

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 569/GT/2020

Coram:

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

Date of Order: 10th July, 2023

In the matter of

Petition for truing up of tariff for the period 2014-19 in respect of Bokaro Thermal Power Station, Units 1, 2 & 3 (630 MW) and for determination of tariff for the period 2019-24 in respect of Bokaro Thermal Power Station, Unit No. 3 (210 MW).

And

In the matter of

Damodar Valley Corporation,
DVC Towers, VIP Road,
Kolkata- 700054

...Petitioner

Vs

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

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

...Respondents

3. Damodar Valley Power Consumers Association,
9, AJC Bose Road, 4th Floor, Kolkata-700017

...Objector

Parties Present:

Shri M.G.Ramachandran, Senior Advocate, DVC
Ms. Anushree Bardhan, Advocate, DVC
Ms. Surbhi Kapoor, Advocate, DVC
Shri Samit Mandal, DVC
Shri Rajiv Yadav, Advocate, DVPCA, Objector
Shri Awanit Kumar Singh



ORDER

This petition has been filed by the Petitioner, Damodar Valley Corporation for truing-up of tariff of Bokaro TPS, Unit Nos. 1 to 3 (630 MW) (in short 'the generating station') for the period 2014-19, in terms of Regulation 8(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short 'the 2014 Tariff Regulations') and for determination of tariff of Unit No. 3 (210 MW) of the generating station, for the period 2019-24, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short 'the 2019 Tariff Regulations').

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

	Actual COD
Unit-I	March, 1986
Unit-II	November, 1990
Unit-III	August, 1993

Background

3. Petition No. 66/2005 was filed by the Petitioner for approval of the revenue requirements and for determining the tariff for electricity related activities, that is, the generation, transmission and distribution of electricity, undertaken by it for the period from 1.4.2004 to 31.3.2009. The Commission by its order dated 3.10.2006 determined



tariff in respect of the generating stations and inter-state transmission systems of the Petitioner, after allowing a special dispensation to the Petitioner to continue with the prevailing tariff till 31.3.2006. Against the Commission's order dated 3.10.2006, the Petitioner filed Appeal No. 273/2006 before the Appellate Tribunal for Electricity (hereinafter referred to as 'APTEL') on various issues. Similarly, appeals were also filed before APTEL by some of the objectors/ consumers, namely, Maithon Alloys Ltd. and others (Appeal No. 271/2006), Bhaskhar Shrachi Alloys Ltd. and others (Appeal No. 272/2006), State of Jharkhand (Appeal No. 275/2006) and the West Bengal State Electricity Regulatory Commission (Appeal No. 8/2007) challenging the order of the Commission dated 3.10.2006 on various grounds. APTEL by its judgment dated 23.11.2007 disposed of the said appeals ('Appeal Nos. 273/2006 & batch') as under:

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

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



subject to the final outcome of the said Civil Appeals pending before the Hon'ble Supreme Court. Against the Commission's order dated 6.8.2009, the Petitioner filed appeal (Appeal No.146/2009) before APTEL on various issues. However, APTEL by its judgment dated 10.5.2010, rejected the prayers of the Petitioner and upheld the order of the Commission dated 6.8.2009. Against the judgment of APTEL dated 10.5.2010, the Petitioner filed appeal (Civil Appeal No.4881/2010) before the Hon'ble Supreme Court and the Hon'ble Court by interim order dated 9.7.2010 stayed the directions of APTEL for refund of excess amount billed, until further orders. However, on 17.8.2010 the Hon'ble Court had passed interim order in the said appeal. During the pendency of these appeals, the Commission, in terms of the judgment of APTEL, while notifying the 2014 Tariff Regulations, applicable for the 2014-19 tariff period, incorporated Regulation 53, containing special provisions related to the generating stations of the Petitioner. Accordingly, the tariff of the generating stations of the Petitioner for the period 2014-19, was determined by this Commission, subject to the final decision of the Hon'ble Supreme Court, in the said civil appeals. Similar provisions were made by the Commission under Regulation 72, while notifying the 2019 Tariff Regulations, applicable for the period 2019-24.

5. Meanwhile, the Hon'ble Supreme Court vide its common judgment dated 23.7.2018 in Civil Appeal No(s) 971-973/2008 (along with C.A Nos. 1914/2008, C.A No. 4504-4508/2008 and C.A No. 4289/2008) dismissed all the Civil Appeals thereby affirming the judgment of APTEL dated 23.11.2007 in Appeal Nos. 273/2006 & batch. Further, vide judgment dated 3.12.2018, the Hon'ble Supreme Court dismissed the Civil Appeal No. 4881/2010 filed by the Petitioner, against the judgment of APTEL dated 10.5.2010. In this background and in terms of the special provisions under the



2014 and 2019 Tariff Regulations, the tariff of the generating station of the Petitioner, is being trued-up for the period 2014-19 and is also determined for the period 2019-24, as stated in the subsequent paragraphs.

6. The Commission vide its order dated 27.9.2016 in Petition No. 350/GT/2014 read with corrigendum order dated 19.5.2017 had approved the capital cost and the annual fixed charges of the generating station for the period 2014-19, as under:

Capital cost allowed

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (A)	62114.40	62114.40	62431.80	63989.42	64168.21
Add: Additional Capital Expenditure allowed (B)	0.00	317.40	1557.61	178.80	99.82
Closing Capital Cost (C) = (A) + (B)	62114.40	62431.80	63989.42	64168.21	64268.03
Average Capital Cost (D) = (A+C) / 2	62114.40	62273.10	63210.61	64078.82	64218.12

Annual fixed charges allowed

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	156.51	313.06	1216.92	795.96	147.14
Interest on loan	19.76	14.14	27.85	21.90	0.00
Return on Equity	4598.82	4606.20	4649.80	4690.17	4696.65
Interest on Working Capital	3990.62	4061.07	4137.77	4195.43	4251.01
O&M Expenses	15057.00	16002.00	17010.00	18081.00	19221.30
Compensation Allowance	420.00	420.00	210.00	210.00	210.00
Sub-Total (A)	24242.72	25416.47	27252.35	27994.47	28526.09
Additional claims allowed					
Share of Common Office Expenses	99.64	91.77	85.72	85.62	84.63
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)	99.64	91.77	85.72	85.62	84.63
Total Annual Fixed Charges (C = A+B)	23342.36	25508.24	27338.06	28080.09	28610.72

Truing-up of tariff for the period 2014-19

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

“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. The Petitioner has submitted that Units-1 and 2 of the generating station, were decommissioned on 30.7.2017 and Unit-3 was decommissioned on 1.4.2021 i.e. after submission of this petition. Accordingly, the Petitioner has filed the present petition, for truing-up of tariff for the period 2014-19 and has claimed the capital cost (in Form 1(l) of the petition) and annual fixed charges as under:

Capital Cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital cost (A)	62114.40	66903.21	69243.10	69415.43	36120.53
Add: Addition during the year/ period (B)	4863.05	2324.07	290.15	104.88	370.54
Less: De-capitalization during the year / period (C)	45.14	4.02	40.24	33386.94	91.04
Less: Reversal during the year / period (D)	0.00	0.00	0.00	0.00	0.00
Less: Undischarged liabilities (E)	218.18	246.02	308.10	274.18	311.59
Add: Discharges during the year / period (F)	189.08	265.85	230.51	261.34	372.29
Closing Capital Cost (G)=(A+B-C-D-E+F)	66903.21	69243.10	69415.43	36120.53	36460.73
Average Capital Cost (H)=(A+G/2)	64508.81	68073.16	69329.26	52767.98	36290.63

Annual Fixed Charges claimed

(Rs in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2311.48	3248.54	1134.12	-	349.69
Interest on loan	80.90	68.36	1.22	1.10	1.82
Return on Equity	5959.25	6198.84	6273.09	5294.05	4331.38
Interest on Working Capital	4251.18	4470.46	4507.82	2544.00	1540.21
O&M Expenses	15057.00	16002.00	17010.00	10022.98	6407.10
Water Charges	-	1379.91	348.64	124.17	132.43
Compensation Allowance	420.00	420.00	210.00	210.00	210.00
Special allowance	1575.00	1675.01	3562.75	1256.07	-
Sub-Total (A)	29654.81	33463.12	33047.64	19452.37	12972.62
Impact of Pay revision due to recommendation of 7th Pay Commission	-	-	765.21	533.90	226.13
Impact of GST as 'Change in law'	-	-	-	46.28	60.51
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	1751.89	1880.57	2159.04	-	-



Share of P&G	934.71	2400.26	2637.80	3310.42	376.12
Share of Common Office Expenditure	122.72	114.83	97.61	58.60	37.70
Expenses due to Ash evacuation, Mega insurance, CISF expenditure & Expenditure for Subsidiary activities	2937.47	2985.88	4187.91	1491.61	1016.11
Sub-Total (B)	5746.79	7381.54	9847.57	5440.79	1716.57
Total annual fixed charges claimed (C = A+B)	35401.60	40844.66	42895.21	24893.17	14689.19

9. The Petition was heard on 27.7.2021, through video conferencing, and the Commission had directed the Petitioner to submit certain additional information. In response, the Petitioner vide affidavit dated 17.8.2021, has filed additional information after serving copies on the Respondents/Objector. The Objector, DVPCA has filed its comments/objection vide affidavit dated 19.4.2021 and the Petitioner has filed its rejoinder to the same vide affidavit dated 1.10.2021. The Petition was subsequently, heard on 6.12.2022 and the Commission after directing the Petitioner to submit certain additional information and based on consent of the parties, reserved its order in the Petition. In response, the Petitioner vide affidavit dated 9.1.2023, has filed the additional information after serving copies on the Respondents/Objector. Taking into consideration the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner in this petition, on prudence check, as stated in the subsequent paragraphs.

Capital Cost

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

“9. Capital Cost:

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

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014.*
 - (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and*
 - (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.*
- xxx...”*

11. The Commission vide its order dated 29.7.2016 in Petition No. 469/GT/2014 had



approved the closing capital cost of Rs. 62114.40 lakh, as on 31.3.2014. The same has been considered as the opening capital cost as on 1.4.2014, in accordance with Regulation 9(3)(a) 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 details of the additional capital expenditure allowed in order dated 27.9.2016

in Petition No. 350/GT/2014 is summarized below:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Additional Capital Expenditure	0.00	510.00	2054.00	195.00	74.00	2883.00
Decapitalisation	0.00	192.60	496.39	16.20	24.18	729.37
Net Additional Capital Expenditure	0.00	317.40	1557.61	178.80	99.82	2153.63

14. The Petitioner in Form-9A of the petition, has claimed actual additional capital expenditure for the period 2014-19. The Petitioner has submitted that Interest During Construction (IDC) and undischarged liabilities, were maintained on a consolidated year to year basis, but not item wise, and therefore, the additional capital expenditure claimed for each item is on accrual basis. Accordingly, the additional capital expenditure claimed by the Petitioner for the period 2014-19, is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Addition during the year/ period	4863.05	2324.07	290.15	104.88	370.54
Less: De-capitalization during the year / period	45.14	4.02	40.24	33386.94	91.04
Less: Undischarged liabilities	218.18	246.02	308.10	274.18	311.59
Add: Discharges during the year / period	189.08	265.85	230.51	261.34	372.29
Net Addition during the year/ period	4788.81	2339.89	172.33	(-)33294.90	340.20

15. The Objector, DVPCA has submitted that the Petitioner has not provided details of works asset wise/ work wise included in the original scope of work and were not claimed or approved by the Commission in order dated 27.9.2016 in Petition No 350/GT/2014. In response, the Petitioner has stated that vide Form-9A, it has given detailed justification against each of the additional capital expenditure items claimed along with documentary evidence. It has also submitted that additional capital expenditure has been claimed under Regulation 14(3) read with Regulation 54 (Power to Relax) of the 2014 Tariff Regulations with a prayer to relax the provisions of these regulations and Regulation 55 (Power to Remove Difficulty) to support the Petitioner



to remove the difficulty which arises in giving effect to the provisions of these regulations and allow the claims of the Petitioner.

16. The matter has been examined. Before we proceed to consider the truing up of the additional capital expenditure claimed by the Petitioner for the period 2014-19, we observe that the units of the generating station are in operation since 1986 (Unit-1), 1990 (Unit-2) and 1993 (Unit-3). As such, Unit-1, Unit-2 and Unit-3/generating station have completed their useful life in 2011, 2015 and 2018 respectively and have been eventually decommissioned in 2017 (two units) and 2021 (last unit). As such, post the completion of useful life of these units, the Petitioner has claimed Special Allowance in terms of Regulation 16 of the 2014 Tariff Regulations. However, as per proviso to the said regulation, Special Allowance is not allowable for generating units which are operating under relaxed operational and performance norms in terms of the 2014 Tariff Regulations, which are as under, in comparison to other thermal units of 210 MW:

Operational norms	Bokaro generating station	As per the 2014 Tariff Regulations
NAPAF (%)	80	85
Gross station heat rate (kcal/kWh)	2700	2450
AEC (%)	10.25%	8.5%- 9.5%
Secondary fuel oil consumption (ml/kWh)	1.5	0.5

17. As such, the Special allowance of Rs.8068.83 lakh claimed by the Petitioner as compensation for meeting the requirement of expenses including R&M beyond the useful life of the units, is not allowable to the generating station, in terms of proviso to Regulation 16 of the 2014 Tariff Regulations. Accordingly, the units of the generating station are placed in peculiar circumstances post completion of useful life as these have not gone for comprehensive R&M apprehending decommissioning in near future which eventually happened. Further, these units are also not eligible for Special allowance and Compensation allowance, after completion of their useful life. In this



background, we consider the claim of the Petitioner for additional capital expenditure for the period 2014-19, based on the submissions and documents on record, and on prudence check, as under:

2014-15

18. All the three units of the generating station were in operation in 2014-15. However, one of the unit was running beyond its useful life of 25 years and was not admissible for Compensation allowance of Rs.1.00 lakh per MW. Accordingly, only two units of 210 MW each, which were within the elapsed life of 21-25 years, are eligible for the said Compensation allowance. Accordingly, the compensation allowance of Rs.420 lakh is allowed to the generating station in 2014-15 for meeting the expenses of capital nature including minor assets. In this background, the following claims of the Petitioner for assets earlier allowed on projection basis and which are not covered under Compensation allowance are considered against the total claim of Rs. 4863.05 lakh:

<i>(Rs. in lakh)</i>			
	2014-15	List of assets	
Sl. No	Head of Work/ Equipment	Justification of the Petitioner and Commission's decision on admissibility of the expenditure	Amount allowed
1.	Ash Bund	<p>The claim has been made under Regulation 14(3)(vii) read with Regulation 54 & Regulation 55 of the 2014 Regulations. The Petitioner has stated that this expenditure is towards construction of new ash bund to handle ash disposal requirements of both BTPS 1-3 and BTPS A. The associated capital expenditure is allocated between BTPS 1-3 and BTPS A in the ratio of installed capacity and capitalized in the current year.</p> <p>In our view, the ash generation and ash disposal is a continuous process for which expenditure on ash bund creation/raising is incurred from time to time during the operating life of the plant. In view of this and in consideration of the fact that all three units were under operation during 2014-15, we allow the actually incurred expenditure on Ash Bund under Regulation 14(3)(iv) of the 2014 Regulations. The Petitioner has also prayed that after the decommissioning of Unit-3/generating station on 1.4.2021, the cost of the Ash Bund claimed here may be shifted to Bokaro-A and the unrecovered depreciation and interest on loan may be allowed to be recovered through tariff of Bokaro-</p>	4718.17



		A. In this regard, it is held that this proposition may be considered by the Commission at the time of truing up of tariff for the period 2019-24 in respect of Bokaro-A.	
2.	Personal Computer (Pc) Fixed Assets	The claim is under Regulation 14(3)(vii) along with Regulation 54 & Regulation 55 of the 2014 Regulations. This expenditure is towards procurement of personal computers with updated operating systems for use of various sections (Dispensary /Office/O. T/Medical Store /Indoor / Metron chamber). Computers with updated operating systems are essential to ensure protection against cyber threat and to ensure compliance with the directives of the Ministry of Power, GOI dt. 12.4.2010 and dt. 2.8.2017 regarding steps to be taken to prevent cyber-attacks. Commission allows the expenditure under Regulation 14(3)(iii) of the 2014 Regulations i.e. for safe operation of the plant as advised by the MOP.	3.53
		Total amount allowed	4721.70

19. The following additional capital expenditure claimed for 2014-15 has not been allowed for the purpose of tariff, after prudence check:

(Rs. in lakh)

2014-15		List of disallowed assets	
Sl. No	Head of Work/ Equipment	Justification of the Petitioner and Commission's decision on admissibility of the claimed expenditure	Amount Disallowed
1.	Clinker Grinder motor	Claimed under Regulation 14 (3) (vii), Regulation 54 & Regulation 55 of the 2014 Regulations. The Petitioner has claimed this expenditure towards replacement of the existing Clinker Grinder motors with new motors. The motors are located near dusty environment and moisture-prone area which resulted in frequent report of low IR value of the motors. Due to several times rewinding, performance of the motors got deteriorated. M/S NGEF, who was the OEM of the motors, already closed their manufacturing units and hence the spares of the motors were not readily available. Therefore, in order to ensure operational reliability of the units, replacement of the motors was necessary. The expenditure incurred is for assets of O&M nature. The Commission is not inclined to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax) for allowing capitalization of such expenses.	1.28
2.	PA Fan Motors	The claim is under Regulation 14(3)(vii) along with Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. The Petitioner has submitted that the existing PA fan motors have completed around 25 years of service. There were frequent tripping and breakdown of the motors during recent years (average break down rate was 8 to 15 per year). Therefore, in order to ensure operational reliability of the units, replacement of the PA fan motors was necessary. Regulation 14(3)(vii) of the 2014 Tariff Regulations provides for additional capital expenditure to generating stations other than coal/lignite-based	37.16



