

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.241/GT/2017

&

Petition No. 240/GT/2017

Coram:

Shri P.K.Pujari, Chairperson

Dr. M.K.Iyer, Member

Shri I.S. Jha, Member

Date of Order: 22nd January, 2020

In the matter of

Petition No.241/GT/2017

Petition for determination of tariff of Muzaffarpur Thermal Power Station Stage-I, Unit-II(110 MW) for the period from COD (15.10.2010) to 31.3.2014

And

In the matter of

Petition No. 240/GT/2017

Petition for approval of tariff of Muzaffarpur Thermal Power Station Stage-I (2x 110 MW) from 1.4.2014 to 31.3.2019

And

In the matter of

Kanti Bijli Utpadan Nigam Limited
NTPC Bhawan, Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi- 110 003

....Petitioner

Vs

1. Bihar State Power Holding Company Ltd
(BSPHCL), Vidyut Bhawan, Bailey Road, Patna- 800 021

2. North Bihar Power Distribution Company Ltd
Vidyut Bhawan, Bailey Road, Patna- 800 021

3. South Bihar Power Distribution Company Ltd
Vidyut Bhawan, Bailey Road, Patna- 800 021

....Respondents

Parties Present:

Shri M.G.Ramachandran, Advocate, KBUNL

Ms. Poorva Saigal, Advocate, KBUNL

Mr. Abhinav Jindal, KBUNL

Shri Nishant Gupta, NTPC



Shri Shailendra Singh, NTPC
Shri Ashutosh Kr. Srivastava, Advocate, BSPHCL
Shri Rahul Kinra, Advocate, BSPHCL

ORDER

KBUNL (the Petitioner) is a subsidiary of NTPC Ltd and was set up as a joint venture company with the Respondent, BSPHCL (*erstwhile* BSEB) to take over the assets and business of the generating station. NTPC holds 65% equity shares in the joint venture company and thus, the Petitioner is a Government company covered under Section 79(1)(a) of the Electricity Act, 2003. The generating station was established by the Respondent during 1985-86 and has been transferred and vested in favour of the Petitioner with effect from 8.9.2006 in terms of the Bihar Electricity Reforms (Transfer of Muzaffarpur Thermal Power Station) Scheme, 2006. As per Bihar State Electricity Transfer Reforms, 2012, the Bihar State Power Holding Company Limited (BSPHCL) is vested with the rights and liabilities and interest in property of *erstwhile* BSEB. The generating station comprises of two units of 110 MW capacity which were commissioned during the years 1985-86 and were under shut down from October, 2003. The entire power generated from the generating station, is supplied to the respondent in terms of the Power Purchase Agreement dated 22.8.2006 and has been made part of the Transfer scheme notification dated 8.9.2006. The project was in depleted condition at the time of transfer and the generating station was in a position to generate power only at 10% to 15% of its capacity. As there was acute shortage of power being faced by the respondent, BSEB, only selective refurbishment works for restoration of generation from Unit-II was taken up and the commercial operation of the Unit-II was declared on 15.10.2010, without doing any major R&M work. Subsequently, it was taken under R&M from 29.3.2012 to 14.11.2014. Unit-I was taken under Renovation & Modernization (R&M) during 2010.



Background

2. Petition No. 271/2010 was filed by the Petitioner for approval of tariff of Unit-II (110 MW) of the generating station for the period from 15.10.2010 to 31.3.2014 with relaxed operational norms and O&M expenses. Considering the fact that the said unit was under shut down, the Commission by order dated 13.5.2014 disposed of the said petition with liberty to file separate petition after completion of R&M.

The relevant portion is extracted hereunder:

“8. We have examined the submissions of the Petitioner. As stated, Unit-II of the generating station has been granted provisional tariff for the period from 15.11.2010 to 31.3.2014, based on relaxed norms in the absence of R&M. The said unit was taken up for R&M on 29.3.2012 which was expected to be completed by April, 2014. Since the unit is under shut down due to R&M and since tariff can be determined only after completion of R&M and based on revised norms, there is no reason to keep this petition pending for determination of final tariff of the said unit. Accordingly, we dispose of this petition with liberty to the Petitioner to approach the Commission with a fresh petition for determination of tariff of the said unit of the generating station after completion of R&M.”

3. Petition No. 207/GT/2013 was filed by the Petitioner for determination of tariff of the generating station from anticipated COD of Unit-I (30.9.2012) and Unit-II (1.4.2013). Petition No.260/GT/2014 was also filed by the Petitioner for revision of tariff of the generating station after truing-up in terms of Regulation 6(1) & 6(2) of the 2009 Tariff Regulations. Accordingly, the Commission by order dated 9.2.2016 disposed of the aforesaid petitions by determining the tariff of Unit-I of the generating station for the period from 1.11.2013 to 31.3.2014. Petition No. 259/GT/2014 was filed by the Petitioner for approval of tariff of the generating station for the period from 1.4.2014 to 31.3.2019 considering the actual COD of Unit-I (1.11.2013) and the anticipated COD of Unit-II (1.11.2014). The Commission by its order dated 30.7.2016 disposed of the Petition as under:

“10. As stated, the Petitioner has filed this petition for approval of tariff for the period 2014-19, considering the actual COD of Unit-I and anticipated COD of Unit-II (1.10.2014). The Petitioner has also submitted vide affidavit dated 15.10.2014 that Unit-II is expected to be declared under commercial operation 1.11.2014. It is observed that Unit-II is yet to be declared under commercial operation. Also, the Petitioner has not submitted the scheduled completion of R&M of Unit-II and the reasons for delay in completion of R&M of Unit-II. Taking into consideration the observations of the



Commission in order dated 13.5.2014 that the tariff of Unit-II can be determined only after completion of R&M and based on the revised norms and since the Petitioner is required to submit revised tariff filing forms along with all relevant documents after declaration of COD of Unit-II, we find no reason to keep this petition pending. Hence, we are inclined to dispose of this petition, with liberty to the Petitioner to approach the Commission with fresh tariff petition in respect of the generating station for the period 2014-19 enclosing all relevant documents. We direct accordingly. The filling fees deposited by the Petitioner shall be adjusted against the fresh petition to be filed in terms of the liberty granted above.”

4. Against the Commission’s order dated 9.2.2016 in Petition Nos.207/GT/2013 & 260/GT/2014 as stated above, the Petitioner filed review petition (Petition No. 20/RP/2016) on the following grounds:

- (i) Non-admittance of capital expenditure other than transfer price of Unit-I;*
- (ii) Non-admittance of IDC;*
- (iii) Double deduction of revenue earned from sale of infirm power;*
- (iv) Mismatch in value of taken over assets in auditor’s certificate and physical valuation report;*
- (v) Non-consideration of liabilities discharged between 1.11.2013 and 31.3.2014; and*
- (vi) Pro-rata reduction in IEDC due to time overrun*

5. The Commission by its order dated 7.7.2017 rejected the review petition on all grounds but observed that the issue of treatment of expenditure incurred, if any over and above the grant amount of ₹471.80 crore towards R&M of Units-I & II of the generating station shall be dealt with once the R & M of both the units are complete.

