	Sub-total	**(-) 2602.17**				**0.00**
	Total amount claimed	**(-) 3927.22**				
	Total amount allowed					**0.00**
	2017-18					
1	**Buildings**					
	Power House Building (Main Plant & Building in Equipment Tree) (0111020101)	16.67	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. 2. (i) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.	Considering the fact that the actual expenditure has been incurred within the cut-off date and is in respect of the assets within the original scope of work, the additional capital expenditure claimed is **allowed** under Regulation 14(1)(ii) of the 2014 Tariff Regulations.	16.67
	Power House Building (Main Plant & Building in Equipment Tree) (0111020101)	(-)9822.91	14 (1) (i) and (ii)	Rectification entry. Excess amount booked earlier now transferred to Boiler & Accessories Equipment (0111080212) (Rs. 31,25,47,156) and Chimney (0111080258) (Rs. 66,97,43,905)	The expenditure claimed **is allowed** since corresponding reversal entry has been provided.	(-) 9822.91
	Water Works & Water Supply Sys (0111020134)	(-)9283.22	14 (1) (i) and (ii)	Rectification entry. Excess amount booked earlier now transferred to Water System (0111080108).	The expenditure claimed **is allowed** since the corresponding reversal entry	(-) 9283.22

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
					has been provided.	
	Sub-total	**(-) 19089.46**				**(-) 19089.46**
2	**Power House Plant & Machinery**					
	Boiler & Accessories Equipment (0111080212)	65.05	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. 2. (i) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.	Considering the fact that the actual expenditure has been incurred within the cut-off date and is in respect of the asset which is within the original scope of work, the additional capital expenditure claimed is **allowed** under Regulation 14(1)(ii) of the 2014 Tariff Regulations.	65.05
	Boiler & Accessories Equipment (0111080212)	3125.47	14 (1) (i) and (ii)	Rectification entry. Excess amount booked earlier under Power House Building (Main Plant & Building in Equipment Tree) (0111020101) is now transferred to this head.	The expenditure claimed is **allowed** since the corresponding reversal entry has been provided.	3125.47
	Turbo Generator & Accessories (0111080230)	31.16	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. 2. (i) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed	Considering the fact that the actual expenditure has been incurred within the cut-off date and is in respect of the assets which are within the	31.16

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
				and capitalized within the cut-off date.	original scope of work, the additional capital expenditure claimed, are **allowed** under Regulation 14(1)(ii) of the 2014 Tariff Regulations.	
	Coal Handling Plant (0111080260)	1879.44	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. 2. (vii) & (viii) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.		1879.44
	10. Water System (0111080108)	493.24		This expenditure is towards the work within the original scope (under Sl. No. 2. (ix) & (x) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.		493.24
	10. Water System (0111080108)	9283.22		Rectification entry. Excess amount booked earlier underwater Works & Water Supply System (0111020134) is now transferred to this head.	The expenditure claimed is **allowed** since the corresponding reversal entry has been provided.	9283.22
	Chimney (0111080258)	6697.44		Rectification entry. Excess amount booked earlier under Power	The expenditure claimed **is allowed** since the	6697.44

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
				House Building (Main Plant & Building in Equipment Tree) (0111020101) is now transferred to this head.	corresponding reversal entry has been provided.	
	Initial Spares					
	Boiler & Accessories. Equip (0111080212)	2.64	14 (1) (iii)	Procurement of Initial Spares within the Original Scope (under Sl. No. 2. (v), (vii), (viii), (ix) & (x) of the Sanction Order of BTPS - A dt. 17.10.2017)	Considering the fact that the actual expenditure on the initial spares have been incurred within the cut-off date and is within the permissible limits for initial spares, as per prevailing Regulations, at the time of COD, the expenditures claimed **are allowed** under Regulation 14(1)(iii) of the 2014 Tariff Regulations.	2.64
	Turbo Generator & Accessories (0111080230)	1.26	14 (1) (iii)			1.26
	Coal Handling Plant (0111080260)	76.21	14 (1) (iii)			76.21
	Water System (0111080108)	20.00	14 (1) (iii)			20.00
	Sub-total: Initial Spares	**100.11**				**100.11**
	Sub-total	**21675.13**				**21675.13**
	Total amount claimed	2585.67				
	Total amount allowed					**2585.67**
	2018-19					
1	**Buildings**					
	30. Power House Building (Main Plant & Building in Equipment Tree) (0111020101)	1067.78	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. 2. (i) of the Sanction Order of BTPS - A dt.	Considering the fact that actual expenditure has been incurred within cut-off date on the assets with in original	1067.78
	Steel Structure (0111020107)	42.65				42.65
	Other Building (0111020122)	67.88				67.88

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
	Fencing (0111020132)	53.99		17.10.2017), as executed and capitalized within the cut-off date.	scope of work, the claimed additional capital expenditure **are allowed** under Regulation 14(1)(ii) of the 2014 Tariff Regulations.	53.99
	Office Building (0111020104)	33.65				33.65
	Sub-total	**1265.95**				**1265.95**
2	**Barrage Gates & Other Civil Works**					
	Drainage & sewage (Power house area) (0111050107)	2.44	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. 2. (i) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.	Considering the fact that the actual expenditure incurred is within the cut-off date and is in respect of the asset which is within the original scope of work, the additional capital expenditure claimed is **allowed** under Regulation 14(1)(ii) of the 2014 Tariff Regulations.	2.44
	Cooling tower & circulating water system (0111050108)	1701.61				1701.61
	Sub-total	**1704.05**				**1704.05**
3	**Power House Plant & Machinery**					
	Boiler & Accessories Equipment (0111080212)	6745.80	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. 2. (i) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.	Considering the fact that the actual expenditures incurred are within the cut-off date and are in respect of assets which are within the original scope of work, the additional capital	6745.80
	Boiler Feed Pump (0111080213)	635.80				635.80
	Deaerator (0111080218)	19.47				19.47
	Piping Valve & Insul. (0111080224)	487.85				487.85
	Turbo Generator & Accessories (0111080230)	3383.73				3383.73

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
	Accessory Elec. Equip. (0111080241)	1458.65			expenditures claimed are **allowed** under Regulation 14(1)(ii) of the 2014 Tariff Regulations.	1458.65
	Accessory Mech. Equip. (0111080252)	305.85				305.85
	Coal Handling Plant (0111080260)	688.99				688.99
	A H P (0111080261)	1150.88				1150.88
	Oil Equipment (0111080266)	169.41				169.41
	Misc. Power Plant Equip. (0111080267)	1148.62				1148.62
	Transformer and HT Motors (0111080269)	479.74				479.74
	ESP (0111080270)	0.00				0.00
	400 Kv GIS Switchyard (0111080271)	16.27				16.27
	Combined Ash Slurry Disposal system (0111080272)	477.80				477.80
	33 KV Switchyard (0111080273)	6.29	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. 3. B (i) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.		6.29
	10. Water System (0111080108)	246.84		This expenditure is towards the work within the original scope (under Sl. No. 2. (ix) & (x) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized		246.84

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
				within the cut-off date.		
	Chimney (0111080258)	406.64	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. 2. (i) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.		406.64
	Transformer (0111080259)	24.93		This expenditure is towards the work within the original scope (under Sl. No. 2. (xi) of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.		24.93
	Initial Spares					
	Boiler & Accessories Equipment (0111080212)	183.63	14 (1) (i) and (ii)	Procurement of Initial Spares within the Original Scope (under Sl. No. 2. (v), (vii), (viii), (ix) & (x) of the Sanction Order of BTPS - A dt. 17.10.2017)	Considering the fact that the actual expenditures incurred on initial spares are within the cut-off date and are within the permissible limits for initial spares as per prevailing Regulations at the time of COD, the expenditures claimed **are**	183.63
	Turbo Generator & Accessories (0111080230)	92.11				92.11
	Coal Handling Plant (0111080260)	18.75				18.75
	Water System (0111080108)	6.72				6.72

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
					allowed under Regulation 14(1)(iii) of the 2014 Tariff Regulations.	
	Sub-total: Initial Spares	**301.21**				**301.21**
	Sub-total	**18154.78**				**18154.78**
4	**Switch Gear**					
	Switchgear (0111130102)	342.28	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. **2. (i)** of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.	Considering the fact that the actual expenditure incurred is within the cut-off date and is in respect of the asset which is within the original scope of work, the additional capital expenditure claimed is **allowed** under Regulation 14(1)(ii) of the 2014 Tariff Regulations.	342.28
	Sub-total	**342.28**				**342.28**
5	**Sub Station Equipment**					
	Station Lighting & Fans (Substation Equipment) (0111120116)	61.03	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. **2. (i)** of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.	Considering the fact that the actual expenditure incurred is within the cut-off date and is in respect of the asset which is within the original scope of work, the additional capital expenditure claimed is **allowed** under Regulation	61.03

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
					14(1)(ii) of the 2014 Tariff Regulations.	
	Sub-total	**61.03**				**61.03**
6	**Other Assets**					
	Office Equipment (O/assets) (0111160301)	4.02	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. **3. G** of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.	Considering the fact that the actual expenditures incurred are within the cut-off date and are in respect of assets which are within the original scope of work, the additional capital expenditures claimed are **allowed** under Regulation 14(1)(ii) of the 2014 Tariff Regulations.	4.02
	Hospital Equipment (O/assets) (0111160330)	2.75		This expenditure is towards the work within the original scope (under Sl. No. **4. (3)** of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.		2.75
	Personal Computer (PC) Fixed asset (0111160318)	19.49		This expenditure is towards the work within the original scope (under Sl. No. **3. H** of the Sanction Order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.		19.49

Sl. No.	Asset / Work	Amount Claimed*	Regulation	Petitioner's Submission	Reason for Admissibility	Amount Allowed
	Office Furniture-Elec. (O/assets) (0111160103)	0.83	14 (1) (i) and (ii)	This expenditure is towards the work within the original scope (under Sl. No. **3. G** of the sanction order of BTPS - A dt. 17.10.2017), as executed and capitalized within the cut-off date.		0.83
	Sub-total	**27.09**				**27.09**
	Total amount claimed	**21555.17**				
	Total amount allowed					**21555.17**

28. Accordingly, the additional capital expenditure allowed/disallowed for the period 2016-19 is summarized as under:

(Rs. in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	**2017-18**	**2018-19**
Claimed	(-) 3927.22	2585.67	21555.17
Disallowed	(-) 3927.22	0.00	0.00
Allowed	**0.00**	**2585.67**	**21555.17**

Initial Spares

29. The Petitioner has claimed total initial spares for Rs.401.32 lakh during 2017-19 (Rs.100.11 lakh in 2017-18 and Rs. 301.21 lakh in 2018-19) under Regulation 14(1)(iii) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that the capitalized spares pertain to the original scope of work and have been procured within the cut-off date of the generating station and are within the allowable ceiling limit of 4% as per the Tariff Regulations.

30. Considering the fact that the COD of the generating station is in 2017, the cut-off date of the generating station, as per regulations, is 31.3.2020. The capital cost under

head of 'Plant & Machinery', as on COD (23.2.2017) is considered as Rs.226016 lakh, as per order dated 30.5.2018 in Petition No. 196/GT/2016. As per Regulation 13(a) of the 2014 Tariff Regulations, the total allowable initial spares for Rs.9040.64 lakh has been workout considering the celling limit of 4% of Plant and Machinery cost. It is observed that the Petitioner has capitalised initial spares for Rs. 4128 lakhs, at time of COD of Unit-I. Thus, the total initial spares capitalised as claimed by the Petitioner, as on 31.3.2019, is Rs.4529.32 lakh, which is within the 4% celling limit, as per Regulation 13(a) of the 2014 Tariff Regulations. Considering the said fact, the initial spares claimed during the years 2017-18 and 2018-19 is allowed under Regulation 14(i)(iii) of the 2014 Tariff Regulations.

31. Accordingly, the Initial spares allowed in additional capital expenditure for the period 2016-19 is as under:

(Rs. in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	**2017-18**	**2018-19**
Claimed	0.00	100.11	301.21
Allowed	0.00	100.11	301.21

De-capitalization

32. The Petitioner has not claimed any decapitalisation during the period 2014-19.

Un-Discharged Liabilities

33. The Petitioner has submitted that the total undischarged liabilities created during the period 2016-19 is Rs. 2015.14 lakh (Rs. 672.64 lakh for 2016-17, Rs. 911.23 lakh for 2017-18 and Rs. 431.26 lakh for 2018-19). However, it is observed that information submitted by the Petitioner is not in line with the 2014 Tariff Regulations i.e. details of item-wise undischarged/discharge of 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 of the respective financial years. Accordingly, as against an un-discharged liability of Rs.2015.14 lakh claimed for the period 2017-19, corresponding amount of Rs.1342.49 lakh (Rs. nil for 2016-17, Rs.911.23 lakh for 2017-18 and Rs.431.26 lakh for 2018-19) for allowed assets has been considered for the period 2014-19.

Discharge of liability

34. The Petitioner has submitted the year-wise details of the total liability discharged for Rs. 3461.08 lakh during 2016-19 (Rs.322.43 lakh for 2016-17; Rs.135.82 lakh for 2017-18 and Rs. 3002.83 lakhs for 2018-19), instead of the item-wise liability discharges. In the absence of any item-wise availability of liabilities discharged, the same is determined on a pro-rata basis, considering the admitted additional capital expenditure and the undischarged liabilities against the expenditure claimed, during each year of the period 2017-19. Further, the opening balance of liability discharged as on 23.2.2017, has been allowed to be discharged in full. Accordingly, the discharge of liabilities, allowed as part of additional capital expenditure, corresponding to the assets allowed, are as under:

(Rs. in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	**2017-18**	**2018-19**
Opening Un-discharged liabilities (A)	8119.16	7796.73	8591.62
Additions during the period 2014-19 (corresponding to allowed additional capital expenditure) (B)	0.00	911.23	431.26
Discharges during the period 2014-19 (corresponding to allowed additional capital expenditure) (C)	322.43	116.34	2591.38
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
Closing Un-discharged liabilities (E) = (A+B-C-D)	7796.73	8591.62	6431.49

Capital cost allowed for the period 2014-19

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

(Rs. in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	**2017-18**	**2018-19**
Opening Capital Cost (A)	304022.60	304345.03	306135.81
Add: Addition during the year / period (B)	0.00	2585.67	21555.17
Less: De-capitalization / Assumed Deletion during the year /period (C)	0.00	0.00	0.00
Less: Undischarged liabilities (D)	0.00	911.23	431.26
Add: Discharges during the year /period (E)	322.43	116.34	2591.38
Closing Gross Block (F) = (A+B-C-D+E)	**304345.03**	**306135.81**	**329851.10**
Average Gross Block (G) = (A+F)/2	304183.82	305240.42	317993.46

Debt-Equity Ratio

36. 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."

37. The gross normative loan and equity for the revised capital cost as on COD duly adjusted with the revised IDC and the rectification entries has been considered in the ratio of the corresponding gross normative loan and equity, i.e. 70:30 as considered in order dated 30.5.2018 in Petition No.196/GT/2016. 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 is as under:

(Rs. in lakh)

	Capital Cost as on 23.2.2017	**%**	**Net Additional Capital Expenditure for 2016-19**	**%**	**Capital Cost as on 30.4.2019**	**%**
Debt	212815.82	70.00%	18079.95	70.00%	230895.77	70.00%
Equity	91206.78	30.00%	7748.55	30.00%	98955.33	30.00%
Total	**304022.60**	**100.00%**	**25828.50**	**100.00%**	**329851.10**	**100.00%**

Return on Equity

38. 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:

39. 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."