		<p>stations. As such, the same is not applicable to the instant coal based generating station. However, Commission, in consideration of the fact that these assets have outlived their life and have become obsolete, allowed replacement of these items in Tariff Order dated 27.09.2016 in Petitioner No. 350/GT/2014 under Regulation 14(3) (vii) in exercise of the power to relax under Regulations 54, subject to furnishing of the OEM/technical committee report for replacement of these assets due to obsolescence at the time of truing up in terms of Regulation 8 of the 2014 Tariff Regulations. However, it is observed that in spite of such explicit directions, the Petitioner has not submitted any supporting document to substantiate replacement of these items. Accordingly, the Commission is not inclined to allow the claimed expenditure. The Petitioner may meet the expenditure from compensation allowance allowed to the station.</p>	
3.	Misc. Power Plant Equipment.	<p>The claim is under Regulation 14(3)(vii) along with Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. The Petitioner has submitted that the expenditure is towards replacement of existing Coal Mill motors with new motors. The existing coal mill motors had already completed their useful lives. There was frequent breakdown of the motors (4-7 breakdowns per year) due to failure of Stator/Rotor windings. M/S NGEF, the OEM of the coal mill motors, had shut down its manufacturing operation. Therefore, spares of the motors were not readily available. Hence, the motors were to be replaced with new ones in order to ensure reliability of the equipment. Regulation 14(3)(vii) of the 2014 Tariff Regulations provides for additional capital expenditure to generating stations other than coal/lignite-based stations. As such, the same is not applicable to the instant coal based generating station. However, Commission, in consideration of the fact that these assets have outlived their life and have become obsolete, allowed replacement of these items in Tariff Order dated 27.09.2016 in Petitioner No. 350/GT/2014 under Regulation 14(3) (vii) in exercise of the power to relax under Regulations 54, subject to furnishing of the OEM/technical committee report for replacement of these assets due to obsolescence at the time of truing up in terms of Regulation 8 of the 2014 Tariff Regulations. However, it is observed that in spite of such explicit directions, the Petitioner has not submitted any supporting document to substantiate the replacement of these items. Accordingly, the Commission is not inclined to allow the claimed expenditure. The Petitioner may meet the expenditure from compensation allowance allowed to the station.</p>	26.39



4.	Misc. Power Plant Equipment	The claim is under Regulation 14(3)(vii) along with Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. The Petitioner has submitted that the expenditure is towards replacement of the existing motors of CW Booster pump and DM circulating Pump with new motors. The existing motors had already completed their useful life. The performance of these motors was not satisfactory and regular trouble was being reported. Therefore, replacement of these old motors was necessary considering smooth operation of the units. Regulation 14(3)(vii) of the 2014 Tariff Regulations is not applicable to the instant coal based generating station. Further, in consideration of the fact that the Petitioner has not substantiated its claim by producing the OEM/technical committee report for replacement of these assets, Commission is not inclined to allow the claim of the Petitioner. The Petitioner may meet the expenditure from compensation allowance allowed to the station	42.04
5.	Misc. Power Plant Equipment	Claimed under Regulation 14 (3) (vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. The Petitioner has stated that this expenditure is toward procurement of Ultrasonic/Radar type level transmitters used for measurement of levels of the Ash Slurry sump, filter water tank, CW sump. Earlier there was no instrument installed for measurement of Ash Slurry Sump level. But for smooth running of the Units, Ash slurry sump level is required to be maintained at a certain level which was being locally monitored. For remote indication of Ash Slurry Sump level, level transmitters were required to be installed for all the three Units. The Instrument installed earlier for measurement of Clear Water/ Filter Water tank level was air balance type pressure gauge which was being operated by Service Air pressure at Water Treatment Plant. Due to fluctuation in air pressure, gauge reading fluctuated and became erratic. But for smooth running of the Units & to avoid wastage of Clear Water/Filter Water, its level was required to be maintained at a certain level. Also, for CW Sump level, there was no measurement system. Therefore, for remote & reliable indication of Clear Water/ Filter Water & CW sump level, level transmitters were required to be installed in each tank. The expenditure incurred is for assets of O&M nature. The Commission is not inclined to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax). Accordingly, the claim is not allowed.	9.01
6.	Misc. Power Plant Equipment (111080267)	The claim is under Regulation 14(3)(iii) along with Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. The Petitioner has submitted that the expenditure is towards installation of High Mast light (20 mtr) for OPH area. Originally, there were two nos.	4.32



		of High Mast lights at CHP area. Considering satisfactory performance of the same, it was advised by the higher authority for procurement, erection and commissioning of another High Must light (20 mtr.) for OPH area. The new light is necessary for better illumination as well as for ensuring enhanced safety and security in respect of the plan activities. In our view, creation of additional facility at the fag end of station life shall be met by the Petitioner from its own resources/compensation allowance. Further, the expenditure incurred for assets which are minor in nature is not allowable in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations. May be met from compensation allowance allowed. Moreover, the Petitioner has not submitted any advice or direction from appropriate Government agency for its claim under Regulation 14(3)(iii) of the 2014 tariff Regulations.	
7.	Circuit breaker	The claim is under Regulation 14(3)(vii) along with Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. It has been stated by the Petitioner that ooriginally manual air circuit breaker without any protection was installed for performing as an isolation switch. During total power failure, it caused frequent problem for normalization of supply of emergency board which is also fed through DG set for supplying auxiliary power to emergency equipment's. With this consideration, it was decided to replace the existing breaker with new air circuit breaker with protection for quick restoration of emergency supply to avoid any damage of plant and machinery. The expenditure incurred is for assets of O&M nature. The Commission is not inclined to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax) . Accordingly, the claim is not allowed.	10.28
8.	Office Furniture Steel	This expenditure is towards procurement of furniture's (including chairs & tables etc.) used in the different offices within the plant such as chairs & tables etc. The expenditure incurred is for assets of minor nature which is not allowable in terms of first proviso to Regulation 14 of the 2014 Tariff Regulations. As such, the Commission is not inclined to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax) for allowing capitalization of such expenses. The petitioner may meet the expenditure from compensation allowance. Accordingly, the claim is not allowed.	10.86
		Total amount disallowed	141.34

20. In view of the above, against a total claim of Rs.4863.04 lakh in 2014-15, a total expenditure of Rs. 4721.70 lakh has been allowed and Rs.141.34 lakh has been disallowed.



2015-16

21. All the three units were in operation in 2015-16. However, one of the Unit was running beyond its useful life of 25 years and was not admissible for Compensation allowance of Rs.1 lakh per MW. Accordingly, only two units of 210 MW each, which were within elapsed life of 20-25 years is eligible for Compensation allowance of Rs.1lakh per MW. Accordingly, a compensation allowance of Rs.420 lakh is allowed to the generating station for 2015-16 for meeting the expenses of capital nature including minor assets. In this background, the following claim of the Petitioner for assets earlier allowed on projection basis and that which is not covered by compensation allowance is allowed against the total claim of Rs. 2324.07 lakh.

(Rs. in lakh)

2015-16		List of allowed assets	
Sl. No	Head of Work/ Equipment	Justification of the Petitioner and Commission's decision on admissibility of the claimed expenditure	Amount allowed
1.	Dry Fly Ash Collecting System	Claimed under Regulation 14(3)(ii) of the 2014 Tariff Regulations i.e. Change in law or for compliance of existing Law. This expenditure is towards the supply, erection and commissioning of the Dry Fly Ash Handling System. Earlier, fly ash collected in different hoppers of BTPS Units 1-3 was transported in slurry form to the existing ash slurry sump, from where the slurry was transported to the nearby ash ponds with the help of ash slurry pumps. In order to reduce the loading of the ash pond and to ensure compliance with the effluent discharge norms of the Jharkhand State Pollution Control Board, the Dry Fly Ash Handling System was implemented. The dry fly ash system will also help BTPS in utilization of fly ash as per the statutory directives by the Ministry of Environment, Forest and Climate Change, Government of India vide Notification dated 14.9.1999 (and its amendments dt. 27.8.2003, 3.11.2009 and 25.01.2016). Considering the Petitioner's submission, the said claim is allowed under Regulation 14(3)(ii) of the 2014 Tariff Regulations.	2285.98
Total amount allowed			2285.98

22. The following additional capital expenditure claimed for 2015-16 has not been allowed for the purpose of tariff, after prudence check:



(Rs. in lakh)

	2015-16	List of disallowed assets	
Sl. No	Head of Work/ Equipment	Justification of the Petitioner and Commission's decision on admissibility of the claimed expenditure	Amount disallowed
1	Residential Building	Claimed under Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards construction of residential building blocks for accommodation of employees of the plant. The claim is not being allowed as Petitioner is availing compensation allowance. The Commission is not inclined to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax) for allowing such expenses at the end of life. Accordingly, the claim is not allowed.	28.29
2	Clinker Grinder motor - Booked under the ledger code of ID Fan Motors	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This is the balance expenditure toward replacement of the existing Clinker Grinder motors with new motors (part of the expenditure is claimed in FY 2014-15; justification for this work is also provided in Form-9A for FY 2014-15). The expenditure incurred is for assets of O&M nature. The Commission is not inclined to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax) . Accordingly, the claim is not allowed.	1.92
3	Circuit Breaker (S.S.Equip)	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards replacement of existing Air Circuit breakers installed in the different feeders and incomers board, with new breakers. The performance of the existing breakers was not satisfactory and there was regular breakdown. Spares for the breakers were not readily available in the market as the OEM had stopped manufacturing of the breakers. The OEM recommended for replacement of the old breakers with the advanced version of air circuit breakers. The expenditure incurred is for assets of O&M nature. The Commission is not inclined to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax). Accordingly, the claim is not allowed.	4.45
4	Circuit Breaker (S.S.Equip)	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards replacement of existing Air Circuit breaker installed in the emergency board with new breaker (part of the expenditure is claimed in FY 2014-15; justification for this work is also provided in Form-9A for 2014-15). The expenditure incurred is for assets of O&M nature. The Commission is not inclined to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax). Accordingly, the claim is not allowed.	3.43
	Total amount disallowed		38.09



23. In view of the above, against the total claim of Rs.2324.07 lakh for 2015-16, an amount of Rs.2285.98 lakh has been allowed and a total amount of Rs.38.09 lakh has been disallowed.

2016-17

24. All the three units were in operation in 2016-17. However, two of the units were running beyond their useful life of 25 years and were not admissible for Compensation allowance of Rs.1lakh per MW. Accordingly, only one unit of 210 MW, which was within the elapsed life of 20-25 years is eligible for compensation allowance of Rs.1lakh per MW. Accordingly, the compensation allowance of Rs.210 lakh is allowed to the one unit of the generating station for 2016-17, for meeting the expenses of capital nature including minor assets. In this background, the following claim of the Petitioner for assets earlier allowed on projection basis and which is not covered by compensation allowance, is allowed against the total claim of Rs.290.15 lakh.

<i>(Rs. in lakh)</i>			
	2016-17	List of allowed assets	
Sl. No	Head of Work/ Equipment	Justification of the Petitioner and Commission's decision on admissibility of the claimed expenditure	Amount allowed
1	Misc. Power Plant Equipment	Claimed under Regulation 14(3)(ii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards the procurement, installation and commissioning of SPM, SOx, NOx and ETP analyzers along with accessories for monitoring of SPM, SOx, NOx, and effluent parameters of BTPS along with data transmission to CPCB & JSPCB for compliance of pollution norms requirement. Considering the submissions of the Petitioner, the additional capital expenditure claimed is allowed under 14(3)(ii) of 2014 Tariff Regulations.	94.31
2	Dry Fly Ash Collecting System	Claimed under Regulation 14(3)(ii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards procurement, installation and commissioning of different instruments and parts of the Dry Fly Ash Collecting System for BTPS 1-3. The instruments are parts include Ash hopper level switches for monitoring of ash levels inside hoppers, different cards for PLC	20.81



		of the dry fly ash system, different switches used for permissive, interlock & protection of different equipment's in dry fly ash system, hose pipes for connection of different instruments in dry fly ash system, V-Belts as spares for the various belt driven compressors and blowers of dry fly ash system, ball valves and solenoid valves for operation of different pneumatic valves/cylinders, transmitters and associated fittings for monitoring of pressure at different points in Dry Fly Ash system. Major part of the expenditure for Dry Fly Ash system has been claimed for FY 2015-16; Considering that the capitalization of Dry Fly Ash Collecting System has been allowed during 2015-16, the additional capital expenditure claimed for items required for successfully operating the same is also allowed under Regulation 14(3)(ii).	
		Total amount allowed	115.12

25. The following additional capital expenditure claimed for 2016-17 has not been allowed for the purpose of tariff, after prudence check:

(Rs. in lakh)

2016-17		List of Disallowed assets	
Sl. No	Head of Work/ Equipment	/Justification of the Petitioner and Commission's decision on admissibility of the claimed expenditure	Amount disallowed
1	Misc. Power Plant Equip	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards replacement of 2 nos. of old gear boxes (used in Coal mills) with new ones. The old gear boxes had completed their useful life. The replacement was necessary for reliable operation of the coal mills. The Hon'ble Commission in Tariff Order for BTPS 1-3 dt. 27.09.2016 has already approved additional capital expenditure for this item (Para 49, Page 28 of the Order). Regulation 14(3)(vii) of the 2014 Tariff Regulations provides for additional capital expenditure to generating stations other than coal/lignite-based stations. As such, the same is not applicable to the instant coal based generating station. However, Commission, in consideration of the fact that these assets have outlived their life and have become obsolete, allowed replacement of these items in Tariff Order dated 27.09.2016 in Petitioner No. 350/GT/2014 under Regulation 14(3) (vii) in exercise of the power to relax under Regulations 54 of the 2014 Tariff Regulations, subject to furnishing of the OEM/technical committee report for replacement of these assets due to obsolescence at the time of truing up in	119.91



		terms of Regulation 8 of the 2014 Tariff Regulations. However, it is observed that in spite of such explicit directions, the Petitioner has not submitted any supporting document to substantiate the replacement of these items. The Petitioner may meet the expenditure from compensation allowance allowed to the station. Accordingly, the claim is not allowed.	
	Other Building	Claimed under Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards upgradation of the residential building for convenience of the staffs staying at the township. The claim is not allowed as the Petitioner is availing compensation allowance. The Commission is not inclined to invoke Regulation 54 of the 2014 Tariff Regulations (power to relax) for allowing such expenses at fag end of life. May be met from the compensation allowance allowed. Accordingly, the claim is not allowed.	42.33
2.	Misc. Power Plant Equipment	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This is residual payment towards procurement of Insulation Tester (Megger), major part of which has already been claimed in FY 2013-14. The capitalization of tools and tackles is not permissible as per first proviso to Regulation 14 of the 2014 Tariff Regulations. The expenditure may be met from compensation allowance. Accordingly, the claim is not allowed.	0.05
3	Office Furniture-Steel (O/assets)	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.	0.51
4	Office Furniture-Elec. (O/assets)	This expenditure is towards procurement of multiflex file storage cabinets, four nos. of inverters, procurement of UPS, air coolers, and various hospital equipment.	0.98
5	Office Equipment (O/assets)	Since, the capitalization of minor assets is not permissible as per first proviso to Regulation 14 of the 2014 Tariff Regulations. The expenditure may be met from compensation allowance.	0.03
6	016 Other Assets (BTPS B)	Accordingly, the claim is not allowed.	3.32
5	Hospital Equipment (O/assets)		7.90
		Total amount disallowed	175.03

26. In view of the above, against the total claim of Rs.290.15 lakh in 2016-17, an amount of Rs.115.12 lakh is allowed and a total amount of Rs.175.03 has been disallowed.



2017-18

27. All the three units were in operation during the period from 1.4.2017 till 29.7.2017, as the same were decommissioned on 30.7.2017. However, only one unit was in operation from 30.7.2017 to 31.3.2018, and was eligible for compensation allowance. Accordingly, an amount of Rs.210 lakh is allowed to the generating station for the year 2017-18, for meeting the expenses of capital nature including minor assets. In this background, the following claim of the Petitioner for assets earlier allowed on projection basis and which is not covered by compensation allowance, is allowed against the total claim of Rs. 104.88 lakh:

(Rs. in lakh)

2017-18		List of allowed assets	
Sl. No	Head of Work/ Equipment	Justification of the Petitioner and Commission's decision on admissibility of the claimed expenditure	Amount allowed
1	Boiler & Accs. Equip	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards installation of Tertiary Air duct in the Boiler of Unit-3 with the aim to reduce unburnt carbon in the bottom and fly ash. The work was executed based on recommendations of NTPC in the Technical Audit report. After execution of the work, marked improvement noticed in unburnt carbon loss was noticed. Relevant pages of the NTPC Technical Audit Report containing recommendations, and the BTPS energy audit report showing reduction in unburnt carbon loss are submitted. Regulation 14(3) (vii) of the 2014 Tariff Regulations is not applicable for thermal generating stations, however, in consideration of the justification and supporting documents furnished by the Petitioner, the claim is allowed for efficient operation of the Unit-3 under Regulation 14(3)(vii) of the 2014 Tariff Regulations by invoking power to relax under Regulation 54 of 2014 Tariff Regulations.	56.01
2	Dry Fly Ash Collecting System	Claimed under Regulation 14(3) (ii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This is balance payments in respect of procurement, installation and commissioning of the Dry Fly Ash Collecting System. Major part of the expense under this head is already claimed in FY 2015-16 and 2016-17; justifications for undertaking this work is also provided in Form-9A for 2015-16.	12.96



		As the said claim is towards balance payment for the asset allowed during the year 2015-16 in respect of procurement, installation and commissioning of the Dry Fly Ash Collecting System, the same is also allowed under Regulation 14(3)(ii) of the 2014 Tariff Regulations.	
		Total amount allowed	68.97

28. The following additional capital expenditure claimed for the year 2017-18 is disallowed for the purpose of tariff:

(Rs. in lakh)

2017-18		List of Disallowed assets	
Sl. No	Head of Work/ Equipment	Justification of the Petitioner and Commission's decision on admissibility of the claimed expenditure	Amount disallowed
1	Other Building	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulations 55 of the 2014 Tariff Regulations. This expenditure is towards construction of toilet, urinal and shed for the staff and workers engaged in ash evacuation work at the permanent ash pond of BTPS. The claim is not being allowed as Petitioner has been allowed compensation allowance to meet such expenses.	4.33
2	Other Building	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards installation of deep tube well with water storage tank and pipe line as part of construction of drinking water facility required for the staffs and workers engaged in ash evacuation work at the permanent ash pond of BTPS. The claim is not being allowed as Petitioner has been allowed compensation allowance to meet such expenses.	3.43
3	Residential Building	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards installation of deep tube well with water storage tank and pipe line as part of construction of drinking water facility required for the staffs and workers engaged in ash evacuation work at the permanent ash pond of BTPS. The claim is not being allowed as Petitioner has been allowed compensation allowance to meet such expenses.	6.75
4	Water Works & Water Supply System	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.	2.86