6. The Petitioner also filed Petition No. 62/MP/2013 for adjudication of the disputes between the Petitioner and the Respondent No. 1 BSPHCL and the Commission by its order dated 15.9.2017 had disposed of the same as under:

“36. Under the circumstances mentioned above and as per the terms of PPA and Transfer Notification issued by Govt. of Bihar, we are of the view that capacity charges claimed for the shutdown period beyond 3.11.2011 up to 14.3.2012 (i.e. till Unit-II R&M shutdown was cleared by Respondent no.1) is also payable by Respondent no.1. However, the capacity charge billed by Petitioner for the shutdown period i.e. from 15.3.2012 to 29.3.2012 is not valid and hence not payable as the Petitioner was informed well in advance about the R&M plan w.e.f 15.3.2012.

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40. In view of Unit-II commercial operation being undertaken under special circumstances before R&M after only emergent and selective refurbishment for meeting state power requirement and the minor difference in the amount payable and paid, no further amount is required to be paid/ claimed by the Respondent No.1/



Petitioner in respect of Unit 2 commercial operation w.e.f 15.10.2010 till its shutdown for R&M in March, 2012.”

Petition No. 241/GT/2017

7. The Petitioner has filed this Petition with the following prayers:

- (a) Approve revised tariff of Unit-II (110 MW) of MTPS Stage-I (2 x 110 MW) for the period 15.10.2010 to 31.3.2014;*
- (b) Allow the recovery of O&M expenses and interest on loan for Unit-II(110 MW) for the period 29.3.2012 to 31.3.2014 when unit was under shutdown due to renovation and modernisation; and*
- (c) Pass any other order as the Hon'ble Commission deems appropriate in the circumstances pleaded above.*

8. This Petition was heard along with Petition No. 240/GT/2017 on 27.2.2018 and the Commission had directed the Petitioner to file certain additional information. Thereafter, the matter was heard on 13.3.2019 and the Commission after directing the Petitioner to file certain additional information, reserved its orders in both the Petitions. In compliance with the directions of the Commission, the Petitioner has filed the additional information, with copy to the Respondents. Reply has been filed by the Respondent No.1 (BSPHCL) and the Petitioner has filed its rejoinder to the said reply. We now proceed to examine the claim of the Petitioner for approval of tariff, on prudence check, based on the submissions of the parties and the documents available on record.

9. The Petitioner had filed Petition No. 271/2010 for approval of tariff of Unit-II of the generating station (after short term restoration) for the period from 15.10.2010 to 31.3.2014 with relaxed operational norms and O&M expenses. The Commission vide its order dated 23.2.2012 granted provisional tariff, pending determination of final tariff, as stated under:

“8....The Petitioner has filed the petition in terms of Regulations 5(1) and 5(2) of the 2009 Tariff Regulations and has prayed for relaxed operational norms and O&M expenses. After analysing the actual performance of the generating station for the year 2009-10 and thereafter from 1.4.2010 till the date of commercial operation of the Unit-II (15.10.2010) and considering the likely improvement in the operational performance that could be achieved by the generating station, due to the restoration/refurbishment work done on the unit, we are of the view that the grant of provisional tariff of the



generating station based on the relaxed operational norms, as discussed under, could be considered at this stage, keeping in view the interest of the sole beneficiary and the cash flow problems faced by the Petitioner. We direct accordingly.

9. In view of the above, pending determination of final tariff of the generating station, we consider the grant of provisional tariff of the generating station for the period from 15.10.2010 to 31.3.2014 as stated in the subsequent paragraphs.”

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11. Taking into consideration the objections of the respondent, BSEB in its reply filed on 7.3.2011 and the submissions of the Petitioner, the parameters for grant of provisional tariff is as under:

(a) The Capital expenditure, on cash basis, as on 15.10.2010 and certified by Chartered Accountant is ₹16840.06 lakh and the same has been considered.

(b) The Petitioner has not claimed any projected additional capital expenditure after the date of commercial operation of Unit-II and has submitted that the additional capital expenditure shall be claimed after the implementation of R&M works.

(c) The Petitioner has informed that grant in the form of Special Central Assistance under Rashtriya Sam VikasYojna aggregating to `18750.00 lakh has been provided for the generating station. However, for working out the provisional tariff, the apportioned amount of ₹6513.54 lakh for Stage-I, Unit-II (as claimed by the Petitioner) has been reduced from the capital cost of ₹16840.06 lakh (on cash basis) to arrive at the opening capital cost as on 15.10.2010. This works out to ₹10326.52 lakh and the same is considered.

(d) Capital expenditure of ₹10326.52 lakh has been considered in the debt-equity ratio of 70:30 in line with Regulation 12 of the 2009 Regulations.

10. Also, the Commission in the said order observed the following:

“23. The operating norms for Unit-II has been relaxed at present, considering the fact that Unit-II is operating after restoration/ refurbishment work and that comprehensive R&M would take considerable time before the same is actually implemented. Simultaneously, Unit-I is undergoing comprehensive R&M and the likely implementation would be during April, 2012. After the implementation of R&M programme on Unit-I, all the operating norms allowed as above shall be reviewed by the Commission.”

11. Accordingly, the provisional fixed charges allowed for the generating station for the period 2011-14 by order dated 23.2.2012 was as under:

(₹ in lakh)			
15.10.2010 to 31.3.2011	2011-12	2012-13	2013-14
7909.12	8052.50	8140.99	8245.48

12. The Energy Charges Rate of 241.257 paise/kWh for the aforesaid period was allowed by the said order.



13. Thereafter, the Commission by its order dated 13.5.2014 disposed of the said petition, with liberty to the Petitioner to approach the Commission with a fresh petition for determination of tariff of the said unit, after completion of R&M. The provisional tariff granted by order dated 23.2.2012, was subject to adjustment after determination of final tariff of the said unit of the generating station based on the petition to be filed by the Petitioner.

14. The annual fixed charges claimed by the Petitioner are as under:

	(₹ in lakh)			
	2010-11 (15.10.2010 to 31.3.2011)	2011-12	2012-13	2013-14
Depreciation	909.99	954.04	-	-
Interest on Loan	977.76	1064.64	1037.41	1053.83
Return on Equity	512.29	669.67	-	-
Interest on Working Capital	753.87	770.38	-	-
O&M Expenses	3349.50	3540.90	3743.30	3957.80
Cost of secondary fuel oil	1450.79	1454.77	-	-
Compensation allowance	-	-	-	-
Special allowance	-	-	-	-
Total	7954.20	8454.20	4780.71	5011.83
Energy Charges	253.22	253.22	253.22	253.22

Capital Cost

15. As stated, the opening capital cost of ₹10326.52 lakh (as on 15.10.2010) considered for the grant of provisional tariff, was after reduction of the apportioned amount of grant of ₹6513.54 lakh for Stage-I, Unit II from the capital cost of ₹16840.06 lakh (on cash basis) as on 15.10.2010.

