

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 205/GT/2020

Coram:

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

Date of Order: 30th November, 2022

In the matter of

Petition for truing up of annual fixed charges for the 2014-19 tariff period and for determination of tariff for the 2019-24 tariff period in respect of Unit-4 of Mejia Thermal Power Station (210 MW).

And

In the matter of

Damodar Valley Corporation,
DVC Towers, VIP Road
Kolkata

...Petitioner

Vs

1. West Bengal State Electricity Distribution Company Limited
Block 'DJ' Sector-11, Salt Lake City
Kolkata – 700 091
2. Jharkhand Bijli Vitran Nigam Limited
Engineering Building, HEC, Dhurwa,
Ranchi- 834 004

...Respondents

Parties Present:

Ms. Anushree Bardhan, Advocate, DVC
Ms. Srishti Khindaria, Advocate, DVC
Shri Manik Rakshit, DVC
Shri Subrata Ghosal, DVC
Shri Samit Mandal, DVC
Shri Arnab Kr. Sinha, DVC
Shri Rajiv Yadav, Advocate, DVPCA (Objector)



ORDER

This petition has been filed by the Petitioner, Damodar Valley Corporation, for truing-up of tariff of Mejia Thermal Power Station, Unit-4 (1 x 210 MW) (in short “the generating station”) for the 2014-19 tariff period, in terms of Regulation 8(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff of the generating station for the 2019-24 tariff period, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short ‘the 2019 Tariff Regulations’).

2. The Petitioner is a statutory body established by the Central Government under the Damodar Valley Corporation Act, 1948 (hereinafter referred to as the 'DVC Act, 1948') for the development of the Damodar Valley, with three participating Governments, namely, the Central Government, the Government of West Bengal and the Government of Jharkhand. The generating station is a non-pit head station with one Unit having a capacity of 210 MW. The actual date of commercial operation of Unit-4 of the generating station is 13.2.2005.

Background

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



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

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

4. Against the above judgment dated 23.11.2007, some of the parties namely, the Central Commission (Civil Appeal No.4289/2008), the West Bengal State Electricity Regulatory Commission (Civil Appeal No.804/2008), M/s Bhaskhar Shrachhi 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 the Tribunal dated 23.11.2007 in Appeal No.273/2006 and other connected appeals, for a *denovo* consideration of the order dated 3.10.2006, the Petition No. 66/2005 (with I.A. Nos.19/2009 and 23/2009) was heard by the Commission and tariff of the generation and inter-state transmission systems of the petitioner for the period 2006-09 was re-determined by order dated 6.8.2009, subject to the final outcome of the said Civil Appeals pending before the Hon'ble Supreme Court. Against the Commission's order dated 6.8.2009, the Petitioner filed appeal (Appeal No.146/2009) before the Tribunal on various issues. However, the



Tribunal 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 the Tribunal 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 the Tribunal 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 the Tribunal, while notifying the 2014 Tariff Regulations, applicable for the period 2014-19, incorporated Regulation 53, containing special provisions related to the generating stations of the Petitioner. Accordingly, the tariff of the generating stations of the Petitioner for the period 2014-19, were determined by this Commission, subject to the final decision of the Hon'ble Supreme Court, in the said civil appeals. Similar provisions were made by the Commission under Regulation 72, while notifying the 2019 Tariff Regulations, applicable for the tariff period 2019-24.

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

6. The Commission vide its order dated 20.9.2016 in Petition No. 352/GT/2014 had



approved the capital cost and the annual fixed charges for the 2014-19 tariff period for this generating station, as under:

Capital Cost allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	72346.67	72346.67	72346.67	72346.67	72447.67
Net Additions Allowed	0.00	0.00	0.00	101.00	0.00
Closing Capital Cost	72346.67	72346.67	72346.67	72447.67	72447.67
Average Capital Cost	72346.67	72346.67	72346.67	72397.17	72447.67

Annual fixed charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5111.99	5111.99	5111.99	3409.90	45.45
Interest on loan	216.70	0.00	0.00	0.00	0.00
Return on Equity	3364.12	3364.12	3364.12	3366.47	3368.82
Interest on Working Capital	2036.78	2055.55	2072.25	2055.32	2001.55
O&M Expenses	5019.00	5334.00	5670.00	6027.00	6407.10
Compensation Allowance	0.00	42.00	42.00	42.00	42.00
Sub-Total (A)	15748.59	15907.66	16260.36	14900.68	11864.92
Additional claims allowed					
Share of Common Office Expenditure	33.21	30.59	28.57	28.54	28.21
Additional O&M on account of Ash Evacuation, Mega Insurance, CISF Security and Share of subsidiary activities	0.00	0.00	0.00	0.00	0.00
Share of Pension & Gratuity Contribution	0.00	0.00	0.00	0.00	0.00
Sub-Total (B)	33.21	30.59	28.57	28.54	28.21
Total annual fixed charges claimed (C = A+B)	15781.80	15938.25	16288.93	14929.23	11893.13

Truing-up of tariff for the 2014-19 tariff period

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

“8. Truing up

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

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

8. In terms of the above regulations, the Petitioner, in the present petition, has



claimed the Capital cost (in Form 1(l) of the petition) and annual fixed charges for the 2014-19 tariff period, as under:

Capital Cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (A)	72346.67	72346.67	72346.67	72346.67	72346.67
Add: Addition during the year / period (B)	0.00	0.00	0.00	0.00	501.50
Less: De-capitalization during the year / period (C)	0.00	0.00	0.00	0.00	202.39
Less: Reversal during the year / period (D)	0.00	0.00	0.00	0.00	0.00
Less: Undischarged liabilities (E)	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year / period (F)	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost (G)=(A+B-C-D-E+F)	72346.67	72346.67	72346.67	72346.67	72645.78
Average Capital Cost (H)=(A+G/2)	72346.67	72346.67	72346.67	72346.67	72496.22

Annual fixed charges claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5227.44	5227.44	5227.44	3018.10	134.60
Interest on loan	213.10	0.00	0.00	0.00	10.96
Return on Equity	4256.25	4276.87	4276.87	4276.87	4297.03
Interest on Working Capital	2239.64	2288.36	2348.45	2301.27	2217.39
O&M Expenses	5019.00	5334.00	5670.00	6027.00	6407.10
Water Charges	0.00	200.76	85.41	179.88	183.08
Compensation Allowance	0.00	42.00	42.00	42.00	42.00
Sub-Total (A)	16955.43	17369.44	17650.16	15845.12	13292.16
Additional claims					
Capital Spares	0.00	88.10	21.11	7.17	0.00
DVC's share of savings in interest cost due to loan restructuring	0.00	0.00	0.00	0.00	0.34
Impact of Pay Revision due to recommendation of 7 th Pay Commission	0.00	0.00	255.07	321.04	226.13
Impact of GST as "change in Law"	0.00	0.00	0.00	14.09	48.17
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	583.96	626.86	719.68	0.00	0.00
Share of P&G expenses	311.57	800.09	879.27	1990.61	376.12
Share of Common Office Expenditure	40.91	38.28	32.54	35.23	37.70
Expenses due to Ash evacuation, Mega insurance, CISF expenditure & Expenditure for Subsidiary activity	704.37	763.89	877.61	1102.69	955.91
Sub-Total (B)	1640.81	2317.22	2785.28	3470.84	1644.37
Total annual fixed charges claimed (C = A+B)	18596.24	19686.65	20435.44	19315.97	14936.53

9. The Objector, Damodar Valley Power Consumers Association (DVPCA), vide



affidavit dated 6.10.2020 had filed Interlocutory Application (I.A No. 10/IA/2021) praying for its impleadment, as Respondent in the matter. However, the Commission vide Record of the Proceeding (ROP) dated 13.4.2021 in Petition No.564/GT/2020 & 573/GT/2020 (filed by DVC for approval of tariff of KTPS & Durgapur STPS) disposed of the said I.A, by permitting the said Objector, to file its objections/ comments and to participate in the hearing of the tariff petitions filed by the Petitioner. In terms of this, DVPCA has filed its objections vide affidavit dated 19.4.2021. This Petition was heard on 25.5.2021 through virtual conferencing, and the Commission after directing the Petitioner to submit certain additional information, reserved its order in the petition. In response, the Petitioner vide affidavit dated 1.7.2021 has filed the additional information after serving copies on the Respondents/Objector. The Petitioner vide its affidavit dated 16.7.2021 has filed its response, to the objections raised by the Objector. Since the order in the petition, could not be passed prior to the Chairperson, Shri P. K. Pujari demitting office, the Petition was re-listed and heard on 24.6.2022, through virtual conferencing. The Commission, after hearing the parties, after directing the Petitioner to submit additional information, reserved its order in the petition. In response, the Petitioner vide affidavit dated 13.7.2022, has filed additional information after serving copy on the Respondents/Objector. The Objector vide affidavit dated 22.7.2022 has filed its objections and the Petitioner vide affidavit dated 28.7.2022 has filed its response to the same. Taking into consideration the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner, on prudence check, as stated in the subsequent paragraphs.

Capital Cost

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

“9. Capital Cost:

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

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

(b) additional capitalization and de-capitalization for the respective year of tariff as



- determined in accordance with Regulation 14; and
(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.
xxx...”

11. The Commission vide its order dated 29.7.2016 in Petition No. 466/GT/2014 had allowed the closing capital cost of Rs.72346.67 lakh, as on 31.3.2014 and the same has been considered as the opening capital cost, as on 1.4.2014, in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

Additional Capital Expenditure

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

“14. Additional Capitalization and De-capitalization:

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

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

(ii) Works deferred for execution;

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

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

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

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

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

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

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

(iii) Deferred works relating to ash pond or ash handling system in the original scope of work; and

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

(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the



following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

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

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

(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;

(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;

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

(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;

(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal /lignite-based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;

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

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

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

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

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



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

13. The Commission vide its order dated 20.9.2016 in Petition No. 352/GT/2014 had allowed the additional capital expenditure for Rs.101.00 lakh towards the Procurement, Installation and Commissioning of Continuous Ambient Air Quality Monitoring Stations (CAAQMS)-1 set in 2017-18, under Regulation 14(3)(iii) of the 2014 Tariff Regulations as claimed by the Petitioner.

14. The Petitioner vide Form-9A of the affidavit dated 21.1.2020, had claimed total additional capital expenditure of Rs 299.11 lakh in 2018-19 as detailed below:

<i>(Rs. in lakh)</i>		
	Regulation	2018-19
Control Relay Panel	14(3)(vii) and 54 & 55	480.26
CHP (IV) MTPS		21.24
Total Additional Capitalization (A)		501.50
Less: De-capitalization during the year / period (B)		202.39
Less: Reversal during the year / period (C)		0.00
Less: Undischarged liabilities (D)		0.00
Add: Discharges during the year / period (E)		0.00
Net additional capitalization claimed including discharge of liability (F=A-B-C-D+E)		299.11

15. However, the Petitioner vide its affidavit dated 13.7.2022 has revised Form 9A, wherein, no additional capital expenditure and/or de-capitalization has been claimed during the 2014-19 tariff period. Accordingly, no additional capital expenditure and/or de-capitalization has been considered during the 2014-19 tariff period.

Un-discharged liabilities & Discharge of liabilities

16. The Petitioner has neither claimed any undischarged liability nor claimed any discharges during the 2014-19 tariff period. Therefore, no undischarged liabilities and discharges have been considered during the 2014-19 tariff period.

Exclusions

17. No exclusion has been claimed by the Petitioner during the 2014-19 tariff



period.

Capital cost allowed for the 2014-19 tariff period

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

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (A)	72346.67	72346.67	72346.67	72346.67	72346.67
Add: Addition during the year (B)	0.00	0.00	0.00	0.00	0.00
Less: Decapitalization during the year (C)	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year (D)	0.00	0.00	0.00	0.00	0.00
Closing Gross Block (E) = (A+B-C+D)	72346.67	72346.67	72346.67	72346.67	72346.67
Average Gross Block (F) = (A+E)/2	72346.67	72346.67	72346.67	72346.67	72346.67

Debt-Equity Ratio

19. 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.”

20. The gross normative loan and equity amounting to Rs.50642.68 lakh and Rs.21704.00 lakh respectively, as on 1.4.2014, as considered in order dated 20.9.2016 in Petition No. 352/GT/2014, has been retained for the purpose of tariff. As no additional capital expenditure has been claimed/considered for the 2014-19 tariff period, the same has been considered as ‘nil’. Accordingly, the debt-equity ratio allowed for the generating station, as on 1.4.2014 and 31.3.2019, are as follows:

(Rs. in lakh)

	Capital cost as on 1.4.2014		Additional Capital Expenditure during 2014-19		Capital cost as on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt (A)	50642.68	70.00%	0.00	70.00%	50642.68	70.00%
Equity (B)	21704.00	30.00%	0.00	30.00%	21704.00	30.00%
Total (A+B)	72346.67	100.00%	0.00	100.00%	72346.67	100.00%

Return on Equity

21. 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:

Provided that:

- (i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*
- (ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:*
- (iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:*
- (iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:*



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

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

“25. Tax on Return on Equity:

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

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

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

Illustration.

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

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

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

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

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

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

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

23. 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 return on equity, at the end of every financial year, based on the actual tax paid, together with any additional tax demand, including interest thereon, duly adjusted for any refund of tax, including interest received from the income tax authorities, pertaining to the 2014-19 tariff period, on actual gross income, of any financial year.

24. The Objector, DVPCA has submitted that though the Petitioner has considered effective tax rate of 20.9605%, 21.3416%, 21.3416%, 21.3416% and 21.548% for the computation of ROE for the 2014-19 tariff period, the Audited accounts reveal that the Petitioner has not paid any actual tax during the period from 2014-18. It has stated that for 2018-19, the deferred tax liability which gets materialised in the said year, pertains to the year 2012-13. Referring to Regulation 49 of the 2014 Tariff Regulations, the objector has stated that the claim is in contravention to the provisions of 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 for the 2014-19 tariff period. However, it has sought leave of the Commission, to claim Income Tax liability, if any, which may arise in future.

25. The matter has been considered. Since, the Petitioner has not paid any income tax in any of the financial years, for the 2014-19 tariff period, 'nil' rate has been considered as the effective tax rate for the respective financial years, for the purpose of grossing up of ROE, in terms of the provisions of the 2014 Tariff Regulations. Accordingly, ROE has been worked out as follows:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Equity-Opening (A)	21704.00	21704.00	21704.00	21704.00	21704.00



	2014-15	2015-16	2016-17	2017-18	2018-19
Addition of Equity due to additional capital expenditure (B)	0.00	0.00	0.00	0.00	0.00
Normative Equity-Closing (C) = (A) + (B)	21704.00	21704.00	21704.00	21704.00	21704.00
Average Normative Equity (D) = (A+C)/2	21704.00	21704.00	21704.00	21704.00	21704.00
Return on Equity (Base Rate) (E)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate (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) annualized (H) = (D)*(G)	3364.12	3364.12	3364.12	3364.12	3364.12

Interest on Loan

26. 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.”

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

- (i) Gross normative loan amounting to Rs.50642.68 lakh as on 1.4.2014 as considered in the order dated 20.9.2016 in Petition No. 352/GT/2014 has been considered as on 1.4.2014;
- (ii) Cumulative repayment amounting to Rs.46411.59 lakh as on 1.4.2014 as considered in the order dated 20.9.2016 in Petition No. 352/GT/2014 has been considered as on 1.4.2014.
- (iii) Accordingly, the net normative opening loan as on 1.4.2014 is considered as Rs.4231.09 lakh.
- (iv) As there is 'Nil' additional capital expenditure during 2014-19 tariff period, no addition to normative loan has been considered.
- (v) The repayment for the respective years of the 2014-19 tariff period has been considered equal to the depreciation allowed for that year.
- (vi) In line with the Regulations, the weighted average rate of interest (WAROI) has been calculated by applying the actual loan portfolio existing as on 1.4.2014 along with subsequent additions during the 2014-19 tariff period, if any, for the generating station. In case of loans carrying floating rate of interest the rate of interest as provided by the Petitioner has been considered for the purpose of tariff.
- (vii) The Petitioner was directed vide ROP of the hearing dated 24.6.2022, to justify the inclusion of Loan-5 DVC Bonds (For T&D)-fully repaid on 26.2.2017 and Loan-6 REC Loan (For T&D) for computation of weighted average rate of interest (WAROI) for generating station. In response, the Petitioner, vide affidavit dated 13.7.2022, has submitted that the Commission may exclude these two loans from loan portfolio, while computing WAROI. Similarly, RVP loan and US Exim loan was taken for specific purpose. The Petitioner provided revised form-13 after excluding REC loan, DVC Bonds (T&D), RVP and US Exim Bank.
- (viii) Revised Form 13, submitted by the Petitioner as above, has been considered for the purpose of computation of WAROI and accordingly WAROI has been used in computation of Interest on Loan.