40. The base rate of Return on Equity (ROE), as allowed under Regulation 24 of the 2014 Tariff Regulations, is to be grossed up with the effective tax rate of the respective financial years. Also, in terms of Regulation 25(3) of the 2014 Tariff Regulations, the generating company, shall true up the grossed-up rate of ROE, at the end of every financial year, based on actual tax paid together with any additional tax demand, including interest thereon, duly adjusted, for any refund of tax, including interest received from the income tax authorities, pertaining to the period 2014-19, on actual gross income of any financial year.

41. The Respondent and the Objector, DVPCA have submitted that the Petitioner has not paid any actual tax during the period of 2014-15 to 2017-18 and it is apparent from the annual accounts of 2018-19, that the deferred tax liability which gets materialized in 2018-19 pertains to 2012-13. They have submitted that in view of the above, there is neither any basis for the Petitioner to claim the effective tax rates of 21.3416%, 21.3416% and 21.548% for 2016-19 nor the Petitioner is entitled to its claim of deferred tax liability pertaining to 2012-13 to be claimed in true-up for 2018-19. Thus, the Respondent has stated that the ROE as claimed by the Petitioner may be revised in terms of Regulations 25 and Regulation 49 of the 2014 Tariff Regulations. 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. In response, the Petitioner, has clarified that there is no income tax liability on the Petitioner for the period 2014-19 and it has sought the leave of the Commission, to claim income tax liability, if any, which may arise in future.

42. The submissions have been considered. Since the Petitioner has not been paying any income tax in any of the financial years of the period 2016-19, '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)

	2016-17 (23.2.2017 to 31.3.2017)	**2017-18**	**2018-19**
Normative Equity-Opening (A)	91206.78	91303.51	91840.74
Addition of Equity due to additional capital expenditure (B)	96.73	537.23	7114.59
Normative Equity-Closing (C) = (A) + (B)	91303.51	91840.74	98955.33
Average Normative Equity (D) = (A+C)/2	91255.14	91572.13	95398.04
Return on Equity (Base Rate) (E)	15.500%	15.500%	15.500%

	2016-17 (23.2.2017 to 31.3.2017)	2017-18	2018-19
Effective Tax Rate (F)	0.00%	0.00%	0.00%
Rate of Return on Equity (Pre-Tax) (G) = (E)/(1-F)	15.500%	15.500%	15.500%
Return on Equity (Pre-Tax) (H) = (D)*(G)	**1433.83**	**14193.68**	**14786.70**

Interest on Loan

43. 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."

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

a. The gross normative loan of Rs.212815.82 lakh has been considered as on 23.2.2017, in the line with the approved capital cost as on COD as stated above. In addition to this, the loan component towards additional capitalization has been considered as per the approved debt equity ratio.

b. There is no opening cumulative repayment of loan as on 23.2.2017.

c. In addition to this, normative loan on account of additional capital expenditure approved above has been considered on year-to-year basis.

d. Depreciation allowed has been considered as repayment of normative loan during the respective years of the period 2014-19. There is no consequent adjustments on account of de-capitalization, as no de-capitalization is claimed by the petitioner.

45. In line with the Regulations, WAROI has been calculated by applying the actual loan portfolio existing as on 1.4.2014, along with subsequent additions, during the period 2014-19, if any, for the generating station. In case of loans carrying the floating rate of interest, the interest rate, as furnished by the Petitioner has been considered for the purpose of tariff. Necessary calculation for interest on loan is as under:

(Rs in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	**2017-18**	**2018-19**
Gross opening loan (A)	212815.82	213041.52	214295.07
Cumulative repayment of loan upto previous year (B)	0.00	2316.88	25609.97
Net Loan Opening (C) = (A) - (B)	212815.82	210724.64	188685.09
Addition due to additional capital expenditure (D)	225.70	1253.54	16600.71
Repayment of loan during the year (E)	2316.88	23293.09	24296.84
Less: Repayment adjustment on account of de-capitalization (F)	0.00	0.00	0.00
Net Repayment (G) = (E) - (F)	2316.88	23293.09	24296.84
Net Loan Closing (H) =(C) +(D) -(G)	210724.64	188685.09	180988.96
Average Loan (I) = (C+H)/2	211770.23	199704.87	184837.03
Weighted Average Rate of Interest of loan (J)	10.3354%	10.2897%	10.2260%
Interest on Loan (K) = (I)*(J)	**2218.72**	**20549.00**	**18901.39**

46. Further, the Petitioner has claimed its share of savings due to loan restructuring (i.e., one-third share) amounting to Rs.704.03 lakh and Rs. 678.42 lakh for the years

2017-18 and 2018-19 respectively, in terms of Regulation 26(7) of the 2014 Tariff Regulations. It is observed that the sharing of saving in interest due to re-financing of loan, if any, has to be undertaken between the parties, on actual basis, in accordance with the provisions of Regulation 26 (7) of the 2014 Tariff Regulations. However, in case of disputes, the parties may approach the Commission, in terms of Regulation 26(9) of the 2014 Tariff Regulations.

Depreciation

47. 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."

48. 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."

49. The cumulative depreciation as on 23.2.2017, is considered as 'nil'. 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)

	2016-17 (23.2.2017 to 31.3.2017)	**2017-18**	**2018-19**
Average Capital Cost (A)	304183.82	305240.42	317993.46
Value of freehold land included in average capital cost (B)	0.00	0.00	0.00
Aggregated Depreciable Value (C)= (A-B) *90%	273765.43	274716.38	286194.11
Remaining aggregate depreciable value at the beginning of the year (D) = [(C) - (Cumulative Depreciation of Previous year)]	273765.43	272399.50	260584.14

	2016-17 (23.2.2017 to 31.3.2017)	2017-18	2018-19
No. of completed years at the beginning of the year (E)	0	0.11	1.11
Balance useful life at the beginning of the year (F) = 25 - (E)	25.00	24.89	23.89
Weighted Average Rate of Depreciation (WAROD) (G)	7.5138%	7.6311%	7.6407%
Depreciation during the year/ period (H) = Minimum of [(A)*(G) or (D)]	2316.88	23293.09	24296.84
Cumulative depreciation at the end of the year (before adjustment for de-capitalisation) (I) = (H) + (K of the previous year)	2316.88	25609.97	49906.81
Less: Depreciation adjustment on account of de-capitalisation (J)	0.00	0.00	0.00
Cumulative depreciation at the end of the year (K) = (I) - (J)	2316.88	25609.97	49906.81

Operation & Maintenance Expenses

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

(Rs. lakh per MW per year)

2016-17	2017-18	2018-19
18.08	19.22	20.43

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

(Rs. in lakh)

2016-17 (23.2.2017-31.3.2017)	2017-18	2018-19
916.38	9610.00	10215.00

52. 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

53. 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:

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

(Rs. in lakh)

2016-17	2017-18	2018-19
49.93	632.62	561.82

55. The Petitioner was directed to submit the year-wise audited computation of actual water charges claimed for the period 2014-19, including the actual quantity of water consumed; rate (Rs./M^3) charged by the State authorities; any other charges included in the water charges, in addition to the charges calculated based on the above; and Auditor certificate to the effect that such other charges above were booked under the head 'water charges' during the period 2014-19. In compliance to the same, the Petitioner *vide* affidavit dated 1.7.2021 has submitted the auditor certificate in support of the water charges incurred for BTPS as a whole (Bokaro-I to 3 and Bokaro-A) and has apportioned the same between various stages/units based on the year-wise actual generation during the period 2014-19.

56. DVPCA has submitted that the actual specific water consumption is 3.50 m^3/MWh which is higher than norm of 2.50 m^3/MWh for a new power station commissioned after January 2017. In response, the Petitioner has submitted that the schedule date of declaration of COD of Unit-I was 16.12.2011 and the plant was put for synchronization on 23.3.2016, during which time the plant was consuming water. The Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India vide the Environment (Protection) Amendment Rules, 2015 dt. 7.12.2015 had set norm for specific water consumption for all existing Cooling Tower-based Thermal Power Plants as 3.5 m^3 /MWh. The Petitioner has further submitted that the Respondent's contention that specific water consumption up to 2.50 m^3 /MWh will be applicable is

misleading since, the synchronization run was on 23.3.2016. It has further submitted that the expenses related to water management increased during the period 2014-19, due to revision in rates of water consumption by the Petitioner's Board, which were due to increase in employee costs on account of the 7th Central Pay Commission and capital expenditure incurred from time to time. The Petitioner while pointing out that the Commission in the Statement of Objects and Reasons (SOR) to the 2014 Tariff Regulations has observed on the uncontrollable nature of water charges, has submitted that Commission vide its order dated 29.7.2016 in Petition No. 294/GT/2014 (tariff of NTPC Simhadri STPS, Stage-II (1000 MW) for the period 2014-19) had allowed water charges at a rate of Rs.12.39/Cum for 2013-14, with an escalation of 5% per annum. It has added that the Commission in its order dated 3.10.2016 in Petition No. 207/GT/2015 (tariff for Unit 7 and 8 for the generating station for the period 2014-19) had compared the water charges in respect of NTPC Talcher-I STPS (1000 MW) and accordingly, allowed water charges at a rate of Rs.5.70/Cum. Also, the year-wise computation of the actual water charges claimed, including the actual quantity of water consumed, rate (Rs./M^3) charged by Damodar Valley Reservoir Regulation Committee (DVRRC) along with notification applicable for the period 2014-19, on water tariff for supply of raw water to various generating stations of the Petitioner, duly certified by Auditor has been submitted. Based on the above, the Petitioner has prayed to allow the water charges claimed to be recovered in full on sharing basis.

57. 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. However, 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 details of water charges claimed are as under:

(Rs. in lakh)

Year	Water Use	Quantity of water consumed (M^3)	Rate of water charges (Rs./M^3)	Water Charges as per Rate for BTPS	Water Charges for BTPS as per Annual Accounts	Water Charges apportioned to BTP-A as per Annual Accounts
2016-17	Industrial	6242873	6.25	390.18	398.57	49.93
	Domestic	730000	1.15	8.40		
	Total	**6972873**		**398.57**		
2017-18	Industrial	11648999	6.25	728.06	756.79	632.62
	Domestic	2498220	1.15	28.73		
	Total	**14147219**		**756.79**		
2018-19	Industrial	10149306	6.25	634.33	694.25	561.82
	Domestic	5210209	1.15	59.92		
	Total	**15359515**		**694.25**		
Total for period 2016-19				**1849.61**	**1849.61**	**1244.38**

58. It is observed that the water charges determined, based on consumption and rate, thereof, are in line with the audited water charges of BTPS. Accordingly, the audited water charges apportioned to the generating station based on the actual generation from the generating station and actual generation from BTPS as a whole, have been considered. It is also noticed that the water consumption includes domestic water consumption, charges for which are being recovered by the Petitioner 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 under:

(Rs. in lakh)

	2016-17 **(23.2.2017 to 31.3.2017)**	**2017-18**	**2018-19**
Claimed	49.93	632.62	561.82
Allowed	**48.88**	**608.61**	**513.33**

59. Accordingly, the O&M expenses allowed for the period 2014-19 is summarised below:

(Rs. in lakh)

		2016-17 **(23.2.2017 to 31.3.2017)**	**2017-18**	**2018-19**
Installed Capacity (MW) (A)		500.00	500.00	500.00
O&M Expenses under Reg.29(1) in Rs. lakh / MW (B)		18.08	19.22	20.43
Total O&M Expenses (in Rs. lakh) (C) = (A)*(B)	Claimed	916.38	9610.00	10215.00
	Allowed	**916.38**	**9610.00**	**10215.00**
Water Charges (in Rs. lakh) (D)	Claimed	49.93	632.62	561.82
	Allowed	**48.88**	**608.61**	**513.33**
Total O&M Expenses as allowed (including Water Charges) (F) = (C+D+E)	Claimed	**966.32**	**10242.62**	**10776.82**
	Allowed	**965.26**	**10218.61**	**10728.33**

Operational Norms

60. The operational norms in respect of the generating station as claimed by the Petitioner are as under:

	2016-17 **(23.2.2017 to 31.3.2017)**	**2017-18**	**2018-19**
Normative Annual Plant Availability Factor (NAPAF) (%)	83%	83%	83%
Gross Station Heat Rate (kCal/kWh)	2362.79	2362.79	2362.79
Auxiliary Power Consumption (%)	5.25%	5.25%	5.25%
Specific Oil Consumption (ml/kWh)	0.5	0.5	0.5

Normative Annual Plant Availability Factor (NAPAF)

61. 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.

62. The Commission in its order dated 30.5.2018 in Petition No. 196/GT/2016, had allowed NAPAF for the generating station as under:

"81. The petitioner has considered the Target Availability of 83% for the period 2016-19. Due to shortage of domestic coal supply, the Commission has relaxed the Target Availability norm to 83% for first 3 years from 1.4.2014 with a provision to review the same after a period of 3 years. Accordingly, in terms of the Regulation 36(a) of the 2014 Tariff Regulations, the Target Availability of 83% is considered for the period 2016-17 and 85% for the period 2017-19."

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

64. DVPCA has submitted that the onus is on the Petitioner to demonstrate that there is consistent coal shortfall in the control period. It has also stated that prudency check needs to be conducted to ascertain whether the Petitioner has made genuine efforts to avail coal supply under FSA and from alternate sources.

65. The matter has been considered. Considering the coal stock availability, Regulation 36(A) of the 2014 Tariff Regulations has specified the NAPAF of 83 % for three (3) years i.e., from 2014-15 to 2016-17 with a provision to review the same thereafter. In line with this, the coal availability has been reviewed and it is observed that the availability of coal to the thermal generating stations in the country was normal and therefore, the NAPAF was revised as 85% in 2017-18 and 2018- 19. In our view, the non-availability of coal to the generating station of the Petitioner, is a localised or a

plant specific issue and cannot be a factor to reduce NAPAF, particularly, keeping in view that arrangement of coal supply is the sole responsibility of the generator (Petitioner). Thus, the continuation of reduced NAPAF of 83% in 2017-18 and 2018-19 to the generating station is not allowed. Accordingly, the NAPAF of 83% for 2016-17 and 85% for 2017-18 and 2018-19 is allowed in accordance with the provisions of Regulation 36 (A) of the 2014 Tariff Regulations.

Gross Station Heat Rate

66. The Gross Station Heat Rate of 2362.79 Kcal/ kWh, claimed by Petitioner is in accordance with the provisions of Regulation 36 (C)(b)(i) of the 2014 Tariff Regulations and hence, the same is allowed.

Auxiliary Energy Consumption

67. The Petitioner has claimed Auxiliary Energy Consumption (AEC) of 5.25% for the plant. The Regulation 36(E)(a) (ii) of the 2014 Tariff Regulations provides for AEC of 5.25% for coal based generating stations of 500 MW sets with Natural Draft cooling tower. Claimed AEC of 5.25%, is in line with the above Regulations and hence the same is allowed.

Secondary Fuel Oil Consumption

68. Regulation 36(D)(a) of 2014 Tariff Regulations provides for secondary fuel oil consumption to the generating station as 0.50 ml/kWh. Based on the above, the operational norms allowed are as under:

	2016-17	**2017-18**	**2018-19**
Normative Annual Plant Availability Factor (NAPAF) (%)	83%	85%	85%
Gross Station Heat Rate (kCal/kWh)	2362.79	2362.79	2362.79
Auxiliary Power Consumption (%)	5.25%	5.25%	5.25%
Specific Oil Consumption (ml/kWh)	0.5	0.5	0.5

Interest on Working Capital

69. 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."