16. The Petitioner in Form-5 (1) of the Petition has claimed the opening capital cost for Unit-II, on cash basis, as on 15.10.2010, based on audited expenditure as under:

		(₹ in lakh)
1	Capital cost including Interest During Construction & Financing Charges as on 15.10.2010	16067.33*
2	Interest During Construction & Financing Charges	1070.47
3	Capital cost excluding IDC & FC as on 15.10.2010	14996.86
4	Notional Interest During Construction	1084.13
5	Total opening capital cost including grant (1+4)	17151.46



6	Opening grant as on 15.10.2010 for Unit-II	6513.54
8	Total opening capital cost as on 15.10.2010 excluding grant [5-8]	10637.92
9	Opening capital cost as on 15.10.2010 excluding IDC& FC, Notional Interest During Construction & grant	8483.32

**includes contingency amount of ₹180.62 lakh as per Form-5(1)*

17. The breakup of the capital cost of ₹14996.86 lakh (as on 15.10.2010), excluding IDC & FC is as under:

	<i>(₹ in lakh)</i>
IEDC booked on capitalization of Unit-II on 15.10.2010	10191.64
Expenditure on partial restoration	6189.08
Capitalization of taken over assets	6202.25
Pre-commissioning expenses	(-) 7766.72
Contingency	180.62
Total	14996.87

18. The project has been transferred and vested in favour of the Petitioner with effect from 8.9.2006 and Unit-II had commenced operation on a continuous basis from 15.10.2010, after completion of limited refurbishment. As such, the major portion of IEDC of ₹10191.64 lakh during the period of takeover till 14.10.2010 is towards Salary of employees of the Petitioner. During this period, the Pre-commissioning expenses for ₹7766.72 lakh has been adjusted (reduced) for the purpose of tariff as this amount represents the difference between the expenditure on fuel and the revenue earned from sale of power. The capital cost of taken over assets has been booked at ₹6202.25 lakhs for Unit-II as on 15.10.2010, which includes the cost of civil structures common to both units and the cost of Plant & Machinery of Unit-II. Therefore, it is clear from the above table that the Petitioner has claimed an additional amount of ₹8483.32 lakh (approx.) over and above the grant of ₹6513.54 lakh.

19. The Petitioner in Form-1(a) has claimed capital cost for the period from 15.10.2010 to 31.3.2014 as under:



(₹ in lakh)

	2010-11 (15.10.2010 to 31.3.2011)	2011-2012	2012-2013	2013-2014
Opening Capital Cost*	17151.46	17909.39	18158.00	18432.43
Addition during the period	757.94	248.60	274.43	85.24
Closing Capital Cost	17909.39	18158.00	18432.43	18517.67

*includes normative IDC for ₹1084.13 lakh

20. The capital cost claimed as above is inclusive of the RSVY grant of ₹6513.54 lakh received by the Petitioner and apportioned to Unit-II as per details submitted vide its affidavit dated 30.3.2018. The Petitioner has reduced the capital cost by the said grant amount and accordingly, the capital cost claimed for the purpose of tariff after such reduction is as below:-

(₹ in lakh)

	2010-11 (15.10.2010 to 31.3.2011)	2011-12	2012-13	2013-14
1 Opening Capital Cost	17151.46	17909.39	18158.00	18432.43
2 Addition during the period	757.94	248.60	274.43	85.24
3 Closing Capital Cost	17909.39	18158.00	18432.43	18517.67
4 RSVY Opening grant	6513.54	6513.54	6513.54	6513.54
5 RSVY grant during the period	0.00	0.00	0.00	0.00
6 RSVY Closing grant	6513.54	6513.54	6513.54	6513.54
7 Opening capital cost (1-4)	10637.92	11395.85	11644.46	11918.89
8 Addition (2-5)	757.94	248.60	274.43	85.24
9 Closing capital cost for purpose of tariff (3-6)	11395.85	11644.46	11918.89	12004.13

Interest During Construction (IDC)

21. The Petitioner has claimed IDC for ₹1070.47 lakh as on the COD of Unit-II (15.10.2010). The Petitioner vide Form-6 (financial package as on COD) and Form-7 (details of Project specific loans), has furnished the details of the loan availed. It is noticed that the Petitioner has availed loan from the holding company, NTPC. It is pertinent to mention that the Commission vide its order dated 9.2.2016 in Petition No. 207/GT/2013 (pertaining to approval of tariff from COD of Unit-I till 31.3.2014) had decided the following:

“32. It is pertinent to mention that the Board Resolutions of the Petitioner Company dated 13.10.2006 and dated 31.12.2007 for availing loans of `20.00 crore and ₹12.03 crore respectively, indicate that the loans would be short term



working capital loans. It is therefore apparent that these loans were not intended for meeting the capital expenditure of the project. Hence, the IDC claimed by the Petitioner on the loan raised from NTPC has not been allowed to form part of the capital cost of the project.”

22. Aggrieved thereby, the Petitioner had sought review of the decision on the disallowance of IDC in Petition No. 20/RP/2016 and the Commission vide its order dated 7.7.2017 rejected the prayer of the Petitioner, observing as under:

“16. We have examined the matter. As discussed earlier, the entire project cost for the R&M of the generating station has been envisaged to be met through RSVY grant, and any variation in the final completion cost from the original estimate was to be funded by State government, and as such no borrowing was either approved or envisaged in the said scheme. While the Petitioner has incurred the expenditure more than the amount of grant received, thereby leading to a funding gap, such funding gap was supposed to be met by State government as per approved scheme. It is noticed that the Petitioner has not furnished any justification and/or document reasoning the necessity for availing an interest bearing loan from NTPC for bridging the funding gap instead of resorting to the methodology of approaching State government as per MOU for R&M scheme. From the submissions of the Petitioner, there appears no justification for availing the loan. Moreover, as observed in para 32 of the order dated 9.2.2016, the Board Resolutions of the Petitioner Company dated 13.10.2006 and 31.12.2006 reveal that loans of ₹20.00 crore and ₹12.03 crore respectively were availed for meeting the working capital requirement only. Even otherwise, it is noticed from letter dated 10.9.2013 placed on record by the Petitioner that the issue of funding the expenditure like pre-commissioning expenses, IEDC and IDC had been taken up with the State Government vide letter dated 11.10.2013. As such, we are not inclined to consider the said loan from NTPC as a project loan for availing IDC to be capitalized as part of the capital cost. Accordingly, the IDC accrued on the loan has not been allowed for capitalization for the purpose of tariff. In view of this, the prayer of the Petitioner for review of the order dated 9.2.2016 is rejected.”

23. The aforesaid decision pertaining to Unit-I is also applicable in the present case and accordingly, the IDC claimed by the Petitioner in respect of Unit-II is disallowed.

Normative IDC

24. The Petitioner has claimed normative IDC for ₹1084.13 lakh, on the basis of the equity deployed in excess of 30% of the project expenditure. The Petitioner has vide affidavit dated 25.10.2017 claimed the same along with calculations for the period from 2006-07 till COD of Unit-II (15.12.2010). The calculation of the normative IDC claimed by the Petitioner has been reworked on the basis of the provision of the PPA dated 22.8.2006 which provides as below:-



“7.1.1 (ii) For the purpose of tariff, the entire transfer price shall be considered as equity. Entire expenditure through grant shall be treated as debt and further expenditure thereafter shall be split in 70:30 debt equity ratio.”