		<p>This expenditure is towards procurement and installation of PVC tanks on the roof of quarters for storage of water for daily use purpose.</p> <p>The claim for asset of minor nature is not permissible for capitalization as per first proviso to Regulation 14 of the 2014 Tariff Regulations. May be met from compensation allowance.</p>	
6	Fencing	<p>Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.</p> <p>This expenditure is towards fencing of ash pond by barbed wire and RCC post for the purpose of plantation of tree in the peripheral area of ash pond for complying with the pollution norms of CPCB & Jharkhand State Pollution Control Board.</p> <p>Considering the fact that the expenditure incurred is for assets which are minor in nature, the additional capital expenditure claimed is not allowed in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations. May be met from compensation allowance.</p>	1.59
7	Plantation (Colony)		0.94
8	Misc. Power Plant Equip.	<p>Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.</p> <p>This expenditure is towards procurement of Portable Dissolved Oxygen Analyzer. Portable Dissolved Oxygen Analyzer is very much essential to monitor the concentration of dissolved oxygen in the boiler water system and various other points in the feed cycle, with the aim to minimize the rate of corrosion in the tubes due to increase in dissolved oxygen in the water. The existing portable ppb level DO meter was out of order. The cost of repairing the same (as per budgetary estimates by the OEM) was comparable with the cost of a new meter. Hence, it was decided to procure a new meter instead of going for repair.</p> <p>Capitalization of tools and tackles is not allowable in terms of first proviso to Regulation 14 of the 2014 Tariff Regulations. May be met from compensation allowance allowed to the station.</p>	8.82
9	Misc. Power Plant Equip.	<p>Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.</p> <p>This expenditure is towards replacement of existing different LT motors for mobile trippers, sump pumps (for handling waste water from RCTS), vibro feeders (for feeding raw and crushed coals at CHP), sump pumps (installed at the tail ends of coal conveyors # 2A/2B/5A/5B for removal of waste water), with new motors. These motors are essential for smooth operation of CHP and RCTS of BTPS-B. These motors were almost in continuous running and had direct impact on the coal feeding in the mill feeders. Performance of the existing motors was not satisfactory due to aging,</p>	4.16



		frequent cut-in/ cut-out, unfavorable working conditions and repeated rewinding, which resulted in frequent breakdown of these motors. Due to non-availability of spare motors, it was decided to procure new motor for replacement of the old motors. Considering the fact that the expenditure incurred is for assets of O&M nature, the additional capital expenditure claimed is not allowed .	
10.	Misc. Power Plant Equip.	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards procurement of Pressure Transmitters Considering the fact that the expenditure incurred is for assets of O&M nature, the additional capital expenditure claimed is not allowed .	2.08
11.	Misc. Power Plant Equipment	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This expenditure is towards procurement of instrument hose and fitting (for connection of different instruments), butterfly & solenoid valves and nipples (for operation of different pneumatic valves/cylinders), spare V-belts (for blowers), and gasket fronts (for instrument air compressors) for use in the Dry Fly Ash system. Considering the fact that the expenditure incurred is for assets of O&M nature, the additional capital expenditure claimed is not allowed .	0.96
		Total amount disallowed	35.92

29. In view of above deliberations, an amount of Rs.68.97 lakh is allowed against the total claim of Rs.104.88 lakh, disallowed amount being Rs.35.92 lakh for the year 2017-18.

2018-19

30. During 2018-19, only one unit of 210 MW, was operating and was eligible for compensation allowance of Rs. 1 lakh/MW. Accordingly, an amount of Rs.210 lakh has been allowed as compensation allowance to the station to meet expenses of capital nature including assets of minor nature. Under this background, the following claim of the Petitioner for assets earlier allowed on projection basis and that which is not covered by compensation allowance, is allowed against the total claim of



Rs.370.54 lakh:

(Rs. in lakh)

2018-19		List of allowed assets	
Sl. No	Head of Work/ Equipment	Regulation/Justification of the Petitioner and Commission's decision on admissibility of the claimed expenditure	Amount allowed
1	Transformer	<p>Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.</p> <p>This expenditure is towards procurement and installation of new 80MVA Power Transformer at the BTPS B switchyard as a replacement of the existing 50MVA transformer. The 50MVA transformer has been used for supplying power to DVC's 33kV consumers such as CCL, JSEB, DVC Bermo mines, colony and BTPS A construction supply. Total MVA demand on the 33kV side was to the tune of 65 MVA. Hence the 50MVA transformer was not sufficient to cater the load demand. Therefore, to meet the load demand procurement of the 80MVA transformer was necessary.</p> <p>This is to further state that after procurement of the new 80MVA transformer, the existing 50MVA transformer was shifted to the DVC's Jamuria substation (West Bengal) for further use.</p> <p>Regulation 14(3)(vii) of the 2014 Tariff Regulations provides for additional capital expenditure to generating stations other than coal/lignite-based stations. Considering the fact that said item is crucial for to cater the load demand, we are inclined to allow the claim of the Petitioner, under Regulation 14(3) (vii) of the 2014 Tariff Regulations, in exercise of the power to relax under Regulations 54 of the 2014 Tariff Regulations. With regard to the Petitioner's prayer that after decommissioning of the Unit-3/station on 1.4.2021, the cost of the 80 MVA transformer and Switchyard of BTPS 1-3 may be added to T&D system of DVC and unrecovered depreciation and interest on loan etc. may be allowed to be recovered through tariff of T&D system, it is held that Commission shall examine and consider such preposition during truing up of the tariff for the period 2019-24 of T&D system. Further, the Petitioner has prayed not to de-capitalize 50 MVA transformer from asset base, since the same shall be reused, as claimed by DVC. The same is not acceptable as the asset is not in use and as such has to be decapitalized from capital base of BTPS 1-3. Accordingly, the corresponding de-capitalization against the said additional capital expenditure is also considered as the old transformer is not in use.</p>	318.09
2	Misc. Power Plant Equipment	<p>Claimed under Regulation 14(3)(ii) and 14(3)(iii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.</p>	17.70



		<p>This amount is towards procurement of Fire extinguishing system for the newly installed 80MVA power Transformer. The Firefighting system is mandatory from safety point of view as well as to comply with the Fire Safety Code of Practice IS:3034 of 1993 and clause 8B of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010.</p> <p>Considering that the capitalization of 80MVA power Transformer has been allowed, the claimed expenditure for its fire safety is allowed under Regulation 14(3) (iii) of the 2014 Tariff regulation.</p>	
3	Personal Computer (PC) Fixed Asset	<p>Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.</p> <p>This amount is towards the procurement of desktop computer with updated operating systems to facilitate various activities at different offices in the plant. Computers with updated operating systems are essential to ensure protection against cyber threat and also to ensure compliance with the directives of the Ministry of Power, GOI dt. 12.4.2010 and dt. 2.8.2017 regarding steps to be taken to prevent cyber-attacks.</p> <p>The claim is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations for safe operation of the plant against cyber-attacks.</p>	17.02
		Total amount allowed	352.81

31. The following additional capital expenditure claimed for 2018-19 has not been allowed for the purpose of tariff, after prudence check:

(Rs. in lakh)

2018-19		List of disallowed assets	
Sl. No	Head of Work/ Equipment	Justification of the Petitioner and Commission's decision on admissibility of the claimed expenditure	Amount disallowed
1	Fencing	<p>Claimed under Regulation 14(3)(ii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.</p> <p>This amount is for creation of Green Belt in DVC land from CISF Complex to Chhat Ghat, in order to comply with the stipulations of The Ministry of Environment, Forest and Climate Change, Government of India.</p> <p>The Petitioner has not submitted any supporting document that substantiates that said claim is towards change in law. Hence the same is not allowed. May be met from compensation allowance</p>	0.79
2	Ash Handling Equipment (0111080263)	<p>Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations.</p> <p>This amount is towards procurement of spare Temperature switch and compressor for the Ash Handling system, in order to remain prepared for any exigency / breakdown with the ultimate aim to ensure plant availability.</p>	2.81



		There is no provision in 2014 Tariff Regulation to allow spares after cut-off date. Hence the same is disallowed . May be met from compensation allowance.	
4	Misc. Power Plant Equipment (0111080267)	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This amount is towards the procurement of Jaw Crusher & Roll Crusher used for sample preparation of coal for testing. The said items are necessary for quality testing of coal samples thereby facilitating, monitoring and supervision of plant performance. Considering the fact that the expenditure incurred is for procuring tools and tackles, the additional capital expenditure claimed is not allowed in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations. May be met from compensation allowance allowed to the station.	2.59
5	Misc. Power Plant Equipment (0111080267)	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This amount is towards the replacement of old pressure switch and pressure transducer with new one, in order to ensure proper monitoring thereby facilitating the plant operations. Considering the fact that the expenditure incurred is for assets of O&M nature, the additional capital expenditure claimed is not allowed .	3.50
6	Misc. Power Plant Equipment (0111080267)	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This amount is towards the procurement hose pipe V belt for use in the Ash Handling System. Considering the fact that the expenditure incurred is for assets of O&M nature, the additional capital expenditure claimed is not allowed .	0.35
2	Office Furniture-Elec. (O/assets)	Claimed under Regulation 14(3)(vii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This amount is towards the procurement of ceiling fans and hospital equipment for installation at different locations in the plant.	1.55
3	Hospital Equipment (O/assets) (0111160330)	Considering the fact that the expenditure incurred is for procuring assets of minor nature, the additional capital expenditure claimed is not allowed in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations. May be met from compensation allowance allowed to the station.	1.13
4	Miscellaneous (O/assets) (0111160399)	Claimed under Regulation 14(3)(iii), Regulation 54 & Regulation 55 of the 2014 Tariff Regulations. This amount is towards the procurement of CCTV System to ensure enhanced security at the plant area as well as the colony area. The Petitioner has not submitted any supporting document from appropriate Government Agency. Hence the same is not allowed . May be met from compensation allowance.	5.01
		Total amount disallowed	17.73



32. In view of above, against the total claim of Rs.370.54 lakh in 2017-18, an amount of Rs.352.81 lakh has been allowed and an amount of Rs.17.73 lakh has been disallowed.

33. Accordingly, the additional capital expenditure allowed/disallowed for the period 2014-19 is summarised below:

(Rs. in lakh)

Additional capital expenditure	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed	4863.05	2324.07	290.15	104.88	370.54
Allowed	4721.70	2285.98	115.12	68.97	352.81

De-capitalization

34. The Petitioner has furnished the asset-wise details for de-capitalization for the period 2014-19, as under:

(in Rs.)

Sr. No.	Name of the Asset	De-capitalization
2014-15		
1	PA Fan Motors (111080206)	760301
2	Clinker Grinder motor - Booked under the ledger code of ID Fan Motors (111080204)	61118
3	Misc. Power Plant Equip. (111080267) - CW Booster pump motor and DM circulating Pump motor	2008610
4	Misc. Power Plant Equip. (111080267) - Coal Mill motors	1260565
5	Circuit Breaker (111120102) - Air Circuit breaker installed in the emergency board	423145
	TOTAL	4513739
2015-16		
1	Clinker Grinder motor - Booked under the ledger code of ID Fan Motors (111080204)	89075
2	Circuit Breaker (S.S.Equip)(0111120102) - Air Circuit breakers installed in the different feeders and incomers board	176899
3	Circuit Breaker (S.S.Equip)(0111120102) - Air Circuit breaker installed in the emergency board	136249
	TOTAL	402223
2016-17		
1	Misc. Power Plant Equip.(0111080267) - Coal Mill Gear Box	4023676
	TOTAL	4023676
2017-18		
1	Misc. Power Plant Equip. (0111080267) - Different LT motors	182494



Sr. No.	Name of the Asset	De-capitalization
2	Power House Plant & Machinery (Decommissioning of BTPS Units-1 & 2)	
i	Turbine, Generator & Auxiliary (0111080102)	41411402
ii	Boiler & Accs. Equip(0111080212)	9474792
iii	STEAM TURB GEN (0111080226)	45128775
iv	Turbo Generator & Accs.(0111080230)	4135550
v	P.H. Plant & Mach. (BTPS B)(0111081101)	2407921407
vi	Plant & Mach. BTPS (C Spons)(0111081102)	495014
vii	Plant & Mach. BTPS (Own Sch)(0111081103)	37771497
viii	Plant & Mach. BTPS I-III(0111081104)	83432327
ix	Plant & Mach. BTPS IV(0111081105)	19554578
x	Plant & Mach. Ext. BTPS I-III(0111081106)	143704903
xi	Plant & Mach. Ext. BTPS IV(0111081107)	3308306
xii	Plant & Mach. Extn. BTPS B(0111081108)	541145365
	Total of Power House Plant & Machinery (Decommissioning of BTPS Units-1 & 2)	3337483916
3	Other Assets (Decommissioning of BTPS Units-1 & 2)	
i	Other Assets	1027619
	Total of Other Assets (Decommissioning of BTPS Units-1 & 2)	1027619
	TOTAL	3338694029
2018-19		
1	Transformer (0111080259) - existing 50MVA Power Transformer at the BTPS B switchyard	8986962
2	Misc. Power Plant Equip. (0111080267) - Pressure switch and Pressure transducer	117366
	Total	9104329

35. The matter has been considered. It is observed that the assets claimed under decapitalisation were from the original scope and Unit 1 & 2 got decommissioned in 2017-18. Hence, the decapitalisation of assets as claimed by the Petitioner for the period 2014-19 has been allowed, considering that the said assets are not in use. Accordingly, decapitalisation of assets allowed for the period 2014-19 are as under:

(Rs. In lakh)

Decapitalisation	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed	45.14	4.02	40.24	33386.94	91.04
Allowed	45.14	4.02	40.24	33386.94	91.04

Un-discharged liabilities

36. The Petitioner has submitted that total undischarged liabilities created during the period 2014-19 is Rs.1358.07 lakh (Rs.218.18 lakh in 2014-15, Rs.246.02 lakh in



2015-16, Rs.308.10 lakh in 2016-17, Rs.274.18 lakh in 2017-18 and Rs.311.59 lakh in 2018-19). It is also observed that the information submitted by the Petitioner, is not in line with the 2014 Tariff Regulations i.e., no item-wise and year-wise position of undischarged/discharged liabilities is made available. In the absence of the item-wise availability of undischarged liability, the same is determined on a *pro-rata* basis, considering the admitted additional capital expenditure, as against the additional capital expenditure claimed, during each year of the period 2014-19. Accordingly, as against an un-discharged liability of Rs.1358.07 lakh claimed for the period 2014-19, a corresponding amount of Rs.1053.05 lakh has been allowed. Accordingly, the year-wise details of un-discharged liabilities are as under:

(Rs. in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
211.84	241.98	122.24	180.31	296.67

Discharge of liability

37. The Petitioner has submitted the year-wise, total discharge of liabilities of Rs.1319.08 lakh during the period 2014-19 (Rs.189.08 lakh in 2014-15, Rs.265.85 lakh in 2015-16, Rs.230.51 lakh in 2016-17, Rs.261.34 lakh in 2017-18 and Rs.372.29 lakh in 2018-19), instead of item wise discharges of liability. In the absence of the item-wise availability of liabilities discharged, the same is determined on a *pro-rata* basis, considering the admitted additional capital expenditure, as against the additional capital expenditure claimed, during each year of the period 2014-19. Further, the opening balance of the liability discharged, as on 1.4.2014, has been allowed to be discharged in full. Accordingly, the discharge of liabilities, allowed as part of the additional capital expenditure, corresponding to the assets allowed, are as under:

(Rs. in lakh)					
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Un-discharged liabilities (A)	31.90	60.13	40.17	65.27	89.11



	2014-15	2015-16	2016-17	2017-18	2018-19
Additions during the period 2014-19 (corresponding to allowed additional capital expenditure) (B)	211.84	241.98	122.24	180.31	296.67
Discharges during the period 2014-19 (corresponding to allowed additional capital expenditure) (C)	183.61	261.95	97.13	156.48	324.14
Reversal of Liabilities out of liabilities added during the period 2014-19 (corresponding to allowed additional capital expenditure) (D)	0.00	0.00	0.00	0.00	0.00
Closing Un-discharged liabilities (E) = (A+B-C-D)	60.13	40.17	65.27	89.11	61.64

Capital cost allowed for the period 2014-19

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

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (A)	62114.40	66762.74	69064.67	69114.44	35772.64
Add: Addition during the year / period (B)	4721.70	2285.98	115.12	68.97	352.81
Less: De-Capitalisation during the year /period (C)	45.14	4.02	40.24	33386.94	91.04
Less: Undischarged liabilities (D)	211.84	241.98	122.24	180.31	296.67
Add: Discharges during the year /period (E)	183.61	261.95	97.13	156.48	324.14
Closing Gross Block (F) = (A+B-C-D+E)	66762.74	69064.67	69114.44	35772.64	36061.87
Average Gross Block (G) = (A+F)/2	64438.57	67913.70	69089.55	52443.54	35917.25

Debt-Equity Ratio

39. 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- xxxxx

(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.”

40. The gross normative loan and equity as considered in order dated 27.9.2016 in Petition No. 350/GT/2014, has been retained for the purpose of tariff. Further, the admitted additional capital expenditure and de-capitalisation of assets put to use after 1.4.1992, has been allocated in the debt-equity ratio of 70:30. whereas the de-capitalisation, being related to assets put in use prior to 1992 has been allocated in the debt-equity ratio of 50:50. Also, the impact of decommissioning of Unit-I & II has been allocated in the opening debt-equity ratio of the year of decommissioning, i.e. 1.4.2017, as 54.04%: 45.96%. Accordingly, the details of the debt-equity ratio in respect of the generating station, as on 1.4.2014 and 31.3.2019, allowed is as under:

(Rs. in lakh)

	Capital Cost as on 1.4.2014	%	Addition al Capital expenditure for 2014-19	De-Capitali zation during 2014-19 of assets put to use after 1.4.199 2	De-Capitali zation during 2014-19 of assets put to use before 1.4.199 2	Decommi ssioning of Unit-I &ii for 2014-19	Capital Cost as on 31.4.2019	%
Debt	32444.57	52.23%	5260.39	122.26	3.80	18039.71	19539.19	54.18%
Equity	29669.83	47.77%	2254.45	52.40	3.80	15345.41	16522.68	45.82%
Total	62114.40	100%	7514.85	174.66	7.60	33385.12	36061.87	100%



Return on Equity

41. 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*
- (v) Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:*
- (vi) 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:*
- (vii) additional RoE shall not be admissible for transmission line having length of less than 50 kilometer.”*

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

“25. Tax on Return on Equity:

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

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

Rate of pre-tax return on equity = Base rate / (1-t) Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning



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

Illustration.

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

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

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

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

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

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

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

43. 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 term of Regulation 25(3) of the 2014 Tariff Regulations, the generating company shall true-up the grossed up rate of ROE, at the end of every financial year, based on 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 period 2014-19, on actual gross income of any financial year.