28. Necessary calculation for interest on loan is as under:

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



	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan (A)	50642.68	50642.68	50642.68	50642.68	50642.68
Cumulative repayment of loan up to previous year (B)	46411.59	50642.68	50642.68	50642.68	50642.68
Net Loan Opening (C) = (A) - (B)	4231.09	0.00	0.00	0.00	0.00
Addition due to additional capital expenditure (D)	0.00	0.00	0.00	0.00	0.00
Repayment of loan during the year (E)	4231.09	0.00	0.00	0.00	0.00
Less: Repayment adjustment on account of de-capitalization (F)	0.00	0.00	0.00	0.00	0.00
Net Repayment (G) = (E) - (F)	4231.09	0.00	0.00	0.00	0.00
Net Loan Closing (H) =(C) +(D) -(G)	0.00	0.00	0.00	0.00	0.00
Average Loan (I) = (C+H)/2	2115.54	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest of loan (J)	8.9403%	8.9424%	8.9448%	6.9122%	6.9122%
Interest on Loan (K) = (I)*(J)	189.14	0.00	0.00	0.00	0.00

29. Further, the Petitioner has claimed its share of savings due to loan restructuring (i.e., one-third share) amounting to Rs.0.34 lakh in 2018-19, in terms of Regulation 26(7) of the 2014 Tariff Regulations. In this regard, it is observed that as per the Petitioner's submission *vide* affidavit dated 13.7.2022, REC loan is not considered in the actual loan portfolio, for the purpose of computation of WAROI, as the loan pertains to the T&D system of the Petitioner. Therefore, the claim for sharing of savings, due to loan restructuring deserve no merit or consideration.

Depreciation

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

"27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

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

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



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

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

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

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

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

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

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

(7) *The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) 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.”*

31. Regulation 53 (2)(iii) of the 2014 Tariff Regulations provides as under:

“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)xxxx

(ii)xxxx

(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.

32. The cumulative depreciation amounting to Rs.46411.59 lakh as on 1.4.2014, as considered in order dated 20.9.2016 in Petition No. 352/GT/2014, has been retained



for the purpose of tariff. The weighted average rate of depreciation calculated (Annexure-I) in terms of Regulation 53(2)(iii) read with Regulation 27 of the 2014 Tariff Regulations, has been considered for calculation of depreciation. Accordingly, depreciation is worked out and allowed as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Average Capital Cost (A)	72346.67	72346.67	72346.67	72346.67	72346.67
Value of freehold land included in average capital cost (B)	0.00	0.00	0.00	0.00	0.00
Aggregated Depreciable Value (C) = (A-B) *90%	65112.00	65112.00	65112.00	65112.00	65112.00
Remaining aggregate depreciable value at the beginning of the year (D) = (C)-((Cumulative Depreciation (shown at K) at the end of the previous year))	18700.41	13472.98	8245.54	3018.10	0.00
No. of completed years at the beginning of the year (E)	9.13	10.13	11.13	12.13	13.13
Balance useful life at the beginning of the year (F) = 25 - (E)	15.87	14.87	13.87	12.87	11.87
Weighted Average Rate of Depreciation (WAROD) (G)	7.2255%	7.2255%	7.2255%	7.2255%	7.2277%
Combined Depreciation during the year (H) = Minimum of [(A) * (G) or D]	5227.44	5227.44	5227.44	3018.10	0.00
Cumulative depreciation at the end of the year (before adjustment for de-capitalization) (I) = (H) + (K of the previous year)	51639.03	56866.46	62093.90	65112.00	65112.00
Less: Depreciation adjustment on account of de-capitalization (J)	0.00	0.00	0.00	0.00	0.00
Cumulative depreciation at the end of the year* (K) = (I) - (J)	51639.03	56866.46	62093.90	65112.00	65112.00

*Cumulative depreciation at the end of 2013-14 was Rs.46411.59 lakh.

Operation & Maintenance Expenses

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

(Rs. in lakh/MW)				
2014-15	2015-16	2016-17	2017-18	2018-19
23.90	25.40	27.00	28.70	30.51

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

(Rs. in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19



2014-15	2015-16	2016-17	2017-18	2018-19
5019.00	5334.00	5670.00	6027.00	6407.10

35. The normative O&M expenses claimed for the 2014-19 tariff period are in terms of Regulation 29(1)(a) of the 2014 Tariff Regulations and is therefore allowed.

Water Charges

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

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

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

37. The Petitioner has claimed total actual expenditure of Rs.649.13 lakh incurred during the period 2014-19 (i.e. Rs.200.76 lakh in 2015-16, Rs.85.41 lakh in 2016-17, Rs.179.88 lakh in 2017-18 and Rs.183.08 lakh in 2018-19) towards Water charges under Regulation 29(2) of the 2014 Tariff Regulations. The Commission vide ROP of the hearing dated 25.5.2021, had directed the Petitioner to submit the year-wise audited computation of actual water charges claimed, including the actual quantity of water consumed; Rate (Rs./M³) charged by the State authorities; any other charges included in the water charges, in addition to the charges calculated based on the above; and Auditor certificate to the effect that such other charges above were booked under the head ‘water charges’ during the 2014-19 tariff period. In compliance to the same, the Petitioner vide affidavit dated 1.7.2021 has furnished the auditor certificate in support of the water charges incurred for Mejia TPS (Units 1-8) and has submitted that it had apportioned the same for various units / stages, based on the year-wise actual generation during the 2014-19 tariff period.

38. The Objector, DVPCA has submitted that the actual specific water consumption



is 4.49 m³/MWh, which is higher than norm of 3.5 m³/MWh. In response, the Petitioner has submitted that the Ministry of Environment, Forest and Climate Change (MoEF&CC) vide notification dated 7.12.2015, had revised the water consumption standards for the existing thermal plants, (including the Petitioner) and reduced maximum water consumption to 3.5 m³ / MWh, within two years of the notification i.e., 6.12.2017. The Petitioner has stated that it has successfully achieved the timeline in reducing the water consumption during the control period. It has further submitted that the expenses related to water management increased during the 2014-19 tariff period, due to revision in rates of water consumption by the Petitioner's Board, which were due to increase in employee costs on account of the 7th Central Pay Commission, and capital expenditure incurred from time to time. The Petitioner while pointing out that the Commission in the Statement of Objects and Reasons (SOR) to the 2014 Tariff Regulations has observed on the uncontrollable nature of water charges, 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 2014-19 tariff period) 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./M³) charged by Damodar Valley Reservoir Regulation Committee (DVRRC) along with notification applicable for the 2014-19 tariff period, on water tariff for supply of raw water to various generating stations of the Petitioner, duly certified by Auditor. Based on the above, the Petitioner has prayed to allow the water charges claimed to be recovered in full on sharing basis.



39. The matter has been considered. It is noticed that as per MoEF&CC notification dated 7.12.2015, specific water consumption allowed for the generating station is 3.5 m3/MWh. Regulation 29(2) of the 2014 Tariff Regulations provides for consideration of the actual consumption of water depending upon type of plant, type of cooling water system etc., subject to prudence check. The Petitioner vide its affidavit dated 1.7.2021 has furnished the total audited water consumption and charges incurred thereof, for the 2014-19 tariff period. It is however noticed, that the Petitioner has booked water consumption charges for both the years i.e. 2014-15 and 2015-16, in the audited accounts of 2015-16. The details of water charges claimed are as follows:

	Water Use	Quantity of water consumed (m3)	Rate of water charges (Rs. /m3)	Water Charges as per rate (Rs. lakh)	Water charges apportioned as per annual account
2014-15	Industrial	2289697.00	5.70	130.51	0.00
	Domestic	4524.00	1.15	0.05	
		2294221.00		130.56	
2015-16	Industrial	2614136.00	5.70	149.01	200.76
	Domestic	5787.00	1.15	0.07	
		2619923.00		149.07	
2016-17	Industrial	2434160.00	5.70	138.75	85.41
	Domestic	4819.00	1.15	0.06	
		2438979.00		138.80	
2017-18	Industrial	3132075.00	5.70	178.53	179.88
	Domestic	12824.00	1.15	0.15	
		3144899.00		178.68	
2018-19	Industrial	2685645.00	5.70	153.08	183.08
	Domestic	13390.00	1.15	0.15	
		2699035.00		153.24	
Total		13197057.00		750.35	649.13

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



	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed	0.00	200.76	85.41	179.88	183.08
Allowed	0.00	200.64	85.35	179.73	182.92

Capital Spares

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

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

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

42. The Petitioner has claimed total actual expenditure of Rs.116.39 lakh (i.e., Rs.88.10 lakh in 2015-16, Rs.21.11 lakh in 2016-17 and Rs.7.17 lakh in 2017-18) towards capital spares incurred during the 2014-19 tariff period, under Regulation 29(2) of the 2014 Tariff Regulations and has prayed that the same may be allowed.

43. The Objector, DVPCA has submitted that the Petitioner has not furnished justification for incurring ‘capital spares’ and has also not substantiated as to whether the expenditure incurred has been funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of Stores & Spares and Renovation & Modernization. Further, the Petitioner has not furnished any documentary evidence to substantiate its claim for the 2014-19 tariff period. In response, the Petitioner has clarified that the details of the capital spares have already been furnished *vide* Form-17 of the true-up forms, for the 2014-19 tariff period. Further, in order to ensure reliable and efficient operation at all times by the generating station, the units/ equipment is taken under overhaul/ maintenance and inspected regularly for wear and tear and during such works, spares parts of equipment’s which became damaged/ unserviceable are replaced/ consumed so that the machine continues to perform at expected efficiency on sustained basis. In Form-



17, it has already confirmed that no part of the capital spares has been funded through compensatory allowance or special allowance or claimed as part of additional capitalization or stores and spares.

44. The Petitioner *vide* affidavit dated 13.7.2022 has revised the claim towards capital spares as Rs. 617.89 lakh (i.e., Rs.88.10 lakh in 2015-16, Rs.21.11 lakh in 2016-17, Rs.7.17 lakh in 2017-18 and Rs. 501.50 lakh in 2018- 19) as an actual expenditure incurred towards capital spares during the 2014-19 tariff period under Regulation 29(2) of the 2014 Tariff Regulations.

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

46. We have examined the list of the capital spares claimed by the Petitioner. Keeping the above principle of materiality and to ensure standardized practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs.1 lakh, on prudence check of the details furnished by the Petitioner in Form-17 of the petition, has been considered for the purpose of tariff. It is observed that the Petitioner has claimed capital spares of Rs. 480.26 lakh towards Control Relay Panel on account of upgradation and Rs. 21.24 lakh under the head CHP (IV)



MTPS' towards 'In Line Magnetic Separator (ILMS)' (on replacement basis) in 2018-19. In this regard, it is noted that the Petitioner has claimed and has been allowed compensation allowance in terms of Regulation 17 of the 2014 Tariff Regulations. Considering the nature of items, after prudence check, the upgradation control panel is allowed. However, the expenditure for ILMS is not allowed and the same may be met from the compensation allowance allowed to the Petitioner. In view of the above discussion, only those capital spares, which do not form part of the capital cost of the project, have been considered and allowed as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Capital Spares (not part of capital cost) claimed (A)	0.00	88.10	21.11	7.17	501.50
Value of capital spares (of Rs. 1 lakh and below) disallowed on individual basis (B)	0.00	0.00	0.00	0.00	0.00
Value of capital spares disallowed on individual basis (C)	0.00	0.00	0.00	0.00	21.24
Net total value of capital spares considered (D) = (A) - (B) - (C)	0.00	88.10	21.11	7.17	480.26

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

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Net total value of capital spares considered (A)	0.00	88.10	21.11	7.17	480.26
Salvage value @ 10% (B)	0.00	8.81	2.11	0.72	48.03
Net Claim allowed (C) = (A)-(B)	0.00	79.29	19.00	6.45	432.23

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



(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
Installed Capacity (MW) (A)		210.00	210.00	210.00	210.00	210.00
O&M Expenses under Reg.29(1) in Rs. lakh / MW (B)		23.90	25.40	27.00	28.70	30.51
O&M Expenses (in Rs. lakh) (C) = (A)*(B)	Claimed	5019.00	5334.00	5670.00	6027.00	6407.10
	Approved	5019.00	5334.00	5670.00	6027.00	6407.10
Water Charges (in Rs. lakh) (D)	Claimed	0.00	200.76	85.41	179.88	183.08
	Approved	0.00	200.64	85.35	179.73	182.92
Capital Spares Consumed (in Rs. lakh) (E)	Claimed	0.00	88.10	21.11	7.17	501.50
	Approved	0.00	79.29	19.00	6.45	432.23
Total O&M Expenses as allowed (including Water Charges and Capital Spares Consumed) (F) = (C+D+E)	Claimed	5019.00	5622.87	5776.52	6214.05	7091.68
	Approved	5019.00	5613.94	5774.35	6213.19	7022.26

Compensation Allowance

49. Regulation 17 of the 2014 Tariff Regulations provides as follows:

“17. Compensation Allowance:

- (1) In case of coal-based or lignite-fired thermal generating station or a unit thereof, a separate compensation allowance shall be admissible to meet expenses on new assets of capital nature which are not admissible under Regulation 14 of these regulations, and in such an event, revision of the capital cost shall not be allowed on account of compensation allowance, but the compensation allowance shall be allowed to be recovered separately.
- (2) The compensation allowance shall be allowed in the following manner from the year following the year of completion of 10, 15 or 20 years of useful life.

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

50. The Petitioner has claimed compensation allowance as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
0.00	42.00	42.00	42.00	42.00

51. In terms of Regulation 17 of the 2014 Tariff Regulations, the compensation allowance allowed to the generating station is as under:

(Rs. in lakh)

	Unit-I
Installed Capacity in MW	210
COD	13-February-2005
Balance Useful life as on 1.4.2014 (in years)	15.87
a) 10 Years	13-February-2015
b) 15 Years	13-February-2020



	Unit-I
c) 20 Years	13-February-2025
2014-15	0.00
2015-16	42.00
2016-17	42.00
2017-18	42.00
2018-19	42.00
Total	168.00

Operational Norms

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

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

Normative Annual Plant Availability Factor

53. 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.

54. The Petitioner has claimed NAPAF of 83% for the 2014-19 tariff period, against the NAPAF of 85% specified under the said Regulations. In justification for the same, the Petitioner has submitted that during the monsoon, the coal supply was inadequate, and thus, the PAF of the generating station was adversely impacted. 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.

55. The Objector, DVPCA has submitted that the arrangement of adequate coal supply is the sole responsibility of the Petitioner and the coal supply is being governed



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

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

Gross Station Heat Rate

57. The Petitioner has claimed Gross Station Heat Rate (GSHR) of plant as 2450



Kcal / kWh. As the Gross Station Heat Rate claimed is in accordance with the provisions of Regulation 36(C)(a) of the 2014 Tariff Regulations, the same is allowed.

Auxiliary Energy Consumption

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

Secondary Fuel Oil Consumption

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

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

	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Annual Plant Availability Factor (NAPAF) (%)	83%	83%	83%	85%	85%
Gross Station Heat Rate (GSHR) (kCal/kWh)	2450.00	2450.00	2450.00	2450.00	2450.00
Auxiliary Power Consumption (%)	9.00%	9.00%	9.00%	9.00%	9.00%
Specific Oil Consumption (ml/kWh)	1.00	1.00	1.00	1.00	1.00

Interest on Working Capital

61. Regulation 28 of the 2014 Tariff Regulations provide 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.”

62. The Petitioner has claimed Interest on Working Capital as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal/Lignite for Stock and Generation	5891.19	5907.33	6033.15	5891.19	5891.19
Cost of oil for 2 months (B)	143.05	143.44	146.50	143.05	143.05
O & M expenses - 1 month (C)	418.25	461.23	479.62	517.24	549.18
Maintenance Spares - 20% of O&M (D)	1003.80	1106.95	1151.08	1241.38	1318.04
Receivables - 2 months (E)	9133.61	9331.88	9585.55	9253.57	8523.66
Total Working Capital (F) = (A+B+C+D+E)	16589.91	16950.84	17395.89	17046.43	16425.12
Rate of Interest (G)	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital (H) = (F)x(G)	2239.64	2288.36	2348.45	2301.27	2217.39

(a) Fuel Cost for Working Capital

63. Sub-clauses (i), (ii) and (iii) of Regulation 28(1) of the 2014 Tariff Regulations provide for 30 days of cost of coal stock, 30 days of cost of coal towards generation and cost of secondary oil for two months respectively, to be considered for computation of working capital and in terms of Regulation 28(2) of the 2014 Tariff



Regulations, 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.

64. 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

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

(b) xxxxx

Where,

AUX = Normative auxiliary energy consumption in percentage.

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

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

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

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

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

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

LC = Normative limestone consumption in kg per kWh.

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

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

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

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

65. 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.”