70. The details of interest on working capital as claimed by the Petitioner is as under:

(Rs. in lakh)

	2016-17 **(23.2.2017 to 31.3.2017)**	**2017-18**	**2018-19**
Cost of Coal / Lignite for Stock and Generation	10991.36	10991.36	10991.36
Cost of oil for 2 months (B)	115.85	115.85	115.85
Maintenance Spares - 20% of O&M (C)	1906.51	2048.52	2155.36
Receivables - 2 months (D)	27837.41	28864.91	27378.19
O&M expenses - 1 month (E)	794.38	853.55	898.07

	2016-17 (23.2.2017 to 31.3.2017)	2017-18	2018-19
Total Working Capital Annualized (F) = (A+B+C+D+E)	**41645.51**	**42874.19**	**41538.83**
Rate of Interest (G)	12.80%	12.80%	12.80%
Total Interest on Working capital pro-rated for the period (H) = (F)x(G)x (effective days/ 365)	**540.36**	**5487.90**	**5316.97**

Fuel Cost for Working Capital

71. 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, further, 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. 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

72. Therefore, in terms of the above Regulation, for determination of 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."*

73. The Petitioner has furnished the average GCV of coal as 3726.47 Kcal/kg on "as received" basis for the period from November 2016 to January 2017.

74. 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 November 2016 to January 2017, for the purpose of computation of working capital for the period 2014-19. Accordingly, the cost for fuel components in working capital has been computed considering the fuel details (price and GCV) as per Form-15 and coal GCV of 3726.47 Kcal/kg. It is observed that while the Petitioner in Form-15 of the signed hard copy has submitted the details of coal quantity in Million Metric Tonne up to two decimal places, in Form-15 of excel soft copy the figures are

provided up to 7-8 decimal places. Accordingly, in order to determine appropriate values, the information furnished in excel soft copy has been considered. It is also observed that the transit & handling loss of coal, GCV and price of primary and secondary fuel claimed by the Petitioner are in line with the regulations. Accordingly, the weighted average cost and GCV of primary and secondary fuel allowed for computing cost of fuel components in working capital are as under:

	Allowed
Weighted Average GCV of Oil (kCal/ltr)	9764.36
Weighted Average GCV of Coal (kCal/kWh)	3726.47
Weighted Average cost of Oil (Rs./kl)	38239.65
Weighted Average cost of Coal (Rs./MTonne)	2866.95

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

(Rs. in lakh)

	2016-17	**2017-18**	**2018-19**
Cost of Coal towards stock (30 days)	5420.39	5551.01	5551.01
Cost of Coal towards Generation (30 days)	5420.39	5551.01	5551.01
Cost of Secondary fuel oil 2 months	115.85	118.64	118.64

Working capital for Maintenance Spares

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

(Rs. in lakh)

2016-17	**2017-18**	**2018-19**
1906.51	2048.52	2155.36

77. It is noticed that the Petitioner has claimed working capital for maintenance spares by excluding the capital spares. However, Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the O&M expenses, including water charges and capital spares. Accordingly, the cost of maintenance spares @ 20% of the O&M expenses, including water charges and capital spares, allowed are as under:

(Rs. in lakh)

2016-17	2017-18	2018-19
1904.44	2043.72	2145.67

Working Capital for O&M Expenses

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

(Rs. in lakh)

2016-17	2017-18	2018-19
794.38	853.55	898.07

79. 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)

2016-17	2017-18	2018-19
793.52	851.55	894.03

80. ***Energy Charge Rate for Working Capital***The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of 193.48 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 COD of the generating station. Accordingly, the allowable ECR, based on the operational norms as specified under the 2014 Regulations and on approved weighted average GCV of coal and oil is worked out as under:

	Unit	2017-19
Gross Station Heat Rate	Kcal/kWh	2362.79
Aux. Energy Consumption	%	5.25%
Weighted average GCV of oil	Kcal/lit	9764.36
Average GCV of Coal for Jan to March 2014	Kcal/kg	3726.47

	Unit	2017-19
Weighted average price of oil	Rs. /KL	38239.65
Weighted average price of Coal	Rs. /MT	2866.95
Rate of Energy Charge ex-bus (rounded-off to 3 decimal places)	Rs. /kWh	1.935

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

a) ECR of Rs. 1.935/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, normative availability of 83% (2016-17) & 85% (2017-18 & 2018-19) and Auxiliary Energy Consumption of 5.25%.

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

(Rs. in lakh)

2016-17	2017-18	2018-19
11108.65	11376.32	11376.32

Working Capital for Receivables

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

(Rs.in lakh)

	2016-17	2017-18	2018-19
Variable Charges - for two months corresponding to NAPAF (A)	11108.65	11376.32	11376.32
Fixed Charges – for two months corresponding to NAPAF (B)	12189.97	12179.39	12260.69
Total (C) = (A+B)	**23298.62**	**23555.72**	**23637.01**

Rate of interest on working capital

84. In terms of clause (3) of Regulation 28 of the 2014 Tariff Regulations, the rate of interest on working capital has been considered as 12.80% (Bank rate as on 1.4.2016 9.30% + 350 bps). Accordingly, Interest on working capital has been computed as

under:

(Rs. in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	2017-18	2018-19
Working Capital for Cost of Coal for Stock (30 days), corresponding to NAPAF (A)	5420.39	5551.01	5551.01
Working Capital for Cost of Coal for Generation (30 days), corresponding to NAPAF (B)	5420.39	5551.01	5551.01
Working Capital for Cost of oil for 2 months, corresponding to NAPAF (C)	115.85	118.64	118.64
Working Capital for Maintenance Spares - 20% of O&M (D)	1904.44	2043.72	2145.67
Working Capital for Receivables - 2 months of capacity and energy charges corresponding to NAPAF (E)	23298.62	23555.72	23637.01
Working Capital for O&M expenses - 1 month (F)	793.52	851.55	894.03
Total Working Capital (G) = (A+B+C+D+E+F)	**36953.21**	**37671.64**	**37897.36**
Rate of Interest (H)	12.80%	12.80%	12.80%
Total Interest on Working capital (I) = (G)*(H)	**479.48**	**4821.97**	**4850.86**

Additional O&M Expenses

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

(A) Ash Disposal Expenses

86. The Petitioner has claimed total amount of Rs. 1449.20 lakh (Rs. 200.22 lakh in 2016-17, Rs. 893.16 lakh in 2017-18, and Rs. 355.81 lakh in 2018-19) towards Ash Disposal expenses as additional O&M expenses for the generating station. In justification for 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 Eastern Coalfields Ltd (ECL) has allowed the Petitioner to utilize its abandoned mines for this. Accordingly, the Petitioner has engaged various transporters for excavation and transportation of ash from ash ponds of the generating station to the abandoned open cast mines of ECL. Further, the Petitioner has submitted that the expenses for such ash evacuation and transportation activities of the Project (BTPS) have been booked in the annual accounts in a consolidated manner and subsequently apportioned among the various stages/units of BTPS based on the actual gross generation of the units for the respective years of the period 2014-19. The Petitioner has prayed that the Commission may approve the proposed Ash Disposal expenses for the period 2014-19 and allow the same to be recovered in full from the beneficiaries, considering the statutory requirement as per notifications of under Regulation 8(3)(ii) of the 2014 Tariff Regulations.

87. DVPCA has submitted that the Commission had disallowed the claim of expenses towards Ash Evacuation in a number of orders, stating that the Petitioner was fully

aware of the MOEFCC Notification, 2009 which mandate 100% ash utilization to be ensured by the generator, within a specific period by installation of dry ash and wet ash disposal system. It has submitted that the Petitioner must have taken necessary steps for installation of the evacuation system at the inception stage. However, the Petitioner has claimed the Ash Transportation charges on the ground that it has not complied with MoEF&CC Notification, 2009 and is taking appropriate measures now. The Respondent, DVPCA has further submitted that as the actual O&M expenses including Ash Evacuation expenses are lower than the normative O&M expenses, thus, there is no requirement to allow the ash evacuation expenses additionally. It has also pointed out that the Commission in its order dated 3.10.2016 in Petition No. 207/GT/2015 had not allowed the Ash Evacuation expenses.

88. The Petitioner, in its rejoinder, has clarified that the Commission in its order dated 5.11.2018 in Petition No. 172/MP/2016 (NTPC Vs. UPPCL & Ors.) had admitted the expenses related to transportation of ash under 'change in law' as additional O&M expenses and NTPC was granted liberty to claim the same at the time of truing-up of tariff for the period 2014-19. It has also pointed out that the Commission in its order dated 29.7.2020 in Petition No.101/MP/2019, had granted liberty to the Petitioner to claim expenses for ash transportation at the time of truing-up for the 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 on the basis of 'normative' or 'actuals', whichever is less. The Petitioner has added that even the National Tariff Policy, 2016 prescribes that the operating parameters in tariffs should be at "normative levels" only and not at "lower of normative and actuals" and this is essential to encourage better operating performance. The Petitioner has also stated that the Commission in its order dated 29.7.2020 in Petition No. 101/MP/2019 had directed the Petitioner to furnish some additional information in support to the Petitioner's claim on ash evacuation expenses as under:

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

89. 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 under:

(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**

90. 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 by coal 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 25.1.2016:

"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."

91. It is observed that the Petitioner had filed Petition No.101/MP/2019, before this Commission seeking recovery of the ash transportation charges, through monthly bills of beneficiaries, in terms of the MoEF&CC notification dated 25.1.2016, as 'change in law' and the Commission vide its order dated 29.7.2020, disposed of the same after observing that the MOEF&CC notification dated 25.1.2016 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 award of transportation

through competitive bidding, alternatively scheduled rate of State Government, expenditure incurred and revenue generated up to 25.1.2016 and after 25.1.2016 and to maintain the revenue generated from fly ash in 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 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 SoR, the actual quantum of ash supplied, transported, distance, awarded rate of transportation in Rs. / ton per kilometre, income from sale of ash etc., from 25.1.2016 to 31.3.2019 for DTPS (1 x 210 MW), MTPS (4 x 210 MW + 2 x 250 MW + 2 x 500 MW), KSTPS (2 x 500 MW), DSTPS (2 x 500 MW), CTPS (1 x 130 MW + 2 x 250 MW) and BTPS (1 x 210 MW + 1 x 500 MW). It is noticed that the Petitioner has also claimed ash transportation charges, pertaining to mine filling (abandoned coal mines of ECL) and low-lying area (DVC & its premises) and the revenue generated through sale of ash to cement / non-cement plants. However, the information regarding the revenue generated from sale of ash as on 25.1.2016 has not been furnished. The Petitioner has also transported ash from its generating stations through road (trucks), the distance varied from 2 kms to 76 kms and has therefore declared that it has not received any money from escrow account / coal mine companies for mine stowing.

92. 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**

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

(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**

94. The Petitioner has also generated revenue through the sale of ash and the details of plant wise along with the year-wise income received from sale of fly ash from 26.10.2016 to 31.3.2019 is 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

	DSTPS	DTPS	KTPS	CTPS	MTPS	BTPS
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**

95. 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 between 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**

96. Accordingly, the ash transportation charges of BTPS, allowed as above, during the period 2014-19, 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**
BTPS Units 1 to 3	0.00	350.62	1398.05	174.05	83.87
BTPS A	0.00	0.00	200.22	886.79	355.81
BTPS (all Stages)	**0.00**	**350.62**	**1598.27**	**1060.84**	**439.68**

97. Admittedly, the 2014 Tariff Regulations, do not contain any provision for allowing the Ash transportation charges, incurred by the generator. Accordingly, the Commission, in exercise of the regulatory powers, allows the total expenditure of Rs.1442.82 lakh towards fly ash transportation for the generating station of the

Petitioner for the period 2016-19, after adjusting the revenue received from the sale of ash of such plants, in six equal instalments (without interest), starting from the succeeding month from the date of 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

98. The Petitioner has claimed total amount of Rs.208.96 lakh (Rs.4.42 lakh in 2016-17, Rs.144.68 lakh in 2017-18 and Rs.59.87 lakh in 2018-19) during the period 2016-19, 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 located in high alert security zone and therefore, the Petitioner has to ensure substantial safeguard measures through Mega Insurance, against damage or destruction of the assets. The Petitioner has further submitted that the expenses for Mega Insurance for BTPS have been booked in the annual accounts in a consolidated manner. Therefore, the accounted mega Insurance expenses for BTPS has been apportioned amongst BTPS Unit A and BTPS Units 1 to 3, based on the installed capacity and the same are claimed in the instant petition.

99. DVPCA has submitted that the Commission in its earlier orders had disallowed the expenditure on Mega Insurance and the same was to be recovered as part of the normative O&M expenses. It has stated that the actual O&M expenses, including the mega insurance expenses for the period 2014-19, is lower than the normative O&M expenses specified under the 2014 Tariff Regulations, and thus, the normative O&M

expenses are sufficient to cover such expenses. The Petitioner has not cited any extraordinary factors that have necessitated additional insurance cover for its units. Accordingly, DVPCA has stated that the claim of the Petitioner may not be considered separately. In response, the Petitioner has submitted that the subject expenditure is necessitated due to 'substantial increase in the risk profile of power plants' on account of various issues (including lenders covenants), natural calamities, law and order etc, and it protects the customers from any tariff shock, in the event of any substantial loss, arising out of damage or destruction of the power plant. Accordingly, it shall be allowed as an additional pass-through, over and above, the norms. The Petitioner has further submitted, that the Commission in its various orders (i.e. order dated 13.12.2005 in Petition No. 163/2004, order dated 9.7.2013 in Petition No. 269/GT/2012, order dated 29.7.2016 in Petition No. 465/GT/2014, order dated 7.8.2013 in Petition No. 275/GT/2012 and order dated 29.7.2016 in Petition No. 470/GT/2014) while determining tariff had allowed expenses towards Mega Insurance.

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 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.3621.93 lakh (Rs. 191.09 lakh in 2016-17, Rs. 1465.14 lakh in 2017-18 and Rs. 1965.70 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 submitted that:

(a) The generating station is located in high alert security zone and 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. Any untoward situation arising due to the terrorist attack or theft, may cause loss of property and prolonged interruption of generation.

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

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

(d) The Commission had allowed the CISF expenses in case of this generating station vide order dated 9.7.2013 in Petition No. 269/GT/2012 and order dated 29.7.2016 in Petition No. 465/GT/2014 and for Chandrapura TPS (Units 1 to 3) vide dated 7.8.2013 in Petition No. 275/GT/2012 and order dated 29.7.2016 in Petition No. 470/GT/2014. Accordingly, the Commission may allow the CISF expenses as incurred by and apportioned to the generating station during the period 2014-19 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. DVPCA has submitted that the actual O&M expenses, including the security expenses, for the period 2014-19 have been lower than the normative O&M expenses specified under the 2014 Tariff Regulations. It has further submitted that the provisions of the 2014 Tariff Regulations, does not allow security expenses over and above the O

& M norms. Accordingly, the claim may not be allowed separately.

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

104. The Petitioner has claimed additional O&M expenses of Rs. 66.25 lakh in 2017-18 and Rs. 144.07 lakh in 2018-19 as impact of Goods and Service Tax (GST), including the apportioned impact with regard to DVC HQ, during the period 2014-19. DVPCA has submitted that the Petitioner's claim is extraneous to the provisions of 2014 Tariff Regulations and various orders of the Commission. In response, the Petitioner has clarified that the Commission in order dated 14.3.2018 in Petition No. 13/SM/2017 and order dated 17.12.2018 in Petition No. 01/SM/2018 had considered the implementation of GST as "change in law".