25. Regulation 16(5) of 2009 Tariff Regulations provides as below:

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project.: 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.”

26. The Petitioner has calculated normative IDC on the basis of the rate of interest pertaining to loans availed from NTPC. It is observed that the loans availed by the Petitioner from NTPC were availed for meeting the working capital requirements only and as such, the same cannot be considered as project loans. In line with the observations of the Commission in its orders dated 9.2.2016 and 7.7.2017, the aforesaid loans have not been considered to be project loans and the rate of interest pertaining to these loans cannot be considered for the calculation of normative IDC. It is further noticed that the Petitioner has availed commercial loans for Stage-II which have been drawn after September 2011, i.e. after COD of Unit-II (15.10.2010). As such, there has been no rate of interest available for calculation of normative IDC. Similar issue came up for consideration in Petition No. 229/2010 and the Commission vide its order dated 6.5.2015 had decided as under:

“45. (a) The Petitioner has claimed notional IDC from the first quarter of 2007-08 and the first drawl of the actual loan was made in the fourth quarter (14.2.2008) of 2007-08. The Petitioner has worked out the notional IDC for first three quarters of 2007-08 by considering the rate of interest @ 10.75% per annum, applicable to the first drawl of loan. But, there was no drawl of actual loan for the generating station as well as the Petitioner company as a whole before 14.2.2008. Hence, there was no weighted average rate of interest available to work out the normative IDC before actual drawl of the loan (14.2.2008). Therefore, no IDC has been allowed before the actual drawl of the loan.”

27. In line with the above decision, the normative IDC for Unit-II has not been allowed.



Un-discharged liabilities

28. The Petitioner has claimed un-discharged liabilities amounting to ₹1645.65 lakh as on 15.10.2010. The Petitioner was directed vide ROP of the hearing dated 13.3.2019 to furnish the statement of un-discharged liabilities as on COD and the period-wise discharges thereof, duly certified by Auditor, for the periods 2009-14 and 2014-19 respectively. In response, the Petitioner vide affidavit dated 27.4.2019 has furnished the details duly certified by Auditor, as under:

Un-discharged liabilities as on 15.10.2010	Discharge of liabilities				Un-discharged liabilities as on 31.3.2014
	2010-11	2011-12	2012-13	2013-14	
1645.65	744.30	207.86	260.55	0.93	432.02

29. Accordingly, the un-discharged liabilities and the discharge of liabilities claimed by the Petitioner are allowed.

Take over price of Unit-I and Unit-II

30. The Petitioner was directed vide ROP of the hearing dated 13.3.2019 to submit Auditor's certificate in respect of the takeover price of Unit-II. In response, the Petitioner, vide its affidavit dated 27.4.2019 has furnished the auditor's certificate certifying the takeover value of Unit-I and II as ₹1654.59 lakh and ₹6202.25 lakh respectively. After excluding the IEDC included in the above mentioned take-over prices amounting to ₹286.09 lakh and ₹164.20 lakh, the take-over price of ₹1368.49 lakh for Unit-I and ₹6038.05 lakh for Unit-II has been considered.

Additional Capital Expenditure

31. The Petitioner has claimed additional capital expenditure for the period from 15.10.2010 till 31.3.2014 as under:



(₹ in lakh)						
Sl. No.	Head of Work / Equipment	2010-11	2011-12	2012-13	2013-14	Total
1	New equipment's for successful and efficient running of unit	19.12	0.00	7.63	0.00	26.75
2	MBOA items	1.99	11.20	6.26	7.31	26.76
3.	Capital spares	0	29.54	0	77.01	106.55
4.	De-capitalization	(-) 7.47	0.00	0.00	0.00	(-) 7.47
5.	Additional capital expenditure claimed	13.64	40.74	13.89	84.31	152.58
6.	Total discharge of liability	744.30	207.86	260.55	0.93	1213.64
	Total additional capital expenditure claimed	757.94	248.60	274.44	85.24	1366.22

32. The Petitioner has submitted that the additional capital expenditure claimed includes capital expenditure from 15.10.2010 (COD of Unit-II after short term restoration) to 29.3.2012 (date of taking Unit-II to R&M) along with capital expenditure necessitated for Unit-II during shutdown, while carrying out R&M of the said unit till 31.3.2014. The Petitioner has claimed the following additional capital expenditure under Regulation 9(2) read with Regulation 44 of the 2009 Tariff Regulations (Power to relax).

(i) New equipment's for successful & efficient running of the unit amounting to ₹ 26.75 lakh (equipment's like Centrifugal Mineral oil separator, Diesel forklift truck, and fire extinguisher for ₹19.12 lakh for 2010-11 and equipment's like HP Dosing Pump, differential pressure transmitter, Conductivity meter, Drive Pulley for conveyor belt etc., for ₹7.63 lakh for 2012-13);

(ii) MBOA items amounting to ₹26.76 lakh for 2010-14 (Office equipment's for ₹ 1.99 lakh for 2010-11, Office equipment's & software for official work execution for ₹11.20 lakh for 2011-12, Furniture & Equipment for office use for ₹6.26 lakh for 2012-13 and Equipment brought for official work execution for ₹7.31 lakh for 2013-14) and

(iii) Capital Spares amounting to ₹106.55 lakh (220 kV capacitance Voltage Transformer, Fluid Coupling complete, Adjusting coal Nozzle tip, Gapless type lighting arrester, Electronic Analytical balance for ₹29.54 lakh for 2011-12 and Fluid coupling FCU-41 for coal crusher motor, Condensate Extraction Pump Inter stage Impellar for ₹77.1 lakh for 2013-14).

33. The Petitioner has submitted that the generating station has been taken over from the Respondent with neither Special allowance nor Compensation allowance



applicable for the station. It has stated that these items are required for smooth running of the power station as well as for execution of R&M. In justification of the item/assets, the Petitioner has stated that the MBOA items are mainly towards Office equipment's & software for execution of office work and Capital spares which have been procured, as there is no provision for spares under R&M funded through GOI. As regards new equipment's like Centrifugal Miner Oil separator, Diesel forklift truck, Fire extinguisher, Conductivity meter, HP dosing pump, Drive Pulley for conveyor belt etc., the Petitioner has stated that these equipment's are required for smooth and efficient running of the said unit. Accordingly, the Petitioner has submitted that the Commission may allow the capitalisation of these items in relaxation of the provisions of additional capitalisation under Regulation 9(2) read with Regulation 44 the 2009 Tariff Regulations.

34. The matter has been examined. Regulation 9(2) of the 2009 Tariff Regulations provides as under:

“9. (2) The capital expenditure incurred or projected to be incurred on the following counts after the cut-off date may, in its discretion, 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;

(ii) Change in law;

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

(iv) 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) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and

(v) 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 of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:

Provided that in respect sub-clauses (iv) and (v) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-



conditioners, voltage stabilizers, refrigerators, coolers, 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. 1.4.2009.

(vi) In case of gas/liquid fuel based open/ combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations.

Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed.