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

67. The matter has been considered. As stated above, the Petitioner, in Form-15, has considered the average GCV of coal on “as received” basis i.e. from Wagon top, for the period from January 2014 to March 2014, for the purpose of computation of working capital for the 2014-19 tariff period. Accordingly, the cost for fuel components in working capital has been computed considering the fuel details (price and GCV) as per Form-15 and GCV of 3262.82 Kcal/kg. It is observed that while the Petitioner in Form-15 of the 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, the information furnished in excel soft copy has been considered. It is also observed that the Petitioner has claimed transit & handling loss of coal, GCV and price of primary and secondary fuel in line with the regulations. Accordingly, the weighted average cost and GCV of primary and secondary fuel and the cost of fuel components in working capital allowed as follows:



	Allowed
Weighted average price of coal (Rs./MT)	3095.28
Weighted average GCV of coal (kCal/kg)	3262.82
Weighted average price of oil (Rs./kl)	56214.05
Weighted average GCV of oil (kCal/l)	9685.35

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

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (30 days)	2905.24	2905.24	2905.24	2975.25	2975.25
Cost of Coal towards Generation (30 days)	2905.24	2905.24	2905.24	2975.25	2975.25
Cost of Secondary fuel oil 2 months	143.05	143.44	143.05	146.50	146.50

(b) Working capital for Maintenance Spares

69. The Petitioner has claimed maintenance spares in working capital as follows:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
1003.80	1106.95	1151.08	1241.38	1318.04

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

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
1003.80	1122.79	1154.87	1242.64	1404.45

(c) Working Capital for O & M Expenses

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

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
418.25	461.23	479.62	517.24	549.18

72. It is noticed that the Petitioner has claimed e 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:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
418.25	467.83	481.20	517.77	585.19

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

73. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of 260.574 Paise/kWh for the generating station based on the landed cost of coal, GCV of coal & GCV and price of Oil for the preceding three months of 2014-19 for the generating station. The GCV and price of Oil as claimed by the Petitioner are allowed. Accordingly, the ECR allowed as follows:

	Unit	2014-19
Capacity	MW	210.00
Gross Station Heat Rate	Kcal/kWh	2450.00
Aux. Energy Consumption	%	9.00
Weighted average GCV of oil	Kcal/lit	9685.35
Average GCV of Coal for Jan to March 2014	Kcal/kg	3262.82
Weighted average price of oil	Rs. /KL	56214.05
Weighted average price of Coal	Rs. /MT	3095.28
Rate of Energy Charge ex-bus	Rs. /kWh	2.606

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

- a) ECR of Rs. 2.606/kWh as calculated above (rounded off to three places as per Regulation 30(6) of 2014 Regulations).
- b) Ex-bus energy (two months), corresponding to the installed capacity of 210 MW normative availability of 83% for first three years and 85% for last two years during the 2014-19 tariff period, and Auxiliary Energy Consumption of 9.00%.

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



(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
6034.84	6051.38	6034.84	6180.26	6180.26

(e) Receivables for Working Capital

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Energy Charges -for two months generation corresponding to NAPAF (A)	6034.84	6051.38	6034.84	6180.26	6180.26
Capacity Charges – for two months generation corresponding to NAPAF (B)	2661.57	2735.03	2763.04	2470.67	2099.30
Total (C) = (A+B)	8696.41	8786.41	8797.88	8650.93	8279.56

(f) Rate of interest on working capital

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working capital for Cost of Coal for Stock (30 days generation corresponding to NAPAF) (A)	2905.24	2905.24	2905.24	2975.25	2975.25
Working capital for Cost of Coal for Generation (30 days generation corresponding to NAPAF) (B)	2905.24	2905.24	2905.24	2975.25	2975.25
Working capital for Cost of oil for 2 months generation corresponding to NAPAF (C)	143.05	143.44	143.05	146.50	146.50
Working capital for O & M expenses - 1 month (D)	418.25	467.83	481.20	517.77	585.19
Working capital for Maintenance Spares - 20% of O&M (E)	1003.80	1122.79	1154.87	1242.64	1404.45
Working capital for Receivables - 2 months (F)	8696.41	8786.41	8797.88	8650.93	8279.56
Total Working Capital (G) = (A+B+C+D+E+F)	16072.00	16330.95	16387.49	16508.34	16366.20
Rate of Interest (H)	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital (I) = (G)*(H)	2169.72	2204.68	2212.31	2228.63	2209.44

Additional O&M Expenses

78. 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, 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, the head-wise claims of the Petitioner as detailed are examined in the subsequent paragraphs.

(A) Ash Disposal Expenses

79. The Petitioner has claimed total expenditure for Rs.1682.47 lakh (i.e., Rs.265.79 lakh in 2014-15, Rs.270.62 lakh in 2015-16, Rs.291.57 lakh in 2016-17, Rs.478.36 lakh in 2017-18 and Rs.376.13 lakh in 2018-19) towards Ash Disposal expenses as additional O&M expenses for the generating station, under Regulation 8(3)(ii) of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that due to the statutory directives by the MoEF&CC, GoI *vide* Notification dated 14.9.1999 (and its amendments dated 27.8.2003, 3.11.2009 and 25.1.2016), the fly ash generated during the course of operation of the 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 Limited (ECL) has allowed the Petitioner to utilize its abandoned mines for this. Accordingly, the Petitioner has engaged various transporters for 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 for MTPS Units 1 to 8 have been booked in the annual accounts in a consolidated manner and subsequently have been apportioned among the various units of MTPS based on the actual gross generation of the units for respective years during the 2014-19 tariff period. The Petitioner has prayed to approve the Ash Disposal expenses for the 2014-19 tariff period and allow the same to be recovered in full from the beneficiaries, considering the statutory requirement as per MoEF&CC Notifications as “Change in Law” under the 2014 Tariff Regulations.

80. The Objector, DVPCA has submitted that the Commission has disallowed the claim of expenses towards Ash evacuation in a number of orders, stating that the Petitioner was fully aware of the MoEF&CC 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 stated 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 Objector has further submitted that as the actual O&M expenses including Ash Evacuation expenses are lower than the normative O&M expenses, there is no requirement of allowing Ash evacuation expenses additionally. It has also pointed out that the Commission in its order dated 20.9.2016 in Petition No. 352/GT/2014 had also not allowed Ash evacuation expenses.

81. The Petitioner, in its rejoinder, has submitted 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 2014-19 tariff period. It has also pointed out that the Commission in its



order dated 29.7.2020 in Petition No.101/MP/2019, had granted liberty to the Petitioner to claim expenses for ash transportation at the time of truing-up for the 2014-19 period. Accordingly, the Petitioner has submitted that it has claimed expenses incurred for ash transportation from its thermal generating stations during 2014-19 tariff period 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 v 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."

82. The Petitioner has stated that in compliance to the above, the transportation of fly ash was awarded through competitive bidding and the transportation charges are within the schedule rates of the respective State Governments. In addition, the



Petitioner has submitted that the revenue generated from Fly ash sales is maintained in a separate account, as per the MOEF&CC notifications, and an auditor certificate on the information associated with ash evacuation / transportation expenses in respect of various stations are as follows:

(Rs. in lakh)

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

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

Notification dated 3.11.2009:

“6. The amount collected from sale of fly ash and fly ash based products 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.”

84. The Petitioner had filed Petition No.101/MP/2019 before this Commission



seeking the recovery of the ash transportation charges from 25.1.2016, through monthly bills of beneficiaries, in terms of the MoEF&CC notification 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 and the Petitioner was accordingly 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.

85. 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 2014-19 tariff period 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.

86. 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:

	<i>(Rs. in lakh)</i>					
	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

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

	<i>(Rs. in lakh)</i>					
	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

88. 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
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

89. 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

91. It is observed that the 2014 Tariff Regulations, do not contain any provision for allowing the ash transportation charges. Accordingly, the Commission, in exercise of its regulatory powers, had allowed the expenditure towards fly ash to various other thermal generating station of NTPC, for the period 2014-19, after adjusting the revenue received from the sale of ash of such plants, in six equal instalments, starting from December, 2022, starting from December, 2022, keeping in view the interest of the beneficiaries. Considering the fact that the reimbursement of the ash transportation expenses is being allowed based on the MOEF&CC notification, these expenses are not made part of the O&M expenses and the consequent annual fixed charges being determined in this order under the 2014 Tariff Regulations. The



Petitioner is also directed to utilize the surplus fund of Rs. 1553.18 lakh pertaining to DSTPS, in terms of the MOEFCC's notification only.

92. Further, the ash transportation charges of MTPS allowed as above during the 2014-19 tariff period are apportioned to the various stages, based on their actual generation as under:

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

(B) Mega Insurance Expenses

93. The Petitioner has claimed total amount of Rs.115.39 lakh (i.e., Rs.24.00 lakh in 2014-15, Rs.3.15 lakh in 2015-16, Rs.21.52 lakh in 2016-17, Rs.48.79 lakh in 2017-18 and Rs.17.94 lakh in 2018-19) 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 such Mega Insurance for Mejia TPS have been booked in the annual accounts in a consolidated manner. Therefore, the accounted Mega Insurance expenses for Mejia TPS for the 2014-19 tariff period have been apportioned among Mejia TPS Unit- 1 to 8 based on the installed capacity of the units for the purpose of claiming during truing up. Accordingly, the apportioned Mega Insurance expenses for the generating station is claimed in the instant petition.

94. The Objector, 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 2014-19 tariff period, 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. Accordingly, the objector 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.

95. The matter has been considered. As regards, the submission of the Petitioner that the Commission had allowed expenses towards Mega insurance to Mejia 1, 2 & 3, CTPS 1, 2 & 3 etc, over and above the O&M expenses norms, it is noticed that the grant of Mega insurance was for the period prior to the 2014–19 tariff period and in exercise of its Power to Relax. 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 2014-19 tariff period, 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 allowed to the Petitioner.



Accordingly, the expenses claimed towards Mega Insurance is not allowed.

(C) CISF Security Expenses

96. The Petitioner has claimed Rs.2028.30 lakh (i.e., Rs.296.94 lakh in 2014-15, Rs.346.28 lakh in 2015-16, Rs.444.60 lakh in 2016-17, Rs.460.15 lakh in 2017-18 and Rs.480.34 lakh in 2018-19) towards CISF Security expenses as additional O&M expenses during the 2014-19 tariff period for the generating station. In justification of the same, the Petitioner has submitted the following:

- (a) The generating station is located in high alert security zone and any untoward situation arising due to the terrorist attack or theft, may cause loss of property and prolonged interruption of generation. The concerned Ministry, from time to time has directed the Petitioner, to take appropriate security arrangements at hydro generating stations, dams etc. and to strengthen the physical security of various generating stations and tighten personal security.
- (b) The Ministry of Home Affairs, GOI, had granted approval for creation of additional security personnel posts to be stationed at the generating station. Thus, accordingly, the Petitioner has deployed CISF personnel in its plants, to ensure adequate security at the plants, as well as to comply with the directives, on security measures. Accordingly, the Petitioner has been incurring expenses towards CISF security for deployment of CISF personnel and associated CISF activities.
- (c) The expenses for CISF Security for the project have been booked in the annual accounts in a consolidated manner. Therefore, the accounted CISF Security expenses for the project for the 2014-19 period has been apportioned among Unit- 1 to 8 of the projects, based on the installed capacity of the units. Accordingly, the apportioned CISF Security expenses for Units- 1 to 3 (the generating station) has been claimed.
- (d) The Commission had allowed the CISF expenses in case of this generating station *vide* order dated 9.7.2013 in Petition No. 269/GT/2012 and order dated 29.7.2016 in Petition No. 465/GT/2014 and for Chandrapura TPS (Units 1 to 3) *vide* dated 7.8.2013 in Petition No. 275/GT/2012 and order dated 29.7.2016 In Petition No. 470/GT/2014. Accordingly, the Commission may allow the CISF expenses as incurred by and apportioned to the generating station during the 2014-19 tariff period to be recovered in full, in exercise of the 'Power to Relax' under the 2014 Tariff Regulations, similar to the Commission's treatment in the aforesaid orders.

97. The Objector, DVPCA has submitted that the actual O&M expenses including the



security expenses for the 2014-19 tariff period 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.

98. 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 expense norms, was allowed only for Mejia Thermal Power Station (Units 1-3) and Chandrapura Thermal Power Station (Units 1-3), projects of the Petitioner during the 2009-14 tariff period, in exercise of its Power to Relax, but the same was not allowed to the other projects of the Petitioner. Further, the Commission while specifying the O&M expense norms for the 2014-19 tariff period, had considered Security expenses of the generating station, as part of the O&M expenses and had factored the same in the said norms. Considering the above, we do not find any reason to allow additional O&M expenses towards CISF security.

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

99. The Petitioner has claimed additional O&M expenses of Rs.14.09 lakh in 2017-18 and Rs.48.17 lakh in 2018-19 as Impact of Goods and Service Tax (GST) during the 2014-19 tariff period. The Objector, DVPCA has submitted that the Petitioner's claim is extraneous to the provisions of the 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.1/SM/2018 has considered the implementation of GST as "change in law".



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

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

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

(E) Share of Subsidiary Activities

102. The Petitioner has claimed Rs.578.32 lakh (i.e., Rs.117.66 lakh in 2014-15, Rs.143.84 lakh in 2015-16, Rs.119.92 lakh in 2016-17, Rs.115.39 lakh in 2017-18 and Rs.81.50 lakh in 2018-19) towards Share of Subsidiary Activities as additional O&M expenses during the 2014-19 tariff period. In justification of the same, the Petitioner has submitted 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 APTEL judgment dated 23.11.2007 in Appeal No.273 of 2006 and batch, the expenses with regard to Subsidiary activities are to be allowed as a pass-through element in tariff. 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 towards 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 the Share of subsidiary activities, as incurred and apportioned to the generating station during the 2014-19 tariff period for recovery in full, in exercise of the power to relax' under the 2014 Tariff Regulations.

103. The Objector, DVPCA has submitted that the Petitioner has also claimed expenses towards subsidiary activities including additional capital, O&M, Return on Equity, Interest on loan and Depreciation. It has submitted that the contribution to subsidiary fund is not allowable as the Return on Equity, Interest on loan and Depreciation, on common assets, have been claimed separately. The Objector has further submitted that the Commission had dealt with the issue of expenditure of subsidiary activities, while framing the 2014 Tariff Regulations and had specifically disallowed such expenses to be charged as additional O&M expenses *vide* order dated 20.9.2016 in Petition No.352/GT/2014. 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.

104. In response, the Petitioner has clarified the following:

(a) DVC has been undertaking multifarious functions in the Damodar Valley area in terms of Section 12 of the DVC Act, 1948 with the obligation to undertake development of Damodar Valley, which falls in the provinces of West Bengal and Jharkhand. The activities of DVC are not restricted to generation and sale/supply of



electricity. The functions of the DVC include promotion and operation of schemes for irrigation, water supply and drainage, flood control and improvement of flow conditions in the Hooghly River, navigation in the Damodar River and its tributaries and channels, afforestation and control of soil erosion and promotion of public health and agricultural, industrial, economic and general well-being in the Damodar Valley under its areas of operation. Thus, DVC is engaged in number of activities which are not commercial in nature and where no significant revenue accrues to DVC.

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

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

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

105. The submissions have been considered. Though the Petitioner has mentioned as a subsidiary activity, 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 basis of capital cost for the purpose of determination of tariff:*

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

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(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.*

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

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

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

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

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



37. Disposal of profits and deficits. —

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

(2) The net deficit, if any, in respect of any of the objects shall be made good by the Governments concerned in the proportion specified in sub-section (1):
Provided that the net deficit in respect of flood control shall be made good entirely by the Government of West Bengal and the Central Government shall have no share in such deficit.”

107. 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 the Corporation 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



with the provisions of the 2003 Act. We will, therefore, have no occasion to interfere with the findings recorded by the learned Appellate Tribunal on the above score.”

108. Accordingly, the expenses of ‘other activities’ is being allowed as claimed by the petitioner during the 2014-19 tariff period.

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

109. 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.

110. It is noticed that the Petitioner, in its tariff petitions for truing-up for the 2009-14 tariff period had made additional claims towards P&G liability based on actuarial valuation. This prayer was, however, rejected by the Commission by its various orders, on the ground that the P&G liability formed part of the O&M expense norms specified under the 2009, Tariff Regulations. Aggrieved by this decision, the Petitioner filed Appeal No.268-275 of 2016 before APTEL and the same is pending. The Petitioner, as made similar prayers in tariff petitions for the 2014-19 tariff period, which was also rejected by the Commission on the ground that the Petitioner’s contribution to P&G fund is required to be met through the normative O&M expenses, allowed to the generating stations. However, the Commission in order dated 20.9.2016 in Petition No.353/GT/2014 (approval of tariff for Panchet Hydel Power Station, Units-I &II for the 014-19 tariff period) granted liberty to the Petitioner, to claim the said relief through a separate application along with all relevant details, so that a holistic view can be taken in the matter, in accordance with law. Accordingly, the Petitioner has filed Petition No.197/MP/2016, wherein P&G contribution of Rs.3228.86 crore and impact of pay revision from January, 2016 as Rs.420.27 crore for 2014–19 was claimed over and above the normative O&M expenses specified under Regulation 29 of the 2014 Tariff Regulations. The Commission, *vide* its order dated 4.9.2019, while holding that the said petition was maintainable, disposed of the same as under:



“25.....The employee expenses, in general, form a considerable part of O&M expenses and includes all types of employee related expenses like Salary, contribution to CPF, gratuity, pension, etc., However, the submission of the Petitioner that no part of P&G contribution related to power business were factored in the O&M expenses during the base years cannot be appreciated in the absence of any supporting details/data being furnished by the Petitioner. As stated, the normative O&M expenses were specified under Regulation 29 of the 2014 Tariff Regulations after giving due consideration of the requirements of various generating companies. The Petitioner DVC has argued that in so far as the liability of pension for its employees is concerned, it is unique and different from those prevalent in other central generating stations regulated by this Commission since the revision of pension from time to time, is based on the decision of the Central Govt. However, the information/details available on record do not support the aforesaid submission of the Petitioner that it incurs extra expenditure on terminal benefits to the employees over and above the normative O&M expenses under the 2014 Tariff Regulations. In the above background and in the absence of any supporting details/data, the prayer of the Petitioner cannot be granted in this order. However, the Petitioner is at liberty to claim the said relief with all relevant information/ documents including the (a) actuarial valuation; (b) actual data duly audited and certified by the auditor and (c) annual accounts of the pension fund, at the time of truing up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations

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27. We notice that subsequently, the Petitioner has implemented the recommendations of the 7th Pay Commission for its employees with effect from 1.1.2016. In view of this, the impact of pay revision, after implementation of the 7th Pay Commission, is required to be examined on actual basis, on prudence check of the information/ details to be submitted by the Petitioner. Accordingly, we direct the Petitioner to furnish the actual impact of pay revision based on the recommendations of the 7th CPC, effective from 1.1.2016, along with details of HRA and transport allowance from July, 2017. The aforesaid details/information shall be furnished by the Petitioner at the time of truing up of tariff and the same will be considered in accordance with law.