44. The Objector, DVPCA has submitted that though the Petitioner has considered



the effective tax rate of 19.610%, 19.705%, 19.705%, 19.705% and 19.758% for computation of ROE for the period 2014-19, the Audited accounts reveals that the Petitioner has not paid any actual tax during the period 2014-18. It has also submitted that for 2018-19, the deferred tax liability, which gets materialised in the year, pertains to the year 2012-13. DVPCA has Referred to Regulation 49 of the 2014 Tariff Regulations and submitted that the claim is in contravention to the 2014 Tariff Regulations and ROE is to be allowed at a rate of 15.50% only, without considering any effective tax rate. In response, the Petitioner, has clarified that there is no income tax liability on the Petitioner for the period 2014-19. However, it has sought leave of the Commission, to claim income tax liability, if any, which may arise in future.

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

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Equity-Opening (A)	29669.83	31062.81	31753.39	31768.32	16435.91
Addition of Equity due to additional capital expenditure (B)	1392.98	690.58	14.93	(-)15332.41	86.77
Normative Equity-Closing (C) = (A) + (B)	31062.81	31753.39	31768.32	16435.91	16522.68
Average Normative Equity (D) = (A+C)/2	30366.32	31408.10	31760.86	24102.12	16479.29
Return on Equity (Base Rate) (E)	15.50%	15.50%	15.50%	15.50%	15.50%
Effective Tax Rate (F)	0.00%	0.00%	0.00%	0.00%	0.00%
Rate of Return on Equity (Pre-Tax) (G) = (E)/(1-F)	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity (Pre-Tax) annualized (H) = (D)*(G)	4706.78	4868.26	4922.93	3735.83	2554.29

Interest on Loan

46. 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.”

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

- a. The gross normative loan of Rs.32444.57 lakh has been considered on 1.4.2014, in line with the gross normative loan balance as on 31.3.2014, in



terms of order dated 29.7.2016 in Petition No. 469/GT/2014. In addition to this, loan component towards additional capitalization has been considered as per the approved debt equity ratio.

- b. Cumulative repayment of loan as on 31.3.2014 has been considered as cumulative repayment of loan as on 1.4.2014.
- c. Addition to normative loan on account of additional capital expenditure approved above has been considered on year-to-year basis.
- d. Depreciation allowed has been considered as repayment of normative loan, if any during the respective years of the period 2014-19. Proportionate adjustment has been made to the repayments on account of de-capitalizations considered in the additional capital expenditure approved above.

48. 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 period 2014-19, if any, for the generating station. Further, 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. For the year 2018-19, as only PFC loan is left in the loan portfolio which was also fully repaid during the year, the PFC rate of interest on loan i.e., 6.91%, has been considered as WAROI for the year 2018-19. The necessary calculation for interest on loan is as follows:

	<i>(Rs in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan (A)	32444.57	35699.93	37311.28	37346.12	19336.73
Cumulative repayment of loan up to previous year (B)	32173.43	34391.62	37311.28	37346.12	19305.13
Net Loan Opening (C) = (A) - (B)	271.14	1308.31	0.00	0.00	31.60
Addition due to additional capital expenditure (D)	3255.36	1611.35	34.84	(-)18009.39	202.46
Repayment of loan during the year (E)	2248.26	2922.47	63.01	0.00	229.39
Less: Repayment adjustment on account of de-capitalization (F)	30.08	2.82	28.17	18040.99	63.73
Net Repayment (G) = (E) - (F)	2218.19	2919.66	34.84	(-)18040.99	165.66



	2014-15	2015-16	2016-17	2017-18	2018-19
Net Loan Closing (H) = (C) + (D) - (G)	1308.31	0.00	0.00	31.60	68.40
Average Loan (I) = (C+H)/2	789.72	654.15	0.00	15.80	50.00
Weighted Average Rate of Interest of loan (J)	8.9403%	8.9424%	8.9405%	6.3140%	6.9100%
Interest on Loan (K) = (I)*(J)	70.60	58.50	0.00	1.00	3.45

Depreciation

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

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

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

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

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

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

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

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

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



station and transmission system:

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

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

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

(8) In case of de-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.”

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

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

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

(i)xx

(ii)xx

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

51. The cumulative depreciation amounting to Rs.55154.69 lakh as on 31.3.2014, as allowed in order dated 29.7.2016 in Petition No. 469/GT/2014 has been considered as the opening cumulative depreciation, as on 1.4.2014, for the purpose of tariff. The weighted average rate of depreciation, calculated in terms of the Regulation 53(2)(iii) read with Regulation 27 of the 2014 Tariff Regulations, has been considered for the calculation of depreciation. The cumulative depreciation has been adjusted on account of de-capitalization, considered during the period 2014-19, for the purpose of tariff. Accordingly, depreciation is worked out and allowed as under:



(Rs in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Average Capital Cost (A)	64438.57	67913.70	69089.55	52443.54	35917.25
Value of freehold land included in average capital cost (B)	657.51	657.51	657.51	657.51	657.51
Aggregated Depreciable Value (C)= (A-B) *90%	57402.95	60530.57	61588.84	46607.43	31733.77
Remaining aggregate depreciable value at the beginning of the year (D) = [(C) - (Cumulative Depreciation of Previous year)]	2248.26	3127.62	1058.27	(-) 14981.41	(-) 29818.86
No. of completed years at the beginning of the year (E)	24.06	25.06	26.06	27.06	28.06
Balance useful life at the beginning of the year (F) = 25 - (E)	0.94	-	-	-	-
Weighted Average Rate of Depreciation (WAROD) (G)	7.0421%	7.0547%	6.8180%	6.3852%	6.3937%
Depreciation during the year/ period (H) = Minimum of [(A)*(G) or (D)]	2248.26	3168.24	1061.89	0.00	229.39
Cumulative depreciation at the end of the year (before adjustment for de-capitalisation) (I) = (H) + (K of the previous year)	57402.95	60530.57	61588.84	61552.63	31733.77
Less: Depreciation adjustment on account of de-capitalisation (J)	40.62	3.62	36.21	30048.25	81.94
Cumulative depreciation at the end of the year* (K) = (I) - (J)	57362.33	60526.95	61552.63	31504.38	31651.83

Operation & Maintenance Expenses

52. Regulation 29(1)(a) of the 2014 Tariff Regulations provides O&M norms for the generating station as under:

(Rs in lakh/MW)

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

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
15057.00	16002.00	17010.00	10022.98	6407.10

54. It is observed that the O&M expenses claimed by Petitioner except for the year 2017-18, are in terms of Regulation 29(1)(a) of the 2014 Tariff Regulations, the claim



is allowed. However, considering the decommissioning date of 30.7.2017 of two units, the three units (630 MW) are eligible for O&M expenses for 120 days and from 30.7.2017 till 31.3.2018, only one remaining unit (210 MW) is eligible for O&M expenses for 245 days. Accordingly, considering the norm of Rs. 28.70 lakh/MW, the O&M expenses allowed to the station work out to Rs.9989.96 lakh for the year 2017-18. In view of above deliberations, the O&M expenses allowed to the station for the period 2014-19, are as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
15057.00	16002.00	17010.00	9989.96	6407.10

Water Charges

55. Regulation 29(2) of the 2014 Tariff Regulations provide as follows:

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

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

56. The Petitioner has claimed water charges in terms of the above Regulations, as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
-	1379.91	348.64	124.17	132.43

57. The Objector, DVPCA has submitted that water charges has to be allowed based on norm of 3.50 m³/kWh (as per MoEF&CC Notification 3305 dated 7.12.2015) or actual consumption whichever is lower. The Petitioner, in its rejoinder, has submitted the following reasons behind the higher water consumption in respect of BTPS 1-3 over MoEF&CC norm of 3.5 M³/MWh:



- i. *Low PLF and lower generation due to low Valley area firm consumer demand for which total water consumption divided by Actual generation being low resulted in higher water consumption.*
- ii. *Further, in order to maintain overall emission parameters under control thereby serving society at large, during appropriate time blocks scheduled generation for old BTPS 1-3 plant was maintained at lower levels keeping onus of higher generation on the part of newly installed power plant units (where emission is comparatively low than old BTPS 1-3 units) in order protect environment.*
- iii. *Regarding water charge rate DVC like to submit that water charge rate is being fixed by Committee namely DVRRC. The details of DVRRC as follows:*
 - *Damodar Valley Reservoir Regulation Committee (DVRRC) is a Committee and was constituted under the Chairmanship of Member (Floods), Member (RM), CWC along with the members from the States of West Bengal & Jharkhand) and DVC.*
 - *DVRRC reviews the overall reservoir operation of DVC during monsoon & non-monsoon season; water allocation for different uses; discusses and takes decision on optimum utilisation of water resources available in the basin; directs to take special studies on different aspects of reservoir operations, improvement of flood forecasting and warning network, health aspects of dams and related structures and water resources development in general in Damodar basin etc.*
- iv. *The basis behind increase in Water Charge rate as fixed by DVRRC during the 2014-19 control period is due to increase in employee costs due to pay revision on implementation of 7th Central Pay Commission and capital expenditure incurred from time to time on reservoir operation etc.*
- v. *Fixation of Rates for supply of water for industrial purposes is also governed by Section-15 of the DVC Act and approved by the DVC Board consisting of members from the Central Government and the respective state governments of West Bengal and Jharkhand.*
- vi. *The expenses related to water management increased during the 2014-19 control period due to increase in employee costs due to 7th Central Pay Commission revision and capital expenditure incurred from time to time.*
- vii. *CERC had allowed water charges at a rate of Rs.12.39/Cum for FY 2013-14 with an escalation of 5% per annum vide Order dated 29.07.2016 in Petition No. 294/GT/2014.*

58. The matter has been considered, Regulation 29(2) provides for consideration of the actual consumption of water depending upon type of plant, type of cooling water system etc, subject to prudence check. It is however noticed that the Petitioner has booked water consumption charges for 2014-15 and 2015-16 in the audited accounts for 2015-16. The details of water charges claimed are as follows:



	Water Use	Quantity of water consumed (M ³)	Rate of water charges (Rs./M ³)	Water Charges as per Rate (Rs. Lakh)	Water Charges for BTPS as per Annual Accounts	Water Charges apportioned to Bokaro-1 to 3 as per Annual Accounts
2014-15	Industrial	11332840	6.25	708.30	-	-
	Domestic	730000	1.15	8.40		
	Total	12062840		716.70		
2015-16	Industrial	10476719	6.25	654.79	1379.91	1379.91
	Domestic	732000	1.15	8.42		
	Total	11208719		663.21		
2016-17	Industrial	6242873	6.25	390.18	398.57	348.64
	Domestic	730000	1.15	8.40		
	Total	6972873		398.57		
2017-18	Industrial	11648999	6.25	728.06	756.79	124.17
	Domestic	2498220	1.15	28.73		
	Total	14147219		756.79		
2018-19	Industrial	10149306	6.25	634.33	694.25	132.43
	Domestic	5210209	1.15	59.92		
	Total	15359515		694.25		
Total for 2014-19 tariff period		59751166		3229.53	3229.53	1985.15

59. It is observed that, the water charges determined, based on consumption and rate, thereof, are in line with the audited water charges. Accordingly, the audited water charges apportioned to the generating station based on the actual generation from the generating station and actual generation from BTPS as a whole, have been considered. It is further observed that the Petitioner has claimed domestic water charges, which are being recovered from its employees. As the water charges for domestic usage are not allowable, the same has been excluded from the audited apportioned water charges. Accordingly, water charges allowed are as follows:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed	0.00	1379.91	348.64	124.17	132.43
Allowed	0.00	1363.10	341.30	119.45	121.00

Compensation Allowance

60. Regulation 17 of 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

61. The Petitioner has claimed Compensation allowance as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
420.00	420.00	210.00	210.00	210.00

62. The Unit-I has completed 25 years during the year 2010-11. Accordingly, compensation allowance for Unit 1 has not been allowed. Further, Unit-2 will complete 25 years of operation in 2015-16 and Unit 3 will complete 25 years of operation in 2018- 19. Therefore, compensation allowance for Unit 2 & 3 of this generating station has been allowed in accordance with the above regulation as under:

(Rs. in lakh)

	COD of Units	2014-15	2015-16	2016-17	2017-18	2018-19
Unit 1	Mar-86	0.00	0.00	0.00	0.00	0.00
Unit 2	Nov-90	210.00	210.00	0.00	0.00	0.00
Unit 3	Aug-93	210.00	210.00	210.00	210.00	210.00
Total Compensation Allowance		420.00	420.00	210.00	210.00	210.00

Special Allowance

63. Regulation 16 of the 2014 Tariff Regulations provides as follows:

“16. Special Allowance for Coal-based/Lignite fired Thermal Generating station

(1) In case of coal-based/lignite fired thermal generating stations, the generating company, instead of availing renovation and modernization (R&M) may opt to avail a ‘special allowance’ in accordance with the norms specified in this Regulation, as compensation for meeting the requirement of expenses including renovation and



modernisation beyond the useful life of the generating station or a unit thereof and in such an event, upward revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the Special Allowance shall be included in the annual fixed cost:

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

(2) The Special Allowance shall be @ Rs. 7.5 lakh/MW/year for the year 2014-15 and thereafter escalated @ 6.35% every year during the tariff period 2014-15 to 2018-19, unit-wise from the next financial year from the respective date of the completion of useful life with reference to the date of commercial operation of the respective unit of generating station:

Provided that in respect of a unit in commercial operation for more than 25 years as on 1.4.2014, this allowance shall be admissible from the year 2014-15: Provided further that the special allowance for the generating stations, which, in its discretion, has already availed of a „special allowance“ in accordance with the norms specified in clause (4) of regulations 10 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff Determination) Regulations, 2009, shall be allowed Special Allowance by escalating the special allowance allowed for the year 2013-14 @ 6.35% every year during the tariff period 2014-15 to 2018-19..

(3) In the event of granting special allowance by the Commission, the expenditure incurred or utilized from special allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission as and when directed to furnish details of such expenditure.”

64. Special Allowance claimed by the Petitioner in terms of the above Regulation is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
1575.00	1675.01	3562.75	1256.07	0.00

65. It has been observed that the Petitioner has not claimed the Special Allowance for the period 2014-19, but is now seeking the same in true-up. As the generating station of the Petitioner is availing relaxed operating norms, the claim of the Petitioner has not been allowed in terms of the proviso to Regulation 16(1) of 2014 Tariff Regulation.

Operational Norms

66. The operational norms for the generating station claimed by the Petitioner are as



under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Annual Plant Availability Factor (NAPAF) (%)	75%	75%	75%	75%	75%
Gross Station Heat Rate (kCal/kWh)	2700	2700	2700	2700	2700
Auxiliary Power Consumption (%)	10.25%	10.25%	10.25%	10.25%	10.25%
Specific Oil Consumption (ml/kWh)	1.5	1.5	1.5	1.5	1.5

Normative Annual Plant Availability Factor (NAPAF)

67. Regulation 36(c) 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.

...

(d) Following Thermal Generating Stations of DVC:

Bokaro TPS	75%
Chandrapura TPS	75%
Durgapur TPS	74%

68. The NAPAF of 75% as claimed by Petitioner is in accordance with the provisions of Regulation 36 (A)(a)(c) of the 2014 Tariff Regulations and hence allowed.

Gross Station Heat Rate

69. The Gross Station Heat Rate of 2700 Kcal/ kWh, as claimed by Petitioner is in accordance with the provisions of Regulation 36 (C)(a)(iii) of the 2014 Tariff Regulations and hence allowed.

Auxiliary Energy Consumption (AEC)

70. The AEC of 10.25% claimed for the period 2014-19 is in line with the provisions of Regulation 36(E)(b) of the 2014 Tariff Regulations and hence allowed.



Secondary Fuel Oil Consumption

71. As the Secondary Fuel Oil Consumption of 1.50 ml/kWh claimed for the period 2014-19 is in line with Regulation 36(D)(c) of 2014 Tariff Regulations, the same is allowed.

72. Accordingly, the operational norms allowed are summarized below:

	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Annual Plant Availability Factor (NAPAF) (%)	75%	75%	75%	75%	75%
Gross Station Heat Rate (kCal/kWh)	2700	2700	2700	2700	2700
Auxiliary Power Consumption (%)	10.25%	10.25%	10.25%	10.25%	10.25%
Specific Oil Consumption (ml/kWh)	1.5	1.5	1.5	1.5	1.5

Interest on Working Capital

73. The Petitioner has submitted details of interest on working capital in their revised claim as follows:

	2014-15	2015-16	2016-17	2017-18	2018-19
	<i>(Rs. in lakh)</i>				
Cost of Coal/Lignite for Stock and Generation	10484.69	10513.42	10484.69	5812.06	3494.90
Cost of oil for 2 months (B)	654.42	656.22	654.42	362.77	218.14
O&M expenses - 1 month (C)	1254.75	1448.49	1446.55	845.60	544.96
Maintenance Spares - 20% of O&M (D)	3011.40	3476.38	3471.73	2029.43	1307.91
Receivables - 2 months (E)	17059.03	17993.29	18304.76	10326.11	6168.30
Total Working Capital (F) = (A+B+C+D+E)	32464.29	34087.80	34362.16	19375.97	11734.20
Rate of Interest (G)	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital (H) = (F)x(G)	4382.68	4601.85	4638.89	2615.76	1584.12

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

“28. Interest on Working Capital:

(1) The working capital shall cover:

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

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



maximum coal/lignite stock storage capacity whichever is lower;

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

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

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

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

(vi) Operation and maintenance expenses for one month.

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

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof as the case may be is declared under commercial operation whichever is later.

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

Fuel Cost for Working Capital

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

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

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

xxx

(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

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

(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

77. In terms of the above Regulation, for determination of the working capital, the GCV on “as received basis” is to be considered. Further, Regulation 30 (7) of the 2014 Tariff Regulations provides for the following:

“(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.”



78. The Petitioner has furnished the weighted average GCV of coal as 3358.15 Kcal/kg on “as received” basis for the period from January 2014 to March 2014. The Petitioner has further submitted that it has filed a separate petition before the Commission vide affidavit dated 6.3.2018 (Petition No.133/MP/2018), wherein the Petitioner has submitted that it determines the GCV of the coal on ‘as received basis’ by taking sample manually from the wagon top 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 with regard to measurement of the GCV at the receiving end as submitted in the Petition 133/MP/2018 along with this Petition and determine tariff for the generating station, based on GCV considered on ‘as received’ basis.