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

(viii) Any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.

(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometers of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

35. Regulation 44 of the 2009 Tariff Regulations empowers the Commission to relax any of the provisions thereof either on its own motion or on an application made before it by any interested person. It reads as under -

“44 Power to Relax:- The Commission, for reasons to be recorded in , may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.”

36. As stated, the Petitioner has claimed additional capitalisation of the aforesaid assets/items mainly on the ground that these are required for smooth running of the generating station as well as for execution of R&M schemes under Regulation 9(2) in exercise of the ‘Power to Relax’ in terms of Regulation 44 of the 2009 Tariff Regulations. However, the Petitioner has stated that the generating station was taken over by the Petitioner during 2006 from the erstwhile Bihar State Electricity Board (BSEB) in depleted condition. As there was acute shortage of power being faced by the Respondent, only selective refurbishment works for



restoration of generation from Unit-II was taken up and commercial operation of Unit-II was declared on 15.10.2010 without doing any R&M work. It is noticed that on the proposal of Govt. of Bihar, R&M and Life extension, MOU was signed on 29.5.2006. Unit-II of the generating station was put to operation after limited refurbishment only. The Petitioner can neither claim additional capital expenditure on essential assets under Regulation 10 which pertains to units under R&M nor can it claim special compensation allowance in lieu of R&M. Keeping in view the submissions of the Petitioner and considering the fact that the additional capital expenditure claimed are mainly for sustenance of smooth and efficient performance of the generating station, we are inclined to relax the provisions of Regulation 9(2) of the 2009 Tariff Regulations and allow the additional capitalization claims of the Petitioner for the period 2010-14 towards New equipment, Capital spares and MBOA items. It is however noticed that Unit-II was under shut down during the period 2012-13 (from 29.3.2012) and 2013-14 and the items/assets for the said period were put to use after R&M of Unit-II. Hence, the additional capital expenditure of ₹13.89 lakh and ₹84.31 lakh allowed for the years 2012-13 & 2013-14 respectively shall be considered as part of the capital cost as on COD of Unit-II after R&M (15.11.2014). Accordingly, the additional capital expenditure claimed for the years 2010-11 and 2011-12 (upto 28.3.2012) have only been allowed for Unit-II as part of the capital cost for the purpose of tariff.

37. From the above discussions, the additional capital expenditure allowed for the purpose of tariff for the period 2010-14 is summarized as under:-

<i>(₹ in lakh)</i>			
Head of Work /Equipment	2010-11	2011-12	Total
New equipment for successful and efficient running of unit	19.12	0.00	19.12
MBOA items	1.99	11.20	13.19
Capital Spares	0	29.54	29.54
De-capitalization	(-) 7.47	0.00	(-) 7.47
Total additional capital expenditure allowed	13.64	40.74	54.38



Capital cost for purpose of tariff

38. Based on the above, the capital cost as on COD of Unit-II (15.10.2010) is as under:

<i>(₹ in lakh)</i>	
Opening capital cost on cash basis claimed by Petitioner	17151.46
Less: Grant amount included in the above	6513.54
less: IDC included in the above & disallowed	1070.47
Less: Normative IDC included in the above & disallowed	1084.13
Capital Cost as on 15.10.2010	8483.32

39. Accordingly, the capital cost for the period from 15.10.2010 to 28.3.2012 (i.e. till R&M of Unit-II) is as below:

<i>(₹ in lakh)</i>		
	15.10.2010 to 31.3.2011	1.4.2011 to 28.3.2012
Opening capital cost	8483.32	9241.26
Additional capitalisation allowed	13.64	40.74
Discharge of liabilities	744.30	207.86
Closing Capital Cost	9241.26	9489.86

Interest on loan and O&M expenses during the shut-down period from 29.3.2012 till 31.3.2014

40. The Petitioner in the Petition has submitted that since Unit-II was taken under R&M during the period 29.3.2012 to 31.3.2014, the Commission may allow the billing of O&M expenses and Interest on loan for Unit-II for the period when unit was under shutdown due to R&M.

41. The Respondent, BSPHCL vide its reply affidavit dated 18.5.2018 has objected to the claims of the Petitioner and has submitted that the 2009 Tariff Regulations do not contain a provision for allowing O&M expenses and Interest on loan during the shutdown period. It has also submitted that unless a specific provision exists for allowing such expenses, the same cannot be allowed as a pass through in tariff. The Petitioner has pointed out that as the Petitioner had agreed for O&M expenses on actual basis during the shutdown period, only the actual O&M expenses incurred by the Petitioner shall be a pass through during the period of R&M. The



Respondent has stated that the Petitioner is obligated to estimate the provisional annual O&M expenses at the beginning of each year and the same has to be informed to the Respondent. The Respondent has added that the PPA nowhere provides for Interest on loans taken by the Petitioner and hence the same cannot be allowed. Accordingly, the Respondent has stated that in the absence of any provision regarding O&M Expenses and Interest on loan during the period of shutdown, the Petitioner cannot claim such O&M expenses and Interest on loan. In response, the Petitioner vide its rejoinder affidavit dated 9.7.2018 has submitted that the commercial operation of Unit-II was declared on 15.10.2010, after completing partial restoration of unit based on the urgent need for making power available to the Respondent. It has further submitted that as per request of the Respondent, Unit-II was taken under planned shutdown for undertaking complete R&M from 29.3.2012. The Petitioner has stated that during the intervening period from 15.10.2010 to 29.3.2012, Unit-II had consistently supplied power to the Respondent and after completion of R&M of Unit-II, the unit was re-commissioned on 15.11.2014. The Petitioner has pointed out that the Commission had approved the O&M expenses and interest on loan, in case of complete long shutdown of unit for carrying out R&M in the case of Talcher Thermal Power Station, which was a takeover station, in its order dated 25.9.2006 in Petition No. 35/2004. Accordingly, the Petitioner has submitted that the cost incurred towards O&M expenses and servicing of loan during the complete shutdown period of Unit-II from 29.3.2012 to 31.3.2014 may be allowed by the Commission in line with the principles laid down by the Commission in Regulation 30(2) of the 2014 Tariff Regulations.

42. The matter has been examined. We agree with the submissions of the Respondent that the provisions of the 2009 Tariff Regulations do not provide for the grant of O&M expenses and Interest on loan during the shutdown period.