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.497.74 lakh (Rs.28.94 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 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 period 2014-19 for recovery in full, in exercise of the 'power to relax' under the 2014 Tariff Regulations.

108. 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 3.10.2016 in Petition No. 207/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 interms 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 schemesfor 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 healthand 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. Inthe 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 byDVC 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:

"53. Special Provisions relating to Damodar Valley Corporation:

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

*(i) **Capital Cost**: The expenditure allocated to the object 'power', in terms of sections 32 and 33 of the Damodar Valley Corporation Act, 1948, to the extent of its apportionment to generation and inter-state transmission, shall form the basisof capital cost for the purpose of determination of tariff:*

Provided that the capital expenditure incurred on head office, regional offices, administrative and technical centers of DVC, after due prudence check, shall also form part of the capital cost.
xxxx

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

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

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 (SOR) to the 2014 Tariff Regulations, the site specific norms in case of thermal generating stations may not serve much purpose as there is a set of advantages and disadvantages associated with every site, which average out, and the proposed norms are also based on multiple stations with wide geographical spread and therefore, such aspects are already factored in the norms and accordingly, the additional O&M expenses claimed by the Petitioner, including share of subsidiary activities was not allowed. In this regard the relevant sections of DVC Act 1948 are as follows:

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

33. Allocation of expenditure chargeable to project on main objects: The total capital expenditure chargeable to a project shall be allocated between the three main objects, namely, irrigation, power and flood control as follows, namely:
1) expenditure solely attributable to any of these objects, including a proportionate share of overhead and general charges, shall be charged to that object, and
2) expenditure common to two or more of the said objects, including a proportionate share of overhead and general charges shall be allocated to each of such objects in proportion to the expenditure which, according to the estimate of the Corporation, would have been incurred in constructing a separate structure solely for that object, less any amount determined under clause (1) in respect of that object.

37. Disposal of profits and deficits. —

(1) Subject to the provisions of sub-section (2) of section 40, the net profit, if any, attributable to each of the three main objects, namely, irrigation, power and floodcontrol,

shall be credited to the participating Governments in proportion to their respective shares in the total capital cost attributed to that object.

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

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

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 as under:

"55. In so far as the issue of allowance of cost relating to 'other activities' of the Corporation to be recovered through tariff on electricity is concerned, we have taken note of the objection(s) raised in this regard which in sum and substance is that Sections 32 and 33 of the Act of 1948 are in direct conflict with Sections 41 and 51 of the 2003 Act and, therefore, recovery of cost incurred in "other works" undertaken by theCorporation through power tariff is wholly untenable. Apart from reiterating the basis on which we have thought it proper to affirm the findings of the learned Appellate Tribunal on the purport and scope of the fourth proviso to Section 14 of the 2003 Act and the continued operation of the provisions of the Act of 1948 which are not inconsistent with the provisions of the 2003 Act, we have also taken note of the specific provisions contained in Sections 41 and 51 of the 2003 Act which, inter alia, require maintenance of separate accounts of the other business undertaken by transmission/distribution licensees so as to ensure that the returns from the transmission/distribution business of electricity do not subsidize any other such business. Not only Sections 41 and 51 of the 2003 Act contemplate prior approval of the Appropriate Commission before a licensee can engage in any other business other than that of a licensee under the 2003 Act, what is contemplated by the aforesaid provisions of the 2003 Act is some return or earning of revenue from such business. In the instant case, the "other activities" of the Corporation are not optional as contemplated under Sections 41/51 of the 2003 Act but are mandatorily cast by the statute i.e. Act of 1948 which, being in the nature of socially beneficial measures, per se, do not entail earning of any revenue so as to require maintenance of separate accounts. The allowance of recovery of cost incurred in connection with "other activities" of the Corporation from the common fund generated by tariff chargeable from the

consumers/customers of electricity as contemplated by the provisions of the Act of 1948, therefore, do not collide or is, in any manner, inconsistent.

112. Accordingly, the expenses of 'other activities' is allowed as claimed by the Petitioner during the period 2014-19.

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

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

114. It is noticed that the Petitioner, in 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, has 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 period 2014-19) 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 the period 2014-19 was claimed over and above the normative O&M expenses specified under Regulation 29 of the 2014 Tariff Regulations.

The Commission, vide its order dated 4.9.2019, while holding that the said Petition was maintainable, disposed of the same as under:

> *"25**……**The employee expenses, in general, form a considerable part of O&M expenses and includes all types of employee related expenses like Salary, contribution to CPF, gratuity, pension, etc., However, the submission of the Petitioner that no part of P&G contribution related to power business were factored in the O&M expenses during the base years cannot be appreciated in the absence of any supporting details/data being furnished by the Petitioner. As stated, the normative O&M expenses were specified under Regulation29 of the 2014 Tariff Regulations after giving due consideration of the requirements of various generating companies. The Petitioner DVC has argued that in so far as the liability of pension for its employees is concerned, it is unique and different from those prevalent in other central generating stations regulated by this Commission since the revision of pension from time to time, is based on the decision of the Central Govt. However, the information/details available on record do not support the aforesaid submission of the Petitioner that it incurs extra expenditure on terminal benefits to the employees over and above the normative O&M expenses under the 2014 Tariff Regulations. In the above background and in the absence of any supporting details/data, the prayer of the Petitioner cannot be granted in this order. However, the Petitioner is at liberty to claim the said relief with all relevant information/ documents including the (a) actuarial valuation; (b)actual data duly audited and certified by the auditor and (c) annual accounts of the pension fund, at thetime of truing up of tariff in terms of Regulation 8 of the2014 Tariff Regulations*
> *26.xxxxx*
>
> *27. We notice that subsequently, the Petitioner has implemented the recommendations of the 7th Pay Commission for its employees with effect from 1.1.2016. In view of this, the impact of pay revision, after implementation of the 7th Pay Commission, is required to be examined on actual basis, on prudence check of the information/ details to be submitted by the Petitioner. Accordingly, we direct the Petitioner to furnish the actual impact of pay revision based on the recommendations of the 7th CPC, effective from 1.1.2016, along with details of HRA and transport allowance from July, 2017. The aforesaid details/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 respect of its Petitions for truing-up of generation tariff for the period 2014-19, has submitted its claim for P&G contribution and for impact of pay revision, as additional O&M expenses, which are examined below:

(i) Impact of Pay revision

116. The Petitioner has claimed total amount of Rs.1364.36 lakh (Rs.61.56 lakh during 2016-17, Rs.764.39 lakh during 2017-18 and Rs.538.41 lakh during 2018-19) towards impact on account of Pay revision during period 2014-19. Further, the

Petitioner has submitted that the Commission, while specifying the 2014 Tariff Regulations, has stated in the 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 in respect of Petition No.(s) 568/GT/2020, 205/GT/2020, 571/GT/2020 and 577/GT/2020, directed the Petitioner to furnish the following information:

> ***"True-up for period 2014-19***
>
> *"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 for the period 2014-19 is as under:

(Rs. in lakh)

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

119. The above information/data provided by the Petitioner was common for all Hydro /Thermal Generating Station, hence the above information has been used in analysis

of ‘Additional O&M Expenses’ across various orders issued by the commission in Truing-Up Petitions filed by the Petitioner.

120. 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.

121. 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.

122. In response, the Petitioner 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

123. The Petitioner has claimed share of P&G Contribution for the period 2014-19 (revised claim) as under:

(Rs. in lakh)

2016-17	2017-18	2018-19
209.61	4657.55	891.86

124. 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.

125. 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.

126. 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.

127. In response, the Petitioner in its response has clarified as under:

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

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

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

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 ofDVC or to be utilized for the business activities of DVC. In line with the Employees Provident Funds and Miscellaneous Act, 1952, DVC is investing CPF and GPF amount in approved securities and the interest thereof is apportioned to employees. This has been reflected in Schedule 27 with two corresponding entries,namely, interest payable and interest recoverable on investment. DVC is requiredto duly account for all such interest.

(e) 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.

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

128. The Petitioner has also submitted that the O&M expenses inclusive of employees cost and Contributory Provident Fund will not cover the revenue requirements of the Petitioner on account of the P&G contribution on the 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 andGratuity 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 contributionsare being made not only for the present year working of the employees but also for all the past years of services including for persons who have retired from DVC in the past;

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

(iii) The liability under Contributory Provident Fund ceases with the year in which tis 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 Pensionand 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 theTariff Regulations.

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

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

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

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

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

129. The Petitioner has prayed that Commission in consideration of its above submissions may reject objector's contentions 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

130. 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 has claimed the actual P&G. It is observed that the normative O&M expenses includes 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 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.

131. 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.

132. 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 period 2014-19. 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 actualO&M expenses, as per DVC Financial statements for the 2014-19 period is Rs.1219786.00 lakh (including subsidiary activities), which indicates that the actual O&M expenses exceeds the normative O&M expenses, by Rs.97480.32 lakh. However, we note that the actual O&M expenses of Rs.1219786 lakh also includes Provisions for Loss, Doubtful claims &

Advances, Doubtful debts, and Shortage/Obsolescence in stores etc. amounting to Rs.77573 lakh, and Rebates & Discount allowed to consumers for Rs.49937 lakh, out of which rebate of Rs.40820 lakh pertain to firm consumers (breakup submitted by the Petitioner vide ROP dated 22.4.2022). When the actual O&M expenses are normalised, by excluding the provisions amounting to Rs.77573 lakh (being a non-cash expenditure) and Rebates & Discounts for Rs.40820 lakh pertaining to firm consumers, as stated above, the actual O&M expenses work out to Rs.1101392.70 lakh (i.e., Rs.1219786 - Rs.77573 - Rs.40820.30 lakh). The computation of the normalised actual O&M expenses is as under:

(Rs. in lakh)

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

133. 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 of 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
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 and Distribution (T&D) System	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 auditedfinancial 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**

134. It is evident from the above, that the total normative O&M expenses allowable in respect of all the generation and transmission tariff petitions of the Petitioner for the 2014-19 period is Rs.1044745.04 lakh, in terms of the 2014 Tariff Regulations. Also, considering the actual water charges of Rs.38226.00 lakh and Ash Evacuation Charges w.e.f. 26.1.2016 of Rs.39334.64 lakh, the total works out to Rs.1122305.68 lakh, which is higher than the normalised actual O&M expenses of Rs.1101392.70 lakh, as per

audited financial statements pertaining to Power segment. 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 incurred 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) Share of Common Office Expenditure

135. 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	1263.95	393.86
R & D	2.72	38.31	0.00	(-)550.49	0.00
Direction Office	26.85	9.17	68.62	50.07	(-)255.83
Subsidiary Activities	0.20	1.66	7.37	3.29	0.13
IT Cell	37.69	0.00	0.00	0.00	185.62
Other Offices	1.49	30.17	44.63	406.40	62.70
Total	**119.82**	**174.04**	**163.88**	**1173.22**	**386.48**

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Land and Land Rights	2.72	0.00	0.00	508.33	70.80

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

137. 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 installed capacity. The annual fixed charges claimed towards assets of common offices are as under:

(Rs. in lakh)

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

(Rs. in lakh)

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

138. 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 BTPS A	-	-	7.85	83.89	89.77

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

Land and Land Rights

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

Buildings

141. 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 lakhpertains to expansion of R & D building and Rs.1.49 lakh towards extension of CentralTesting Laboratory building; Considering the nature of expenses, the claimed expenditure as additional capitalization is allowed under the 2014 Tariff Regulations.

Power House Plant & Machinery

142. 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

143. 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

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

Tower Poles & Fixatures

145. 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

146. 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 thatthe 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

147. 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

148. 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**

149. 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 cope with the extra volume of works associated with the huge capacity augmentation program taken

up by the Petitioner and for smooth functioning of the offices. Considering the nature of these items, the additional capitalization and decapitalization is not allowed, in terms of first proviso to Regulation 14(3) of the 2014 Tariff Regulations.

Assets Held for Disposal

150. The Petitioner has claimed total amount 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 this head is not allowed. 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**

151. 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**

152. 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 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 ROE is considered as 15.50% for the period 2014-19.

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

(Rs. in lakh)

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

(Rs. in lakh)

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

154. As regards the common office expenditure for the generating station, it is further observed that the Commission vide Order dated 17.3.2017 in Petition No. 207/GT/2015 had observed as under:

"89. In response to the directions of the Commission, it is observed that the petitioner has not submitted any details regarding the additional capitalization claimed under IT offices. In view of this, the additional capitalization claimed under IT office is not allowed. However, the petitioner is granted liberty to submit detailed justification on the said claim at the time of revision of tariff based on truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations. It is noticed that the claim of the petitioner for common office expenditure is in line with the Commission's order dated 6.8.2009 in Petition No. 66/2005 and order dated 8.5.2013 in Petition No. 272/2010. The Commission has considered the O&M norms for this generating station as specified for 500 MW units including the expenditure for Common Offices in respect of depreciation and interest on loan. Accordingly, as also discussed earlier, only return on equity towards cost of cost offices has been allowed in computation of cost of common offices. The annual fixed charges of Common offices as worked out have been apportioned to the generating stations / T&D systems as considered as on 31.3.2014."