79. The matter has been considered. As stated above, the Petitioner, in Form-15, has considered the weighted average GCV of coal on “as received basis” i.e., from Wagon top, for the period from January 2014 to March 2014, for the purpose of computation of working capital for the period 2014-19. Accordingly, the cost for fuel components in working capital has been computed considering the fuel details (price and GCV) as per Form-15, and GCV of coal as 3358.15 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 till two decimal places whereas, 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. In this regard it is 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 are as follows:



		Allowed
Weighted average price of Coal	Rs. /MT	1900.61
Weighted average GCV of Coal for Jan to March 2014	Kcal/kg	3358.15
Weighted average price of oil	Rs. /KL	63243.01
Weighted average GCV of secondary fuel oil	Kcal/L	9738.40

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (30 days)	5170.53	5170.53	5170.53	2856.78	1723.51
Cost of Coal towards Generation (30 days)	5170.53	5170.53	5170.53	2856.78	1723.51
Cost of Secondary fuel oil 2 months	654.42	656.22	654.42	361.58	218.14

Working Capital for Maintenance Spares

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
3011.40	3476.38	3471.73	2029.43	1307.91

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
3011.40	3473.02	3470.26	2021.88	1305.62

Working Capital for O&M expenses

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1254.75	1448.49	1446.55	845.60	544.96



84. 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 the working capital. The one-month O&M expenses, as allowed is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
1254.75	1447.09	1445.94	842.4584 2.45	544.01

Energy Charge rate (ECR) and Working Capital for Receivables

85. The Petitioner has claimed ECR ex-bus for 179.91 Paise/kWh for the generating station, based on the landed cost of coal, GCV of coal & GCV and price of oil procured and burnt for the preceding three months of the period 2014-19. Accordingly, the allowable ECR, based on the operational norms as specified under the 2014 Tariff Regulations, on weighted average price and ‘as received’ GCV of coal and weighted average price and GCV of oil as allowed above, works out as Rs. 1.799 / kWh.

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

- a) ECR of Rs. 1.799/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, normative availability of 75% during the 2014-19 tariff period, and Auxiliary Energy Consumption of 10.25%.

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

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
11138.34	11168.85	11138.34	6154.06	3712.78

88. Receivables equivalent to two months of capacity charge and energy charge has



been worked out, duly considering the mode of operation of the generating station on secondary fuel, as follows:

(Rs.in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Energy Charges - for two months (A)	11138.34	11168.85	11138.34	6154.06	3712.78
Fixed Charges – for two months (B)	4372.83	4964.49	4601.51	2708.25	1800.67
Total (C) = (A+B)	15511.16	16133.34	15739.85	8862.30	5513.45

Rate of interest on working capital

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for Cost of Coal for Stock (30 days of generation at NAPAF) (A)	5170.53	5170.53	5170.53	2856.78	1723.51
Working Capital for Cost of Coal for Generation (30 days of Generation at NAPAF) (B)	5170.53	5170.53	5170.53	2856.78	1723.51
Working Capital for Cost of oil for 2 months of generation at NAPAF(C)	654.42	656.22	654.42	361.58	218.14
Working Capital for O&M expenses - 1 month of O&M Expenses (D)	1254.75	1447.09	1445.94	842.45	544.01
Working Capital for Maintenance Spares - 20% of O&M Expenses (E)	3011.40	3473.02	3470.26	2021.88	1305.62
Working Capital for Receivables - capacity and energy charges for 2 months of generation at NAPAF(F)	15511.16	16133.34	15739.85	8862.30	5513.45
Total Working Capital (G) = (A+B+C+D+E+F)	30772.80	32050.74	31651.54	17801.77	11028.24
Rate of Interest (H)	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital (I) = (G)*(H)	4154.33	4326.85	4272.96	2403.24	1488.81

Additional O&M Expenses

90. The Petitioner has also claimed additional O&M expenses, over and above the



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

Ash Disposal Expenses

91. The Petitioner has claimed total Rs.2769.77 lakh on account of Ash Disposal expenses as additional O&M expenses, for the generating station as under:

<i>(Rs.in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
578.44	534.11	1398.05	175.30	83.87

92. The Petitioner has submitted that due to statutory directions of the Ministry of Environment, Forest and Climate Change (MoEF&CC), GoI, vide Notification dated 14.9.1999 (and its amendments dated 27.8.2003, 3.11.2009 and 25.1.2016), the fly ash generated during the course of operation of coal power plants, is required to be utilized under various designated modes, out of which, mine stowing is the most feasible option for the generating station, as the Eastern Coalfields Ltd (ECL) has allowed the Petitioner to utilize its abandoned mines for this. Accordingly, the



Petitioner has engaged various transporters for excavation and transportation of ash from ash ponds of the generating station to the abandoned open cast mines of ECL. The Petitioner has further submitted that the expenses for such ash evacuation and transportation activities for Units 1 to 3 have been booked in the annual accounts in a consolidated manner and subsequently have been apportioned among the various units of BTPS based on the actual gross generation of the units for the respective years of the period 2014-19. The Petitioner has prayed that the Commission may approve the Ash disposal expenses for the period 2014-19 and allow the same to be recovered in full from the beneficiaries, considering the statutory requirement as per notifications under Regulation 8(3)(ii) of the 2014 Tariff Regulations.

93. 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 MoEFCC Notification, 2009, which mandated 100% ash utilization to be ensured by the generator within a specific period by installation of dry ash and wet ash disposal system. It has submitted that the Petitioner must have taken necessary steps for installation of the evacuation system at the inception stage. However, the Petitioner has claimed the Ash Transportation charges on the ground that it has not complied with MoEF&CC Notification, 2009 and is taking appropriate measures now. DVPCA has further submitted that as the actual O&M expenses including Ash Evacuation expenses are lower than the normative O&M expenses, thus, there is no requirement to allow the ash evacuation expenses additionally. It has also pointed out that the Commission in its order dated 31.8.2016 in Petition No. 347/GT/2014 had not allowed the Ash Evacuation expenses.

94. The Petitioner has clarified that the Commission in its order dated 5.11.2018 in



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

"31. Accordingly, we in exercise of the regulatory power hold that the actual additional expenditure incurred by the Petitioner towards transportation of ash in terms of the MOEFCC No as additional O&M expenses. However, the admissibility of the claims is subject to prudence check of the following conditions/ details on case-to-case basis for each station:

(a) Award of fly ash transportation contract has been effected through a transparent competitive bidding procedure. Alternatively, the schedule rates of the respective State Governments, as applicable for transportation of fly ash.

(b) Details of the actual additional expenditure incurred on Ash transportation after 25.1.2016, duly certified by auditors.



(c) Details of the Revenue generated from sale of fly ash/fly ash products and the expenditure incurred towards Ash utilisation up to 25.1.2016 and from 25.1.2016 to till date, separately.

(d) Revenue generated from fly Ash sales maintained in a separate account as per the MoEF notification.”

95. 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:

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

96. 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 3.11.2009

“10. The cost of transportation of ash for road construction projects or for manufacturing of ash based products or use as soil conditioner in agriculture activity within a radius of hundred kilometres from a coal or lignite based thermal power plant shall be borne by such coal or lignite based thermal power plant and the cost of transportation beyond the radius of hundred kilometres and up to three hundred kilometres shall be shared equally between the user and the coal or lignite based thermal power plant.”

97. It is observed that the Petitioner had filed Petition No.101/MP/2019 before this Commission seeking recovery of ash transportation charges, through monthly bills of beneficiaries, in terms of the MoEF&CC notification dated 25.1.2016, as ‘change in law’ event and the Commission vide its order dated 29.7.2020, disposed of the same, after observing that the said MOEF&CC notification is a change in law event. Accordingly, the Petitioner was granted liberty to approach the Commission at the time of truing up of tariff, along with the audited details, including the award of transportation through competitive bidding, alternatively scheduled rate of State Government, expenditure incurred and revenue generated (up to 25.1.2016/ after 25.1.2016) and to maintain the revenue generated from fly ash in a separate account. In compliance to the above, the Petitioner has furnished the year-wise audited ash transportation details and the income received from sale of ash for its various generating stations i.e., MTPS, CTPS, DTPS, BTPS, DSTPS, KTPS etc., during the period 2014-19 and these charges were apportioned to the various stages, on the basis of their actual generation, in the respective years. Further, in compliance to direction given in order dated 29.7.2020 in Petition No.101/MP/2019, the Petitioner has furnished additional information such as the end user type, category of ash utilization, the award of transportation carried out through competitive bidding/ rate of transportation is lower than Schedule of Rates (SoR), the actual quantum of ash



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

98. 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

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



(Rs. in lakh)

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

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

(Rs. in lakh)

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

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
DSTPS	0.00	0.00	0.00	0.00	0.00	0.00
DTPS	0.00	0.00	999.20	0.00	0.00	999.20
KTPS	0.00	72.08	513.59	523.69	611.79	1721.15
CTPS	0.00	310.22	2518.01	2830.93	1478.59	7137.75
MTPS	0.00	2710.33	10601.33	6490.63	4668.86	24471.15
BTPS	0.00	350.62	1598.27	1060.84	439.68	3449.41
Total	0.00	3443.25	16230.40	10906.08	7198.92	37778.66

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



2014-19 in respect of this generating station (BTPS) are apportioned to the various stages, based on their actual generation as under:

(Rs. in lakh)

Stage	2014-15	2015-16	2016-17	2017-18	2018 -19	Total
Ash allocation to BTPS (1,2,3)	0.00	350.62	1398.05	174.05	83.87	2006.59
Ash allocation to BTPS A	0.00	0.00	200.22	886.79	355.81	1442.82
BTPS (all stages)	0.00	350.62	1598.27	1060.84	439.68	3449.41

103. Admittedly, the 2014 Tariff Regulations, do not contain any provision for allowing the ash transportation charges. Accordingly, we, in exercise of the regulatory powers, allow the total expenditure of Rs.2006.59 lakh towards fly ash transportation for the generating station of the Petitioner for the period 2014-19, after adjusting the revenue received from the sale of ash of such plants, in six equal instalments, starting from following month from the date of issue of this order, keeping in view the interest of the beneficiaries. Considering the fact that the reimbursement of the ash transportation expenses is being allowed based on the MOEF&CC notification, these expenses are not made part of the O&M expenses and the consequent annual fixed charges being determined in this order under the 2014 Tariff Regulations.

Mega Insurance Expenses

104. The Petitioner has claimed total amount of Rs. 255.39 on account of Mega Insurance expenses for the generating station as under:

(Rs.in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
65.65	8.61	54.93	101.05	25.14

105. In justification of the same, the Petitioner has submitted that the generating station is located in high alert security zone and therefore, the Petitioner has to ensure substantial safeguard measures through Mega Insurance, against damage or destruction of the assets. The Petitioner has further submitted that the expenses for



Mega Insurance for Bokaro TPS have been booked in the annual accounts in a consolidated manner. Therefore, the accounted Mega Insurance expenses for Bokaro TPS have been apportioned amongst Bokaro TPS Units based on the installed capacity and the same are claimed in the petition.

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

107. The matter has been considered. As regards, the submission of the Petitioner that these expenses were allowed over and above the O&M norms for Mejia 1, 2 & 3,



CTPS 1, 2 & 3, it is noticed that this was allowed for these two stations for the period 2014-19 and in exercise of its Power to Relax. It is pertinent to mention that the Commission, while specifying the O&M norms for the period 2014-19, had considered insurance expenses as part of the O&M expense calculations and had factored the same in the said norms. Considering the above, we do not find any reason to allow expenses towards Mega Insurance over and above the O&M expense norms. Accordingly, the expenses claimed towards Mega Insurance is not allowed.

CISF Security Expenses

108. The Petitioner has claimed total amount of Rs.8176.15 lakh towards CISF Security expenses as additional O&M expenses for generating station as under:

(Rs.in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1940.42	2011.62	2375.17	1023.35	825.59

109. In justification of the same, the Petitioner has made the following submissions:

- (a) The generating station is located in high alert security zone and any untoward situation arising due to the terrorist attack or theft, may cause loss of property and prolonged interruption of generation. The concerned Ministry, from time to time has directed the Petitioner, to take appropriate security arrangements at hydro generating stations, dams etc. and to strengthen the physical security of various generating stations and tighten personal security.
- (b) The Ministry of Home Affairs, GOI, had granted approval for creation of additional security personnel posts to be stationed at the generating station. Thus, accordingly, the Petitioner has deployed CISF personnel in its plants, to ensure adequate security at the plants, as well as to comply with the directives, on security measures. Accordingly, the Petitioner has been incurring expenses towards CISF security for deployment of CISF personnel and associated CISF activities.
- (c) The expenses for CISF Security for the project have been booked in the annual accounts in a consolidated manner. Therefore, the accounted CISF Security expenses for the project for the 2014-19 period has been apportioned among Unit- 1 to 8 of the projects, based on the installed capacity of the units. Accordingly, the apportioned CISF Security expenses for Units- 1 to 3 (the generating station) has been claimed.



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

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

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

Impact of Goods and Service Tax (GST)

112. The Petitioner has claimed additional O&M expenses on account of GST for



Rs.46.28 lakh for 2017-18 and Rs.60.51 lakh for 2018-19. The Objector, DVPCA has submitted that the Petitioner's claim is extraneous to the provisions of 2014 Tariff Regulations and various orders of the Commission. In response, the Petitioner has clarified that the Commission in order dated 14.3.2018 in Petition No. 13/SM/2017 and order dated 17.12.2018 in Petition No. 01/SM/2018 had considered the implementation of GST as "change in law".

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

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

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

Share of Subsidiary Activities

115. The Petitioner has claimed total amount of Rs.1417.67 lakh towards Share of Subsidiary activities as additional O&M expenses as under:



(Rs.in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
352.97	431.53	359.77	191.90	81.50

116. In justification of the same, the Petitioner has submitted that it has been undertaking various subsidiary activities in terms of Section 12 of the DVC Act, 1948. It has also submitted that in terms of the judgment of the Appellate Tribunal for Electricity ('APTEL') dated 23.11.2007 in Appeal No. 273 of 2006 and batch, the expenses with regard to Subsidiary activities are to be allowed as a pass-through element in tariff. The Petitioner has stated that above judgment of APTEL has been affirmed by the Hon'ble Supreme Court vide its judgment dated 23.7.2018 in Civil Appeal Nos. 971-973 of 2008 along with Civil Appeal Nos. 4289 of 2008 (Bhaskar Shrachi Alloys Ltd. Vs. DVC) referred to in (2018) 8 SCC 281. The Petitioner has further submitted that the expenses toward share of subsidiary activities were 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 order dated 7.8.2013 in Petition No. 275/GT/2012 and order dated 29.7.2016 in Petition No. 470/GT/2014, in relaxation of the provisions of the Tariff Regulations. Accordingly, the Petitioner has prayed that the Commission may allow the expenses toward share of subsidiary activities, as incurred and apportioned to the generating station during the period 2014-19 for recovery in full, in exercise of the 'power to relax' under the 2014 Tariff Regulations.

117. DVPCA has submitted that the Petitioner has also claimed expenses towards subsidiary activities including additional capital expenditure, 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 31.8.2016 in Petition No. 347/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. In response, the Petitioner has clarified as under:

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

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

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

(d) Section 32 of the DVC Act 1948 allows DVC to incur expenditure on activities other than power, irrigation and flood control. The APTEL's judgment dated 23.11.2007 in Appeal No. 271, 272, 273 and 275 of 2006, had allowed the recovery of these expenses through tariff. The said judgment was upheld by the Hon'ble Supreme Court vide order dated 23.7.2018 in Bhaskar Shrachi Alloys Ltd. vs.



Damodar Valley Corporation (2018) 8 SCC 281, whereupon, the Hon'ble Supreme Court has reiterated the fact that the other activities undertaken by DVC are statutory in nature and provided for recovery of related expenses.

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

"53. Special Provisions relating to Damodar Valley Corporation:

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

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

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

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

xxxx

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

(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.

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



allowed. In this regard the relevant sections of DVC Act 1948 are as follows:

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

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

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

37. Disposal of profits and deficits. —

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

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

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

120. 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”

121. Accordingly, the expenses of ‘Subsidiary activities’ is allowed as claimed by the Petitioner during the period 2014-19.

Impact of Pay Revision and Share of P&G contribution

122. 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.

123. It is noticed that the Petitioner, in its tariff petitions for true-up for the period 2009-14 had made additional claims towards P&G liability based on actuarial valuation. This prayer was, however, rejected by the Commission in its various orders, on the ground that the P&G liability formed part of the O&M expense norms specified under the 2009 Tariff Regulations. Aggrieved by this decision, the Petitioner filed Appeal No.268-275 of 2016 before APTEL and the same is pending. The Petitioner, has made similar prayers in tariff petitions for the period 2014-19, which was also



rejected by the Commission on the ground that the Petitioner's contribution to P&G fund is required to be met through the normative O&M expenses, allowed to the generating stations. However, the Commission in order dated 20.9.2016 in Petition No.353/GT/2014 (approval of tariff for Panchet Hydel Power Station, Units-I &II for the period 2014-19) granted liberty to the Petitioner to claim the said relief through a separate application along with all relevant details, so that a holistic view can be taken in the matter, in accordance with law. Accordingly, the Petitioner had filed Petition No.197/MP/2016, wherein P&G contribution of Rs.3228.86 crore and impact of pay revision from January, 2016 as Rs.420.27 crore for 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

26.xxxxx

27. We notice that subsequently, the Petitioner has implemented the recommendations of the 7th Pay Commission for its employees with effect from 1.1.2016. In view of this, the impact of pay revision, after implementation of the 7th Pay Commission, is required to be examined on actual basis, on



prudence check of the information/ details to be submitted by the Petitioner. Accordingly, we direct the Petitioner to furnish the actual impact of pay revision based on the recommendations of the 7th CPC, effective from 1.1.2016, along with details of HRA and transport allowance from July, 2017. The aforesaid details/information shall be furnished by the Petitioner at the time of truing up of tariff and the same will be considered in accordance with law.”

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

Impact of Pay revision

125. The Petitioner has claimed total amount of Rs.1525.24 lakh towards impact on account of Pay revision during the period 2014-19, due to recommendations of the 7th Pay Commission, and the year-wise impact is as under:

<i>(Rs.in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
-	-	765.21	533.90	226.13

126. Further, the Petitioner has submitted that the Commission, while specifying the 2014 Tariff Regulations, has in the 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.

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

“True-up for 2014-19 tariff period

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

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



basis of allocating such expenditure (in both MS Excel and PDF format).