111. Based on the above, the Petitioner, in respect of its petitions for truing-up of generation tariff for the 2014-19 tariff period, has submitted its claim for P&G contribution and impact of pay revision, as additional O&M expenses. Accordingly, the impact of pay revision and claim for P&G were examined together as detailed in below;

(i) Impact of Pay Revision

112. The Petitioner has claimed total amount of Rs.802.25 lakh (i.e., Rs.255.07 lakh in 2016-17, Rs.321.04 lakh in 2017-18 and Rs.226.13 lakh in 2018-19) towards impact of Pay revision during the 2014-19 tariff period, due to recommendations of 7th Pay Commission. Further, the Petitioner has submitted that the Commission, while specifying the 2014 Tariff Regulations, has in the Statement of Objects and Reasons



(SOR) indicated 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.

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

“True-up for 2014-19 tariff period

i. Break-up of the actual O&M expenses of the generating station under various subheads (as per Annexure-A enclosed) after including the pay revision impact (employees, CISF and Corporate Centre) and wage revision impact (minimum wages), if applicable. (in both MS Excel and PDF format).

ii. Break-up of the actual O&M expenses of Corporate Centre/other offices including pay revision impact (as per Annexure-B enclosed) for the generating station along with the allocation of the total O&M expenses to the various generating stations under construction, operational stations and any other offices/business activity, along with basis of allocating such expenditure (in both MS Excel and PDF format).

iii. Breakup of the pay revision impact claimed in respect of employees of the Petitioner Company, Security personnel stationed at the generating station and Corporate Centre/other offices employee cost allocated to the generating station. (as per Annexure-C enclosed in both MS Excel and PDF format).”

114. 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., pay revision. Accordingly, the total O&M expenses claimed by the Petitioner, in respect of the generating station, as per Annexure A, for the 2014-19 tariff period is as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
3290.78	3771.79	4392.99	5014.84	4140.44

115. 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.

116. The Objector, 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. Further, the Objector 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.



117. The Petitioner, in its rejoinder, has reiterated the submissions and has stated that the recovery of impact of pay revision is to be considered and allowed in line with tariff principles enshrined under Section 61(d) of the Act. It has also mentioned that the norms for O&M expenses under the 2014 Tariff Regulations, were determined on the basis of the actual O&M expenses for the years 2008-09 to 2012-13 and the 2014 Tariff Regulations, were notified by the Commission on 21.2.2014 i.e., prior to the implementation of the pay revision (7th CPC). Accordingly, it has submitted that while arriving at the O&M norms for the 2014-19 tariff period, 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

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

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
311.57	800.09	879.27	1990.61	376.12

119. The Petitioner, in terms of the directions 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 2014-19 tariff period.*



120. 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 2014-19 tariff period.

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

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

- (a) DVC as a statutory body is required to maintain appropriate scheme for meeting the Terminal Benefits of the employees i.e., Pension (wherever the appointment of employees is on pension basis), Gratuity, Contributory Provident Fund i.e., CPF (wherever the employment of the employees is on Provident Fund contribution basis instead of pension). The CPF scheme being an alternative to the pension scheme, is for those who have not opted or otherwise not eligible for pension scheme and DVC makes contribution to the CPF. In addition to the above, there is also a General Provident Fund (GPF), wherein, fund is contributed only by the employees but not by DVC. Thus, Provident Fund schemes are of two types, namely, the CPF and the GPF.
- (b) The article 16 and 17 of Employees Provident Funds and Miscellaneous Provisions Act, 1952 provides for administration of Provident Fund Scheme. Accordingly, DVC is maintaining Provident Fund, both CPF and GPF, in respect of each of the employees with individual account of the employees duly reflecting (a) the contribution apportioned to such employees or the contribution made by DVC, wherever applicable, (b) apportionment to such employees, apportionment of the interest earned on the money invested from the Provident Fund Scheme in approved securities and (c) contribution made by the employees to the GPF. Such



contributions are maintained in a separate account of each of the employees as per the applicable scheme.

- (c) The Pension & Gratuity Fund accounts are maintained separately by the Trust. The contributions to the Pension and Gratuity Trust are made based on actuarial valuation undertaken from time to time by actuaries appointed for the purpose. The actuarial valuation is in regard to all the employees and workmen of DVC.
- (d) No part of the amount related to Pension or Gratuity Fund contribution is used by DVC for its business activities in any of the years commencing from 01.4.2006 i.e. for the period in which the tariff is being determined by this Hon'ble Commission, upon coming into force of the Electricity Act, 2003. The contribution to the Pension & Gratuity Fund made by DVC is considered in the audited accounts of the DVC for the respective financial years.
- (e) In regard to the Provident Fund, the amount contributed is maintained by DVC but is dedicated to the benefit of DVC's employees and workmen. As in the case of Pension & Gratuity Fund, no part of the Provident Fund amount is to the account of DVC or to be utilised for the business activities of DVC. In line with the Employees Provident Funds and Miscellaneous Act, 1952, DVC is investing CPF and GPF amount in approved securities and the interest thereof is apportioned to employees. This has been reflected in Schedule 27 with two corresponding entries, namely, interest payable and interest recoverable on investment. DVC is required to duly account for all such interest.
- (f) The amount contributed by DVC to the Pension & Gratuity Fund is invested by the Trust in the name of the trust and not in the name of DVC. The interest accrued on this investment is considered as the income of the Trust. No part of the interest income is realised by DVC or appropriated by DVC in any manner and nowhere it is reflected in the audited accounts of DVC.
- (g) In view of the above, there is a difference between the Pension & Gratuity Contribution of DVC as compared to the Contributory Provident Fund.

123. The Petitioner also submitted that the O&M expenses inclusive of employees cost and thereby inclusive of the Contributory Provident Fund will not cover the revenue requirements of the DVC on account of the Pension & Gratuity Contribution on following grounds:

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



valuation. Thus, the contribution to P&G cannot be restricted to current year.

- (b) The amount of Pension & Gratuity contribution in the case of DVC is significantly more in the recent past i.e., from 1.1.2006 onwards, on account of the following factors:
- (i) Earlier, as there was no fund maintained for receiving the Pension and Gratuity Contribution, the same was being discharged by DVC on revenue basis pay as you go as in the case of any other Government Department. However, as per the mandate of the Comptroller and Auditor General and in accordance with the directions given by the Central Government, now, DVC has to maintain the Pension and Gratuity Fund. Accordingly, the contributions are being made not only for the present year working of the employees but also for all the past years of services including for persons who have retired from DVC in the past;
 - (ii) There has been a substantial increase in Pension and Gratuity payment to the employees on account of wage revision pursuant to the decision taken by the Central Government, firstly, in the year 2006 and secondly in the year 2016. These higher contributions to be made are not confined to the current year but also relates to the payment for the past services including the services rendered by the retired employees;
 - (iii) The liability under Contributory Provident Fund ceases with the year in which it is contributed. There is no actuary valuation or adjustment for upward revision on account of any wage revision etc. however, the pension payment is payable by DVC after the retirement of the employees on a continuous basis along with the revision to the pension from time to time as per the decision of the Central Government applicable to all retired employees; further the pension payment liability continues even after the death of the employee. The family pension needs to be given to the widows and other eligible members under the pension scheme.
- (c) Thus, the matter relating to Pension & Gratuity Contribution and other aspects of Terminal Benefit liabilities to the employees including the increase in such Pension and Gratuity contribution on account of actuarial valuation undertaken from time to time cannot be inter-mixed with the normative O&M expenditure provided for in the Tariff Regulations.
- (d) The normative O&M expenses determined by the Commission is based on the normalized actual quantum of expenditure incurred by the Utilities in the past period and escalation of thereof on account of inflation and other factors. Such normative expenditure would consider matters such as contribution to the Provident Fund etc. where the amount of contribution is duly factored as a percentage of the salaries and wages paid to the employees and is adopted by Central Power Sector Utilities who do not maintain a Pension scheme such as NTPC, NHPC etc, however, it cannot be ipso facto adopted for DVC, wherein, some of its employees are under Pension Scheme, as admissible to the Government departments.
- (e) The contribution which DVC has to make towards the Pension and Gratuity Fund from time to time based on the actuarial valuation including for increase in the Pension and Gratuity Contribution related to the past period on account of pay revision, is not factored into in the determination of the employees cost as part of the normative O&M cost decided by this Hon'ble Commission from time to time.



These are also not part of any specific tariff elements given in the Regulation 21 and 14 of the 2009 and 2014 Tariff Regulations, respectively.

- (f) The APTEL and the Hon'ble Supreme Court in the orders dated 23.11.2007 and 23.7.2018 respectively have directed in favour of full recovery of the P&G contribution. Further, the Commission *vide* order dated 04.09.2019 in Petition no. 197/MP/2016 granted liberty to DVC to claim the Pension and Gratuity contribution along with relevant details at the time of truing up.
- (g) The principle for apportionment of the contribution towards Pension & Gratuity fund to the different generating stations and T&D system of DVC, based on capital cost and installed capacity has been already approved by the Commission for the 2006-09 period and the same principle has been followed by DVC in its true-up petitions for the 2014-19 tariff period.
- (h) As regards linking the recovery of Pension & Gratuity contribution to Plant Availability Factor (PAF), the APTEL in its judgment dated 23.11.2007 had directed for recovery of the entire amount of the Pension & Gratuity contribution from the consumers through tariff. The said judgment of APTEL dated 23.11.2007 was upheld by the Hon'ble Supreme Court *vide* its order dated 23.7.2018. The State Commissions of West Bengal and Jharkhand in their different orders, had also allowed the full recovery of the Pension & Gratuity contribution of the Petitioner.
- (i) The Respondent's contentions may be rejected and the amount claimed towards contribution to Pension & Gratuity for the 2014-19 tariff period may be allowed to be recovered in full, on sharing basis.

Analysis and Decision

124. The submissions have been considered. As regards pay revision, it is noticed that the Petitioner has prayed and claimed the impact of pay revision on account of 7th pay commission. However, in respect of P&G, it is noted that the Petitioner has primarily pleaded for impact of pay revision on P&G but claimed the actual P&G. It is observed that the normative O&M expenses includes a gratuity and CPF of public sector undertakings. Accordingly, the O&M norms under the regulations account for gratuity and a part of pension pertaining to serving employees of Petitioner. However, the Petitioner has the liability of Pension for retired employees as well. Thus, the actual impact of pension needs to be assessed to examine the additional O&M claim by the Petitioner. It is observed that the Petitioner is maintaining the audited accounts of its entire power vertical, which consists of 15 generating stations, transmission system and distribution system, on consolidated basis. In this regard, the Petitioner has submitted that due to frequent transfer of employees from one generation station



to other generating station / T&D wing, on same post, or to the higher post, due to promotion during the period from 1.1.2016 to 31.3.2019, delayed implementation of pay revision etc., the Petitioner has expressed its difficulty to provide the station-wise impact of pay revision separately but determined it in totality for Power business and thereafter, apportioned as per methodology adopted by the Commission, while approving the common office expenditure *vide* order dated 20.9.2016 in Petition No.352/GT/2014.

125. 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.

126. In order to ascertain the justification for additional O&M expenses, over and above the normative O&M expenses allowed, a comparative analysis of the actual O&M expenses, was undertaken, including the additional normalised claims and the normative O&M expenses allowable under the various tariff petitions for truing up filed by the Petitioner. It is observed that during the 2014-19 tariff period, the total normative O&M expenses allowed as per the Tariff Regulations for the various tariff petition (both Generation and Transmission) is Rs.1044745.04 lakh. Further, as per audited financial statements water charges for Rs.38226.00 lakh (in terms of Regulation 29(2) of the 2014 Tariff Regulations) and Ash Evacuation expenses of Rs. 61182.00 lakh (as change in law) has been incurred by the Petitioner, during the



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

	<i>(Rs. in lakh)</i>					
	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	4586.00	1308.00	0.00	0.00	0.00	5894.00



Advances						
Provision for Doubtful Debts	205.00	733.00	9126.00	41657.00	8299.00	60020.00
Provision for Shortage /Obsolescence in Stores	12.00	8.00	13.00	128.00	24.00	185.00
TOTAL (B)-	5249.00	2240.00	15683.00	46078.00	8323.00	77573.00
C. REBATE & DISCOUNT ALLOWED TO FIRM CUSTOMERS (as per Petitioner submission)						
Rebate & Discount Allowed	3821.32	8983.93	8766.85	8393.73	10854.47	40820.30
TOTAL (C)-	3821.32	8983.93	8766.85	8393.73	10854.47	40820.30
NORMALISED ACTUAL O&M AS PER AUDITED STATEMENT OF ACCOUNTS (A-B-C): -	166336.68	203182.07	234527.15	274106.27	223240.53	1101392.70

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

(Rs. in lakh)

Petition No.	Generating Station / Transmission Petitions	Normative O&M expenses claimed
574/GT/2020	Bokaro Thermal Power Station-A	20741.38
569/GT/2020	Bokaro Thermal Power Station-1-3	64499.08
565/GT/2020	Chandrapur Thermal Power Station 1-3	56979.30
570/GT/2020	Chandrapur Thermal Power Station 7-8	67755.00
573/GT/2020	Durgapur Steel Thermal Power Station 1-2	90740.00
567/GT/2020	Durgapur Steel Thermal Power Station 3-4	38527.32
564/GT/2020	Koderma Thermal Power Station 1-2	89118.08
577/GT/2020	Mejia Thermal Power Station 1-3	85371.30
205/GT/2020	Mejia Thermal Power Station 4	28457.10
571/GT/2020	Mejia Thermal Power Station 5-6	67755.00
568/GT/2020	Mejia Thermal Power Station 7-8	90740.00
575/GT/2020	Raghunathpur Thermal Power Station	62340.00
578/GT/2020	Maithon Hydel Station 1-3	10931.64
566/GT/2020	Panchet Hydel Station 1-2	8830.12
572/GT/2020	Tilaiya Hydel Station1-2	3991.24
713/TT/2020	New Elements of Transmission 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) Normalised Actual O&M expenses as per audited financial statement of accounts		1101392.70
(F) Excess of Normative O&M expenses, Water Charges & Ash Evacuation charges over the normalised actual O&M Expenses (D-E): -		20912.98



128. It is evident from the above, that the total normative O & M expenses allowable in respect of all the generation and transmission tariff petitions of the Petitioner for the 2014-19 period is Rs.1044745.04 lakh, in terms of the 2014 Tariff Regulations. Also, considering the actual water charges of Rs.38226.00 lakh and Ash Evacuation Charges w.e.f. 26.1.2016 of Rs. 39334.64 lakh, the total works out to Rs.1122305.68 lakh, which is higher than the normalised actual O&M expenses of Rs.1101392.70 lakh, as per audited financial statements pertaining to Power segment. Further, as per Regulation 29(2) of the 2014 Tariff Regulations, capital spares is allowable separately and in this petition an amount of Rs.536.97 lakh has been allowed and further amounts towards Capital spares will be allowed on prudence check, in the remaining tariff petitions of the Petitioner. Since the normative O&M expenses including actual Water Charges and Ash Evacuation charges allowed separately, are in excess of the actual O&M expenses in the case of the Petitioner, we are not inclined to allow the impact of pay revision and the contribution towards P&G, Mega Insurance, CISF expenditure etc., during the 2014-19 tariff period, as sought by the Petitioner, in this petition.

Other Additional claims

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

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

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
583.96	626.86	719.68	0.00	0.00

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



(Rs. in lakh)

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

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

132. The Objector, DVPCA has submitted that the linkage of Bonds has to be established with each specific generating station. It has also stated that the allocation of principal cannot be the norm as different power plants of the DVC supply power to different entities/ beneficiaries. The Objector has further submitted that neither the provisions of Act nor the 2014 Tariff Regulations, sanction the recovery of cost, of generation assets twice over through (a) allowance of Contribution to Sinking Fund; and (b) Depreciation and allowance of Interest on loan by treating the amount realised through bonds as normative debt. It has also stated that in the earlier tariff orders relating to old plants of the Petitioner, the Commission had treated the amount realised through bonds, as normative debt, and accordingly proceeded to grant interest thereon, over and above, the allowance of contribution to Sinking fund in terms of Regulation 53(2)(iv) of the 2014 Tariff Regulations. However, Regulation 53(2)(iv) of the 2014 Tariff Regulations, will be applicable only in such cases, where normative debt is not allowed for funding the capital cost and the Petitioner cannot be



allowed both contributions to Sinking fund, as well as depreciation and interest on loan, by treating the funds realised through bond issue, as normative loan.