155. Since, the Commission has considered the O&M norms for this generating station as specified for 500 MW units including the expenditure for Common Offices in respect of depreciation and interest on loan. Therefore, only return on equity has been allowed as computed in the above table. Accordingly, the share of Common office expense computed and allowed for the generating station is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Total Common Office Expenditure for generating stations (A)	1068.68	984.95	915.98	901.90	930.14
Total Common Office Expenditure for T&D (B)	92.17	84.95	79.00	77.79	80.22
Total Common Office Expenditure for generating stations and T&D C=(A+B)	1160.85	1069.90	994.98	979.69	1010.37
Total Depreciation for generating stations and T&D (D)	471.40	407.64	343.93	348.25	368.72
Total Interest on loan for generating stations and T&D (E)	140.86	111.83	99.77	67.56	58.18
Total Return on equity on for generating stations and T&D (F)	548.59	550.43	551.28	563.88	583.46
Total of Depreciation, Interest on Loan and ROE of Generating Station and T&D (G)	1160.85	1069.90	994.98	979.69	1010.37
Return on equity corresponding to the generating stations only (H)= (A/C)*F	505.03	550.43	551.28	563.88	583.46
Apportionment of the common office expenditure as claimed to BTPS 'A' including depreciation, interest on loan and ROE. (I)	0.00	0.00	6.24	60.78	64.26

	2014-15	2015-16	2016-17	2017-18	2018-19
Apportioned amount of only "Return on Equity" corresponding to the generating station (J)= (I/A)xH	0.00	0.00	3.46	34.98	37.11

(Rs. in lakh)

Common Office Expenditure	2014-15	2015-16	2016-17	2017-18	2018-19
BTPS Units A *(this generating station)*	0.00	0.00	3.46	34.98	37.11

Annual Fixed Charges for the period 2014-19

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

(Rs. in lakh)

	2016-17 (23.2.2017 to 31.3.2017)	**2017-18**	**2018-19**
Depreciation	2316.88	23293.09	24296.84
Interest on loan	2218.72	20549.00	18901.39
Return on Equity	1433.83	14193.68	14786.70
Interest on Working Capital	479.48	4821.97	4850.86
O&M Expenses	916.38	9610.00	10215.00
Water Charges	48.88	608.61	513.33
Capital Spares	0.00	0.00	0.00
Compensation Allowance	0.00	0.00	0.00
Sub-Total (A)	**7414.17**	**73076.35**	**73564.12**
Additional O&M Expenses			
Impact of Pay Revision due to recommendation of 7th Pay Commission	0.00	0.00	0.00
Impact of GST as "Change in Law"	0.00	0.00	0.00
Share of P&G	0.00	0.00	0.00
Share of Common Office Expenditure	3.46	34.98	37.11
Mega Insurance	0.00	0.00	0.00
Expenses for CISF Security	0.00	0.00	0.00
Addl. Claim for share of subsidiary activity	28.94	274.75	194.05
Sub-Total (B)	**32.40**	**309.73**	**231.16**
Total Annual Fixed Charges (C) = (A) + (B)	**7446.57**	**73386.08**	**73795.28**
Annual fixed charges allowed vide order dated 30.5.2018 in Petition No. 196/GT/2016	70955.72*	72981.34	77188.94

Note: 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

**Annualised basis*

157. The Ash disposal expenses to be reimbursed in six monthly, interest free

instalments, in terms of paragraph 97 above, is as under:

(Rs. In lakh)

2016-17	2017-18	2018-19
200.22	886.79	355.81

158. 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

159. The Petitioner, in this petition, has also sought determination of tariff of the generating station for the period 2019-24, in terms of the 2019 Tariff Regulations. The capital cost and the annual fixed charges claimed by the Petitioner 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)	404850.06	411831.25	418441.37	425329.23	430358.11
Add: Additional Capital Expenditure (B)	6981.19	6610.12	6887.85	5205.12	5178.12
Less: De-capitalization during the year /period (C)	-	-	-	176.24	144.20
Less: Undischarged liabilities (D)	-	-	-	-	-
Add: Discharges during the year / period (E)	-	-	-	-	-
Closing Gross Block (F) = (A+B-C-D+E)	411831.25	418441.37	425329.23	430358.11	435392.03
Average Gross Block (G) = (A+F)/2	**408340.66**	**415136.31**	**421885.30**	**427843.67**	**432875.07**

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	31199.98	31719.21	32234.88	32690.14	33074.57
Interest on loan	21309.16	18570.31	15776.69	12882.07	9883.75
Return on Equity	24181.17	24546.09	24914.76	25252.17	25550.27
Interest on Working Capital	3952.50	3949.99	3953.93	3956.49	3963.29
O&M Expenses	11255.00	11650.00	12060.00	12485.00	12920.00
Water Charges	1390.24	1525.09	1677.60	1845.36	2035.46
Security Expenses	2104.90	2206.16	2312.29	2423.52	2540.10

	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-Total (A)	**95392.95**	**94166.85**	**92930.14**	**91534.74**	**89967.44**
DVC's share of savings in interest cost due to loan restructuring	900.31	759.06	616.25	471.17	326.08
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	639.06	669.80	702.02	735.79	771.19
Sub-Total (B)	**3500.92**	**3485.19**	**3467.63**	**3437.37**	**3420.07**
Total Annual Fixed Charges (A+B)	**98893.87**	**97652.03**	**96397.78**	**94972.12**	**93387.52**

Capital Cost

160. 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.*
>
> *xxx*
>
> *(5) The following shall be excluded from the capital cost of the existing and new projects:*
>
> *(a) The assets forming part of the project, but not in use, as declared in the tariff petition;*
>
> *(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalised only after its redeployment."

161. The opening capital cost, claimed by the Petitioner, as on 1.4.2019 is Rs. 404850.06 lakh. However, the closing capital cost of Rs.329851.10 lakh, as on 31.3.2019, as approved by the Commission, in this order, for the period 2014-19, 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

162. 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."

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

(Rs. in lakh)

2019 Tariff Regulations	2019-20	2020-21	2021-22	2022-23	2023-24	Total
24 (1) (b)	4778.12	4778.12	4778.12	4778.12	4778.12	23890.62
25 (2) (a)	-	282.00	559.73	427.00	400.00	1668.73
26 (1) (f)	-	1550.00	1550.00	-	-	3100.00
76 & 77	2203.06	-	-	-	-	2203.06
Total	**6981.19**	**6610.12**	**6887.85**	**5205.12**	**5178.12**	**30862.41**

164. The Respondent PSPCL has submitted that the Petitioner has claimed additional capital expenditure for 183 assets and has proposed the de-capitalization for 83 assets. The Respondent has further submitted that on an analysis of the proposed depreciation

as provided by the Petitioner in its tariff filing Form-1, the depreciation recovered/ proposed to be recovered from various assets in their de-capitalization is lower than 90% of the capital cost of the asset. Therefore, the Respondent has stated that it appears that the Petitioner is proposing to replace assets without completion of their useful life and claiming additional capitalization for additional assets.

165. DVPCA has submitted that the Petitioner in most of the cases has claimed the additional capital expenditure for the period 2019-24 under Regulation 24 (1) & 25 (2) and Regulations 76 & 77. DVPCA has also submitted that Petitioner has not provided any proper justification or documentary evidence for claiming the additional capital expenditure held after cut-off date as per the regulatory provisions of Regulations 25 (1) & 25 (2) of the 2019 Tariff Regulations. It has further submitted that the Petitioner has not detailed out reasons for additional capitalization claimed under Regulations 76 & Regulation 77 of the 2019 Tariff Regulations and has put the onus on the Commission to decide and undertake analysis of claims. DVPCA has stated that 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 and the Petitioner has not presented/ cited any extra-ordinary circumstances or events which has led to incurring such additional capitalisation and accordingly, the items claimed under additional capitalisation in terms of Regulations 76 and Regulation 77 of 2019 Tariff Regulations may be rejected. It has added that the claims of the Petitioner lack detailed justification to satisfy the claim under relevant regulatory provision and needs to be disallowed by the Commission. DVPCA has pointed out that the additional capital expenditure of Rs 4778.13 lakh for 2019-20 is only allowable to the Petitioner.

166. The Petitioner has submitted that all the additional capital expenditures proposed for the generating station are critical to ensure reliable, safe and efficient operation of the station and are therefore unavoidable. The Petitioner has also submitted that most of the additional capital expenditures claimed is on the following grounds:

(a) Work within the original scope and executed within the cut-off date
(b) Work for ensuring Plant safety based on recommendations from technical audit report.
(c) Critical tools for plant to ensure reliable and efficient operation.

167. The Petitioner has submitted that the additional capital expenditures for the generating station have been claimed under the Regulations 25(1), 25(2) and 26(1) of the 2019 Tariff Regulations and detailed justification and supporting documents have been furnished, as required under the regulations. It has also submitted that all additional capital expenditures proposed for the generating station are critical to ensure reliable, safe and efficient operation of the station and are therefore unavoidable. Hence, the Petitioner has prayed to allow the expenditure claimed, in exercise of the powers under Regulations 76 and Regulation 77 of the 2019 Tariff Regulations, wherever the same could not be claimed under Regulations 25(1)(b), 25(2)(a), 25(2)(c), 26(1)(d) of the 2019 Tariff Regulations.

168. Before we consider asset wise claim of the Petitioner for the period 2019-24, we notice, that the Petitioner has claimed amounts of Rs. 2517.63 lakh and Rs 2260.50 lakh towards “Coal Handling Plant” and “Railway Infrastructure including Railway Bridge”, respectively for each financial year for the period 2019-24. Accordingly, the total amount claimed for these assets during 2019-24 is 12588.15 lakh (Coal handling plant) and Rs.11302.45 lakh (Railway Infrastructure including Railway Bridge). Since the first year (2019-20) of the tariff setting is within the cut-off date, the expenditure

claimed for these assets is allowable in terms of 24(1) (b) of the 2019 Tariff Regulations. For the period beyond the cut-off date, the Petitioner has submitted following reasons and justification for its claim:

Coal Handling plant

169. The Petitioner has submitted that the work of Coal Handling Plant (CHP) is within the original scope of work (under Sl. Nos. 2(vii) and 2(viii) of the sanction order of BTPS-A dated 17.10.2017). The Petitioner has also stated that the expenditure was incurred during the previous years and was kept in CWIP and capitalization of the same is projected during the period 2019-24. The Petitioner has further submitted that the contract for the supply, construction, erection, commissioning of all associated Mechanical, Electrical, C&I, Civil, structural & architectural works and other services for "Coal Handling Plant Main Package (excluding inter-connecting Coal conveyor route from Bokaro 'B' to Bokaro 'A') and Coal Handling Plant Stacker Reclaimer Package" for Bokaro Thermal Power Station 'A' (1x500 MW) was awarded to M/s S. K. Samanta & Co. Pvt. Ltd on 17.12.2015. The Petitioner has also stated that the "Completion of the Facilities" for the "Coal Handling Plant Main Package" as per the specification was to be attained within 25 months from Zero Date (LOA Date) i.e. 16/01/2018. The Petitioner has submitted that the main reasons for delay are due to the following:

i) Huge old underground structures like CW Duct, coal carrying arrangement etc of the Heritage BTPS Plant, constructed in 1952, was encountered by the agency which could not be predicted earlier. In identifying those structures and in subsequent dismantling, took considerable time.
ii) There was acute space constraint in the working area due to existence of Heritage Unit Main Building, already constructed 500 MW Plant and associated contingency coal conveying structures. This constraint slowed down the progress considerably.
iii) COVID pandemic since March 2020.The works related to CHP have been completed in Jan 2022.

Railway Infrastructure including Railway Bridge

170. The Petitioner has submitted that this work is within the original scope (under Sl. No. 3(C) and 3(D) of the sanction orders of BTPS- A dated 17.10.2017). The Petitioner has further submitted that the expenditure was incurred during the previous years and was kept in CWIP and the capitalization of the same is projected during the period 2019-24. The Petitioner has also stated that it has undertaken works for Construction of Bridge on Konar River along with Approach Road and for Railway-infrastructure for which amounts for Rs. 10949.00 lakh and Rs. 2540 lakh respectively (totaling Rs. 13489 lakh) was allowed. However, the Petitioner has submitted that the total amount claimed during the period 2019-24 is Rs. 11302.49 lakh as against the total amount of Rs. 13489 lakh allowed by the Commission. The Petitioner has further submitted that the balance amount of Rs. 2186.51 lakh, which was not projected/claimed for the period 2019-24 and the further additional expenditure incurred within the revised sanctioned amount (for Rs. 150 crore) shall be claimed during the period 2019-24, at the time of truing-up. The Petitioner has also stated that this work has been completed in 2021-22 and necessary supporting documents will be furnished, at the time of truing up of tariff. The Petitioner has also submitted the following, as the major reasons of delay:

i) Dispute of land with local villagers
ii) Removal of unauthorized hutments, khatal etc
iii) Encroachment in Viaduct-C by villagers
iv) Shifting of LT line and utilities coming within alignment
v) Approval of extra items for RE Wall arose due to change in design
vi) Clearance of land for construction of Pier 2 to abutment of Ramp-2
vii) Approval of GAD by Railway.

171. The matter has been examined. In consideration of the fact that the projected expenditure claimed beyond the cut-off date (2019-20) on these assets, was allowed on projection basis for the period 2016-17 to 2018-19, and since the same could not be

capitalized by the Petitioner, during the period due to practical difficulties encountered in the dismantling of the existing coal handling plant of the decommissioned units of Bokaro-1-3 and land related issues in respect of completion of Railway Infrastructure including Railway Bridge, we are inclined to allow the projected expenditure claimed. However, the Petitioner shall, at the time of truing up of tariff, apart from the actual expenditure incurred, submit the detailed reasons with respect to the delay in the completion of these assets, the reasons/approval for execution of the original scope of works, beyond the cut-off date and the associated cost overrun including the increase in IDC and IEDC for the delayed period,

172. Based on the submissions of the parties and on prudence check, the claim of the Petitioner for additional capital expenditure, including the assets, as deliberated in para 169-171 above, for the period 2019-24, is examined and allowed as under:

(Rs. in lakh)

Sl. No.	**Asset/Work**	**Amount claimed**	**Regulation**	**Petitioner submission**	**Remarks on admissibility**	**Amount allowed**
	2019-20					
1	Hydraulic Jack Cylinders of M/s Actuant India Pvt. Limited (Formerly Enerpac Hydraulics (India) Private Ltd. make.	10.42	76 & 77	These Jacks are of special type and dimension and are necessary for carrying out different checks of Turbine.	The creation of additional facility, over and above the original scope of work, is not permissible. Also, from the submissions of the Petitioner, we find no justification to allow the expenditure in exercise of the power under Regulation 76 (power to relax) of the 2019 Tariff Regulations.	0.00

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks on admissibility	Amount allowed
2	Rake (consisting of 61 nos. wagons with one brake van)	2192.64	76 & 77	CTPS and BTPS face irregular coal supply due to short supply of rakes causing loss of generation. In order to mitigate coal shortage and ensure fuel security at BTPS and CTPS, it has been felt necessary for procurement and operation of two full rakes of type BOBRNHSM1 for CTPS and BTPS in terms of the General-Purpose Wagon Investment Scheme (GPWIS) of Indian Railways. As agreed by the Ministry of Power, GOI and as subsequently approved by the Indian Railways, DVC has decided for the said procurement of rakes. Based on the budgetary offers received from vendors, estimated cost of two numbers of rakes (each consisting 61 numbers of wagons with one brake van) considering rate	The Petitioner has not furnished the benefits which would accrue in terms of the said scheme and as to how these benefits would be passed on to the beneficiaries. The Petitioner has also not obtained the consent of the beneficiaries for such expenditure. Accordingly, the additional capitalization claimed is not allowed at present, by invocation of the powers under Regulation 76 (power to relax) of 2019 Tariff Regulations. However, the Petitioner is at liberty to claim the actual expenditure during truing up by providing the complete details of the scheme including benefits which would accrue to the Petitioner, tenure of such benefits and how such benefits would be passed on to the beneficiaries.	0.00

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks on admissibility	Amount allowed
				of 90% of the L1 budgetary quote comes at Rs. 43,85,28,580 ex-works (Kolkata) excluding transportation / haulage charges, freight and insurance, etc. This cost is equally distributed among CTPS and BTPS for claim as additional capital expenditure in the respective tariff Petitions. Letter of approval from the Ministry of Railways, GOI is enclosed with the Petition		
3	Coal Handling Plant	2517.63	24 (1) (b)	This work is within the original scope (Under Sl. No. 2(vii) and 2(viii) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure was incurred during the previous years and was kept in CWIP. Capitalization of the same is projected during 2019-24 period.	Considering the fact that the actual expenditure incurred is in respect of assets/ works which are within the original scope of work and is within the cut-off date, the claims of the Petitioner (@sl. no. 3&4) **are allowed** under Regulation 24(1) (b) of the 2019 Tariff Regulations.	2517.63

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks on admissibility	Amount allowed
4	Railway Infrastructure including Railway Bridge	2260.50	24 (1) (b)	This work is within the original scope (Under Sl. No. 3(C) and 3(D) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure was incurred during the previous years and was kept in CWIP. Capitalization of the same is projected during 2019-24 period.		2260.50
	Total amount claimed	**6981.19**				
	Total amount allowed					**4778.13**

(Rs. in lakh)

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks on admissibility	Amount allowed
	2020-21					
1	Control fluid pump assembly	246.00	25 (2) (a)	To be procured as critical spare and has also been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.	Since capitalization of spares/spare assets is not allowed after the cut-off date, the additional capital expenditures claimed *(@sl no. 1 to 4)* are **not allowed.**	0.00
2	Condensate extraction pump bowl assembly	20.00	25 (2) (a)	To be procured as critical spare and has also been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.	However, the spares of capital nature not covered by normative O&M expenses may be claimed under "capital spares consumed" as and when they are	0.00