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

128. In compliance to the aforesaid directions, the Petitioner *vide* affidavit dated 1.7.2021, has furnished the information and submitted that additional O&M expenses including P&G liability claimed as elements of Part B of the total annual fixed charges and the same were not considered, while preparing the data as per Annexure-A, i. e., in pay revision. Accordingly, the total O&M expenses claimed, as per Annexure-A, for the period 2014-19 is as follows:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
9872.33	11315.38	13178.98	15044.52	12421.31

129. 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.

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

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



implementation of the pay revision (7th CPC). Accordingly, it has submitted that while arriving at the O&M norms for the period 2014-19, the Commission had no occasion to consider the impact of pay revision w.e.f. 1.1.2016. The Petitioner has further submitted that the Commission while specifying the 2014 Tariff Regulations, was of the view that the increase in employee expenses on account of pay revision, in case of central generating stations and private generating stations are to be considered appropriately and therefore, the Commission decided that the said costs shall be examined on case-to-case basis so that the interest of generating stations and consumers remains balanced. Accordingly, the Commission *vide* its order dated 4.9.2019 in Petition No. 197/MP/2016 had directed the Petitioner to furnish the actual impact of pay revision at the time of truing up of tariff.

Share of P&G Contribution

132. The Petitioner has claimed share of P&G contribution is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
934.71	2400.26	2637.80	3310.42	376.12

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

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

134. The Petitioner has further submitted that as per recommendations of the 7th Pay Commission, the Cabinet on 12.9.2017, had cleared the Payment of Gratuity (Amendment Bill 2017), wherein, the upper ceiling of gratuity has been enhanced from the present value of Rs.10 lakh to Rs.20 lakh, effective from 1.1.2016. It has submitted, that since the impact due to enhancement of upper ceiling of gratuity has



not been considered / factored by the Commission, while fixing the normative O&M expenses for the period 2014-19, the Commission may consider the impact while considering the P&G contribution for the period 2014-19.

135. 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.

136. In response, the Petitioner 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) Article 16 and 17 of Employees Provident Funds and Miscellaneous Provisions Act, 1952 provides for administration of Provident Fund Scheme. Accordingly, DVC is maintaining Provident Fund, both CPF and GPF, in respect of each of the employees with individual account of the employees duly reflecting (a) the contribution apportioned to such employees or the contribution made by DVC, wherever applicable, (b) apportionment to such employees, apportionment of the interest earned on the money invested from the Provident Fund Scheme in approved securities and (c) contribution made by the employees to the GPF. Such contributions are maintained in a separate account of each of the employees as per the applicable scheme.
- (c) The Pension & Gratuity Fund accounts are maintained separately by the Trust. The contributions to the Pension and Gratuity Trust are made based on actuarial valuation undertaken from time to time by actuaries appointed for the purpose. The actuarial valuation is in regard to all the employees and workmen of DVC.
- (d) No part of the amount related to Pension or Gratuity Fund contribution is used by DVC for its business activities in any of the years commencing from 01.4.2006 i.e. for the period in which the tariff is being determined by this Hon'ble Commission, upon coming into force of the Electricity Act, 2003. The contribution



to the Pension & Gratuity Fund made by DVC is considered in the audited accounts of the DVC for the respective financial years.

- (e) In regard to the Provident Fund, the amount contributed is maintained by DVC but is dedicated to the benefit of DVC's employees and workmen. As in the case of Pension & Gratuity Fund, no part of the Provident Fund amount is to the account of DVC or to be utilised for the business activities of DVC. In line with the Employees Provident Funds and Miscellaneous Act, 1952, DVC is investing CPF and GPF amount in approved securities and the interest thereof is apportioned to employees. This has been reflected in Schedule 27 with two corresponding entries, namely, interest payable and interest recoverable on investment. DVC is required to duly account for all such interest.
- (f) The amount contributed by DVC to the Pension & Gratuity Fund is invested by the Trust in the name of the trust and not in the name of DVC. The interest accrued on this investment is considered as the income of the Trust. No part of the interest income is realized by DVC or appropriated by DVC in any manner and nowhere it is reflected in the audited accounts of DVC.
- (g) In view of the above, there is a difference between the Pension & Gratuity Contribution of DVC as compared to the Contributory Provident Fund.

137. The Petitioner has also submitted that the O&M expenses inclusive of employees cost and Contributory Provident Fund will not cover the revenue requirements of the DVC on account of the P&G contribution on the following grounds:

- (a) The Contributory Provident Fund is in respect of the actual amount of contribution during the relevant year, and does not involve adjustments for that year in future years, however, the Pension and Gratuity Contribution is to be constantly adjusted for past period of services also and is dependent on actuary valuation to be undertaken from time to time. The period of past services rendered by the employees of DVC including the deficit amount of contribution in the past in order to meet the pension payment to the employees upon their retirement need to be necessarily considered. Similarly, in case the contribution already made is in excess of the requirement, suitable adjustment is made through actuary valuation. Thus, the contribution to P&G cannot be restricted to current year.
- (b) The amount of Pension & Gratuity contribution in the case of DVC is significantly more in the recent past i.e., from 1.1.2006 onwards, on account of the following factors:
 - (i) Earlier, as there was no fund maintained for receiving the Pension 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 actuarial valuation or adjustment for upward revision on account of any wage revision etc. however, the pension payment is payable by DVC after the retirement of the employees on a continuous basis along with the revision to the pension from time to time as per the decision of the Central Government applicable to all retired employees; further the pension payment liability continues even after the death of the employee. The family pension needs to be given to the widows and other eligible members under the pension scheme.
- (c) Thus, the matter relating to Pension & Gratuity Contribution and other aspects of Terminal Benefit liabilities to the employees including the increase in such Pension and Gratuity contribution on account of actuarial valuation undertaken from time to time cannot be inter-mixed with the normative O&M expenditure provided for in the Tariff Regulations.
- (d) The normative O&M expenses determined by the Commission is based on the normalized actual quantum of expenditure incurred by the Utilities in the past period and escalation of thereof on account of inflation and other factors. Such normative expenditure would consider matters such as contribution to the Provident Fund etc. where the amount of contribution is duly factored as a percentage of the salaries and wages paid to the employees and is adopted by Central Power Sector Utilities who do not maintain a Pension scheme such as NTPC, NHPC etc, however, it cannot be ipso facto adopted for DVC, wherein, some of its employees are under Pension Scheme, as admissible to the Government departments.
- (e) The contribution which DVC has to make towards the Pension and Gratuity Fund from time to time based on the actuarial valuation including for increase in the Pension and Gratuity Contribution related to the past period on account of pay revision, is not factored into in the determination of the employees cost as part of the normative O&M cost decided by this Hon'ble Commission from time to time. These are also not part of any specific tariff elements given in the Regulation 21 and 14 of the 2009 and 2014 Tariff Regulations, respectively.
- (f) APTEL and the Hon'ble Supreme Court in the orders dated 23.11.2007 and 23.7.2018 respectively have directed in favour of full recovery of the P&G contribution. Further, the Commission *vide* order dated 04.09.2019 in Petition no. 197/MP/2016 granted liberty to DVC to claim the Pension and Gratuity contribution along with relevant details at the time of true-up.
- (g) The principle for apportionment of the contribution towards Pension & Gratuity fund to the different generating stations and T&D system of DVC, based on capital cost and installed capacity has been already approved by the Commission for the 2006-09 period and the same principle has been followed by DVC in its true-up petitions for the period 2014-19.
- (h) As regards linking the recovery of Pension & Gratuity contribution to Plant Availability Factor (PAF), the APTEL in its judgment dated 23.11.2007 had directed for recovery of the entire amount of the Pension & Gratuity contribution from the consumers through tariff. The said judgment of APTEL dated 23.11.2007 was upheld by the Hon'ble



Supreme Court *vide* its order dated 23.7.2018. The State Commissions of West Bengal and Jharkhand in their different orders, had also allowed the full recovery of the Pension & Gratuity contribution of the Petitioner.

138. The Petitioner has prayed that in consideration of its above submissions, may reject objector's contentions and the amount claimed towards contribution to Pension & Gratuity for the period 2014-19 may be allowed to be recovered in full, on sharing basis.

Analysis and Decision

139. The submissions have been considered. As regards pay revision, it is noticed that the Petitioner has prayed and claimed the impact of pay revision on account of 7th pay commission. However, in respect of P&G, it is noted that the Petitioner has primarily pleaded for impact of pay revision on P&G but has claimed the actual P&G. It is observed that the normative O&M expenses includes 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.

140. 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.

141. In order to ascertain the justification for additional O&M expenses, over and above the normative O&M expenses allowed, a comparative analysis of the actual O&M expenses, was undertaken, including the additional normalised claims and the normative O&M expenses allowable under the various tariff petitions for truing up filed by the Petitioner. It is observed that during the period 2014-19, the total normative O&M expenses allowed as per the Tariff Regulations for the various tariff petition (both Generation and Transmission) is Rs.1044745.04 lakh. Further, as per audited financial statements water charges for Rs.38226.00 lakh (in terms of Regulation 29(2) of the 2014 Tariff Regulations) and Ash Evacuation expenses of Rs.61182.00 lakh (as change in law) has been incurred by the Petitioner, during the period 2014-19. However, in line with the MoEF&CC Notification dated 25.1.2016, the ash transportation charges have been allowed from 26.1.2016 to 31.3.2019 which works out to Rs.39334.64 lakh. Since, the Petitioner maintains separate accounts for each



generating station and the Petitioner is granted liberty to claim the ash evacuation expenses separately, the total amount allowable to the Petitioner against O&M, Water charges and allowable Ash Evacuation charges is Rs.1122305.68 lakh (Rs.1044745.04 lakh + Rs.38226.00 lakh+Rs.39334.64 lakh) whereas, the actual O&M expenses, as per DVC Financial statements for the 2014-19 period is Rs.1219786.00 lakh (including subsidiary activities), which indicates that the actual O&M expenses exceeds the normative O&M expenses, by Rs.97480.32 lakh. However, we note that the actual O&M expenses of Rs.1219786 lakh also includes Provisions for Loss, Doubtful claims & Advances, Doubtful debts, and Shortage/Obsolescence in stores etc. amounting to Rs.77573 lakh, and Rebates & Discount allowed to consumers for Rs.49937 lakh, out of which rebate of Rs.40820 lakh pertain to firm consumers (breakup submitted by the Petitioner vide ROP dated 22.4.2022). When the actual O&M expenses are normalised, by excluding the provisions amounting to Rs.77573 lakh (being a non-cash expenditure and Rebates & Discounts for Rs.40820 lakh pertaining to firm consumers, as stated above, the actual O&M expenses work out to Rs.1101392.70 lakh (i.e., Rs.1219786 - Rs.77573 - Rs.40820.30 lakh). The computation of the normalised actual O&M expenses is as under:

	<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-EmployeeBenefit 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	4586.00	1308.00	0.00	0.00	0.00	5894.00



Claims and 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 O&M AS PER STATEMENT OF ACCOUNTS (A-B-C):-	166336.68	203182.07	234527.15	274106.27	223240.53	1101392.70

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

<i>(Rs. in lakh)</i>		
Petition No.	Generating Station / Transmission Petitions	Normative O&M expenses
574/GT/2020	Bokaro Thermal Power Station-A	20741.38
569/GT/2020	Bokaro Thermal Power Station-1-3	64499.08
565/GT/2020	Chandrapur Thermal Power Station 1-3	56979.30
570/GT/2020	Chandrapur Thermal Power Station 7-8	67755.00
573/GT/2020	Durgapur Steel Thermal Power Station 1-2	90740.00
567/GT/2020	Durgapur Steel Thermal Power Station 3-4	38527.32
564/GT/2020	Koderma Thermal Power Station 1-2	89118.08
577/GT/2020	Mejia Thermal Power Station 1-3	85371.30
205/GT/2020	Mejia Thermal Power Station 4	28457.10
571/GT/2020	Mejia Thermal Power Station 5-6	67755.00
568/GT/2020	Mejia Thermal Power Station 7-8	90740.00
575/GT/2020	Raghunathpur Thermal Power Station	62340.00
578/GT/2020	Maithon Hydel Station 1-3	10931.64
566/GT/2020	Panchet Hydel Station 1-2	8830.12
572/GT/2020	Tilaiya Hydel Station1-2	3991.24
713/TT/2020	New Elements of Transmission and Distribution (T&D) System	1154.65
466/TT/2020	Non-ISTS 400 kV Transmission Lines of Transmission and Distribution (T&D) System	1724.30
482/TT/2020	Existing Transmission and Distribution (T&D)System (allowed)	255089.53
(A) Total Normative O&M Expenses allowable		1044745.04
(B) Water charges as per DVC audited accounts to be considered separately under Regulation 29(2) of 2014 Tariff Regulations		38226.00
(C) Ash Evacuation expenses allowed under change in law (w.e.f. 26.1.2016 till 31.3.2019)		39334.64



Petition No.	Generating Station / Transmission Petitions	Normative O&M expenses
(D) TOTAL (A+B+C):		1122305.68
(E) Normalized Actual O&M expenses as per audited financial statement of accounts		1101392.70
(F) Excess of Normative O&M expenses, Water Charges & Ash Evacuation charges over the normalized actual O&M Expenses (D-E):		20912.98

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

Other Additional Claims

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

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

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
1751.89	1880.57	2159.04	0.00	0.00

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



as under:

	<i>(Rs. in lakh)</i>				
	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 (1-3)	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

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

147. DVPCA has 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 further stated that the creation of funds, without any specific purpose, cannot be allowed to be recovered as an expenditure in tariff, even if it is mentioned in DVC Act and the 2014 Tariff Regulations. It has also submitted that the Commission may seek details on the purpose of borrowing such funds, when all expenses related to capital funding and working capital funding are allowed. Accordingly, the Objector has prayed that the claim of the Petitioner may be disallowed. In response, the Petitioner has reiterated



the submissions made in the petition. Further, it has also relied upon the APTEL's judgment dated 17.5.2019 in Appeal No.17/2014 & batch (Maithon Alloys Ltd V CERC & Ors) and submitted that, APTEL while rejecting the submissions, observed that there was no double allowance of bonds. The Petitioner has 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.

148. 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,

149. 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.

150. DVPCA has objected to the claim of the Petitioner and has submitted that neither the provisions of the Electricity Act, 2003 nor the 2014 Tariff Regulations sanction the recovery of cost of generation assets twice over, through (a) allowance of Contribution to Sinking Fund; and (b) Depreciation and allowance of Interest on loan, by treating the amount realized through bonds, as normative debt. Per contra, the Petitioner has, however pointed out that in Appeal No.17/2014 (MAL v CERC & ors.) & batch cases,



filed by HT consumers before APTEL, similar submissions raised by the appellants therein, were rejected by APTEL vide its judgment dated 17.5.2019. It is noticed from the said judgment dated 17.5.2019 that similar contention of the Objector herein, have been rejected by APTEL vide its judgement dated 17.5.2019 as under:

“8.5 We have carefully considered the submissions of learned counsel for the Appellants and learned counsel for Respondent Nos.1 & 2 and also took note of the various judgments relied upon by the parties. While the main contentions of the learned counsel for the Appellants are against the allowance of contribution to sinking fund to DVC and its utilisation, on the other hand, learned 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”

151. Though the Objector has filed review against the said judgment before APTEL, no stay of operation of the said judgement. Regulation 53(2)(iv) of the 2014 Tariff



Regulations categorically provides that the funds created under Section 40 of the DVC Act, 1948 shall be considered as item of expenditure to be recovered through tariff. It is observed that the sinking funds have been created only for redemption of bonds. Accordingly, the amount claimed by the Petitioner for this generating station is allowed as under

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
1751.89	1880.57	2159.04	0.00	0.00

(B) Share of Common Office Expenditure

152. 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	1173.22	386.48

153. 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 Personalcomputer	77.91	128.60	124.77	198.34	29.09
Cyber Security	0.00	0.00	0.00	0.00	97.85
EBA	37.69	0.00	0.00	0.00	0.00
Machinery & equipment	0.00	(-)0.88	(-)0.88	(-)0.01	0.00
Tower Pole & Fixtures	0.00	0.00	0.00	(-)0.28	0.00
Assets Held for Disposal	0.00	0.00	0.00	0.00	0.76
Total	119.82	174.04	163.88	1173.23	386.48

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

	<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 generating Stations of DVC	1218.63	1157.33	1152.86	1244.88	1299.41
Common Office Expenditure apportioned to T&D	105.10	99.82	99.43	107.37	112.07
Total	1323.73	1257.14	1252.29	1352.25	1411.48

155. 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 BTPS- I to III	122.72	114.83	97.61	58.60	37.70



156. 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 true-up, we have examined the additional capital expenditure claimed by the Petitioner, as under:

Land and Land Rights

157. 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

158. 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

159. 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

160. 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

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

Tower Poles & Fixtures

162. 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

163. 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 complies 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 complies to the directives of MOP, GOI to prevent cyber-attacks, the additional capital expenditure of Rs.97.85 lakh claimed towards procurement of cyber security devices for the period 2014-19 is allowed.

EBA- Integrated Software

164. 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

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

(Rs. in lakh)

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

166. In justification for the same, the Petitioner has submitted that to fulfil the demand of valley area as well as other state utilities and distribution licensees, these items had to be additionally procured for capacity addition during the period 2014-19. The Petitioner has also submitted that the expenditure was essential to copeup with the extra volume of works associated with the huge capacity augmentation program



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

Assets Held for Disposal

167. 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 this head is not allowed.

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

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

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

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

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

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

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

	<i>(Rs. in lakh)</i>				
Common Office Expenditure	2014-15	2015-16	2016-17	2017-18	2018-19
BTPS Units 1-3 (this generating station)	107.62	97.73	77.56	42.45	26.99



Annual Fixed Charges for the period 2014-19

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

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2248.26	3168.24	1061.89	0.00	229.39
Interest on loan	70.60	58.50	0.00	1.00	3.45
Return on Equity	4706.78	4868.26	4922.93	3735.83	2554.29
Interest on Working Capital	4154.33	4326.85	4272.96	2403.24	1488.81
O&M Expenses	15057.00	16002.00	17010.00	9989.96	6407.10
Water Charges	0.00	1363.10	341.30	119.45	121.00
Compensation Allowance	420.00	420.00	210.00	210.00	210.00
Sub-Total (A)	26656.98	30206.94	27819.08	16459.48	11014.04
Additional O&M Expenses					
Impact of Pay Revision	0.00	0.00	0.00	0.00	0.00
Impact of GST	0.00	0.00	0.00	0.00	0.00
Share of Pension & Gratuity Contribution	0.00	0.00	0.00	0.00	0.00
Share of Subsidiary Activities	352.97	431.53	359.77	191.90	81.50
Mega Insurance Expenses	0.00	0.00	0.00	0.00	0.00
CISF Security Expenses	0.00	0.00	0.00	0.00	0.00
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	1751.89	1880.57	2159.04	0.00	0.00
Share of Common Office Expenses	107.62	97.73	77.56	42.45	26.99
Sub-Total (B)	2212.48	2409.83	2596.36	234.36	108.49
Total Annual Fixed Charges (C) = (A) + (B)	28869.45	32616.77	30415.44	16693.83	11122.53

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.