Further, the Petitioner has claimed the capital expenditure of ₹1231.60 lakh as on COD of Unit-II against 'establishment cost' after completion of R&M. The Petitioner has however not submitted any details with regard to the 'cost of establishment' booked to R&M cost and 'establishment cost/O&M' which it had incurred over and above the cost booked/factored in R&M. In this background, we do not consider it prudent to allow normative O&M for the period of shut down of Unit-II. As regards the submission of the Petitioner that the Commission had allowed the O&M expenses in case of Tanda TPS, we are in agreement that O&M expenses are required to a certain extent during the period of shut down. However, the extent to which O&M expenses is to be granted, in the absence of any provision in the 2009 Tariff Regulations, is required to be decided in the present case. For this, we notice that in clause 7.1.1(vi) of the PPA dated 22.8.2006 the Petitioner and the Respondent had agreed for consideration of actual O&M expenses. Relevant portion is extracted hereunder:

"7.1.1 Capacity Charges

xxxx

vi) Till the end of financial year in which renovation and modernization is completed, the actual Operation & Maintenance expenses incurred by JVC shall be a pass through. However, the provisional annual O&M charges shall be estimated by JVC at the beginning of each year and informed to BSEB. The same shall be billed on monthly basis. The Provisionally billed O&M expenses will be adjusted at the end of each year based on actuals. The O&M expenses allowed in tariff for subsequent years shall be as decided by CERC"

43. Accordingly, we allow the Petitioner to claim O&M expenses during the period of shutdown of Unit-II and the same shall be worked in terms of the PPA, in the following manner:

(a) During the period when the Unit-II was shut down for R&M work (2012-13 and 2013-14), the Petitioner shall claim O&M expenses, based on audited certificate for each financial year. The Respondent discoms shall, before making payment, verify/reconcile the claim with balance sheet and shall also make adjustments, if any, towards IEDC booked to R&M of Units-I & II and the normative O&M expenses received by Unit-I from 1.11.2013 to 31.3.2014;



(b) The O&M expenses allowed in Commission's order dated 23.12.2012 for the years 2010-11 and 2011-12 are allowed for the purpose of tariff. However, for the period from 29.3.2012 to 31.3.2014, the Petitioner shall be entitled to actual O&M expenses as per provisions of PPA.

44. As regards the claim of the Petitioner for interest on loan during the shut-down period, it is observed that neither the 2009 Tariff Regulations nor the PPA provides for the same. The Petitioner has submitted that in a similar case, the Commission had approved interest on loan, in case of complete long shutdown of unit for carrying out R&M in its Order dated 25.9.2006 in Petition No 35/2004 in the case of takeover of Talcher Thermal Power Station. The relevant portion of the order dated 25.9.2006 is as below:-

“29. The Petitioner has been paid annual fixed charges for the period 2000-2004 based only on the station capacity in service, and has not been paid any fixed cost for the units under shut down due to R&M. Further, the Petitioner would also have been required to discharge debt liabilities during the above period. On these grounds, there is a genuine need to compensate the Petitioner.

30. Accordingly it has been decided to allow actual expenditure incurred towards administrative and general expenses and interest on existing loan prior to R&M....”

45. As observed by the Commission in above order, there is a genuine need to compensate the Petitioner to meet the debt liabilities. However, in terms of the observations in Commission's order dated 17.7.2017 in Petition No. 20/RP/2016 and as per discussions in para 26 above, there has been no project loan availed by the Petitioner. As such, the prayer of the Petitioner to allow interest on loan during the period of shut down from 29.3.2012 to 31.3.2014 is rejected.

Debt Equity Ratio

46. The Petitioner in Form-6 of the petition has computed the debt equity ratio of 55.48:44.52 and has accordingly claimed the debt equity ratio of 70:30 for the purpose of tariff. It is observed that the Petitioner has computed the equity position as the balance amount after grant and loan from NTPC. As regards debt



equity ratio, the PPA dated 22.8.2006 entered between the Petitioner and the Respondent provides the following:

7.1.1 (ii) For the purpose of tariff, the entire transfer price shall be considered as equity. Entire expenditure through grant shall be treated as debt and further expenditure thereafter shall be split in 70:30 debt equity ratio.

47. The debt equity ratio has been computed based on the above provision of the PPA i.e., by treating the take-over price as equity, the amount of grant received as loan and further expenditure in the debt equity ratio of 70:30. Accordingly, the debt equity ratio of 56.75:43.25 has been computed. As the equity infused is more than 30%, the debt equity ratio of 70:30 has been allowed.

Fixed charges

48. Based on capital cost allowed as in para 39 above, the components of fixed charges for the period from 15.10.2010 to 28.3.2012 are determined as under:

Return on Equity

49. Regulation 15 of 2009 Tariff Regulations provides as below:-

“15. Return on Equity. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on Equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation: Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in Appendix-II: Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below: Rate of pre-tax return on equity = Base rate / (1-t) Where “t” is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case may be, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate



Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission: Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.

Illustration.- (i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 11.33% including surcharge and cess:

Rate of return on equity = 15.50/ (1-0.1133) = 17.481%

(ii) In case of generating company or the transmission licensee paying normal corporate tax @ 33.99% including surcharge and cess:

Rate of return on equity = 15.50/ (1-0.3399) = 23.481%”

50. The Petitioner has not grossed up the ROE for 2010-11 as there has been no taxable income during the year. For the year 2011-12, ROE has been grossed up with MAT rate during 2011-12, in accordance with the regulations. Accordingly, RoE has been worked out as under:

	(₹ in lakh)	
	15.10.2010 to 31.3.2011	1.4.2011 to 28.3.2012
Gross Notional Equity	2545.00	2772.38
Addition due to Additional Capitalisation	227.38	74.58
Closing Equity	2772.38	2846.96
Average Equity	2658.69	2809.67
Return on Equity (Base Rate)	15.50%	15.50%
Tax rate	0.00%	20.01%
Rate of Return on Equity (Pre Tax)	15.50%	19.38%
Return on Equity (Pro rata)	189.68	539.96

Interest on Loan

51. Regulation 16 of 2009 Tariff regulation provides as below:-

“16. Interest on loan capital

(1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(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 annual depreciation allowed.



(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project.

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.

52. As stated earlier, no project loan has been availed by the Petitioner. As such, there is no rate of interest available with respect to actual loan. The Petitioner Company, though has availed commercial loan for Stage-II, the draws of the loan had started only during September-2011. As such, there is no rate of interest available to be applied for the calculation of interest on normative loan for 2010-11 in terms of the said Regulations. Accordingly, the weighted average rate of interest has been considered as 'zero' for 2010-11. For the year 2011-12, the Petitioner has availed project loans for Stage-II, the details of which has been furnished by the Petitioner in Petition No. 74/GT/2017 (determination of tariff for Stage-II). Based on the said details, the weighted average rate of interest has been calculated for 2011-12. Accordingly, the computation of interest on normative loan allowed is as under:

	(₹ in lakh)	
	15.10.2010 to 31.3.2011	1.4.2011 to 28.3.2012
Gross Notional Loan	5938.32	6468.88
Cumulative Repayment of loan upto previous year	0.00	367.12
Net Opening Loan	5938.32	6101.76
Addition during the period	530.55	174.02
Repayment of Loan during the period	336.80	838.16
Net Closing Loan	6132.07	5437.62
Average Loan	6035.20	5769.69
Weighted Average Rate of Interest on Loan	0.00%	12.45%
Interest on Loan (pro-rata)	0.00	712.44

Depreciation

53. Regulation 17 of 2009 Tariff regulation provides as below:-



“17. Depreciation

(1) *The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.*

(2) *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 stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site:*

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

(3) *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*

(4) *Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III 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 date of commercial operation shall be spread over the balance useful life of the assets*

(5) *In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting [the cumulative depreciation including Advance against Depreciation as admitted by the Commission upto 31.3.2009 from the gross depreciable value of the assets*