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks on admissibility	Amount allowed
3	Breech nut of hp turbine	6.00	25 (2) (a)	To be procured as critical spare and has also been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.	actually consumed.	0.00
4	Procurement of compensators of steam line	10.00	25 (2) (a)	To be procured as critical spare and has also been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.		0.00
5	Coal Handling Plant	2517.63	24 (1) (b)	This work is within the original scope (Under Sl. No. 2(vii) and 2(viii) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure was incurred during the previous years and was kept in CWIP. Capitalization of the same is projected during 2019-24 period.	Considering the fact that the expenditure projected to be capitalized after the cut-off date is in respect of works which are within the original scope, the expenditure claimed (@sl nos. 5 & 6) **is allowed.** This is however subject to the Petitioner furnishing proper reasons/approval for the completion beyond the cut-off date along with the associated cost overrun, including the increase in IDC and IEDC, if any, for the period of delay, at the time	2517.63
6	Railway Infrastructure including Railway Bridge	2260.50	24 (1) (b)	This work is within the original scope (under Sl. No. 3(C) and 3(D) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure		2260.50

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks on admissibility	Amount allowed
				was incurred during the previous years and was kept in CWIP. Capitalization of the same is projected during 2019-24 period.	of truing up of tariff.	
7	Sewerage Treatment Plant	1550.00	26 (1) (f)	This expenditure is towards installation of Sewerage Treatment Plant (STP) at BTPS colony with the aim to prevent pollution of the Damodar River as per directions of the Hon'ble Minister of Coal, Power and Renewable Energy, GOI vide meeting dt. 12.05.2015 and the Jharkhand State Assembly Standing Committee on Environment and Pollution vide meeting dt. 15.05.2015. Copies of the correspondence between the Ministry of Jharkhand and the MOP, GOI and discussion summary of the Assembly Committee meeting dt. 15.05.2015 are enclosed with the Petition.	Considering the submissions of the Petitioner, the additional expenditure claimed is **allowed** under Regulation 26(1)(a) of the 2019 Tariff Regulations	1550.00
	Total amount claimed	**6610.12**				

Sl. No.	Asset/Work	Amount claimed	Regula tion	Petitioner submission	Remarks on admissibility	Amount allowed
	Total amount allowed					**6328.12**

(Rs. in lakh)

Sl. No.	Asset/Work	Amount claimed	Regula tion	Petitioner Submission	Remarks for admissibility	Amount allowed
	2021-22					
1	Condensate extraction pump bowl assembly	220.00	25 (2) (a)	To be procured as critical spare and has also been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.	Since the capitalization of spares/spare assets is not allowed after the cut-off date, the claims of the Petitioner *(@ sl. no. 1 to 10)* are not allowed. However, the spares of capital nature not covered by normative O&M expenses may be claimed under "capital spares consumed" as and when they are actually consumed.	0.00
2	Breech nut of hp turbine	70.00	25 (2) (a)	To be procured as critical spare and has also been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.		0.00
3	Procurement of compensators of steam line	100.00	25 (2) (a)	To be procured as critical spare and has also been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.		0.00
4	Vacuum pump complete assembly	120.00	25 (2) (a)	To be procured as critical spare and has also been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.		0.00

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner Submission	Remarks for admissibility	Amount allowed
5	Turning gear complete assembly	4.73	25 (2) (a)	To procured as critical spare. Necessary to ensure reduced downtime and improved operational reliability.		0.00
6	Complete assembly of bfp recirculation valve	20.00	25 (2) (a)	One set of complete valve assembly to be kept as unit spare. Necessary to ensure reduced downtime and improved operational reliability.		0.00
7	Test valve assembly for all stop valves	4.00	25 (2) (a)	To procured as critical spare and also has been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.		0.00
8	Starting device speeder gear assembly (governing system)	3.00	25 (2) (a)	One complete set of starting device and Speeder Gear has to be kept as unit spare. Necessary to ensure reduced downtime and improved operational reliability.		0.00
9	Electro hydraulic converter complete assembly	3.00	25 (2) (a)	One complete assembly to be kept as unit spare to meet any exigency. Necessary to ensure reduced downtime and improved		0.00

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner Submission	Remarks for admissibility	Amount allowed
				operational reliability.		
10	Main oil pump assembly of bfp hydrocoupling	15.00	25 (2) (a)	One complete assembly of the main oil pump is to be kept as unit spare to meet any exigency. Necessary to ensure reduced downtime and improved operational reliability.		0.00
11	Coal Handling Plant	2517.63	24 (1) (b)	This work is within the original scope (Under Sl. No. 2(vii) and 2(viii) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure was incurred during the previous years and was kept in CWIP. Capitalization of the same is projected during 2019-24 period.	Considering the fact that the expenditure projected to be capitalized after the cut-off date is in respect of works which are within the original scope, the expenditures claimed (@sl nos. 11 & 12) are **allowed**. This is however subject to the submission of proper reasons/ approval for the completion beyond the cut-off date along with the associated cost overrun including increase in IDC and IEDC for the period of delay, at the time of truing up of tariff.	2517.63
12	Railway Infrastructure including Railway Bridge	2260.50	24 (1) (b)	This work is within the original scope (Under Sl. No. 3(C) and 3(D) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure was incurred during the previous years and was kept in CWIP. Capitalization of the same is		2260.50

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner Submission	Remarks for admissibility	Amount allowed
				projected during 2019-24 period.		
13	Sewerage Treatment Plant	1550.00	26 (1) (f)	This expenditure is towards installation of Sewerage Treatment Plant (STP) at BTPS colony with the aim to prevent pollution of the Damodar River as per directions of the Hon'ble Minister of Coal, Power and Renewable Energy, GOI vide meeting dt. 12.05.2015 and the Jharkhand State Assembly Standing Committee on Environment and Pollution vide meeting dt. 15.05.2015. Copies of the correspondence between the Ministry of Jharkhand and the MOP, GOI and discussion summary of the Assembly Committee meeting dt. 15.05.2015 are enclosed with Petition	Considering the submissions of the Petitioner, the additional capital expenditure claimed **is allowed** under Regulation 26(1)(a) of 2019 Tariff Regulations.	1550.00
	Total amount claimed	**6887.85**				
	Total amount allowed					**6328.12**

(Rs. in lakh)

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks for admissibility	Amount allowed
	2022-23					
1	Turning gear complete assembly	37.00	25 (2) (a)	To procured as critical spare. Necessary to ensure reduced downtime and improved operational reliability.	Since capitalization of spares/spare assets is not allowed after the cut-off date, the additional capital expenditures claimed *(@ sl. nos. 1 to 8)* are **not allowed.** However, the spares of capital nature not covered by normative O&M expenses may be claimed under "capital spares consumed" as and when they are actually consumed.	0.00
2	Complete assembly of vacuum breaker valve	20.00	25 (2) (a)	One set of complete valve assembly to be kept as unit spare. Necessary to ensure reduced downtime and improved operational reliability.		0.00
3	Test valve assembly for all stop valves	40.00	25 (2) (a)	To procured as critical spare and also has been identified as capital item. Necessary to ensure reduced downtime and improved operational reliability.		0.00
4	Starting device speeder gear assembly (governing system)	27.00	25 (2) (a)	One complete set of starting device and Speeder Gear has to be kept as unit spare. Necessary to ensure reduced downtime and improved operational reliability.		0.00
5	Electro hydraulic converter complete assembly	34.00	25 (2) (a)	One complete assembly to be kept as unit spare to meet any exigency. Necessary to		0.00

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks for admissibility	Amount allowed
				ensure reduced downtime and improved operational reliability.		
6	Boiler feed pump turbine rotor	20.00	25 (2) (a)	One Turbine rotor is to be kept as unit spare to meet any exigency. Necessary to ensure reduced downtime and improved operational reliability.		0.00
7	Scoop tube assembly of h/c of boiler feed pump	20.00	25 (2) (a)	One complete assembly to be kept as unit spare to meet any exigency. Necessary to ensure reduced downtime and improved operational reliability.		0.00
8	Gear box between turbine and booster pump of tdbfp	50.00	25 (2) (a)	By this time unit will run for 6-7 years and gear box may require replacement.		0.00
9	Auxiliary oil pump	5.00	25 (2) (a)	One complete assembly of pump shall be kept as stock to meet any exigency. Necessary to ensure reduced downtime and improved operational reliability.	Since capitalization of spares/spare assets is not allowed after the cut-off date, the additional capital expenditures claimed (@ sl. nos. 9 to 12) are not allowed. However, the spares of capital nature not covered by normative O&M expenses may be claimed under "capital spares	0.00
10	Emergency oil pump	4.00	25 (2) (a)	One complete assembly of pump shall be kept as stock to meet any exigency. Necessary to		0.00

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks for admissibility	Amount allowed
				ensure reduced downtime and improved operational reliability.	consumed" as and when they are actually consumed.	
11	TGECW/SGECW plate heat exchanger complete assembly	150.00	25 (2) (a)	By this time unit will run for 7-8 years and effectiveness of PHE may deteriorate, hence one set will be procured as to change the complete set of plates whose effectiveness will be less. Reusable plates shall be identified for further future use.		0.00
12	Complete cartridge of boiler feed pump	20.00	25 (2) (a)	By this time BFP will run for 5-6 years and cartridge of pump may require replacement.		0.00
13	Coal Handling Plant	2517.63	24 (1) (b)	This work is within the original scope (Under Sl. No. 2(vii) and 2(viii) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure was incurred during the previous years and was kept in CWIP. Capitalization of the same is projected during 2019-24 period.	Considering the fact that the expenditure projected to be capitalized after the cut-off date is in respect of works which are within the original scope, the expenditures claimed (@sl nos. 13 & 14) are **allowed**. This is however subject to the submission of proper reasons/ approval for the completion beyond the cut-off	2517.63

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks for admissibility	Amount allowed
14	Railway Infrastructure including Railway Bridge	2260.50	24 (1) (b)	This work is within the original scope (Under Sl. No. 3(C) and 3(D) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure was incurred during the previous years and was kept in CWIP. Capitalization of the same is projected during 2019-24 period.	date along with the associated cost overrun including increase in IDC and IEDC for the period of delay , at the time of truing up of tariff.	2260.50
	Total amount claimed	**5205.12**				
	Total amount allowed					**4778.12**

(Rs. in lakh)

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks on admissibility	Amount allowed
	2023-24					
1	Boiler feed pump turbine rotor	180.00	25 (2) (a)	One Turbine rotor is to be kept as unit spare to meet any exigency. Necessary to ensure reduced downtime and improved operational reliability.	Since capitalization of spares/spare assets is not allowed after the cut-off date, the additional capital expenditure claimed *(@ sl. no. 1 to 3)* are **not allowed.** However, spares of capital nature not covered by the normative O&M expenses may be claimed under "capital spares consumed" as and when they are actually consumed.	0.00
2	Moving blades of IP turbine	40.00	25 (2) (a)	Set of moving blades of LP Turbine has also been identified as capital item and shall be kept as unit spare to meet any exigency. Necessary to ensure reduced downtime and improved		0.00

Sl. No.	Asset/Work	Amount claimed	Regulation	Petitioner submission	Remarks on admissibility	Amount allowed
				operational reliability.		
3	Complete cartridge of boiler feed pump	180.00	25 (2) (a)	By this time BFP will run for 5-6 years and cartridge of pump may require replacement.		0.00
4	Coal Handling Plant	2517.63	24 (1) (b)	This work is within the original scope (Under Sl. No. 2(vii) and 2(viii) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure was incurred during the previous years and was kept in CWIP. Capitalization of the same is projected during 2019-24 period.	Considering the fact that the expenditure projected to be capitalized after the cut-off date, is in respect of works which are within the original scope, the expenditures claimed (@sl nos. 4 & 5) are **allowed**. This is however subject to the submission of proper reasons/ approval for the completion beyond the cut-off date along with the associated cost overrun including increase in IDC and IEDC for the period of delay, at the time of truing up of tariff.	2517.63
5	Railway Infrastructure including Railway Bridge	2260.50	24 (1) (b)	This work is within the original scope (under Sl. No. 3(C) and 3(D) of the Sanction Order of BTPS - A dt. 17.10.2017). The expenditure was incurred during the previous years and was kept in CWIP. Capitalization of the same is projected during 2019-24 period.		2260.50
	Total amount claimed	**5178.12**				
	Total amount allowed					**4778.12**

173. Accordingly, the projected additional capital expenditure claimed/allowed/ disallowed for the period 2019-24 is summarized below:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Claimed	6981.19	6610.12	6887.85	5205.12	5178.12
Allowed	**4778.12**	**6328.12**	**6328.12**	**4778.12**	**4778.12**
Disallowed	2203.06	282.00	559.73	427.00	400.00

Discharge of Liabilities

174. The Petitioner has submitted that the entire projected additional capital expenditure claimed in Form-9, are on accrual basis, and the un-discharged liabilities, if any, will be submitted on actual basis, at the time of truing up of tariff. The Petitioner has not claimed discharge of liabilities for the period 2019-24 and hence, no discharge of liabilities has been considered. However, the Petitioner is directed to submit the item-wise and year-wise reconciliation statement, showing details of such liabilities as per balance sheet for the period 2019-24, duly certified by auditor and also furnish the break-up of discharges included in the liabilities discharged within the original scope of work or other than within the original scope of work of the project, at the time of truing-up of tariff for the period 2019-24.

De-capitalization

175. The Petitioner has claimed the total decapitalisation of Rs. 320.44 lakh as under:

(Rs. in lakh)

2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total**
0.00	0.00	0.00	176.24	144.20	**320.44**

176. The Commission after prudence check has not allowed any decapitalisation against the allowed assets.

177. Based on the above, the additional capital expenditure allowed for the period

2019-24 is summarised as under:

Additional Capital Expenditure eligible for Normal ROE

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Admitted additions in projected additional capital expenditure (A)	4778.12	4778.12	4778.12	4778.12	4778.12
Less: De-capitalization considered for assets (B)	0.00	0.00	0.00	0.00	0.00
Less: Un-discharged Liabilities (C)	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities (against allowed assets / works) (D)	0.00	0.00	0.00	0.00	0.00
Net projected additional capital expenditure allowed (on cash basis) (E) = (A-B-C+D)	4778.12	4778.12	4778.12	4778.12	4778.12

Additional Capital Expenditure eligible for WAROI ROE

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Admitted additions in projected additional capital expenditure (A)	0.00	1550.00	1550.00	0.00	0.00
Less: De-capitalization considered for assets (B)	0.00	0.00	0.00	0.00	0.00
Less: Un-discharged Liabilities (C)	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities (against allowed assets / works) (D)	0.00	0.00	0.00	0.00	0.00
Net projected additional capital expenditure allowed (on cash basis) (E) = (A-B-C+D)	**0.00**	**1550.00**	**1550.00**	**0.00**	**0.00**

Exclusions

178. The Petitioner has not claimed any exclusion for the period 2019-24.

Capital cost allowed for the period 2019-24

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

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	329851.10	334629.23	340957.35	347285.48	352063.60
Add: Addition during the year / period (Net of Exclusion not allowed) (B)	4778.12	6328.12	6328.12	4778.12	4778.12
Less: Decapitalisation during the year /period (C)	0.00	0.00	0.00	0.00	0.00
Less: Undischarged liabilities (D)	0.00	0.00	0.00	0.00	0.00

	2019-20	2020-21	2021-22	2022-23	2023-24
Add: Discharges during the year /period (E)	0.00	0.00	0.00	0.00	0.00
Net Additional Capitalisation (F) = (B-C-D+E)	4778.12	6328.12	6328.12	4778.12	4778.12
Closing Gross Block (G) = (A+F)	334629.23	340957.35	347285.48	352063.60	356841.72
Average Gross Block (H) = (A+G)/2	**332240.17**	**337793.29**	**344121.41**	**349674.54**	**354452.66**

Debt Equity Ratio

180. Regulation 18 and Regulation 72 of the 2019 Tariff Regulations provides as under:

> *"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.*
>
> *(3) 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."

xxxxx

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:

xxxx

(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."*

181. The gross loan and equity amounting to Rs.230895.77 lakh and Rs.98955.33 lakh respectively, as on 31.3.2019, as determined in this order for the period 2014-19 above, has been considered as the gross loan and equity, as on 1.4.2019, in terms of Regulation 18 of the 2019 Tariff Regulations. The debt-equity ratio of 70:30 has been applied on the 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 the debt and equity in respect of the generating station is as follows:

(Rs. in lakh)

	Capital Cost as on 1.4.2019	**%**	**Additional Capital Expenditure for period 2019-24**	**%**	**Capital Cost as on 31.3.2024**	**%**
Debt	230895.77	70%	18893.43	70%	249789.21	70%
Equity	98955.33	30%	8097.19	30%	107052.52	30%
Total	**329851.10**	**100%**	**26990.62**	**100%**	**356841.72**	**100%**

Return on Equity

182. 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."