173. The Ash disposal expenses to be reimbursed in six monthly instalments, in terms of the paragraph 103 of this order, is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
0.00	350.62	1398.05	174.05	83.87

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



DETERMINATION OF TARIFF FOR THE PERIOD 2019-24

175. The Petitioner, in this petition, has also sought determination of tariff of the generating station for the period 2019-24, in terms of the 2019 Tariff Regulations. Further, the Petitioner has submitted that BTPS Unit-3 decommissioned on 1.4.2021 i.e. after submission of this petition. The capital cost and the annual fixed charges claimed by the Petitioner are as under:

Capital Cost claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	36460.73	36460.73	36460.73	36460.73	36460.73
Add: Additional Capital Expenditure (B)	-	-	-	-	-
Less: De-Capitalization during the year / period (C)	-	-	-	-	-
Less: Reversal during the year / period (D)	-	-	-	-	-
Less: Undischarged liabilities (E)	-	-	-	-	-
Add: Discharges during the year / period (F)	-	-	-	-	-
Closing Capital Cost (G) = (A+B-C-D-E+F)	36460.73	36460.73	36460.73	36460.73	36460.73
Average Capital Cost (H) = (A+G)/2	36460.73	36460.73	36460.73	36460.73	36460.73

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	235.03	-	-	-	-
Interest on loan	1.82	-	-	-	-
Return on Equity	4341.46	4341.46	4341.46	4341.46	4341.46
Interest on Working Capital	1366.28	1369.35	1387.79	1407.20	1429.81
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	880.60	919.35	959.80	1002.04	1046.13
Special Allowance	1995.00	1995.00	1995.00	1995.00	1995.00
Sub-Total (A)	16325.70	16430.89	16803.74	17198.35	17613.69
Unrecovered depreciation up to 31.3.2014 on account of lower availability of the generating station	571.97	-	-	-	-
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
Ash evacuation	87.56	91.41	95.43	99.63	104.02
Mega Insurance	26.25	27.41	28.61	29.87	31.18
Addl. Claim for share of subsidiary activity	85.09	88.83	92.74	96.82	101.08
Sub-Total (B)	1594.71	1071.31	1119.52	1163.10	1211.86
Total Annual Fixed Charges (A+B)	17920.41	17502.20	17923.26	18361.44	18825.55

Capital Cost

176. Clauses (1), (3) and (5) of Regulation 19 of the 2019 Tariff Regulations provides as under:

“19. Capital Cost:

(1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.

....

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

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

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

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

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

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

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

....

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

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

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

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



177. The opening capital cost, claimed by the Petitioner, as on 1.4.2019 is Rs. 36460.73 lakh. However, the closing capital cost of Rs.36061.87 lakh as on 31.3.2019, as approved in this order, for the period 2014-19, has been considered as the opening capital cost as on 1.4.2019, for the purpose of determination of tariff for the period 2019-24, in accordance with the above Regulations.

Additional Capital Expenditure

178. 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 decapitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised.”

179. The Petitioner has not claimed any projected additional capital expenditure in respect of the generating station for the period 2019-24. Accordingly, no additional capital expenditure has been considered for the period 2019-24.

Capital cost allowed for the period 2019-24

180. The Petitioner has submitted that BTPS Unit-3 has been decommissioned on 1.4.2021 i.e. after submission of this petition, accordingly, the capital cost approved for the period 2019-21, is as under:

(Rs. in lakh)

	2019-20	2020-21
Opening Capital Cost (A)	36061.87	36061.87
Add: Addition during the year / period (B)	0.00	0.00
Less: De-capitalization during the year /period (C)	0.00	0.00



	2019-20	2020-21
Less: Reversal during the year (D)	0.00	0.00
Less: Undischarged liabilities (E)	0.00	0.00
Add: Discharges during the year /period (F)	0.00	0.00
Closing Gross Block (G) = (A+B-C-D-E+F)	36061.87	36061.87
Average Gross Block (H) = (A+G)/2	36061.87	36061.87

Debt Equity Ratio

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

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

Provided that:

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

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

(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.”

xxxxx.

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

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

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.”

182. The gross loan and equity as on 31.3.2019, as determined in this order, for the period 2014-19 above, has been considered as the gross loan and equity as on 1.4.2019, in accordance with the Regulation 18 of the 2019 Tariff Regulations. The debt-equity ratio of 70:30 has been applied on year-wise admitted additional capital expenditure for arriving at the additions to loan and equity during each year of the period 2019-21. Accordingly, the details of the debt and equity in respect of the generating station is as under:

(Rs. in lakh)

	Capital Cost as on 1.4.2019	%	Net additional capital expenditure for the period 2019-21	Capital Cost as on 31.3.2021	%
Debt	19539.19	54.18%	0.00	19539.19	54.18%
Equity	16522.68	45.82%	0.00	16522.68	45.82%
Total	36061.87	100.00%	0.00	36061.87	100.00%

Return on Equity

183. Regulations 30 of the 2019 Tariff Regulations provide as follows:

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

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



of-river generating station with pondage:

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

Provided further that:

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

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

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

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

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

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

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

Illustration-

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



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

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

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;

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

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed-up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long-term customers, as the case may be, on year to year basis."

185. The Objector, DVPCA has submitted that though the Petitioner has considered the effective tax rate of 21.5488% for computation of ROE for the period 2019-24, the same is premature and needs to be claimed during truing-up, based on the actual tax paid in terms of Regulation 31 of the 2019 Tariff Regulations. Regarding the Petitioner's claim with regard to ROE at weighted average rate of interest on actual loan portfolio, as per Form-1(I) of the tariff filing format for additional capitalisation, the objector, has submitted that the Petitioner has neither submitted any details of the assets nor any justification for claiming the additional capitalisation after cut-of date and beyond the original scope of work. The Petitioner in its rejoinder has prayed for computation of ROE without considering the income tax rates for the period 2019-24 and has also craved leave of the Commission to claim the income tax liability, if any, for any year of the period 2019-24, as and when it arises in future. The Petitioner has submitted that details of assets and justifications have been furnished in Form-9, for the period 2019-24.

186. The matter has been considered. The Petitioner has not been paying any



income tax till any of the financial year of the period 2014-19. Also, considering the above submissions of the Petitioner, the effective tax rate has been considered as 'Nil' for the purpose of grossing up of ROE and the rate of ROE has been considered as 15.50% for the period 2019-21. Accordingly, ROE has been worked out and allowed as under:

		<i>(Rs. in lakh)</i>	
		2019-20	2020-21
Normative Equity – Opening	A	16522.68	16522.68
Addition to Equity due to additional capital expenditure	B	0.00	0.00
Normative Equity – Closing	C=(A+B)	16522.68	16522.68
Average Normative Equity	D=Average (A, C)	16522.68	16522.68
Return on Equity (Base Rate) (%)	E	15.500%	15.500%
Effective Tax Rate for the year (%)	F	0.000%	0.000%
Rate of Return on Equity (Pre-Tax) (%)	G=E/(1-F)	15.500%	15.500%
Return on Equity (Pre-Tax) annualized	H=(DxG)	2561.02	2561.02

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

Interest on Loan

188. Regulation 32 and 61 of the 2019 Tariff Regulations provides as follows:

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

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

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



cumulative depreciation recovered up to the date of de-capitalisation of such asset.

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

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

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

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

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

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

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

(2) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for settlement of the dispute:

Provided that the beneficiaries or the long-term customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

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

- a. Gross normative loan amounting to Rs.19539.19 lakh, on 31.3.2019, as considered in this order for the period 2014-19, has been considered as on 1.4.2019;
- b. Cumulative repayment of Rs.19470.79 lakh, as on 31.3.2019, as considered in this order for the period 2014-19, has been considered as on 1.4.2019;
- c. Accordingly, the net normative opening loan as on 1.4.2019 works out to Rs 68.40 lakh.
- d. Weighted average rate of interest on loan, as allowed for 2018-19 has been considered for the entire period 2019-24;
- e. The repayments of loan, if any for the respective years of the period 2019-21, has been considered based on the depreciation allowed for that year. Further,



repayments have been adjusted for de-capitalization of assets considered for the purpose of tariff;

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

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

<i>(Rs. in lakh)</i>			
		2019-20	2020-21
Gross opening loan	A	19539.19	19539.19
Cumulative repayment of loan up to previous year	B	19470.79	19539.19
Net Loan Opening	C=(A-B)	68.40	0.00
Addition due to additional capital expenditure	D	0.00	0.00
Repayment of loan during the year	E	68.40	0.00
Repayment adjustment on account of de-capitalization	F	0.00	0.00
Net repayment of the loan during the year	G=(E-F)	68.40	0.00
Net Loan Closing	H=(C+D-G)	0.00	0.00
Average Loan	I=Average (C, H)	34.20	0.00
Weighted Average Rate of Interest of loan	J	6.9100%	6.9100%
Interest on Loan	K=(IxJ)	2.363	0.00

Depreciation

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

xxxx

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

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

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."

192. Depreciation has been worked out by considering the admitted capital cost of Rs. 36061.87 lakh, as on 1.4.2019, and the cumulative depreciation of Rs. 31651.83 lakh, as on 31.3.2019, as determined for the period 2014-19 in this order. Accordingly, in terms of Regulation 33 and Regulation 72 (2) (iii) of the 2019 Tariff Regulations,



depreciation has been worked out and allowed as under:

		<i>(Rs. in lakh)</i>	
		2019-20	2020-21
Average Capital Cost	A	36061.87	36061.87
Value of freehold land	B	657.51	657.51
Aggregated Depreciable Value	$C = [(A-B) \times 90\%]$	31863.92	31863.92
Remaining Aggregate Depreciable value at the beginning of the year	$D = [(C) - (\text{Cumulative Depreciation of Previous year})]$	212.09	0.00
Balance useful life at the beginning of the year	E	0.00	0.00
Weighted Average Rate of Depreciation (WAROD)	F	6.3937%	6.3937%
Depreciation (annualized)	$G = [\text{Min}(D, A \times F)]$	212.09	0.00
Cumulative depreciation (at the end of the year)	$H = (\text{Cumulative Depreciation of Previous year}) + (G)$	31863.92	31863.92
Less: Depreciation adjustment on account of de-capitalization	I	0.00	0.00
Cumulative depreciation at the end of the year	$J = (H - I)$	31863.92	31863.92

Operation & Maintenance Expenses

193. The normative O&M expenses claimed by the Petitioner 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

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

<i>(Rs /lakh/MW)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
32.96	34.12	35.31	36.56	37.84

195. As the Petitioner has claimed normative O&M expenses is in accordance with Regulation 35(1)(1) of the 2019 Tariff Regulations, the same is allowed for the years 2019-20 and 2020-21, considering the fact that the station was decommissioned on 1.4.2021.

Water Charges, Security Charges and Capital Spares

196. The 2019 Tariff Regulations provide for water charges, security expenses and



capital spares, as under:

“35. Operation and Maintenance Expenses:

(1) Thermal Generating Station: Normative Operation and Maintenance expenses of thermal generating stations shall be as follows:

xxx

(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;

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

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.”

Water Charges

197. 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, base water charges @ Rs.10.64/KL, with annual escalation of 10% and has accordingly claimed the yearly water charges as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
583.90	640.54	704.59	775.05	854.89

198. The Objector, DVPCA has submitted that the actual water charge rate was Rs. 5.7/KL and Rs. 1.15/KL for industrial use and domestic use respectively, for each year of the period 2014-19. Accordingly, objector has worked out the weighted average water charge rate of Rs. 5.68/KL. It has submitted that as against this, the Petitioner has considered a water charge rate of Rs. 10.64/KL for the year 2019-20 and thereafter a yearly escalation rate of 10% for the remaining years of the period 2019-24. The objector has stated that the Petitioner has not furnished the relevant OM dated



23.7.2019. It has further stated that the increase sought is more than 85%, which is unreasonable and has therefore prayed that that the Commission may exercise prudence check on arriving at the allowable water charge rate, such that, the same is comparable with the rates prevailing in other States, and there should be no cross-subsidisation of other activities of the Petitioner. The objector has added that the arbitrary escalation of 10% ought to be rejected as there is neither any basis for the same nor has been provided under the 2019 Tariff Regulations. The Petitioner, in its rejoinder, has submitted that the water charges of the generating stations, w.e.f. 1.4.2019 and escalation thereof, are governed by the water tariff, as notified by DVC, vide OM dated 23.7.2019.

199. The matter has been considered. In view of the above submissions and considering the fact that the MOEF&CC, GOI has revised specific water consumption norms of 3.5 m³/MWh for the Thermal Power Plants vide MoEFCC, GOI Notification no. 3305 dated 7.12.2015, and considering the water charges rate of Rs 10.64/KL with annual escalation of 10% thereof, as per OM dated 23.7.2019, the water charges for the period 2019-21 is allowed as under:

	Units	2019-20	2020-21
Projected Gross Generation @ 85% load factor	MU	1383.48	1379.70
Normative Specific Water Consumption as per MoEF&CC stipulations	Cubic Meter/MWh	3.50	3.50
Normative Water Consumption as per MoEF&CC Norms	Cubic Meter	4842180	4828950
Rate of Water Charges	Rs. / Cubic Meter	10.64	11.70
Total Normative Water Charges	(in Rs. lakh)	515.21	565.18

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



Security Expenses

201. The Petitioner has claimed the following security expenses, on projection basis, for the period 2019-24, in terms of the second proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
880.60	919.35	959.80	1002.04	1046.13

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

203. The matter has been considered. Keeping in view that the claim of the Petitioner is based on actual security expenses for 2018-19 and that the annual escalation rate of 4.40% is reasonable, we allow the projected Security expenses for the years 2019-20 and 2020-21, as claimed by the Petitioner. However, considering the fact that security expenses for thermal generating stations for the period 2019-21 are to be allowed separately, after prudence check, based on the assessment of the security requirement and estimated expenses furnished by the Petitioner, 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.

Capital spares

204. The Petitioner has not claimed capital spares for the period 2019-24 but has



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

Special Allowance

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

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

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

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

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

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

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

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

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

(Rs. in lakh)

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



207. As the generating station of the Petitioner has been operating under relaxed operating norms, the claim has not been considered, in terms of the first proviso of Regulation 28(1) of 2019 Tariff Regulations.

Operational Norms

208. As regards Operational norms, Regulation 49 of the 2019 Tariff Regulations provides as under:

“Norms of operation for thermal generating station

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

(A) Normative Annual Plant Availability Factor (NAPAF)

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

...

(c) For following Thermal Generating Stations of DVC: Bokaro TPS 75% Chandrapura TPS 75% Durgapur TPS 74%

Bokaro TPS	75%
Chandrapura TPS	75%
Durgapur TPS	74%

xxx

(C) Gross Station Heat Rate:

(a) Existing Thermal Generating Stations

(iii) For Thermal Generating Stations of Damodar Valley Corporation (DVC):

Bokaro TPS	2,700 kCal/kWh
Chandrapura TPS (Unit 3)	3,000 kCal/kWh
Durgapur TPS	2,750 kCal/kWh

xx

(D) Secondary Fuel Oil Consumption:

(c) For Coal-based generating stations of DVC:

ii)	Bokaro Thermal Power Station	1.5 ml/kWh
(ii)	Chandrapur Thermal Power Station	1.5 ml/kWh
(iii)	Durgapur TPS	2.4 ml/kWh

xx

(E) Auxiliary Energy Consumption:

(c) For other Coal-based generating stations except at (b) below:

S. No.	Generating Station	With Natural Draft cooling tower or without cooling tower
(i)	Talcher Thermal Power Station	10.50%



(ii)	Tanda Thermal Power Station	11.50%
(iii)	Bokaro Thermal Power Station	10.25%
(iv)	Chandrapur Thermal Power Station	9.50%

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

	Value
Normative Annual Plant Availability Factor (NAPAF) (%)	75.00
Gross Station Heat Rate (kcal/kwh)	2700
Auxiliary Power Consumption (%)	10.25
Specific Oil Consumption (ml/kwh)	1.50

210. The matter has been considered. The operational norms as claimed by the Petitioner is in line with the provisions of Regulation 49 of the 2019 Tariff Regulations and hence allowed.

Interest on Working Capital

211. Regulation 34(1)(a) of the 2019 Tariff Regulations provides 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.”

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

“(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

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



period 2019-24.

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

213. The Petitioner has claimed the weighted average GCV and cost of coal as 4380.96 kCal/kg and Rs.2872.64/MT, respectively and the secondary oil as 9771.23 kCal/Lit and Rs.4855.847/Lit. Accordingly, interest on working capital as 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)	3383.40	3374.15	3374.15	3374.15	3383.40
Cost of oil for 2 months (B)	167.94	167.48	167.48	167.48	167.94
O&M expenses - 1 month (C)	698.84	727.09	756.62	787.89	820.62
Maintenance Spares - 20% of O&M (D)	1677.22	1745.02	1815.90	1890.94	1969.48
Receivables – 45 days (E)	5411.06	5350.12	5402.75	5457.53	5524.21
Total Working Capital (F) = (A+B+C+D+E)	11338.46	11363.86	11516.91	11677.99	11865.64
Rate of Interest (G)	12.05%	12.05%	12.05%	12.05%	12.05%
Total Interest on Working capital (H) = (F)x(G)	1366.28	1369.35	1387.79	1407.20	1429.81

Fuel Cost and Cost of Liquid Stock for Working Capital

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

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for 50 days	3383.40	3374.15	3374.15	3374.15	3383.40
Cost of Secondary fuel oil 2 months	167.94	167.48	167.48	167.48	167.94

215. 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.



216. 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.”