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

137. The matter has been examined. Section 40 of the DVC Act, 1948 provides that the Petitioner shall make provision for depreciation and for reserve and other funds at such rates and on such terms as may be specified by the C&AG in consultation with



the Central Government. The APTEL in its judgment dated 23.11.2007 in Appeal No. 271/ 2006 & batch cases, decided as under:

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

138. In terms of this judgment, the Commission in its previous tariff orders pertaining to the generating stations of the Petitioner had allowed the contributions to sinking fund. As stated earlier, the Hon'ble Supreme Court *vide* judgment dated 23.7.2018 in C.A. No.971-973/2008 (BSAL V CERC & ors.) had affirmed the said judgment of APTEL. On the issue of 'Sinking Fund' the Hon'ble Supreme Court has decided the following:

“50.....Of the remaining heads of tariff fixation, it appears that so far as the 'depreciation rate' and 'sinking fund' is concerned it is the provisions of Section 40 of the Act of 1948 which have been held to be determinative. We have gone through the reasoning adopted by the learned Appellate Tribunal in this regard. Having clarified the manner in which the fourth proviso to Section 14 of the 2003 Act has to be understood, we do not find the reasoning adopted by the learned Appellate Tribunal on the issues relating to 'depreciation' and 'sinking fund' to be fundamentally flawed in any manner so as to give rise to substantial question of law requiring our intervention /interference under Section 125 of the 2003 Act’

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

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

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



judgment dated 17.5.2019. It is noticed from the said judgment dated 17.5.2019 that similar contention of the Objector herein, have been rejected by APTEL vide its judgement dated 17.5.2019 as under:

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

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

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

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

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



generating station is approved as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
583.96	626.86	719.68	0.00	0.00

(B) Share of Common Office Expenditure

142. 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:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Central Office	50.86	94.73	43.26	1,263.95	393.86
R & D	2.72	38.31	0.00	(-)550.49	0.00
Direction Office	26.85	9.17	68.62	50.07	(-)255.83
Subsidiary Activities	0.20	1.66	7.37	3.29	0.13
IT Cell	37.69	0.00	0.00	0.00	185.62
Other Offices	1.49	30.17	44.63	406.40	62.70
Total	119.82	174.04	163.88	1,173.22	386.48

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

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Land and Land Rights	2.72	0.00	0.00	508.33	70.80
Buildings	1.49	38.31	0.00	34.91	130.47
Power House	0.00	0.00	38.84	0.00	5.42
Sub Station equipment	0.00	8.01	1.15	431.94	52.08
Other assets, Office Furniture and 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



144. The Petitioner has computed the Return on Equity, Interest on Loan and Depreciation on the Common Assets for the 2014-19 tariff period 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:

	<i>(Rs. in lakh)</i>				
	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

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Common Office Expenditure apportioned to all DVC Generating Stations	1218.63	1157.33	1152.86	1244.88	1299.41
Common Office Expenditure apportioned to T&D	105.10	99.82	99.43	107.37	112.07
Total	1323.73	1257.14	1252.29	1352.25	1411.48

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

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Common Office Expenditure apportioned to Mejia Unit-4	40.91	38.28	32.54	35.23	37.70

146. 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

147. 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

148. The Petitioner has claimed total additional capital expenditure of Rs.165.38 lakh during 2017-19 (i.e., Rs 34.91 lakh in 2017-18 and Rs.130.47 lakh in 2018-19) for Central Office; Also, an amount of Rs.1.49 lakh in 2014-15 has been claimed for Other Offices [including Central Relay & Instrumentation Testing Laboratory (CRITL), CMFS, Central Relay & Instrumentation Testing Mobile (CRITM), Central Service Organization (CSO) and Central Load Despatch (CLD)]; and Rs.38.31 lakh in 2015-16 for R&D Centre under this head. The Petitioner *vide* its affidavit dated 9.9.2022 in revised submissions mentioned that Rs. 165.38 lakh pertains to transfer of asset from DAM to central office, stamp paper & registration of a property in Delhi; Rs. 38.31 lakh pertains to expansion of R & D building and Rs.1.49 lakh towards extension of Central Testing Laboratory building; Considering the nature of expenses, the claimed expenditure as additional capitalization is allowed under the 2014 Tariff Regulations.



Power House Plant & Machinery

149. 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

150. 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

151. 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 the 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 and Fixtures

152. 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

153. The Petitioner has claimed additional capital expenditure of Rs.97.85 lakh in 2018-19 for IT Cell– HQ towards strengthening the IT Cell to safeguard the IT equipment against any cyber threat, with the overall aim to protect data, and network secrecy to ensure smooth functioning of the system. The Petitioner has submitted that the said work is in compliance to the directives of the Ministry of Power (MOP), Government of India (GOI) dated 12.4.2010 and 2.8.2017, with regard to the steps to be taken to prevent cyber-attacks. As the work is in compliance to the directives of MOP, GOI to prevent cyber-attacks, the additional capital expenditure of Rs.97.85 lakh claimed towards procurement of cyber security devices for the 2014-19 tariff period is allowed.

EBA – Integrated Software

154. 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:

155. 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.

	<i>(Rs. in lakh)</i>				
	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

156. In justification for the same, the Petitioner has submitted that to fulfil the demand of valley area as well as other state utilities and distribution licensees, these items had to be additionally procured for capacity addition during the 2014-19 tariff period. The Petitioner has also submitted that the expenditure was essential to cope up with the extra volume of works associated with the huge capacity augmentation program taken up by the Petitioner and for smooth functioning of the offices. Considering the nature of these items, the additional capitalization and decapitalization is not allowed, in terms of first proviso to Regulation 14(3) of the 2014 Tariff Regulations.

Assets Held for Disposal

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

158. 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

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Direction Office	0.00	0.00	0.00	(-)0.01	0.00
Subsidiary Activities	0.00	0.00	0.00	0.00	0.00
Other Offices	1.49	(-)0.88	(-)0.88	(-)0.29	0.00
R&D	2.72	38.31	0.00	(-)550.49	0.00
IT	37.69	0.00	0.00	0.00	97.85
Central Office	0.00	0.00	0.00	1093.73	201.27
Total	41.90	37.43	(-)0.88	542.94	299.13

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

161. The annual fixed charges for Common offices have been worked out by considering the admitted opening capital cost as on 1.4.2014. The annual fixed charges of Common Offices, as worked out for the 2014-19 tariff period, have been apportioned to generating stations/T&D systems, based on the approved capital cost as on 31.3.2014. Accordingly, in line with the decision of the Commission order dated



29.7.2016 in Petition No. 465/GT/2014, the fixed charges have been computed and has been allocated to various generating stations as under:

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

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

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
MTPS Unit-4	35.87	32.58	25.85	25.53	26.99

Annual Fixed Charges

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

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5227.44	5227.44	5227.44	3018.10	0.00
Interest on Loan	189.14	0.00	0.00	0.00	0.00
Return on Equity	3364.12	3364.12	3364.12	3364.12	3364.12
Interest on Working Capital	2169.72	2204.68	2212.31	2228.63	2209.44
O&M Expenses	5019.00	5334.00	5670.00	6027.00	6407.10
Water Charges	0.00	200.64	85.35	179.73	182.92
Capital Spares	0.00	79.29	19.00	6.45	432.23
Compensation Allowance	0.00	42.00	42.00	42.00	42.00
Sub-Total (A)	15969.41	16452.17	16620.22	14866.03	12637.81
Additional O&M Expense					
Impact of Pay Revision	0.00	0.00	0.00	0.00	0.00
Impact of GST	0.00	0.00	0.00	0.00	0.00
Share of Pension & Gratuity Contribution	0.00	0.00	0.00	0.00	0.00
Share of subsidiary Activities	117.66	143.84	119.92	115.39	81.50
Ash Disposal Expense	0.00	89.28	291.57	475.09	356.84
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	583.96	626.86	719.68	0.00	0.00
Share of Common Office Expenses	35.87	32.58	25.85	25.53	26.99
Additional O&M Expenses-Sub-Total (B)	737.50	892.56	1157.02	616.01	465.33
Total Annual Fixed Charges (C)=(A+B)	16706.91	17344.73	17777.24	15482.04	13103.14

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.

164. 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 2019-24 TARIFF PERIOD

165. The Petitioner, in this petition, has also sought the determination of tariff of the generating station for the 2019-24 tariff period, in terms of the 2019 Tariff Regulations. Accordingly, the Petitioner *vide* affidavit dated 21.1.2020 has claimed the capital cost and annual fixed charges for the 2019-24 tariff period as under:

Capital Cost claimed

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	72645.78	72897.62	73482.62	74063.39	74579.72
Add: Additions during the year / period (B)	333.33	862.32	743.66	717.54	111.32
Less: De-capitalization during the year / period (C)	81.49	277.31	162.90	201.21	0.00
Less: Reversal during the year / period (D)	0.00	0.00	0.00	0.00	0.00
Less: Undischarged liabilities (E)	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year / period (F)	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost (G) = (A+B-C-D-E+F)	72897.62	73482.62	74063.39	74579.72	74691.03
Average Capital Cost (H) = (A+G)/2	72771.70	73190.12	73773.00	74321.55	74635.37

Annual Fixed Charges claimed

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	430.08	449.92	774.18	640.30	463.53
Interest on loan	13.86	13.55	16.43	12.89	7.13
Return on Equity	4313.21	4334.94	4364.20	4394.34	4412.94
Interest on Working Capital	1856.34	1870.31	1893.58	1910.68	1931.57
O&M Expenses	6921.60	7165.20	7415.10	7677.60	7946.40
Water Charges	583.90	640.54	704.59	775.05	854.89
Security Expenses	513.63	536.23	559.83	584.47	610.18
Special Allowance	0.00	0.00	0.00	0.00	0.00
Sub-Total (A)	14632.62	15010.70	15727.90	15995.33	16226.64
DVC's share of savings in interest cost due to loan restructuring	0.64	0.63	0.76	0.60	0.33
Share of P&G	782.55	819.34	857.85	898.18	940.40



	2019-20	2020-21	2021-22	2022-23	2023-24
Share of Common Office Expenditure	41.30	44.32	44.88	38.60	35.18
Expenses for Ash Evacuation, Mega Insurance and Subsidiary Activities	496.52	518.37	541.18	564.99	589.85
Sub-Total (B)	1321.01	1382.65	1444.67	1502.36	1565.76
Total Annual Fixed Charges (A+B)	15953.63	16393.35	17172.57	17497.69	17792.40

166. It is observed, that the Petitioner vide its affidavit dated 13.7.2022 has revised the additional capital expenditure for the period 2019-22, based on the actual capitalisation during the respective years, but, the projected additional capital expenditure for the 2022-24 tariff period remain unaltered. However, the Petitioner has not submitted the revised form i.e Form (1) [Summary of Tariff] and Form (1)(I) [Statement showing claimed capital cost] based on revision of the additional capital expenditure for the period 2019-22.

Capital Cost

167. 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.

xxx.

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

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly tried up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to



sharing of benefits accrued under the PAT scheme with the beneficiaries.

....

(5) The following shall be excluded from the capital cost of the existing and new projects:

(a) The assets forming part of the project, but not in use, as declared in the tariff petition;

(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

168. The Petitioner has claimed the opening capital cost of Rs.72645.78 lakh, as on 1.4.2019. However, the closing capital cost of Rs.72346.67 lakh, as on 31.3.2019, as approved in this order, for the 2014-19 tariff period, has been considered as the opening capital cost as on 1.4.2019, for the purpose of determination of tariff for the 2019-24 tariff period, in accordance with the 2019 Tariff Regulations.

Additional Capital Expenditure

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

“25. Additional Capitalisation within the original scope and after the cut-off date:

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

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

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

(c) Deferred works relating to ash pond or ash handling system in the original scope of work;

(d) Liability for works executed prior to the cut-off date;

(e) Force Majeure events;

(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and

(g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:



(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.

26. Additional Capitalisation beyond the original scope

(1) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:

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

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

(c) Force Majeure events;

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

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

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

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

(3) 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 de-capitalisation 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.

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

<i>(Rs. in lakh)</i>							
Head of Work /Equipment	Regulation (s)	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Plant & Machinery	25(2)(a) and 25	67.49	12.04	0.00	0.00	0.00	79.53
C&I system	25(2)(c) and 26(1)(b)	0.00	0.00	0.00	360.00	60.00	420.00
Electrical Inside Power House	25(2)(c) and 25(2)(a)	0.00	0.00	0.00	38.00	0.00	38.00
Details of Capital Spares	25(2)(a) and 76 & 77	0.00	0.00	0.00	319.54	51.32	370.85
Total Additional Capitalization		67.49	12.04	0.00	717.54	111.32	908.38



Head of Work /Equipment	Regulation (s)	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Plant & Machinery	25(2)(a) and 25	67.49	12.04	0.00	0.00	0.00	79.53
Less: Decapitalization during the year / period		81.49	277.31	162.90	201.21	0.00	722.91
Less: Reversal during the year / period		0.00	0.00	0.00	0.00	0.00	0.00
Less: Undischarged liabilities		0.00	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year / period		0.00	0.00	0.00	0.00	0.00	0.00
Net additional capitalization claimed including discharge of liability		(-) 14.00	(-) 265.28	(-) 162.90	516.33	111.32	185.47

171. The head-wise additional capital expenditure claimed by the Petitioner for the 2019-24 tariff period is discussed below:

(a) Plant and Machinery

172. The additional capital expenditure claimed by the Petitioner under the heading 'Plant and Machinery' is summarized as under:

<i>(Rs. in lakh)</i>							
Plant and Machinery	Regulation	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Turbo Generator (Battery Bank for UPS system)	25(2)(a)	45.96	0.00	0.00	0.00	0.00	45.96
Turbo Generator (Sealing ring Assy LPT and IPT)	25(2)(a)	0.00	12.04	0.00	0.00	0.00	12.04
Miscellaneous Power Plant Equipment	25	21.53	0.00	0.00	0.00	0.00	21.53
Total		67.49	12.04	0.00	0.00	0.00	79.53

(i) Turbo Generator (Battery Bank for UPS system)

173. The Petitioner has claimed actual additional capital expenditure of Rs.45.96 lakh towards Turbo Generator (Battery Bank for UPS system) of the generating station in 2019-20 under Regulation 25(2)(a) of the 2019 Tariff Regulations. In justification of the same, the Petitioner has submitted that the 360 V Battery Bank (Type: 180YKP29) of the generating station was commissioned in 2004 to provide back up to the UPS supplying controlled frequency and AC Voltage to C&I system at various places viz.



CRT of control room, flame scanner system, oil gun system and other vital location which is important for reliability of system. It has been observed, that since last six months the specific gravity of some batteries has fallen below acceptable levels along with deposition of active material & heavy corrosion in positive plates of majority of cells. The OEM (M/s Exide) was consulted and after inspection of the batteries, the OEM concluded that the battery bank was deteriorating fast and it won't be possible to revive it and accordingly, the OEM recommended that as the batteries have already crossed a service life of more than 15 years, the same should be replaced by a new one.

174. The matter has been considered. The Petitioner has claimed actual additional capital expenditure under Regulation 25(2)(a) of the 2019 Tariff Regulations among with the decapitalized value of Rs.28.39 lakh in 2019-20, but not furnished any recommendations of the OEM, for prudence check. However, as the additional capital expenditure claimed by the Petitioner is necessary for the efficient operation of the generating station and has been claimed on the recommendation of OEM (that useful life of the battery bank is over), the actual additional capital expenditure claimed by the Petitioner is allowed under Regulation 25(2)(a) of the 2019 Tariff Regulations, subject to truing up. The decapitalized value of old asset is considered under decapitalization. The Petitioner is directed to submit the OEM recommendations towards the replacement of the 360 V Battery Bank, at the time of truing up of tariff.

(ii) Turbo Generator (Sealing ring Assy LPT and IPT)

175. The Petitioner has claimed actual additional capital expenditure of Rs.12.04 lakh towards Turbo Generator (Sealing ring Assy LPT and IPT) of the generating station in 2020-21 under Regulation 25(2)(a) of the 2019 Tariff Regulations. In justification of the same, the Petitioner has submitted that during COH of the generating station in 2019-20, the turbine module was dismantled and during box up



sealing ring of turbine was required to be replaced.

176. The matter has been considered. Though, the Petitioner has claimed actual additional capital expenditure under Regulation 25(2)(a) of the 2019 Tariff Regulations, it has not furnished any details of the asset, such as the date of put to use, the depreciation recovered etc. for prudence check. However, as the additional capital expenditure claimed by the Petitioner is necessary for the efficient operation of the generating station, the actual additional capital expenditure claimed by the Petitioner is allowed under Regulation 25(2)(a) of the 2019 Tariff Regulations. It is also observed that the Petitioner has not submitted the decapitalised value of the replaced asset. Therefore, the same has been considered as 'Assumed Deletions' as per consistent methodology adopted by the Commission in its various orders. The Petitioner is directed to submit the decapitalised value of the replaced asset and the date of put to use of the asset, at the time of truing up of tariff for the 2019-24 tariff period.