(6) *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.*

54. The Petitioner has considered the life of the project as 10.90 years from 15.10.2010 in terms of the Commission’s order dated 23.3.2012 in Petition No. 271/2010. The same has been considered for the purpose of depreciation recovery for the period prior to R&M. The life of Unit-II has been considered as 10.9 years. Accordingly, the depreciable value has been spread over the remaining life of the project. Deprecation has been computed as under:

	<i>(₹ in lakh)</i>	
	15.10.2010 to 31.3.2011	1.4.2011 to 28.3.2012
Opening Gross Block	8483.32	9241.26
Addition during 2009-14 due to actual additional capitalisation	757.94	248.60
Closing Gross Block	9241.26	9489.86
Average Gross Block	8862.29	9365.56
Rate of Depreciation	-	-
Depreciable Value	7976.06	8429.00
Remaining life of the plant	10.00	9.54



Remaining Depreciable Value	7976.06	8,061.88
Depreciation (for the period)	367.12	838.16
Cumulative Depreciation (at the end of the year)	367.12	1205.28

O&M expenses

55. The annualised O&M expenses allowed in terms of the decision in para 43 above are as under:

(₹ in lakh)

	2010-11	2011- 12
Annualised	3349.20	3540.78
Pro-rata	1541.55	3511.76

Operational norms

56. The Petitioner has neither pleaded nor specifically prayed for relaxed norms of operation. However, the Petitioner in Form-3 of the tariff filing form has sought tariff based on the relaxed operational norms of Unit-II allowed in order dated 23.2.2012 in Petition No. 271/2010. The Respondent BSPHCL has submitted that the relaxed norms cannot be considered since the said norms were approved by the Commission since the Unit had undergone R&M. The Respondent has also submitted that the figures provided by the Petitioner do not confirm to the tariff regulations. The Respondent has stated that since the Commission had in its order dated 9.2.2016 in Petition Nos. 207/GT/2013 & 260/GT/2014 had observed that the Project is similar to Tanda TPS, the norms of operation as provided for Tanda TPS in the 2009 Tariff Regulations may be considered. The Respondent has submitted that the Petitioner has claimed operational norms which are much higher as compared to the ceiling norms provided in the 2009 Tariff Regulations.

57. The matter has been considered. Since the tariff of Unit-II of the generating station for the period from 15.10.2010 to 28.3.2012 (before comprehensive R&M) is only being considered in this Petition, the operational norms as allowed in Commission's order dated 23.2.2012 in Petition No. 271/2010 (as quoted below) has only been allowed.



“NAPAF

“17. Thus, taking into consideration that there would be improvement in the availability of unit after 15.10.2010, the Target Availability of 62% for recovery of full fixed charges based on the performance of 2009-10 is reasonable. Hence, the same is allowed.”

SHR

“19. Therefore, the SHR of 3200 (Kcal/kWh) is allowed considering the fact that comprehensive R&M is to be undertaken”

AEC

“20. We are of the view that the AEC at part load operation would be more than at full load operation. Therefore, the AEC of 14% as claimed by the Petitioner is reasonable and the same is considered”

Specific fuel oil consumption

“22. Accordingly, a Specific fuel oil consumption of 5.00 ml/kWh is allowed at this stage, providing the Petitioner some margin for improvement, against the actual specific oil consumption of 5.76 ml/kWh”

Interest on Working Capital

58. Since there is no revision of the operational norms allowed vide order dated 23.2.2012 in Petition No. 271/2010, the components of interest on working capital have been considered as per the said order dated 23.2.2012. Accordingly, Interest on working capital has been calculated as below:-

	(₹ in lakh)	
	15.10.2010 to 31.3.2011	1.4.2011 to 28.3.2012
Cost of coal for 2 months	950.89	2060.24
Secondary fuel oil for 2 months	110.37	240.46
O&M expenses (one month)	128.46	292.65
Receivables (Capacity Charges-2 months)	514.43	1296.13
Receivables (Energy Charges-2 months)	950.89	2060.24
Maintenance Spares (20% of the O&M expenses)	308.31	702.35
Total Working Capital	2963.36	6652.06
Interest Rate	11.00%	11.00%
Interest on Working Capital	325.97	731.73

59. Accordingly, the fixed charges approved for Unit-II for the period from 15.10.2010 to 28.3.2012 are summarised as under:

	(₹ in lakh)	
	15.10.2010 to 31.3.2011	1.4.2011 to 28.3.2012
Depreciation	367.12	838.16
Interest on Loan	0.00	712.44
Return on Equity	189.68	539.96



Interest on Working Capital	325.97	731.73
O&M Expenses	1541.55	3511.76
Secondary fuel oil	662.24	1442.73
Total Fixed Charges	2411.95	6307.10

60. As stated, the Commission in its order dated 15.9.2017 in Petition No. 62/MP/2013 had held that the capacity charges for the period of shut down from 15.3.2012 to 29.3.2012 are not payable by the Respondent BSPHCL. Accordingly, we direct that the capacity charges for the period from 15.3.2012 to 28.3.2012 shall be reduced and is payable on *pro rata* basis. The tariff determined as above shall be adjusted against the tariff allowed vide Commission's order dated 23.2.2012 for the said years.

61. Petition No. 241/GT/2017 is disposed of in terms of the above.

Petition No. 240/GT/2017

62. This Petition has been filed by the Petitioner for approval of tariff of Units-I & II of the generating station for the period from 1.4.2014 to 31.3.2019 in terms of the 2014 Tariff Regulations. During the period from 1.4.2014 to 14.11.2014, only Unit-I was under operation, as Unit-II was under R&M with effect from 29.3.2012. Unit-II had achieved COD on 15.11.2014 after a time overrun of 231 days. As such, with effect from 15.11.2014, both the units were under operation till the end of tariff period 2014-19. The Petitioner has filed this petition based on the capitalisation as per audited financial statements as on actual re-commissioning date after R&M of Unit-II i.e. 15.11.2014. The petition is filed based on actual additional capitalisation data for 2014-15 and 2015-16 and the estimated/projected additional capitalisation for the years 2016-17, 2017-18 and 2018-19.