183. 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."

184. DVPCA has submitted that though the Petitioner has considered effective tax rate of 21.5488% for the computation of ROE for the period 2019-24, the same is premature and needs to be claimed during truing-up, based on the actual tax paid in terms of Regulation 31 of the 2019 Tariff Regulations. With regard to the Petitioner's claim for ROE at the weighted average rate of interest (WAROI) on the actual loan portfolio, as in Form-1(I) for additional capitalisation, DVPCA has submitted that the Petitioner has neither submitted any details of assets nor any justification for claiming the additional capitalisation after cut-of date and beyond the original scope of work.

185. In response, the Petitioner has prayed for computation of ROE without considering the income tax rates for the period 2019-24. The Petitioner has also craved leave of the Commission to claim the income tax liability, if any, for any year of the period 2019-24. As regards the DVPCA's contention, the Petitioner has submitted that the details of assets along with detailed justification, has been furnished in Form-9, for the period 2019-24.

186. The matter has been considered. The Petitioner has not been paying any income tax in any of the financial year of the period 2014-19. Also, considering the submissions

of the Petitioner above, the effective tax rate has been considered as 'Nil' for the purpose of grossing up of ROE and the rate of ROE has been considered as 15.50% for the period 2019-24. Accordingly, ROE is worked out and allowed as under:

(a) Return on Equity at Normal Rate

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Normative Equity - Opening	A	98955.33	100388.77	101822.21	103255.64	104689.08
Addition to Equity due to additional capital expenditure	B	1433.44	1433.44	1433.44	1433.44	1433.44
Normative Equity - Closing	C=(A+B)	100388.77	101822.21	103255.64	104689.08	106122.52
Average Normative Equity	D=Average (A,C)	99672.05	101105.49	102538.92	103972.36	105405.80
Return on Equity (Base Rate) (%)	E	15.500%	15.500%	15.500%	15.500%	15.500%
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)	15.500%	15.500%	15.500%	15.500%	15.500%
Return on Equity (Pre-Tax)	**H=(DxG)**	**15449.17**	**15671.35**	**15893.53**	**16115.72**	**16337.90**

(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	0.00	465.00	930.00	930.00
Addition to Equity due to additional capital expenditure	B	0.00	465.00	465.00	0.00	0.00
Normative Equity - Closing	C=(A+B)	0.00	465.00	930.00	930.00	930.00
Average Normative Equity	D=Average (A,C)	0.00	232.50	697.50	930.00	930.00
Return on Equity (Base Rate) (%)	E	10.228%	10.224%	10.219%	10.214%	10.207%
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)	10.228%	10.224%	10.219%	10.214%	10.207%
Return on Equity (Pre-Tax)	**H=(DxG)**	**0.00**	**23.77**	**71.28**	**94.99**	**94.93**

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	15449.17	15671.35	15893.53	16115.72	16337.90
Return on Equity at WAROI	B	0.00	23.77	71.28	94.99	94.93
Total Return on Equity allowed	**C=(A+B)**	**15449.17**	**15695.12**	**15964.81**	**16210.71**	**16432.82**

187. The Petitioner is directed to furnish the report of RLDC with regard to the commissioning of any Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre, along with relevant information regarding the achievement of 'Ramp Rate' in compliance to proviso (i) and (iii) of Regulation 30(2) of the 2019 Tariff Regulations, at the time of truing-up of tariff.

Interest on Loan

188. 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."

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

a. Gross normative loan amounting to Rs.230895.77 lakh on 31.3.2019 as considered for the period 2014-19, in this order, has been considered as on 1.4.2019;

b. Cumulative repayment of Rs.49906.81 lakh as on 31.3.2019 as considered 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. 180988.96 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.

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

(Rs. in lakh)

		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross opening loan	A	230895.77	234240.46	238670.15	243099.83	246444.52
Cumulative repayment of loan upto previous year	B	49906.81	75292.20	101101.88	127395.07	154112.56
Net Loan Opening	C=(A-B)	180988.96	158948.26	137568.27	115704.76	92331.96
Addition due to additional capital expenditure	D	3344.69	4429.69	4429.69	3344.69	3344.69

		2019-20	2020-21	2021-22	2022-23	2023-24
Repayment of loan during the year	E	25385.39	25809.68	26293.19	26717.49	27082.57
Repayment adjustment on account of decapitalization	F	0.00	0.00	0.00	0.00	0.00
Net repayment of the loan during the year	G=(E-F)	25385.39	25809.68	26293.19	26717.49	27082.57
Net Loan Closing	H=(C+D-G)	158948.26	137568.27	115704.76	92331.96	68594.08
Average Loan	I=Average (C, H)	169968.61	148258.27	126636.52	104018.36	80463.02
Weighted Average Rate of Interest of loan	J	10.2280%	10.2238%	10.2191%	10.2137%	10.2075%
Interest on Loan	**K=(IxJ)**	**17384.47**	**15157.65**	**12941.06**	**10624.08**	**8213.26**

191. Further, the Petitioner has claimed share of savings due to restructuring of loan for the period 2019-24, on projection basis, as per Regulation 61(1) of the 2019 Tariff Regulations. In this regard, it is clarified that the sharing of saving in interest due to re-financing or restructuring of loan, if any, must be undertaken between the parties, on actual basis, in accordance with Regulation 61(1) & 61 (2) of the 2019 Tariff Regulations.

Depreciation

192. 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.
xxxx

***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."*

193. Depreciation has been worked out considering the admitted capital cost of Rs.

329851.10 lakh as on 1.4.2019 and the cumulative depreciation of Rs. 49906.81 lakh as on 31.3.2019, as determined 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 has been worked out and allowed as under:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Average Capital Cost	A	332240.17	337793.29	344121.41	349674.54	354452.66
Value of freehold land	B	0.00	0.00	0.00	0.00	0.00
Aggregated Depreciable Value	C= [(A-B)x90%]	299016.15	304013.96	309709.27	314707.08	319007.40
Remaining Aggregate Depreciable value at the beginning of the year	D=[(C)-(Cumulative Depreciation of Previous year)]	249109.34	228721.76	208607.39	187312.01	164894.84
Balance useful life at the beginning of the year	E	22.89	21.89	20.89	19.89	18.89
Weighted Average Rate of Depreciation (WAROD)	F	7.6407%	7.6407%	7.6407%	7.6407%	7.6407%
Depreciation for the period	G = Minimum of [(AxF) or (D)]	25385.39	25809.68	26293.19	26717.49	27082.57
Cumulative depreciation (at the end of the year)	H= [(Cumulative Depreciation of Previous year)+(F)]	75292.20	101101.88	127395.07	154112.56	181195.13
Less: Depreciation adjustment on account of de-capitalization	I	0.00	0.00	0.00	0.00	0.00
Cumulative depreciation at the end of the year	J=(H - I)	75292.20	101101.88	127395.07	154112.56	181195.13

Operation & Maintenance Expenses

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

Unit	2019-20	2020-21	2021-22	2022-23	2023-24
(lakh/MW)	22.51	23.30	24.12	24.97	25.84

195. 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
11255.00	11650.00	12060.00	12485.00	12920.00

196. 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

197. Regulation 35(1)(6) of the 2019 Tariff Regulations provides as follows:

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

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

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Water Charges

198. 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 under:

(Rs. in lakh)

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

199. 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 control period 2014-19 and has accordingly worked out the weighted average water charge rate of Rs. 5.57/KL. DVPCA has submitted that, as against this, the Petitioner has considered a water charge rate of Rs.10.64/KL for the year 2019-20 and thereafter a yearly escalation rate of 10% for the remaining years of the period 2019-24. It has

submitted that the Petitioner has not furnished the relevant Office Memorandum (OM) dated 23.7.2019 and that the increase sought is more than 85%, which is unreasonable and has pared that the Commission may, on prudence check, arrive 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. DVPCA 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 for the generating stations, w.e.f. 1.4.2019 and escalation thereof, are governed by the water tariff as notified by DVC, vide Office Memorandum dated 23.7.2019.

200. The matter has been considered. In view of the above, and considering the MOEF&CC norms, the generation as per NAPAF and water charges at the rate of Rs 10.64/KL and annual escalation of 10% thereof, as per OM dated 23.7.2019, the water charges for the period 2019-24, is allowed on projection basis, based on actual consumption, as detailed below:

(Rs. in lakh)

	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 MoEFCC stipulations	Cubic Meter/MWh	3.50	3.50	3.50	3.50	3.50
Normative Water Consumption as per MoEFCC's Norms	Cubic Meter	13066200	13030500	13030500	13030500	13066200
Rate of Water Charges based on 2018-19 approved rates	Rs. / Cubic Meter	10.64	11.70	12.87	14.16	15.58
Total Normative Water Charges	**(in Rs. lakh)**	**1390.24**	**1525.09**	**1677.60**	**1845.36**	**2035.46**

201. The Petitioner is however, directed to submit detailed justification for the high

rate of the water charges along with comparison in rate from alternative sources at the time of truing-up.

Security Expenses

202. The Petitioner has claimed 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, as under.

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2104.90	2206.16	2312.29	2423.52	2540.10

203. It is observed that the Petitioner has escalated the actual Security expenses for the year 2018-19, at the rate of 4.81% per annum, and has claimed the Security expenses (projection basis), for the period 2019-24. The Petitioner has also submitted that the 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.

204. DVPCA has submitted that there is no requirement for separate allowance of CISF security expenses as they are covered under normative O&M expenses and separate allowance of same would lead to unjust enrichment of the Petitioner. It has also submitted that the security expense claims of the Petitioner are premature, without any detailed justifications and rationale and cannot be allowed at this stage.

205. In response, the Petitioner submitted that the actual Security expense for 2018-19 has been escalated at 4.81% (which is the CAGR of Normative O&M expenses of BTPS ‘A’ from 2018-19 to 2023-24) per annum to obtain the projected figures for period 2019-24. The Petitioner has further 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.

206. The matter has been considered. It is noticed that the Security expenses for thermal generating stations for the period 2019-24 are to be allowed separately, after prudence check, based on the assessment of the security requirement and estimated expenses furnished by the Petitioner. Accordingly, the Security expenses as claimed by the Petitioner above, **is allowed**. The Petitioner shall, at the time of truing up of tariff, furnish the actual security expenses incurred along with the justification and the same shall be assessed in terms of Regulation 35(1)(6) of the 2019 Tariff Regulations.

Capital spares

207. The Petitioner has not projected any capital spares for the period 2019-24 and has submitted that the same will claimed on actual basis, at the time of truing-up of tariff of the generating station. Accordingly, the Petitioner is granted liberty to claim the capital spares. However, the Petitioner shall certify/affirm that the capital spares claimed have not been funded through Compensatory Allowance or Special Allowance or claimed as a part of additional capitalisation or consumption of stores & spares and Renovation and Modernization, at the time of truing up of tariff.

208. Based on the above discussion, the O&M expenses allowed under Regulation 35(1)(1) of the 2019 Tariff Regulations, Water Charges, Security Expenses and Capital Spares allowed under Regulation 35(1)(6) of the 2019 Tariff Regulations is summarized as under:

(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		22.51	23.30	24.12	24.97	25.84
Total O&M Expenses (A)	Claimed	11255.00	11650.00	12060.00	12485.00	12920.00

		2019-20	2020-21	2021-22	2022-23	2023-24
	Allowed	**11255.00**	**11650.00**	**12060.00**	**12485.00**	**12920.00**
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	2104.90	2206.16	2312.29	2423.52	2540.10
	Allowed	**2104.90**	**2206.16**	**2312.29**	**2423.52**	**2540.10**
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	14750.15	15381.25	16049.88	16753.88	17495.56
	Allowed	**14750.15**	**15381.25**	**16049.88**	**16753.88**	**17495.56**

Operational Norms

209. Regulation 49 of the 2019 Tariff Regulations providing for operational norms for the generating station as under:

"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:

xxx

(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 (^{0}C)	*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*

(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%*

210. 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)	2374.10
Auxiliary Power Consumption (%)	5.75
Specific Oil Consumption (ml/kwh)	0.50

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

212. The matter has been considered. We find no merit in the submissions of the Petitioner, seeking relaxation of NAPAF of the generating station in exercise of the power to relax and accordingly, the said prayer is rejected. The Petitioner has submitted that the generating station is of 500 MW units with induced draft and tube type coal mills. Since the operational norms claimed are in line with Regulation 49(A), 49(C)(b)(i),

49(D) and 49(E) of the 2019 Tariff Regulations, the claim of the Petitioner above, is allowed:

Interest on Working Capital

213. 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."*

214. 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."*

215. The Petitioner has claimed the Weighted average GCV and Cost of coal as 4503.69 kCal / kg and Rs.3097.63/kg, respectively, and those of Secondary oil as 9567.90 kCal/l and Rs.37803.36/Kl. Accordingly, 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)	8449.52	8426.43	8426.43	8426.43	8449.52
Cost of oil for 2 months (B)	117.61	117.28	117.28	117.28	117.61
O&M expenses - 1 month (C)	1229.18	1281.77	1337.49	1396.16	1457.96
Maintenance Spares - 20% of O&M (D)	2950.03	3076.25	3209.98	3350.78	3499.11
Receivables – 45 days (E)	20054.50	19878.26	19721.47	19543.27	19366.21
Total Working Capital (F) = (A+B+C+D+E)	**32800.84**	**32779.99**	**32812.66**	**32833.92**	**32890.41**
Rate of Interest (G)	12.05%	12.05%	12.05%	12.05%	12.05%
Total Interest on Working capital (H) = (F)x(G)	**3952.50**	**3949.99**	**3953.93**	**3956.49**	**3963.29**

Fuel Cost and Cost of Liquid Stock for Working Capital

216. 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 stipulated three months of October, 2018 to December 2018, as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for 50 Days	8449.52	8426.43	8426.43	8426.43	8449.52
Cost of Secondary fuel oil 2 months	117.61	117.28	117.28	117.28	117.61

217. 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. 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."