(iii) Miscellaneous Power Plant Equipment (Procurement of SF-6 Gas Leakage Detector and Gas Handling Device)

177. The Petitioner has claimed actual additional capital expenditure of Rs.21.53 lakh towards Miscellaneous Power Plant Equipment (Procurement of SF-6 Gas Leakage Detector and Gas Handling Device) in 2019-20 under Regulation 25 of the 2019 Tariff Regulations. In justification of the same, the Petitioner has submitted that the expenditure was made towards procurement of SF6 gas handling and leakage detection devices. It has submitted that these devices are used for filling as well as evacuation of SF6 gas in the SF6 gas circuit breakers installed in the generating station and leakage detection device is necessary for the early detection and rectification of gas leakage and is most essential in SF6 breakers, as SF6 gas leakage will lead to reduced pressure in the breakers and may results in non-operation in live



condition.

178. The matter has been considered. It is observed that the Petitioner has claimed actual additional capital expenditure under Regulation 25 of the 2019 Tariff Regulations but has not mentioned the specific clause / sub-clause of the Regulation 25 of the 2019 Tariff Regulations, under which the additional capital expenditure has been claimed. In this regard, it is also noted that the Petitioner has claimed decapitalization of “Supply, erection and commissioning of 220 kV SF6 breakers” in 2020 – 21. Further, the claimed items are common in nature and can be utilized for systems pertaining to all units of MTPS i.e., unit 1 to 8, but, the Petitioner has not furnished any apportionment details. Thus, the additional capital proposed by the Petitioner is not justified. Accordingly, the additional capital expenditure claimed by the Petitioner is not allowed. However, the Petitioner is granted liberty to claim the same under the relevant provisions of the regulations along with appropriate justification thereof, at the time of truing up of tariff.

179. Accordingly, the additional capital expenditure allowed under the heading ‘Miscellaneous Power Plant Equipment (Procurement of SF-6 Gas Leakage Detector and Gas Handling Device)’ is summarized below:

<i>(Rs. in lakh)</i>						
C&I System	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Turbo Generator (Battery Bank for UPS system)	45.96	0.00	0.00	0.00	0.00	45.96
Turbo Generator (Sealing ring Assy LPT and IPT)	0.00	12.04	0.00	0.00	0.00	12.04
Miscellaneous Power Plant Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Total	45.96	12.04	0.00	0.00	0.00	58.00

(b) C&I System

180. The additional capital expenditure claimed by the Petitioner under the heading ‘C&I System’ is summarised as follows:



(Rs. in lakh)

Plant and Machinery	Regulation	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Upgradation of DPU - 4E Controller of SG & TG packages of Unit -4	25 (2) (c)	0.00	0.00	40.00	360.00	0.00	400.00
Procurement, erection & Commissioning of New Pollution Equipment / System	26(1)(b)	0.00	0.00	0.00	0.00	60.00	60.00
Total		0.00	0.00	40.00	360.00	60.00	460.00

(i) Upgradation of DPU - 4E Controller of SG & TG packages of Unit-4

181. The Petitioner has claimed total projected additional capital expenditure of Rs.360.00 lakh in 2022-23 towards Upgradation of DPU-4E Controller of SG & TG packages of the generating station, under Regulation 25(2)(c) of the 2019 Tariff Regulations. In justification of the same, the Petitioner has submitted that presently SG & TG Controller of Unit-4 of the generating station is 4E and BOP Controller is 4F of max DNA Control System. The Petitioner has also submitted that M/s BHEL (OEM) is not supporting for spares and accordingly, the maintenance of the system is being done with the spares available at the generating station. The Petitioner has submitted that SG & TG will require upgradation in 2022-23 and has furnished the documentary evidence in support of its claim.

182. The matter has been considered. It is observed that the documentary evidence submitted by the Petitioner in justification of the said claim includes upgradation of DPU controller system for SG & TG of the generating station. However, whether the upgradation includes BOP or not is not clear. Further, the Petitioner *vide* ROP of the hearing dated 24.6.2022 was directed to clarify as to whether the additional capital expenditure claimed includes BOP and accordingly to submit necessary documents to substantiate its claim. However, the Petitioner has not furnished any clarification as to whether the said expenditure includes BoP or not. However, considering the nature of works, the additional capital expenditure as claimed by the Petitioner is allowed under Regulation 25(2)(C) of the 2019 Tariff Regulations. It is also noted that the Petitioner has claimed expenditure of Rs.202.03 lakh (Rs.20.82 in 2021– 22 and Rs.181.21 in



2022 – 23) towards decapitalization of said asset and the same has been considered under decapitalization. However, the Petitioner is directed to submit detailed information regarding the scope of works considered under the additional capital expenditure, along with supporting documents, at the time of truing up of tariff.

(ii) Procurement, erection & Commissioning of New Pollution Equipment / System

183. The Petitioner has claimed projected additional capital expenditure of Rs.60.00 lakh towards Procurement, Erection & Commissioning of New Pollution equipment / system in 2023-24 under Regulation 26(1)(b) of the 2019 Tariff Regulations. It is observed that the Petitioner had not furnished any justification and documentary evidence in support of its claim in its original petition. Further, the Petitioner *vide* ROP of the hearing dated 24.6.2022 was directed to submit detailed justification in support of the claim along with supporting documents. However, the Petitioner has not furnished any clarification for the same. In view of this, the additional capital expenditure claimed by the Petitioner is not allowed. The Petitioner is, however, granted liberty to claim the same along with proper justification for its requirement along with supporting documents to substantiate its claim and details of apportionment of expenditure among the various units of the project at the time of truing up of tariff.

184. Accordingly, the additional capital expenditure allowed under the head ‘C&I System’ is summarized as follows:

(Rs. in lakh)

Plant and Machinery	Regulation	2019-20	2020-21	2021-22	2022-23	2023-24
Upgradation of DPU - 4E Controller of SG & TG packages of Unit -4	25 (2) (c)	0.00	0.00	0.00	360.00	0.00
Procurement, erection & Commissioning of New Pollution Equipment / System	26(1) (b)	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	360.00	0.00

(c) Electrical Inside Power House



185. The additional capital expenditure claimed by the Petitioner under the head 'Electrical Inside Power House' is summarised below:

(Rs. in lakh)

Electrical Inside Power House	Regulation	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Upgradation of existing 220 KV control panel to SAS	25(2)(a)	0.00	0.00	0.00	30.00	0.00	30.00
Replacement of 48 V Battery bank		0.00	0.00	0.00	8.00	0.00	8.00
Total		0.00	0.00	0.00	38.00	0.00	38.00

(i) Upgradation of existing 220 KV control panel to SAS

186. The Petitioner has claimed projected additional capital expenditure of Rs.30.00 lakh towards Upgradation of existing 220 kV control panel to SAS in 2021-22 under Regulation 25(2)(a) of the 2019 Tariff Regulations. In justification of the same, the Petitioner has submitted that the panels of the switchyard are approximately 25 years old and the wiring of the same are getting damaged that causes leakages in DC, malfunction of relays. The Petitioner has also submitted that the installed switches have become very old and the replacements of the same are not available and therefore, these are required to be replaced with new and upgraded SAS panels. The Petitioner has claimed decapitalization of old assets for Rs.15.78 lakh in 2022-23.

187. The matter has been considered. It appears that the additional capital expenditure claimed relate to all the units of the project. Though the Petitioner has not furnished the apportioned expenditure for other units, it has claimed the same additional capital expenditure in other units of the project. For instance, in Petition No. 577/GT/2020 pertaining to Unit-1, 2 and 3. It is also observed that the Petitioner has submitted that the panels of the switchyard are approximately 25 years old, however, it is noticed that the balanced useful life of the generating station (Unit)-4 as on 31.3.2019 is 10.87 years. Further, the Petitioner *vide* ROP of the hearing dated 24.6.2022 was directed to submit details such as date of put to use, depreciation recovered, supporting documents, recommendations of OEM etc. for prudence check



required in terms of Regulation 25(2)(a) of the 2019 Tariff Regulations. However, the Petitioner has not furnished any clarification in respect of the said additional capital expenditure. In view of this, the additional capital expenditure claimed by the Petitioner is not allowed. The Petitioner is, however, granted liberty to claim the same along with proper justification, details of apportionment of expenditure among the various units of the project including documentary evidence of obsolescence, at the time of truing up of tariff.

(ii) Replacement of 48 V Battery bank

188. The Petitioner has claimed projected additional capital expenditure of Rs.8.00 lakh towards the Replacement of 48 V Battery bank during 2022-23 under Regulation 25(2)(a) of the 2019 Tariff Regulations. In justification of the same, the Petitioner has submitted that the 48 V Battery Bank in 11 KV switchyard is getting old day by day. The maintenance frequency also increases, therefore, the same must be replaced in 3-4 years before complete shutdown.

189. The matter has been considered. It appears that the additional capital expenditure claimed by the petitioner relate to all units of the project. However, the Petitioner has not furnished any apportioned the expenditure for other units. Though the Petitioner *vide* ROP of the hearing dated 24.6.2022 was directed to submit details such as the date of put to use, the depreciation recovered, and supporting documents along with recommendations of OEM etc. for prudence check, the Petitioner has not furnished the same. In view of this, the additional capital expenditure claimed by the Petitioner is not allowed. The Petitioner is, however, granted liberty to claim the same along with proper justification, details of apportionment of expenditure among the various units of the project including documentary evidence of obsolescence, at the time of truing up of tariff.

190. In view of the above, no additional capital expenditure is allowed under the



head 'Electrical Inside Power House'.

Flue Gas Desulphurization (FGD)

191. The Petitioner has sought liberty to approach the Commission, with a separate petition for determination of supplementary tariff with respect to the implementation of Flue Gas Desulphurization (FGD) unit, in compliance to the revised emission standards in terms of Regulation 14(2) read with Regulation 29 of the 2019 Tariff Regulations. It is however, noticed that the Petitioner had filed Petition No. 461/MP/2019 and 462/MP/2019, for approval of additional expenditure on installation of various Emission Control Systems at Mejia TPS (Units 1 to 6) and for Mejia TPS (Units 7 & 8) respectively, in compliance of MOEF&CC notification dated 7.12.2015 and the Commission by a common order dated 20.9.2021 had disposed of the said petitions, with certain observations. Accordingly, the claim of the Petitioner for additional expenditure on emission control system shall be guided by the observations in the said order dated 20.9.2021.

Discharge of Liabilities

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

Decapitalization

193. The asset-wise and year-wise decapitalization of Rs.722.91 lakh as claimed by



the Petitioner is as follows:

(Rs. in lakh)

S. No.	Name of the Asset	Original Value of the Asset Capitalized					Total
		2019-20	2020-21	2021-22	2022-23	2023-24	
1	Upgradation of max DNA control system of Unit#4, MTPS	16.72	0.00	0.00	0.00	0.00	16.72
2	Upgradation of Bently- Nevada VMS Server of Unit # 4	16.72	0.00	0.00	0.00	0.00	16.72
3	Upgradation of Coal Mill Feeder Control System of Unit #4	0.00	0.00	78.07	0.00	0.00	78.07
4	Upgradation of DPU # 4E Controller of SG & TG packages of Unit # 4	0.00	0.00	20.82	181.21	0.00	202.03
5	Energy Efficient LT Motors (>90 KW)	19.67	6.89	9.02	0.00	0.00	35.58
6	Retrofit of GRP Numerical Relays Replacing Old Electromechanical Relays on OEM Basis	0.00	20.17	0.00	0.00	0.00	20.17
7	Complete Battery Bank 360 V System YKP-29, U#4	28.39	0.00	0.00	0.00	0.00	28.39
8	Complete Battery Bank 220V System YHP-25, U#4	0.00	56.10	0.00	0.00	0.00	56.10
9	Supply Erection & commissioning of 220 V, SF6 Breakers	0.00	126.04	0.00	0.00	0.00	126.04
10	Numerical Bus differential Scheme for Sw. yard	0.00	39.21	16.28	0.00	0.00	55.49
11	Upgradation of existing 220 KV control panel to SAS	0.00	0.00	0.00	15.78	0.00	15.78
12	Replacement of 48 V Battery bank	0.00	0.00	0.00	4.22	0.00	4.22
13	Replacement of Ash Slurry Disposal Pipe	0.00	28.90	38.71	0.00	0.00	67.61
	Total (claimed)	81.49	277.31	162.90	201.21	0.00	722.91

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

(Rs. in lakh)

Sl. No.	Name of the Asset	Original Value of the Asset Capitalized					Total
		2019-20	2020-21	2021-22	2022-23	2023-24	
1	Upgradation of max DNA control system of Unit#4, MTPS	16.72	0.00	0.00	0.00	0.00	16.72
2	Upgradation of Bently- Nevada VMS Server of Unit # 4	16.72	0.00	0.00	0.00	0.00	16.72
3	Upgradation of Coal Mill Feeder Control System of Unit #4	0.00	0.00	78.07	0.00	0.00	78.07
4	Upgradation of DPU # 4E Controller of SG & TG packages of Unit # 4	0.00	0.00	20.82	181.21	0.00	202.03
5	Energy Efficient LT Motors (>90 KW)	19.67	6.89	9.02	0.00	0.00	35.58
6	Retrofit of GRP Numerical Relays Replacing Old Electromechanical Relays on OEM Basis	0.00	20.17	0.00	0.00	0.00	20.17
7	Complete Battery Bank 360 V System YKP-29, U#4	28.39	0.00	0.00	0.00	0.00	28.39
8	Complete Battery Bank 220V System YHP-25, U#4	0.00	56.10	0.00	0.00	0.00	56.10



Sl. No.	Name of the Asset	Original Value of the Asset Capitalized					Total
		2019-20	2020-21	2021-22	2022-23	2023-24	
9	Supply Erection & commissioning of 220 V , SF6 Breakers	0.00	126.04	0.00	0.00	0.00	126.04
10	Numerical Bus differential Scheme for Sw. yard	0.00	39.21	16.28	0.00	0.00	55.49
11	Replacement of Ash Slurry Disposal Pipe	0.00	28.90	38.71	0.00	0.00	67.61
	Total (claimed and allowed)	81.49	277.31	162.90	181.21	0.00	702.91

Additional Decapitalisation claimed in Form 9(A)

195. It is observed that the Petitioner, in compliance to the directions vide ROP of the hearing dated 24.6.2022, has claimed the decapitalisation of Rs.14.05 lakh in respect of Station C&I CONT for 2019-20 in Form 9(A). Accordingly, the same is also allowed.

Assumed Deletion

196. As per consistent methodology adopted by the Commission in its orders, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff provided that the capitalization of the said asset, is followed by de-capitalization of the gross value of the old asset. However, in certain cases, where the de-capitalization is proposed to be affected during the future years to the year of capitalization of the new asset, the de-capitalization of the old asset for the purpose of tariff, is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed Deletion".

197. Accordingly, the gross value of the assets de-capitalized under 'assumed deletions' as considered by the Petitioner based on WPI and capitalized value of new asset is not acceptable. Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e. escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. In the instant petition, year of COD of the generating station is 2015-16.