217. In line with the above Regulations, a margin of 85 kCal/kg in weighted average Gross Calorific value (GCV) of coal on ‘as received’ for coal based generating stations on account of variation during storage at the generating station has been considered. As such, weighted average GCV and price of coal and secondary oil claimed by the Petitioner and allowed by the commission are as under for working out the cost of coal and cost of secondary oil for working capital:

	Claimed	Allowed
Weighted average price of coal (Rs./MT)	2872.64	2872.64
Weighted average GCV of coal (kCal/kg)	4380.96	4295.96*
Weighted average price of oil (Rs. /kl)	48555.47	48555.47



	Claimed	Allowed
Weighted average GCV of oil (kCal/l)	9771.23	9771.23

**after adjusting margin of 85 kcal/kg from 'as received GCV' of 4380.96 kcal/kg*

218. Accordingly, considering operational norms as per the 2019 Tariff Regulations allowed as above, and based on the GCV and price of coal and secondary fuel oil allowed as above, the fuel components of working capital have been worked out and allowed as under:

	<i>(Rs. in lakh)</i>	
	2019-20	2020-21
Cost of coal for 20 days	1357.51	1357.51
Cost of coal for generation for 30 days	2036.27	2036.27
Cost of Secondary fuel oil 2 months	167.94	167.48

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

Energy Charges for 45 days for Working Capital

220. The Petitioner has claimed Energy Charge Rate (ECR) of Rs.2.043/kWh based on the weighted average price and GCV of coal as received and secondary oil, during the preceding three months i.e., October 2018, November 2018 and December 2018 as under:



	Unit	Claimed
Energy Charge Rate Secondary fuel-ex-bus	Rs./kWh	0.0728
Energy Charge Rate Primary fuel-ex-bus	Rs./kWh	1.760
Energy Charge Rate (Ex-bus)	Rs./kWh	2.043

221. Based on the operational norms as per the 2019 Tariff Regulations, the weighted average price and GCV of the coal and oil allowed as above, the ECR, for the purpose of working capital, has been worked out and allowed as under:

	(Rs./kWh)
	Allowed
Weighted average price of coal (Rs./MT)	4295.96
Weighted average GCV of coal (kCal/kg)	2872.64*
Weighted average price of oil (Rs./kl)	48555.47
Weighted average GCV of oil (kCal/l)	9771.23
Energy Charge Rate Secondary fuel (ex-bus) (Rs./kWh)	0.081
Energy Charge Rate Primary fuel-ex-bus (Rs./kWh)	2.001
Energy Charge Rate (Ex-bus) (Rs./kWh)	2.082

**after adjusting margin of 85 kcal/kg from 'as received GCV' of 4380.96 kcal/kg*

222. Energy charges for 45 days, on the basis of operational norms as per the 2019 Tariff Regulations and weighted average GCV and weighted average cost of fuel as above, for the purpose of interest on working capital, has been worked out as under:

(Rs. in lakh)	
2019-20	2020-21
3178.48	3178.48

Working Capital for Maintenance Spares

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

(Rs. in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
1677.22	1745.02	1815.90	1890.94	1969.48

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



(Rs. in lakh)

2019-20	2020-21
1663.48	1729.95

Working Capital for Receivables

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

(Rs. in lakh)

	2019-20	2020-21
Energy Charges (45 days)	3178.48	3178.48
Fixed Charges (45 days)	1521.19	1530.85
Total	4699.67	4709.33

Working Capital for O&M Expenses

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
698.84	727.09	756.62	787.89	820.62

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

(Rs. in lakh)

2019-20	2020-21
693.12	720.81

Rate of Interest for Working Capital

228. Regulation 34(3) of the 2019 Tariff Regulations provides for the rate of interest on working capital considered on projection basis, for the period 2019-24 as 12.05% (i.e. 1-year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for the period 2019-24, is being determined during the year 2023-24, the SBI MCLR as on 1.4.2020 (7.75%), as on 1.4.2021 (7.00%) and as on 1.4.2022 (7.00%) is also available. Since, the rate of interest on working capital is subject to revision at the time of truing-up of tariff, based on the bank rate as on 1st April of each financial year, we find it prudent to allow the rate of interest as on 1.4.2020, 1.4.2021



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

		<i>(Rs. in lakh)</i>	
		2019-20	2020-21
Working Capital for non-pit-head Thermal Generating Station			
A	Working Capital for Cost of Coal towards Stock – 20 days of generation at NAPAF	1357.51	1357.51
B	Working Capital for Cost of Coal towards Generation – 20 days of generation at NAPAF	2036.27	2036.27
C	Working Capital for Cost of Secondary fuel oil – 2 months of O & M expenses	167.94	167.48
D	Working Capital for Maintenance Spares @ 20% of O&M expenses	1663.48	1729.95
E	Working Capital for Receivables - capacity and energy charges for 45 days of generation at NAPAF	4699.67	4709.33
F	Working Capital for O&M expenses - 1 month of O & M expenses	693.12	720.81
G	Total Working Capital (A+B+C+D+E+F)	10617.99	10721.34
H	Rate of Interest	12.05%	11.25%
I	Interest on Working capital (G x H)	1279.47	1206.15

Additional Claims

229. In addition to the Depreciation, Interest on Loan, Return on Equity, O&M Expenses, Water Charges, Security Expenses, Interest on Working Capital and Special Allowance in accordance with the 2019 Tariff Regulations, the Petitioner has also claimed expenditure towards Share of P&G contribution, Share of Common office expenditure, Ash Evacuation expenses, Mega Insurance expenses and Expenditure for Subsidiary activity as given under:

<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
Ash evacuation	87.56	91.41	95.43	99.63	104.02
Mega Insurance	26.25	27.41	28.61	29.87	31.18



	2019-20	2020-21	2021-22	2022-23	2023-24
Addl. Claim for share of subsidiary activity	85.09	88.83	92.74	96.82	101.08
Total	1022.74	1071.31	1119.52	1163.10	1211.86

Share of P&G Contribution

230. 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

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

232. The matter has been considered. It is observed that the normative O&M expenses includes a portion of contribution towards gratuity and pension, which is not separately quantifiable for the Petitioner. It is also noted that under the heading P&G



contribution for the period 2014-19, the actual O&M expenses including P&G during the period 2014-19 are lower than the O&M expense norms allowable under the 2014-19 Tariff Regulations. Further, the normative O&M expenses determined by the Commission, while framing the 2019 Tariff Regulations, are based on the information furnished by various generating stations. In view of this, we are not inclined to allow P&G contribution for the period 2019-24. This would however be examined at the time of true up if petitioner is unable to meet its expense through normative O&M charges

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

233. 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	87.56	91.41	95.43	99.63	104.02
Mega Insurance Expenses	26.25	27.41	28.61	29.87	31.18
Share of Subsidiary activities	85.09	88.83	92.74	96.82	101.08
Total	1479.47	1544.57	1612.54	1683.49	1757.57

Ash Evacuation Expenses

234. The Petitioner has claimed total expenditure of Rs. 478.05 lakh in the period 2019-24, towards Ash Evacuation expenses. In justification of the same, the Petitioner has submitted that due to statutory directives by the MOEF&CC notification dated 14.9.1999, the fly ash generated during the course of operation of the coal power plant is required to be utilized under various designated modes. Accordingly, the Petitioner has claimed Ash evacuation expenses under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations. The Objector, DVPCA has submitted that the Commission had disallowed the claim of the Petitioner for ash evacuation expenses during the period 2009-14 on the ground that the same form part of the normative O&M



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

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

- (i) Thermal power plants w.e.f. 1.4.2022, preferably utilise 100 % ash generated during that year and in no case, utilisation shall fall below 80 % in any year subjected to 100 % utilization in a three years cycle. In addition, the unutilised accumulated ash i.e., legacy ash, which is stored before the publication of this notification, shall be utilised progressively and completed fully within ten years, by 31.12.2031.
- (ii) All agencies (Government, Semi-government and Private) engaged in construction activities such as road laying, road and flyover embankments, shoreline protection structures in coastal districts and dams within 300 kms from the thermal power plants shall mandatorily utilise ash in these activities in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government Agencies.
- (iii) Provided that it is delivered at the project site free of cost and transportation cost is borne by such thermal power plants.
- (iv) Provided further that thermal power plant may charge for ash cost and transportation as per mutually agreed terms, in case thermal power plant is able to dispose the ash through other means and those agencies makes a request for it and the provisions of ash free of cost and free transportation shall be applicable, if thermal power plant serves a notice on the construction agency for the same.
- (v) Non-compliance of these provisions by Thermal Power plants attracts an environmental compensation of annual Rs.1000 / ton of unutilised ash and that of users is Rs.1500 per ton of ash for the quantity they fall short off.

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



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

<i>(Rs. in lakh)</i>	
2019-20	2020-21
78.80	82.27

Mega Insurance Expenses

237. The Petitioner has claimed total amount of Rs. 143.32 lakh during the period



2019-24, towards Mega Insurance expenses under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

238. 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 period 2014-19, on this issue.

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

Share of Subsidiary Activities

240. The Petitioner has claimed total amount of Rs. amount of 464.56 lakh in the period 2019-24, towards Share of Subsidiary Activities under Regulation 76 and Regulation 77 of the 2019 Tariff Regulations.

241. The Objector, DVPCA has submitted that the Petitioner has also claimed contribution to subsidiary funds and has claimed the Return on Equity, Interest on Loan and Depreciation on the common assets namely Direction Office, Subsidiary



Activities, Other Offices, R&D, IT Centre and Central Office for the period 2019-24 under the nomenclature “share of common office expenditures”. As such the contribution to subsidiary fund is not allowable as the Return on Equity, Interest on Loan and Depreciation on the common assets have already been claimed separately. The Objector, has further submitted that the Commission, in its order dated 31.8.2016 in Petition No. 347/GT/2014, had disallowed the expenditure on subsidiary activity and the same was to be recovered as part of the normative O&M expenses. The Objector, has also submitted that it has demonstrated that the actual O&M expenses, including the expenditure on subsidiary activity, for the period 2014-19, have been lower than the normative O&M expenses specified under the 2014 Tariff Regulations. Similarly, the normative O&M expenses provided under the 2019 Tariff Regulations would be sufficient to cover such expenses in the period 2019 – 24 tariff also.

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

Share of Common Office Expenditure

243. The Petitioner has submitted that the projected expenditure pertaining to common office expenditure such as Direction Office, Central Office, Other Offices, Subsidiary activities, IT centre and R&D caters services to all generating stations as



well as composite transmission and distribution systems. The Petitioner has stated that it has allocated the cost of common offices amongst its generating stations, on the basis of installed capacity and has claimed additional capital expenditure as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Direction Office	-	-	-	-	-
Subsidiary Activities	-	-	-	-	-
Other Offices	132.00	66.39	222.42	15.52	-
R&D	-	-	-	-	-
IT	960.00	1240.00	-	-	-
Central Office	-	-	-	-	-
Total	1092.00	1306.39	222.42	15.52	-

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

	<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	-
Network Access Controller and Data Centre	960.00	1240.00	-	-	-
Total	1092.00	1306.39	222.42	15.52	-

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

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



	2019-20	2020-21	2021-22	2022-23	2023-24
Total	1536.55	1649.04	1669.83	1436.05	1308.98

(Rs. in lakh)

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

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

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Common Office Expenditure apportioned to BTPST 1 to 3	41.30	44.32	44.88	38.60	35.18

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

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
1	Fully automated microprocessor-based portable CT&PT Analyzer (CRITL)	35.00	0.00	0.00	0.00	0.00
2	10 kV Digital Insulation Tester (CRITM)	17.00	0.00	0.00	0.00	0.00
3	Relay Test Kit (CRITL)	80.00	0.00	0.00	0.00	0.00
4	Dielectric Frequency Response Analysis (DFRA) Test Kit (CRITL)	0.00	36.17	0.00	0.00	0.00
5	Flash Point of Transformer Oil Measurement Kit (CRITL)	0.00	4.70	0.00	0.00	0.00
6	3-Phase Portable Power Source (CRITM)	0.00	21.00	21.00	0.00	0.00
7	Laptop (CRITM)	0.00	4.52	4.52	0.00	0.00
8	Fully Automatic Three Phase Transformer 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

248. As regards additional capital expenditure claimed for fully automated microprocessor-based portable CT&PT Analyser and 10 kV Digital Insulation Tester, the Petitioner has submitted that CT&PT analyser is required for replacement of the existing 220 KV & 132 KV CTs in DVC grid with 0.2 Accuracy Class CTs, as per CEA guidelines. As regards Relay Test Kit (CRITL); Dielectric Frequency Response Analysis (DFRA) Test Kit (CRITL); Flash Point of Transformer Oil Measurement Kit(CRITL); 3-Phase Portable Power Source (CRITM); Laptop (CRITM); Fully Automatic Three Phase Transformer Test Kit (CRITM); Swift Frequency Response Analysis (SFRA) Test Kit (CRITL); Furan Test Kit (CRITL); 3-Phase Portable Reference Standard Meter (0.02 Class) (CRITM); and Line Impedance Measurement Kit, the Petitioner has submitted that these items are required to facilitate testing, condition monitoring of various power equipment's and smart meters. As regards additional capital expenditure claimed for Network Access Controller, next generation Firewall (NGFW) and networking Switches, the Petitioner has submitted that in order to complywith cyber security guidelines, of MOP, GOI, NCIIPC network security layer are proposed to be established, so that access to the system is provided to authenticated users only. As regard claim for Data centre, the Petitioner has submitted



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

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

(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

250. It is observed that that the Petitioner has worked out Common Office expenses for various offices, including Subsidiary activities. However, expenses of subsidiary



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

(Rs. in lakh)

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

(Rs. in lakh)

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

(Rs. in lakh)

Common Office Expenses	2019-20	2020-21
BTPS (Unit 3)	28.49	28.00

Unrecovered Depreciation up to 31.3.2014 on account of lower availability of the generating station

251. The Petitioner has claimed an amount of Rs. 571.91 lakh towards unrecovered depreciation up to 31.3.2014 on account of lower availability of the generating station. In justification of the same, the Petitioner has submitted that APTEL vide its judgment dated 13.6.2007 on the issue of “admissibility of depreciation up to 90% of the value of assets” had allowed the unpaid portion of the depreciation (because of under recovery of fixed charges due to lower availability than NAPAF) after the plant has



lived its designated useful life. It has submitted that the station COD of the generating station is BTPS Unit 1 to 3 is August 1993 and therefore, BTPS Unit 1 to 3 have completed their useful life on August 2018 (i.e. during FY 2018-19). As per the third proviso of Regulation 27(3) of the 2014 Tariff Regulations, the Petitioner has claimed the unrecovered depreciation up to 31.3.2014 on account of lower availability of BTPS Units 1 to 3. The Petitioner has submitted following computation for the unrecovered depreciation based on actual PAF:

Year	NAPAF	Actual PAF	Admitted AFC	Depreciation included in admitted AFC	Unrecovered AFC due to lower PAF than NAPAF	Unrecovered Depreciation due to lower PAF than NAPAF
	(%)	(%)	(Rs. lakh)	(Rs. lakh)	(Rs. lakh)	(Rs. lakh)
2006-07	55.00	57.55	26269.55	3870.21	-	-
2007-08	65.00	68.88	25649.89	1668.69	-	-
2008-09	75.00	60.31	26217.12	62.09	5135.06	12.16
2009-10	75.00	63.39	36239.20	1479.14	5609.83	228.97
2010-11	75.00	61.37	35886.05	978.70	6521.69	177.86
2011-12	75.00	59.85	37201.40	-	7514.68	-
2012-13	75.00	65.03	42568.55	697.87	5658.78	92.77
2013-14	75.00	69.62	41531.59	839.28	2979.20	60.20
GRAND TOTAL						571.97

252. The matter has been considered. It is observed that APTEL in its judgment dated 13.6.2007 in Appeal Nos. 139 of 2006 and batch (NTPC Ltd. Vs CERC and ors) has held as follows:

“In a regulatory cost-plus regime all costs have to be reimbursed. Depreciation amount up to 90% being a cost has to be allowed over the life of the plant. If due to underperformance in a particular year the appellant is not able to recover full depreciation allowed in that year and if this denial is forever, it will tantamount to a penalty. In a contract between the appellant and the beneficiaries, only levy of liquidated damages can be permitted. It will, therefore, be enough deterrent for the appellant if the depreciation is not allowed during the year of underperformance.

However, the same cannot be denied forever and, therefore, it will be only fair to allow the unpaid portion of the depreciation after the plant has lived its designated useful life. In this view of the matter the CERC needs to examine this aspect as per the aforesaid observations.”

253. The APTEL judgment provides for allowing the recovery of unrecovered



depreciation over the life of the plant, after the plant has lived its designated useful life. It is observed that the 2004 Tariff Regulations and the 2009 Tariff Regulations were silent about the recovery of unrecovered depreciation due to underperformance of the generating station in terms of plant availability factor (PAF) in comparison to NAPAF. As such, in absence of such explicit provision in the 2004 Tariff Regulations and the 2009 Tariff Regulations, APTEL in its above judgment observed that:

“It will, therefore, be enough deterrent for the appellant if the depreciation is not allowed during the year of underperformance. However, the same cannot be denied forever and, therefore, it will be only fair to allow the unpaid portion of the depreciation after the plant has lived its designated useful life”

254. Considering the fact that the designated life of the generating station was over in 2018 and the period for which unrecovered depreciation has been claimed is prior to 31.3.2014 i.e. for the period during which the erstwhile Tariff Regulations were silent about such under recovery, the Commission in consideration of the APTEL judgment as quoted above allows the recovery of unrecovered depreciation of Rs.571.91 lakh. The Petitioner may recover the same from beneficiaries in six equal monthly instalments (without interest) after reconciliation of the PAF, billed amount and unrecovered depreciation during the period of claim as indicated by the Petitioner.

Annual Fixed Charges allowed for the period 2019-24

255. Based on the above discussion, the annual fixed charges approved for the generating station for the period 2019-21, is summarized as follows:

	<i>(Rs. in lakh)</i>	
	2019-20	2020-21
Depreciation	212.09	0.00
Interest on loan	2.36	0.00
Return on Equity	2561.02	2561.02
Interest on Working Capital	1279.47	1206.15
O&M Expenses	6921.60	7165.20
Water Charges	515.21	565.18
Security Expenses	880.60	919.35
Sub-total (A)	12372.35	12416.89



	2019-20	2020-21
Interest & Contribution on Sinking Fund (As per section 40, Part IV of DVC Act)	0.00	0.00
Share of P&G	0.00	0.00
Share of Common Office Expenditure	28.49	28.00
Mega Insurance Expenses	0.00	0.00
Share of subsidiary activities	0.00	0.00
Sub-total (B)	28.49	28.00
Total Annual Fixed Charges	12400.84	12444.90

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.

256. Ash Evacuation Expenses, to be recovered separately in terms of this order, is as under:

<i>(Rs in lakh)</i>	
2019-20	2020-21
78.80	82.27

257. 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

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

259. 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.



260. Petition No. 569/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(I.S. Jha)
Member