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

	Claimed	**Allowed**
Weighted average price of coal (Rs./MT)	3097.63	3097.63
Weighted average GCV of coal (kCal/kg)	4503.69	4418.69*
Weighted average price of oil (Rs./kl)	37803.36	37803.36
Weighted average GCV of oil (kCal/l)	9567.90	9567.90

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

219. Based on the allowed operational norms and allowed GCV and price of primary and secondary fuel, the fuel components in working capital have been worked out as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for 20 days for generation corresponding to NAPAF	3388.35	3388.35	3388.35	3388.35	3388.35
Cost of coal for generation for 30 days corresponding to NAPAF	5082.53	5082.53	5082.53	5082.53	5082.53
Cost of Secondary fuel oil 2 months corresponding to NAPAF	117.61	117.28	117.28	117.28	117.61

220. 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 (taking into account normative transit and handling losses, in terms of Regulation 39 of these Regulations) by the generating station and gross calorific value of the fuel, as per actual weighted average for the third quarter of preceding financial year, in case of each financial year for which tariff is to be determined. 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, at the time of truing-up of tariff.

Energy Charges for 45 days for Working Capital

221. The Petitioner has claimed Energy Charge Rate (ECR) of Paise 174.908 per 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.

222. Based on the operational norms and the price and GCV of coal [after adjusting margin of 85kCal/kg allowable as per Regulation 43(2)(b) of the 2019 Tariff Regulation 43 (2) (b) of the 2019 Tariff Regulations], received at the generation station during the stipulated three months i.e. October 2018, November 2018 and December 2018, the ECR works out to Rs. 1.782/kWh as under:

Capacity	MW	500.00
Gross Station Heat Rate	Kcal/kWh	2374.10
Aux. Energy Consumption	%	5.75%
Weighted average GCV of oil	Kcal/l	9567.90
Average GCV of Coal for October to December, 2018	Kcal/kg	4418.69
Weighted average price of oil	Rs./KL	37803.36
Weighted average price of Coal	Rs./MT	3097.63
Rate of Energy Charge ex-bus	Rs./kWh	178.200

223. Energy charges for 45 days, on the basis of ECR allowed as above and NAPAF, has been worked out as follows:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
7709.07	7709.07	7709.07	7709.07	7709.07

Working Capital for Maintenance Spares

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2950.03	3076.25	3209.98	3350.78	3499.11

225. Since the claim for maintenance spares for the purpose of interest on working capital is in accordance with Regulation 34(1)(b)(iii) of the 2019 Tariff Regulations, the same is allowed.

Working Capital for Receivables

226. Receivables equivalent to 45 days of capacity charge and energy charges for the purpose of working capital is worked out and allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges (45 days)	7709.07	7709.07	7709.07	7709.07	7709.07
Fixed Charges (45 days)	9414.48	9297.54	9172.70	9057.56	8900.47
Total	**17123.54**	**17006.61**	**16881.76**	**16766.62**	**16609.54**

Working Capital for O&M Expenses

227. 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
1229.18	1281.77	1337.49	1396.16	1457.96

228. Considering the O&M expenses allowed, the O&M expenses for 1 (one) month allowed for the purpose of working capital is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1229.18	1281.77	1337.49	1396.16	1457.96

Rate of Interest for Working Capital

229. 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 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% & 2022-24 is 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 under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for Cost of Coal towards Stock – 20 days, corresponding to NAPAF (A)	3388.35	3388.35	3388.35	3388.35	3388.35

	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for Cost of Coal towards Generation – 30 days, corresponding to NAPAF(B)	5082.53	5082.53	5082.53	5082.53	5082.53
Working Capital for Cost of Secondary fuel oil – 2 months, corresponding to NAPAF (C)	117.61	117.28	117.28	117.28	117.61
Working Capital for Maintenance Spares @ 20% of O&M expenses(D)	2950.03	3076.25	3209.98	3350.78	3499.11
Working Capital for Receivables - 45 days of capacity and energy charges corresponding to NAPAF (E)	17123.54	17006.61	16881.76	16766.62	16609.54
Working Capital for O&M expenses - 1 month(F)	1229.18	1281.77	1337.49	1396.16	1457.96
Total Working Capital G=(A+B+C+D+E+F)	**29891.23**	**29952.79**	**30017.39**	**30101.71**	**30155.09**
Rate of Interest(H)	12.05%	11.25%	10.50%	10.50%	10.50%
Interest on Working capital (G x H)	**3601.89**	**3369.69**	**3151.83**	**3160.68**	**3166.28**

Additional Claims

230. In addition to the Depreciation, Interest on Loan, Return on Equity, O&M Expenses, Water Charges, Security Expenses, Interest on Working Capital, in accordance with the 2019 Tariff Regulations, the Petitioner has also claimed expenditure towards, DVC's share of savings in interest cost due to loan restructuring, 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
DVC's share of savings in interest cost due to loan restructuring	900.31	759.06	616.25	471.17	326.08
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	639.06	669.80	702.02	735.79	771.19
Total	**3500.92**	**3485.19**	**3467.63**	**3437.37**	**3420.07**

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

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

under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Ash Evacuation Expenses	372.93	390.87	409.67	429.38	450.03
Mega Insurance Expenses	62.75	65.77	68.93	72.24	75.72
Share of Subsidiary Activities	203.38	213.17	223.42	234.17	245.43
Total	**639.06**	**669.80**	**702.02**	**735.79**	**771.19**

232. DVPCA has submitted that the claim for expenses towards Ash evacuation, Mega insurance and Subsidiary activities may be rejected, as such expenses are already built-in in the normative O&M expenses, which are in the nature of a price-cap. It has further submitted that there is no provision in the 2019 Tariff Regulations, which allows the recovery of such expenses from the beneficiaries over and above the specified O&M expenses. Thus, DVPCA has submitted that these expenses ought to be met from the normative O&M expenses allowed to the Petitioner and cannot be allowed separately.

Ash Evacuation Expenses

233. The Petitioner has claimed total expenditure of Rs. 2052.87 lakh (Rs.372.93 lakh in 2019-20, Rs.390.87 lakh in 2020-21, Rs.409.67 lakh in 2021-22, Rs.429.38 lakh in 2022-23 and Rs.450.03 lakh in 2023-24) in the period 2019-24, towards Ash Evacuation Expenses. In justification for 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.

234. 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, DVPCA has stated that there is no rationale to allow such expenses over and above the normative O&M expenses for the period 2019-24.

235. 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 utilize 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.*

236. 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 BTPS and the same was allowed in 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 upto the date of this order, in 6 (six) equal instalments (without interest) commencing from the following month of the date of this order and thereafter, the recovery of the same, may be effected through monthly bills. The Petitioner is however, directed to submit all relevant documents in terms of the MoEF&CC notification and the provisions of the 2019 Tariff Regulations, including the year-wise audited statements, detailed justification, the ash available, plant wise income from sale of ash, quantity of ash produced, quantity of ash transported within 100 kms and beyond, revenue received, interest accrued, the statement of ash fund account as on 31.3.2014, 25.1.2016 and 31.3.2019, transportation cost borne by the end consumer, scheduled rate, etc., at the time of truing up of tariff. It is noticed that in the past, the Petitioner has used road transportation (trucks) for transportation of ash. In terms of this, the Petitioner is directed to explore other economic and environmentally friendly alternatives for ash disposal such as ash slurry pipeline, wagons instead of road transportation. Accordingly, the ash transportation charges allowed @ 90% of the claimed expenses are as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
335.63	351.78	368.70	386.44	405.03

Mega Insurance Expenses

237. The Petitioner has claimed total amount of Rs.345.41 lakh (Rs.62.75 lakh in 2019-20, Rs.65.77 lakh in 2020-21, Rs.68.93 lakh in 2021-22, Rs.72.24 lakh in 2022-

23 and Rs. 75.72 lakh in 2023-24) in the period 2019-24, towards Mega Insurance expenses under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

238. 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 has reiterated its submissions made in its petition for the period 2014-19, on this issue.

239. 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

240. The Petitioner has claimed total Rs.1119.58 lakh (Rs.203.38 lakh in 2019-20, Rs. 213.17 lakh in 2020-21, Rs.223.42 lakh in 2021-22, Rs.234.17 lakh in 2022-23 and Rs. 245.43 lakh in 2023-24) in the period 2019-24, towards Share of Subsidiary Activities under Regulations 76 and Regulation 77 of the 2019 Tariff Regulations.

241. 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 31.8.2016 in Petition No. 347/GT/2014, had disallowed the expenditure on subsidiary activity and the same was to be recovered as part of the normative O&M expenses. 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.

242. The matter has been considered. It is noted that APTEL vide its judgement dated 23.11.2007 and Hon'ble Supreme Court judgement dated 23.7.2018 had observed that the apportioned expenditure associated with subsidiary activities can be recovered through electricity tariff. However, the claim of the Petitioner shall be considered at the time of truing up of tariff, subject to the Petitioner furnishing the actual audited apportioned expenditure associated with subsidiary activities along with proper justification for the expenses claimed.

Share of Common Office Expenditure

243. The Petitioner has submitted that the projected expenditure pertaining to common office expenditure such as Direction Office, Central Office, Other Offices,

Subsidiary activities, IT centre and R&D caters services to all generating stations as well as composite transmission and distribution systems. The Petitioner has stated that it has allocated the cost of common offices amongst its generating stations, on the basis of installed capacity and has claimed additional capital expenditure, as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Direction Office	-	-	-	-	-
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**	**-**

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

245. 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

	2019-20	2020-21	2021-22	2022-23	2023-24
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**

246. 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 BTPS – 'A'	98.33	105.52	106.85	91.89	83.76

247. 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 the 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 portable CT&PT Analyser (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	-	-

		2019-20	2020-21	2021-22	2022-23	2023-24
8	Fully Automatic Three Phase Transformer Test Kit (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**	**-**

248. 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, GOI, NCIIPC network security layer are proposed to be established, so that access to the system is provided to authenticated users only. As regard claim for Data centre, the Petitioner has submitted that the procurement of hardware and licenses for

Oracle to host EBA and other DVC applications, website, Firewall, Managed Back-up services, Load Balancer, IPS and Log Servers, IT infrastructure servers like DHCP, Ex-Bus, DNS, Virtualization, Security Appliances and storage in a DRC at different seismic zone, has been planned to be completed during the year 2019-20 and 2020-21.

249. The matter has been considered. It is observed that the items mentioned under the head 'Substation Equipment's' are required for the efficient functioning of the substations (including generating stations' switchyards) and therefore, the claim is allowed. As regards Network Access Controller, next Generation Firewall (NGFW), Networking switches and Data Centre, it is observed that the proposed additional expenditure is for measures taken to strengthen cyber security, in terms of the MOP, GOI guidelines dated 12.4.2010 and therefore the claim is allowed. Further, considering the nature of works, additional capitalization claimed against the head 'IT Equipment' are allowed. Further, the Petitioner is directed to furnish additional information regarding the total expenditure incurred on this count, segregated claims during the periods 2014-19 and 2019-24, expenditure envisaged in future etc., along with supporting documents, at the time of truing-up of tariff.

250. Based on the above, the total additional capital expenditure allowed under Common Office Expenditure for the period 2019-24 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	960.00	1240.00	0.00	0.00	0.00
Total	**1092.00**	**1306.39**	**222.42**	**15.52**	**0.00**

251. 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.

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

(Rs. in lakh)

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

(Rs. in lakh)

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

253. As regards the common office expenditure for the generating station, it is further observed that the Commission vide its order dated 17.3.2017 in Petition No. 207/ GT/ 2015 has observed as under:

> *"89. In response to the directions of the Commission, it is observed that the petitioner has not submitted any details regarding the additional capitalization claimed under IT offices. In view of this, the additional capitalization claimed under IT office is not allowed. However, the petitioner is granted liberty to submit detailed justification on the said claim at the time of revision of tariff based on truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations. It is noticed that the claim of the petitioner for common office expenditure is in line with the Commission's order dated 6.8.2009 in Petition No. 66/2005 and order dated 8.5.2013 in Petition No. 272/2010. The Commission has considered the O&M norms for this generating station as specified for 500 MW units including the expenditure for Common Offices in respect of depreciation and interest on loan. Accordingly, as also discussed earlier, only return on equity towards cost of cost offices has been allowed in computation of cost of common offices. The annual fixed charges of Common offices as worked out have been apportioned to the generating stations / T&D*

systems as considered as on 31.3.2014."

254. The Commission has considered the O&M norms for this generating station as specified for 500 MW units, including the expenditure for Common Offices in respect of depreciation and interest on loan. Therefore, only ROE has been allowed as computed in the above table. Accordingly, the share of Common office expense computed for this generating station is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Total Common Office Expenditure for generating stations (A)	981.93	965.06	958.12	957.47	874.16
Total Common Office Expenditure for T&D (B)	84.69	83.23	82.63	82.58	75.39
Total Common Office Expenditure for generating stations and T&D C=(A+B)	1066.62	1048.29	1040.75	1040.05	949.55
Total Depreciation for generating stations and T&D (D)	458.06	357.82	300.14	310.67	232.58
Total Interest on loan for generating stations and T&D (E)	91.10	136.51	163.38	148.52	135.87
Total Return on equity on for generating stations and T&D (F)	517.46	553.96	577.23	580.86	581.10
Total of Depreciation, Interest on Loan and ROE of Generating Station and T&D (G)	1066.62	1048.29	1040.75	1040.05	949.55
Return on equity corresponding to the generating stations only(H)= (A/C)*F	476.38	509.98	531.40	534.74	534.96
Apportionment of the common office expenditure as claimed to BTPS 'A' including depreciation, interest on loan and ROE. (I)	67.84	66.67	66.19	66.15	60.39
Apportioned amount of only "Return on Equity" corresponding to the generating station(J)= (I/A)xH	32.91	35.23	36.71	36.94	36.96

255. In view of above discussions, the Common Office expenditure allowed to the generating station is as under:

(Rs. in lakh)

Common Office Expenditure	2014-15	2015-16	2016-17	2017-18	2018-19
BTPS Units A	32.91	35.23	36.71	36.94	36.96

Annual Fixed Charges approved for the period 2019-24

256. Accordingly, the annual fixed charges allowed for the generating station is summarized as follows:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	25385.39	25809.68	26293.19	26717.49	27082.57
Interest on loan	17384.47	15157.65	12941.06	10624.08	8213.26
Return on Equity	15449.17	15695.12	15964.81	16210.71	16432.82
Interest on Working Capital	3601.89	3369.69	3151.83	3160.68	3166.28
O&M Expenses	11255.00	11650.00	12060.00	12485.00	12920.00
Water Charges	1390.24	1525.09	1677.60	1845.36	2035.46
Security Expenses	2104.90	2206.16	2312.29	2423.52	2540.10
Sub-total (A)	**76571.06**	**75413.39**	**74400.77**	**73466.84**	**72390.50**
DVC's share of savings in interest cost due to loan restructuring	0.00	0.00	0.00	0.00	0.00
Share of P&G	0.00	0.00	0.00	0.00	0.00
Share of Common Office Expenditure	32.91	35.23	36.71	36.94	36.96
Mega Insurance	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)	**32.91**	**35.23**	**36.71**	**36.94**	**36.96**
Total Annual Fixed Charges	**76603.97**	**75448.62**	**74437.48**	**73503.78**	**72427.46**

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

257. The Ash Evacuation Expenses allowed in this order, shall be recovered separately as under:

(Rs in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
335.63	351.78	368.70	386.44	405.03

258. 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

259. 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.

260. 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.

261. Petition No. 574/GT/2020 is disposed of in terms of the above.

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