We have considered the value of asset under consideration as on COD as 100 and



escalated it @ 5% till the year during which additional capital expenditure is claimed against replacement of the same. The amount claimed for additional capital expenditure against the asset is multiplied by the derived ratio from above two values i.e., value in year of COD divided by value in capitalized year. Accordingly, as the Petitioner has not furnished the decapitalization value of Sealing ring Assy LPT and IPT, which was claimed and allowed as additional capital expenditure, the same is determined under 'Assumed Deletions' of the 2019-24 tariff period as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Turbo Generator (Sealing ring Assy LPT and IPT)	0.00	5.48	0.00	0.00	0.00

198. Accordingly, the total decapitalisation considered for the purpose of tariff is as follows:

S. No.	Name of the Asset	<i>(Rs. in lakh)</i>					Total
		Original Value of the Asset Capitalized					
		<i>(Rs. In lakh)</i>					
		2019-20	2020-21	2021-22	2022-23	2023-24	
1	Decapitalization	95.54	277.31	162.90	181.21	0.00	716.96
2	Assumed Deletion	0.00	5.48	0.00	0.00	0.00	5.48
3	Total Decapitalization	95.54	282.79	162.90	181.21	0.00	722.44

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

	<i>(Rs. in lakh)</i>					
Head of Work / Equipment	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Plant & Machinery	45.96	12.04	0.00	0.00	0.00	58.00
C&I system	0.00	0.00	0.00	360.00	0.00	360.00
Electrical Inside Power House	0.00	0.00	0.00	0.00	0.00	0.00
Total Additional Capital Expenditure Allowed (A)	45.96	12.04	0.00	360.00	0.00	418.00

Additional Capital Expenditure eligible for normal ROE

	<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Admitted additions in projected additional capital expenditure (A)	45.96	12.04	0.00	360.00	0.00	418.00
Less: De-capitalization considered for assets (B)	95.54	282.79	162.90	181.21	0.00	722.44
Less: Un-discharged Liabilities (C)	0.00	0.00	0.00	0.00	0.00	0.00



	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Add: Discharges of liabilities (against allowed assets / works) (D)	0.00	0.00	0.00	0.00	0.00	0.00
Net projected additional capital expenditure allowed (on cash basis) (E) = (A-B-C+D)	(-) 49.57	(-) 270.76	(-) 162.90	178.79	0.00	(-) 304.44

Additional Capital Expenditure eligible for WAROI ROE

200. No additional capital expenditure is eligible for ROE at WAROI rate.

Capital cost allowed for the 2019-24 tariff period

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

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	72346.67	72297.10	72026.34	71863.44	72042.23
Add: Addition during the year / period (B)	45.96	12.04	0.00	360.00	0.00
Less: Decapitalization during the year (C)	95.54	282.79	162.90	181.21	0.00
Closing Gross Block (D) = (A+B-C)	72297.10	72026.34	71863.44	72042.23	72042.23
Average Gross Block (E) = (A+D)/2	72321.88	72161.72	71944.89	71952.83	72042.23

Debt-Equity Ratio

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

“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*

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



(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

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

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

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”

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

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

xxx

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

203. The gross loan and equity amounting to Rs.50642.68 lakh and Rs.21704.00 lakh respectively as on 31.3.2019, as determined by this order, for the 2014-19 tariff period above, has been considered as gross loan and equity as on 1.4.2019. In terms of Regulation 18 of the 2019 Tariff Regulations. The debt-equity ratio of 70:30 has been applied on year-wise admitted additional capital expenditure for arriving at the additions to loan and equity during each year of the 2019-24 tariff period. Accordingly, the debt: equity is worked out as under:

(Rs. in lakh)



	Capital Cost as on 1.4.2019	(%)	Additional Capital Expenditure for 2019-24 tariff period	(%)	Capital Cost as on 31.3.2024	(%)
Debt	50642.68	70%	(-) 213.11	70%	50429.57	70%
Equity	21704.00	30%	(-) 91.33	30%	21612.66	30%
Total	72346.67	100%	(-) 304.44	100%	72042.23	100%

Return on Equity

204. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides as follows:

“30. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system

Provided further that:

- i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*
- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;*
- iii. in case of a thermal generating station, with effect from 1.4.2020:*
 - a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
 - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

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

“31. Tax on Return on Equity. (1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

(2) Rate of return on equity shall be rounded off to three decimal places and shall be



computed as per the formula given below:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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:

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2155) = 19.758\%$$

(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.”

205. The Objector, DVPCA has submitted that the Petitioner has considered effective tax rate of 21.5488% for computation of ROE for the 2019-24 tariff period and the same is premature. Consequently, the ROE may be allowed at a rate of 15.50% only subject to truing-up, based on actual tax paid. As regards, the Petitioner’s claim for ROE at weighted average rate of interest, on actual loan portfolio, as per Form-1(I) of the petition, the Objector, DVPCA has submitted that the Petitioner has neither submitted any detail of the assets nor any justification for claiming the additional capitalisation after cut-of date and beyond the original scope of work. In response, The Petitioner in its rejoinder has prayed for computation of ROE, without considering the income tax rates for the 2019-24 tariff period. The Petitioner



has sought leave of the Commission to claim the income tax liability, if any, during any year of the 2019-24 tariff period, in future. The Petitioner has submitted that it has furnished details of assets along with justification in Form-9 of the petition, for the 2019-24 tariff period.

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

(a) Return on Equity at Normal Rate

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Normative Equity – Opening	A	21704.00	21689.12	21607.90	21559.03	21612.66
Addition to Equity due to additional/de-capital expenditure	B	(-) 14.87	(-) 81.23	(-) 48.87	53.64	0.00
Normative Equity – Closing	C=(A+B)	21689.12	21607.90	21559.03	21612.66	21612.66
Average Normative Equity	D=Average (A, C)	21696.56	21648.51	21583.46	21585.84	21612.66
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) annualized	H=(DxG)	3362.97	3355.52	3345.44	3345.81	3349.96

(b) Return on Equity at WAROI

207. No additional capital expenditure is eligible for ROE at WAROI rate.

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)	336 2.97	3355.52	3345.44	3345.81	3349.96
Return on Equity at WAROI (B)	0.00	0.00	0.00	0.00	0.00
Total Return on Equity allowed (A+B)	3362.97	3355.52	3345.44	3345.81	3349.96

208. The Petitioner is directed to furnish the report submitted by RLDC regarding the



commissioning of Restricted Governor Mode Operation (RGMO) of Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre along with relevant information regarding the achievement of 'Ramp Rate' for the purpose of compliance to provisos (i) and (iii) of Regulation 30(2) of the 2019 Tariff Regulations, at the time of truing-up of tariff.

Interest on Loan

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

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

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

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

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

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

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

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

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

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

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

(a) Gross normative loan amounting to Rs.50642.68 lakh on 31.3.2019 as considered in this order for the 2014-19 tariff period has been considered as on 1.4.2019;

(b) Cumulative repayment of Rs.50642.68 lakh as considered in this order for the 2014-19 tariff period has been considered as on 1.4.2019;

(c) Accordingly, the net normative opening loan as on 1.4.2019 works out to be 'Nil';



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

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

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

(g) Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest as claimed by the Petitioner, subject to trueing-up.

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

		(Rs. in lakh)				
		2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan	A	50642.68	50607.97	50418.44	50304.41	50429.57
Cumulative repayment of loan up to previous year	B	50642.68	50575.80	50377.84	50263.81	50269.62
Net Loan Opening	C=(A-B)	0.00	32.18	40.60	40.60	159.95
Addition due to additional capital expenditure	D	(-) 34.70	(-) 189.53	(-) 114.03	125.15	0.00
Repayment of loan during the year	E	0.00	0.00	0.00	132.66	159.95
Repayment adjustment on account of decapitalization	F	66.88	197.96	114.03	126.85	0.00
Ney repayment of the loan during the year	G=(E-F)	(-) 66.88	(-) 197.96	(-) 114.03	5.81	159.95
Net Loan Closing	H=(C+D-G)	32.18	40.60	40.60	159.95	0.00
Average Loan	I=Average (C, H)	16.09	36.39	40.60	100.27	79.97
Weighted Average Rate of Interest of loan	J	6.9122%	6.9122%	6.9122%	6.9122%	6.9122%
Interest on Loan	K=(IxJ)	1.11	2.52	2.81	6.93	5.53

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



Depreciation

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

“33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

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

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

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

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

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

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

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

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

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

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, as the case may be, shall



submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

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

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

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

214. Depreciation has been worked out considering the cumulative depreciation of Rs.65112.00 lakh as on 31.3.2019, as determined in this order, for the 2014-19 tariff period. Accordingly, in terms of Regulation 33 and Regulation 72 (2)(iii) of the 2019 Tariff Regulations, depreciation has been worked out and allowed as follows:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Average Capital Cost (A)	72321.88	72161.72	71944.89	71952.83	72042.23
Value of freehold land included in average capital cost (B)	0.00	0.00	0.00	0.00	0.00
Value of software and IT equipment included in average capital cost (C)*	0.00	0.00	0.00	0.00	0.00
Aggregated Depreciable Value (D)= [(A-B-C) x90% + (C)]	65089.69	64945.55	64750.40	64757.55	64838.00
Remaining aggregate depreciable value at the beginning of the year (E) = [(D) – (Cumulative depreciation shown at (L) at the end of the preceding year)]	0.00	0.00	0.00	132.66	243.55
Number of completed years at the beginning of the year (F)	14.13	15.13	16.13	17.13	18.13
Balance useful life at the beginning of the year (G) = [25 - (F)]	10.87	9.87	8.87	7.87	6.87
Weighted Average Rate of Depreciation (WAROD) (H)	7.2298%	7.2298%	7.2298%	7.2298%	7.2298%
Combined Depreciation during the year (I) = Minimum of [(A) x (H) or E]	0.00	0.00	0.00	132.66	243.55
Cumulative depreciation at the end of the year (before adjustment for decapitalization) (J) = [(I) + (Cumulative Depreciation (shown at L) at the end of the previous year)]	65112.00	65026.02	64771.50	64757.55	64838.00



	2019-20	2020-21	2021-22	2022-23	2023-24
Less: Depreciation adjustment on account of de-capitalization (K)	85.98	254.51	146.61	163.09	0.00
Cumulative depreciation at the end of the year (L)** = (J) - (K)	65026.02	64771.50	64624.89	64594.46	64838.00

* The Petitioner should submit, the details of IT Equipment at the time of truing up

**The cumulative depreciation at the end of 2018-19 is Rs.65112.00 lakh.

Operation & Maintenance Expenses

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

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

216. The normative O&M expenses claimed by the Petitioner under Regulation 35(1) (1) of the 2019 Tariff Regulations are as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
6921.60	7165.20	7415.10	7677.60	7946.40

217. It is observed that the Petitioner has claimed normative O&M expenses in accordance with Regulation 35(1)(1) of the 2019 Tariff Regulations and therefore, the same is allowed

Water Charges

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

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

xxx.”

219. In terms of the first proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations, the Petitioner has considered normative water consumption of 3.5 m³/MWh, generation as per NAPAF and water charges at Rs.10.64/KI and has claimed the water charges as follows:

(Rs. in lakh)



2019-20	2020-21	2021-22	2022-23	2023-24
583.90	640.54	704.59	775.05	854.89

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

221. The matter has been considered. It is observed that the Petitioner has not submitted the OM dated 23.7.2019, in support of the said claim. However, the same has been furnished in Petition No. 577/GT/2020 (for Mejia TPS Unit-1,2 and 3) and the same has been considered for this generating station. In view of the above, and considering the MOEF&CC norms, the generation as per NAPAF and water charge rate of Rs 10.64/KL and annual escalation of 10% thereof, as per OM dated 23.7.2019, the water charges for the 2019-24 tariff period is allowed as under:

	Units	2019-20	2020-21	2021-22	2022-23	2023-24
Projected Gross Generation @ 85% load factor	MU	1567.94	1563.66	1563.66	1563.66	1567.94
Normative Specific Water Consumption as per MoEF&CC	Cubic Meter / MWh	3.50	3.50	3.50	3.50	3.50



	Units	2019-20	2020-21	2021-22	2022-23	2023-24
stipulations						
Normative Water Consumption as per MoEF&CC Norms	Cubic Meter	5487804	5472810	5472810	5472810	5487804
Rate of Water Charges as per OM dated 23.7.2019	Rs. / Cubic Meter	10.64	11.70	12.87	14.16	15.58
Total Normative Water Charges	(Rs. in lakh)	583.90	640.54	704.59	775.05	854.89

222. The Petitioner is directed to submit detailed justification for the high rate of water charge along with the comparison in rate from alternative sources at the time of truing up.

(a) Security Expenses

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

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

xxxx:

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

xxxxx.”

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

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
513.63	536.23	559.83	584.47	610.18

225. It is observed, that the Petitioner has considered Rs.491.98 lakh towards security charges for 2018-19 and escalated the same at the rate of 4.40% per annum, and claimed projected security expenses for the 2019-24 tariff period. The Petitioner has also submitted that escalation of Security expenses has been proposed to accommodate the year-on-year growth of salary expenditure and associated CISF activities, that are primarily governed by CISF Rules.

226. It is observed that the actual security expenses for 2018-19 is Rs.480.34 lakh and the same is considered along with annual escalation rate of 4.40 %, as proposed by the Petitioner. Accordingly, the security expenses allowed on projection basis are as follows:



(Rs. in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
501.48	523.54	546.58	570.63	595.74

227. The Petitioner shall, at the time of truing up, 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.

(b) Capital spares

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

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

xxxx:

Provided also that the generating station shall submit the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance as per Regulation 17 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 or Special Allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization;

xxxxx.”

229. The Petitioner has claimed total capital spares for Rs.903.70 lakh (i.e., Rs.186.01 lakh in 2019-20, Rs.79.17 lakh in 2020-21, Rs.267.66 lakh in 2021-22, Rs.319.54 lakh in 2022-23 and Rs.51.32 lakh in 2023-24) under Regulation 25(2)(a) read with Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

230. The matter has been considered. Though the aforesaid regulation provides for claiming capital spares separately and on actual consumption basis, the Petitioner has claimed capital spares, as part of the additional capital expenditure, on provisional basis. Accordingly, the additional capital expenditure as claimed by the Petitioner towards capital spares has not been considered. The claim of the Petitioner, if any, at the time of truing up, of tariff, shall be considered on merits, after prudence check subject to the declaration that the expenditure has not been funded through compensatory allowance or special allowance or claimed as a part of additional



capitalization or consumption of stores & spares and Renovation & Modernization.

231. Based on the above discussion, the total O&M expenses allowed is summarised as follows:

		<i>(Rs. in lakh)</i>				
		2019-20	2020-21	2021-22	2022-23	2023-24
Installed Capacity (MW)		210.00	210.00	210.00	210.00	210.00
O&M Expenses under Regulation 35(1) in Rs.lakh / MW		32.96	34.12	35.31	36.56	37.84
Total O&M Expenses (A)	Claimed	6921.60	7165.20	7415.10	7677.60	7946.40
	Allowed	6921.60	7165.20	7415.10	7677.60	7946.40
Water Charges (B)	Claimed	583.90	640.54	704.59	775.05	854.89
	Allowed	583.90	640.54	704.59	775.05	854.89
Security Expenses (C)	Claimed	513.63	536.23	559.83	584.47	610.18
	Allowed	501.48	523.54	546.58	570.63	595.74
Capital Spares (D)	Claimed	0.00	0.00	0.00	319.54	51.32
	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	8019.14	8341.97	8679.52	9356.65	9462.79
	Allowed	8006.98	8329.28	8666.27	9023.28	9397.03

Operational Norms

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

“Norms of operation for thermal generating station

49. The norms of operation as given hereunder shall apply to thermal generating stations:

(A) Normative Annual Plant Availability Factor (NAPAF)

(a) For all thermal generating stations, except those covered under clauses (b), (c), (d), & (e) - 85% ;

xxx

(C) Gross Station Heat Rate:

(a) Existing Thermal Generating Stations

(h) For existing Coal-based Thermal Generating Stations, other than those covered under clauses (ii) and (iii) below:

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

xxx

(D) Secondary Fuel Oil Consumption:

(a) For Coal-based generating stations other than at (c) below: 0.50 ml/kWh

...XXX

(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%

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

Parameter	
Normative Annual Plant Availability Factor (NAPAF) (%)	85.00
Gross Station Heat Rate (kcal/kwh)	2430
Auxiliary Power Consumption (%)	9.80
Specific Oil Consumption (ml/kwh)	0.50

234. NAPAF of 85% is allowed in terms of the 2019 Tariff Regulations. It is observed that the Petitioner has submitted that the generating station is of 210 MW unit with induced draft and tube type coal mills. Accordingly, the AEC of 9.8 % and specific oil consumption is 0.5 ml / kWh is allowed. Based on this, the operational norms as claimed by the Petitioner is allowed in terms of the 2019 Tariff Regulations.

Interest on Working Capital

235. 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.”

236. Clause (3) and (4) of the Regulation 34 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 triung-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.”

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

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

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

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Coal/Lignite for Stock and Generation (A)	5805.74	5789.88	5789.88	5789.88	5805.74
Cost of oil for 2 months (B)	61.76	61.59	61.59	61.59	61.76
O & M expenses - 1 month (C)	668.26	695.16	723.29	753.09	784.29
Maintenance Spares- 20% of O&M (D)	1603.83	1668.39	1735.90	1807.42	1882.29
Receivables – 45 days (E)	7265.69	7306.25	7403.65	7444.29	7495.53
Total Working Capital (F)= (A+B+C+D+E)	15405.27	15521.27	15714.32	15856.27	16029.62
Rate of Interest (G)	12.05%	12.05%	12.05%	12.05%	12.05%
Total Interest on Working capital (H) = (F)x(G)	1856.34	1870.31	1893.58	1910.68	1931.57



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

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

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for 50 days	5805.74	5789.88	5789.88	5789.88	5805.74
Cost of Secondary fuel oil 2 months	61.76	61.59	61.59	61.59	61.76

240. The 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:

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

(b) For gas and liquid fuel based stations:

$$ECR = SHR \times LPPF \times 100 / \{(CVPF) \times (100 - AUX)\}$$

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.”

241. In line with the above Regulations, a margin of 85kCal/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 and the GCV of coal, GCV and cost of oil as claimed by the Petitioner are considered for computation of IWC. Accordingly, the fuel components of working capital have been worked out and allowed as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for 20 days	2340.12	2340.12	2340.12	2340.12	2340.12
Cost of coal for generation for 30 days	3510.18	3510.18	3510.18	3510.18	3510.18
Cost of Secondary fuel oil for 2 months	61.76	61.59	61.59	61.59	61.76

242. It is pertinent to mention, that the above computation of working capital is based on the GCV and fuel cost furnished for third quarter of 2018-19. However, Regulation 34(C)(2) of the 2019 Tariff Regulations provides that the cost of fuel shall be based on the landed fuel cost (taking into account normative transit and handling losses, in terms of Regulation 39 of these regulations) by the generating station and GCV of 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 this, 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.

(b) Energy Charge Rate for Working Capital

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

	Unit	Claimed
Landed Fuel Cost (Domestic Coal)	Rs./Ton	3912.20



	Unit	Claimed
(%) of Fuel Quantity	(%)	100
Energy Charge Rate Secondary fuel-ex-bus	Rs./kWh	0.026
Energy Charge Rate Primary fuel-ex-bus	Rs./kWh	2.956
Energy Charge Rate -ex bus	Rs./kWh	2.982

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

	(Rs./kWh)
Energy Charge Rate Secondary fuel-ex-bus	0.0262
Energy Charge Rate Primary fuel-ex-bus	3.0280
Total Energy Charge Rate ex-bus (rounded off to 3 decimal places)	3.0540

(c) Energy Charges for 45 days for Working Capital

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

(Rs. in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
5310.53	5310.53	5310.53	5310.53	5310.53

(d) Working Capital for Maintenance Spares

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

(Rs. in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
1603.83	1668.39	1735.90	1807.42	1882.29

247. Working capital for maintenance spares is allowed as under:

(Rs. in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
1601.40	1665.86	1733.25	1804.66	1879.41

(e) Working Capital for Receivables

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



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges (45 days generation corresponding to NAPAF)	5310.53	5310.53	5310.53	5310.53	5310.53
Fixed Charges (45 days generation corresponding to NAPAF)	1621.99	1652.20	1680.05	1743.10	1800.37
Total	6932.52	6962.73	6990.58	7053.63	7110.90

(f) Working Capital for O&M Expenses

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
668.26	695.16	723.29	753.09	784.29

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
667.25	694.11	722.19	751.94	783.09

(g) Rate of Interest for Working Capital

251. Regulation 34(3) of the 2019 Tariff Regulations provides for the rate of interest on working capital considered on projection basis, for the 2019-24 Tariff Period as 12.05% (i.e., 1-year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for the 2019-24 tariff period, is being determined during the year 2022-23, the SBI MCLR as on 1.4.2020 (7.75%), as on 1.4.2021 (7.00%) and as on 1.4.2022 (7.00%) are also available. Since, the rate of interest on working capital is subject to revision at the time of truing-up of tariff, based on the bank rate as on 1st April of each financial year, we find it prudent to allow the rate of interest as on 1.4.2020, 1.4.2021 and 1.4.2022, for the subsequent financial years. Accordingly, the rate of interest for the year 2019-20 is 12.05%, 2020-21 is 11.25%, 2021-22 is 10.50%, 2022-23 is 10.50% and for the subsequent year i.e., 2023-24 the rate of interest of 10.50% has been considered (i.e., 1-year 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 1-year SBI MCLR of 7.00% as on 1.4.2022 + 350 basis points). Accordingly, Interest on working capital is allowed as follows:

		<i>(Rs. in lakh)</i>				
		2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for Cost of Coal towards Stock – 20 days generation corresponding to NAPAF	2340.12	2340.12	2340.12	2340.12	2340.12
B	Working Capital for Cost of Coal towards Generation – 30 days corresponding to NAPAF	3510.18	3510.18	3510.18	3510.18	3510.18
C	Working Capital for Cost of Secondary fuel oil – 2 months generation corresponding to NAPAF	61.76	61.59	61.59	61.59	61.76
D	Working Capital for Maintenance Spares @ 20% of O&M expenses	1601.40	1665.86	1733.25	1804.66	1879.41
E	Working Capital for Receivables - 45 days sale of electricity corresponding to NAPAF	6932.52	6962.73	6990.58	7053.63	7110.90
F	Working Capital for O&M expenses - 1 month of O&M Expenses	667.25	694.11	722.19	751.94	783.09
G	Total Working Capital (A+B+C+D+E+F)	15113.22	15234.59	15357.92	15522.12	15685.46
H	Rate of Interest	12.05%	11.25%	10.50%	10.50%	10.50%
I	Interest on Working capital (G x H)	1821.14	1713.89	1612.58	1629.82	1646.97

Additional Claims

252. In addition, to the Depreciation, Interest on Loan, Return on Equity, O&M Expenses, Water Charges, Security Expenses and Interest on Working Capital in accordance with the 2019 Tariff Regulations, the Petitioner has also claimed expenditure towards 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:

		<i>(Rs. in lakh)</i>				
		2019-20	2020-21	2021-22	2022-23	2023-24
	Share of P&G contribution	782.55	819.34	857.85	898.18	940.40
	Share of Common Office Expenditure	41.30	44.32	44.88	38.60	35.18
	Expenses due to Ash evacuation, Mega Insurance & expenditure for Subsidiary	496.52	518.37	541.18	564.99	589.85



	2019-20	2020-21	2021-22	2022-23	2023-24
activity					
Total	1320.37	1382.03	1443.91	1501.77	1565.43

Share of P&G contribution

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

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
782.55	819.34	857.85	898.18	940.40

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

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



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

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

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

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Ash Evacuation Expenses	392.71	409.99	428.03	446.87	466.53
Mega Insurance Expenses	18.72	19.55	20.41	21.31	22.24
Share of Subsidiary Activities	85.09	88.83	92.74	96.82	101.08
Total	496.52	518.37	541.18	565.00	589.85

Ash Evacuation Expenses

257. The Petitioner has claimed total expenditure of Rs.2144.13 lakh (Rs.392.71 lakh in 2019-20, Rs.409.99 lakh in 2020-21, Rs.428.03 lakh in 2021-22, Rs.446.87 lakh in 2022-23 and Rs.466.53 lakh in 2023-24) towards Ash Evacuation Expenses. In justification of the same, the Petitioner has submitted that due to statutory directives by the MoEF&CC, GOI *vide* 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 the Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

258. The Objector, DVPCA has submitted that the Commission had disallowed the claim of the Petitioner for ash evacuation expenses during the 2009-14 tariff period on



the ground that the same form part of the normative O&M expenses. Accordingly, the Objector has stated that there is no rationale to allow such expenses over and above the normative O&M expenses for the 2019-24 tariff period.

259. The matter has been considered. It is observed, that MOP guidelines dated 22.9.2021 and Clarification dated 8.11.2021 (prospective application, Rate capping at minimum of SoR and competitive rate) thereof have stipulated the following guidelines for supply of fly ash to the end users by the power plants to increase fly ash utilization:

“2. All Coal / lignite based power plants are hereby advised to provide fly ash to the end users for all new commitments for supply of fly ash based on the following guidelines:

- 2.1 The power plants shall provide the fly ash to end users for all new commitments through a transparent bidding process only.*
- 2.2 If after bidding / auction some quantity of fly ash still remains un-utilized, then only, as one of the options, it could be considered to be given free of cost on first come first served basis if the user agency is willing to bear transportation cost.*
- 2.3 If ash remains unutilised even after the steps taken in Paras 2.1 and 2.2 above, TPP shall bear the cost of transportation of fly ash to be provided free to eligible projects.*
- 2.4 The end users shall be obligated to source the fly ash from the nearest TPPs to reduce the cost of fly ash transportation. If the nearest TPP refuses to do so, the end user project shall approach Ministry of Power for appropriate directions.*
- 2.5 The transportation cost wherever required to be borne as per provisions of MOEF&CC notification by the power plants, shall be discovered on competitive bidding basis only. Thermal Power Plants shall prepare a panel of transportation agencies every year based on competitive bidding for transportation in slabs of 50km which may be used for the period. The TPPs shall call for bids well in advance so, that a transportation panel is in place as soon as the previous panel expires. There should not be gap between the expiry of one panel and the finalization of the fresh panel.*
- 2.6 The fly ash will be offered to the end users on the competing demand basis, i.e., the end users who offer the highest price for fly ash and seek minimum support for transportation cost will be offered the same fly ash on priority. This will reduce the tariff of electricity and burden on the consumers.*
- 2.7 The power plants may offer fly ash subject to their technical restrictions such as all precautions required for Dyke Stability and Safety etc. The power plants having lower ash utilizations shall make all out efforts to increase the fly ash utilization.”*

260. Further, the MoEF&CC notification dated 31.12.2021 provides for the following:



- (i) Thermal power plants w.e.f. 1.4.2022, preferably utilise 100 % ash generated during that year and in no case, utilisation shall fall below 80 % in any year subjected to 100 % utilization in a three years cycle. In addition, the unutilised accumulated ash i.e., legacy ash, which is stored before the publication of this notification, shall be utilised progressively and completed fully within ten years, by 31.12.2031.
- (ii) All agencies (Government, Semi-government and Private) engaged in construction activities such as road laying, road and flyover embankments, shoreline protection structures in coastal districts and dams within 300 kms from the thermal power plants shall mandatorily utilise ash in these activities in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government Agencies.

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

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.

- (iii) 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.

261. The Petitioner has proposed ash transportation charges for the 2019-24 tariff period, based on the ash transportation charges, associated with the generating station for 2018-19 with an annual escalation rate of 4.40% thereof. As noted, the ash transportation charges for the generating station in 2018-19, are based on apportioned audited ash transportation charges of Mejia TPS and the same was allowed in the 2014-19 tariff period. However, the actual expenses will depend on actual generation, quality of coal, quantity of ash utilized locally, quantity of ash transported, type of end user, distance of end user etc and may be in variance with projected claim of the Petitioner. Also, the Petitioner may generate some revenue by sale of ash. In this background, we are inclined to allow only 90% of the projected ash



transportation charges claimed, as additional O&M expenses, for the 2019-24 tariff period. The Petitioner is permitted to recover the said expenses from 1.4.2019 upto the date of order, in a phased manner, preferable in 6 equal instalments, in accordance with the Regulation 10 of the 2019 Tariff Regulations and thereafter, the recovery of the same, may be effected through monthly bills. The Petitioner is however, directed to submit all relevant documents in terms of the MoEF&CC notification and the provisions of the 2019 Tariff Regulations, including the year-wise audited statements, detailed justification, the ash available, plant wise income from sale of ash, quantity of ash produced, quantity of ash transported within 100 kms and beyond, revenue received, interest accrued, the statement of ash fund account as on 31.3.2014, 25.1.2016 and 31.3.2019, transportation cost borne by the end consumer, scheduled rate, etc., at the time of truing up of tariff. It is noticed that in the past, the Petitioner has used road transportation (trucks) for transportation of ash. In terms of this, the Petitioner is directed to explore other economic and environmental friendly alternatives for ash disposal. Accordingly, the ash transportation charges allowed are as follows:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
353.44	368.99	385.23	402.18	419.88

Mega Insurance Expenses

262. The Petitioner has claimed total expenditure for Rs.102.23 lakh (Rs.18.72 lakh in 2019-20, Rs.19.55 lakh in 2020-21, Rs.20.41 lakh in 2021-22, Rs.21.31 lakh in 2022-23 and Rs.22.24 lakh in 2023-24) towards Mega Insurance expenses under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

263. The Objector, DVPCA has submitted that the Petitioner has not referred to any extraordinary factors that have necessitated additional insurance cover for its units. It has also submitted that any comprehensive insurance is always cost effective in



comparison to individual insurance policies and hence, it is not clear as to how mega insurance could lead to additional O&M expenses. The Petitioner in its rejoinder dated 16.7.2021 has reiterated its submissions made in its petition for the 2014-19 tariff period, on this issue.

264. The matter has been considered. It is observed that the Commission while specifying the O&M norms for the 2019-24 tariff period 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

265. The Petitioner has claimed total expenditure of Rs.464.56 lakh (Rs.85.09 lakh in 2019-20, Rs.88.83 lakh in 2020-21, Rs.92.74 lakh in 2021-22, Rs.96.82 lakh in 2022-23 and Rs.101.08 lakh in 2023-24) towards Share of Subsidiary activities during 2019-24 under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

266. The Objector, DVPCA has submitted that the Petitioner has also claimed contribution to subsidiary funds and the Petitioner has claimed the Return on Equity, Interest on Loan and Depreciation on the common assets namely Direction Office, Subsidiary Activities, Other Offices, R&D, IT Centre and Central Office for the 2019-24 tariff period and has claimed such expenses 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 vide its order dated 20.9.2016 in Petition No. 352/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, DVPCA has also submitted that it has demonstrated that the actual O&M expenses including the expenditure on subsidiary activity for the 2014-19 tariff period have been lower than the normative O&M expenses specified under the 2014 Tariff Regulations. Similarly, the normative O&M expenses provided under the 2019, Tariff regulations would be sufficient to cover such expenses in 2019 – 24 tariff period also. In response, the Petitioner has reiterated its submissions in the matter of Expenses for Subsidiary Activity made w.r.t the replies for the 2014-19 tariff period.

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

Share of Common Office Expenditure

268. 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 also stated that it has allocated the cost of common offices amongst its generating stations, on the basis of installed capacity and has claimed additional capital expenditure as under:



(Rs. in lakh)

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

269. The head-wise additional capital expenditure claimed by the Petitioner for various offices is as under:

(Rs. in lakh)

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

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

(Rs. in lakh)

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

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Common Office expenditure apportioned to all DVC generating stations	1423.20	1527.40	1546.65	1330.11	1212.42
Common Office expenditure apportioned to T&D	113.35	121.65	123.18	105.93	96.56
Total	1536.55	1649.04	1669.83	1436.05	1308.98

271. In line with the above, the Petitioner has claimed apportioned common office



expenses for the generating station as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Common Office Expenditure apportioned to Mejia-IV	41.30	44.32	44.88	38.60	35.18

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

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

273. 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.

274. The matter has been considered. It is observed that the items mentioned under the head 'Substation Equipment' 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 information regarding the total expenditure incurred on this account, segregated claims during the



2014-19 and 2019-24 tariff period, expenditure envisaged in future etc., along with supporting documents.

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

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Sub Station Equipment	132.00	66.39	222.42	15.52	0.00
Network Access Controller and Data Centre	960.00	1240.00	0.00	0.00	0.00
Total	1092.00	1306.39	222.42	15.52	0.00

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 true up for the 2019-24 tariff period.

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

	<i>(Rs. in lakh)</i>				
	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

	<i>(Rs. in lakh)</i>					
	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

	<i>(Rs. in lakh)</i>				
Common Office Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
MTPS Unit-4 (This generating station)	28.49	28.00	27.80	27.78	25.37



Annual Fixed Charges

277. Based on the above discussion, the annual fixed charges allowed for the generating station for the 2019-24 tariff period is summarized as follows:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	132.66	243.55
Interest on loan	1.11	2.52	2.81	6.93	5.53
Return on Equity	3362.97	3355.52	3345.44	3345.81	3349.96
Interest on Working Capital	1821.14	1713.89	1612.58	1629.82	1646.97
O&M Expenses	6921.60	7165.20	7415.10	7677.60	7946.40
Water Charges	583.90	640.54	704.59	775.05	854.89
Security Expenses	501.48	523.54	546.58	570.63	595.74
Sub-total (A)	13192.20	13401.21	13627.10	14138.50	14643.04
Share of P&G	0.00	0.00	0.00	0.00	0.00
Share of Common Office Expenditure	28.49	28.00	27.80	27.78	25.37
Ash evacuation	353.44	368.99	385.23	402.18	419.88
Mega insurance	0.00	0.00	0.00	0.00	0.00
Subsidiary activity	0.00	0.00	0.00	0.00	0.00
Sub-total (B)	381.93	396.99	413.03	429.96	445.24
Total Annual Fixed Charges	13574.13	13798.20	14040.13	14568.46	15088.28

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.

278. 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

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

280. 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.

281. Petition No. 205/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

S d/-
(Arun Goyal)
Member

Sd/-
(I.S. Jha)
Member



Calculation of Weighted Average Rate of Depreciation for 2014-19 Tariff Period

Sl. no.	Name of assets	Depreciation Rate	For 2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
			Gross Block as on 01.04.2014	Depreciation Amount	Gross Block as on 01.04.2015	Depreciation Amount	Gross Block as on 01.04.2016	Depreciation Amount	Gross Block as on 01.04.2017	Depreciation Amount	Gross Block as on 01.04.2018	Depreciation Amount	Gross Block as on 31.3.2019	Depreciation Amount
1	Buildings	3.02%	9953.25	300.59	9953.25	300.59	9953.25	300.59	9953.25	300.59	9953.25	300.59	9953.25	300.59
2	Roads Bridges & Railway Sidings	3.02%	46.08	1.39	46.08	1.39	46.08	1.39	46.08	1.39	46.08	1.39	46.08	1.39
3	Barrage Gates & Other Civil Works	7.84%	2902.60	227.56	2902.60	227.56	2902.60	227.56	2902.60	227.56	2902.60	227.56	2902.60	227.56
4	Power House Plant & Machinery	7.84%	56075.13	4396.29	56075.13	4396.29	56075.13	4396.29	56075.13	4396.29	56075.13	4396.29	56576.63	4435.61
5	Switchgear	7.84%	2337.58	183.27	2337.58	183.27	2337.58	183.27	2337.58	183.27	2337.58	183.27	2337.58	183.27
6	Other Assets	12.77%	799.37	102.08	799.37	102.08	799.37	102.08	799.37	102.08	799.37	102.08	799.37	102.08
7	Canals & Service Roads (FA)	3.40%	14.47	0.49	14.47	0.49	14.47	0.49	14.47	0.49	14.47	0.49	14.47	0.49
	Total		72128.48	5211.67	72128.48	5211.67	72128.48	5211.67	72128.48	5211.67	72128.48	5211.67	72629.98	5250.99
	Weighted Average Rate of Depreciation		7.2255%		7.2255%		7.2255%		7.2255%		7.2277%			