63. The Capital cost (on cash basis) and the annual fixed charges claimed by the Petitioner are as under:



Capital cost

(₹ in lakh)

	2014-15			2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014 (Unit-I)	1.4.2014 to 14.11.2014 (Unit-II)	15.11.2014 to 31.3.2015				
Capitalisation as on 14.11.2014 in original scope R&M works	-	-	14276.95	-	-	-	-
Notional IDC Unit-II as on 14.11.2014 (details in Annexure-IV)	-	-	6415.82	-	-	-	-
Opening Capital Cost (on cash basis) as per Form 5	24580.07	18517.68	65139.69	65516.81	66337.71	67014.75	68568.43
Add: Addition during the year / period (on cash basis)	1250.59	62.88	49.13	751.16	677.04	1553.68	5570.80
Add: Discharges during the year /period	35.70	0.00	327.99	69.74	0.00	0.00	0.00
Closing Capital Cost (on cash basis)	25866.36	18580.56	65516.81	66337.71	67014.75	68568.43	74139.23
Opening amount of grant	23590.00	6513.54	42967.00	42967.00	42967.00	42967.00	42967.00
Addition in grant	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing amount of grant	23590.00	6513.54	42967.00	42967.00	42967.00	42967.00	42967.00
Opening capital cost excluding grant	990.07	12004.14	22172.69	22549.81	23370.71	24047.75	25601.43
Addition excluding grant	1250.59	62.88	49.13	751.16	677.04	1553.68	5570.80
Closing capital cost excluding grant	2276.36	12067.02	22549.81	23370.71	24047.75	25601.43	31172.23

Annual fixed charges

(₹ in lakh)

	2014-15			2015-16	2016-17	2017-18	2018-19
	1.4.2014 to 14.11.2014 (Unit-I)	1.4.2014 to 14.11.2014 (Unit-II)	15.11.2014 to 31.3.2015				
Depreciation	149.49	0.00	1965.44	2024.64	2107.81	2249.08	2774.19
Interest on Loan	161.18	1074.20	2097.66	1888.28	1633.31	1431.06	1428.45
Return on Equity	98.07	0.00	1342.70	1067.65	1401.58	1467.51	1678.09
Interest on Working Capital	1309.35	0.00	2724.32	1880.25	1855.05	2220.04	2273.96
O&M Expenses	3946.80	3946.80	7893.60	8390.80	8918.80	9479.80	10076.00
Total	5664.89	5021.00	16023.72	15251.62	15916.54	16847.49	18230.69



64. The Petitioner has considered the opening capital cost as on 1.4.2014 for Stage-I based on the summation of capital cost of Units-I & II as on 31.3.2014. While the capital cost of Unit-I as on 31.3.2014 has been considered as per Commission's order dated 9.2.2016, the capital cost for Unit-II has been considered in terms of the submission in Petition 241/GT/2017 related to the period 2009-14.

Take over price above RSVY grant

65. At the time of takeover of the Project, the performance of both units was abysmally low and accordingly for revival, R&M of the plant was envisaged. The scheme of RLA/R&M of Units-I & II of the generating station (and Units 6 & 7 of Barouni TPS) under the Rashtriya Sam Vikas Yojna (RSVY) as a special plan for Bihar was approved by the Planning Commission in its meeting held on 10.5.2005. Accordingly, ₹506.20 crore was approved as the project cost for Units -I & II of the generating station and also for Units 6 & 7 of Barouni TPS. Further, MOU regarding R&M and Life Extension of the generating station was entered into between the State Government of Bihar, BSEB, Ministry of Power, GOI and NTPC on 29.5.2006. MOU was approved by the Energy Department, Government of Bihar vide notification dated 15.5.2006. BSEB transferred the generating station to Vaishali Power Generation Company Ltd. on 6.9.2006. Thereafter, the Bihar Electricity Board Reform (Transfer of Muzaffarpur Thermal Power station) Scheme, 2006 was notified by the Energy Department, Government of Bihar on 8.9.2006. The proposal for R&M work of both the plants were recommended and approved by CEA and proposal was received by the Ministry of Power (MOP), GOI for undertaking R&M, including short term restoration of Unit-II at the cost of ₹47180 lakh, which was approved by the Planning Commission vide its letter dated 16.11.2009. After approval of GOI/ Planning Commission, the contract for R&M of BTG of both the



units of the generating station was awarded to M/s BHEL on 15.4.2010. The R&M of BOP was undertaken by the Petitioner. Thus, the funds for schemes were provided by GOI under RSVY and was capped at ₹47180 lakh as per MOP, GOI letter dated 26.5.2009.

66. The Bihar Electricity Reform (Transfer of Muzaffarpur Thermal Power Station) Scheme, 2006 as notified by the Govt. of Bihar on 8.9.2006 provides as follows:

"(f) The Board, NTPC and the State Government have agreed that NTPC shall pay an amount of Rs. 57.10 crores on behalf of the Transferee to Life Insurance Corporation of India to get the existing charges over the assets of Muzaffarpur station in favour of the said Corporation released and the amount paid by NTPC for the purpose shall be adjusted against the subscription by NTPC towards equity shares in the Transferee to the extent of 74 percent shares and balance amount, if any, remaining unadjusted shall be paid by the State Government to transferee for payment to NTPC."

67. Clause 2.1 (e) of the MOU dated 29.5.2006 between M/s BHEL, NTPC, BSEB and the MoP, GOI provides as under:

"2.iii Additional requirement of funds arising out of variation between initial estimated cost and the revised cost and/ or final completed cost shall be arranged by Ministry of Power from Planning Commission under RSVY and by the state Government shall be released to BHEL/ NTPC for smooth execution of the work."

68. Thus, for the project cost, only the asset takeover was envisaged through fund infusion by the Petitioner Company and all the other expenditure was to be met through Government funding. Moreover, any expenditure exceeding the estimated cost was required to be met by the MOP, GOI and the Govt. of Bihar. Accordingly, the Commission in its order dated 9.2.2016 had allowed the takeover price of Unit-I for ₹1368.00 lakh as the capital cost incurred by the Petitioner, against the cash expenditure of ₹4095.38 lakh. Based on this, the admissible capital cost for Unit-I was worked out as ₹1368.00 lakh. After adjustment of the revenue earned from the sale of inform power for ₹377.93 lakh, the capital cost allowed for the purpose of tariff for Unit-I vide Commission's order dated 9.2.2016 was ₹990.07 lakh as on 31.3.2014. This decision was challenged in the review



petition filed by the Petitioner [ground(i) of para 4 above] and the Commission vide its order dated 7.7.2017 had rejected the review on this ground. However, the Commission in the said order observed the following:

“11. It is evident from the above that the Petitioner has received the total RSVY grant of ₹42967 lakh (24967 + 18000) for R&M package including BOP, but has only capitalized an amount of ₹28013.59 lakh up to the COD of Unit-I of the generating station. In our view, the Petitioner has sought to reopen the case on merits which is not permissible in review. There being no merit in the submissions of the Petitioner for review of the order dated 9.2.2016, the prayer of the Petitioner is disallowed on this ground. However, the issue of treatment of expenditure incurred, if any over and above the grant amount of ₹471.80 crore towards R & M of Units-I & II of the generating station shall be dealt with once the R & M of both the units are complete.”

69. As Unit-I was in operation since 1.11.2013 and Unit-II achieved COD on 15.11.2014 after completion of its R&M, the issue of treatment of expenditure incurred, if any over and above the grant amount of ₹471.80 crore towards R & M of Units-I & II is required to be dealt with in terms of the aforesaid order dated 7.7.2017. Accordingly, the Commission vide ROP of the hearing dated 27.2.2018 in Petition No. 240/GT/2017 had directed the Petitioner to furnish the ‘*details of the additional expenditure incurred over and above the original grant of ₹471.80 crore by MOP, GOI*’ and in response, the Petitioner in its affidavit dated 30.3.2018 had submitted the following:

“Total expenditure towards R&M of units over and above the sanctioned Govt. grant of Rs 471.80 Cr is Rs (-)4.36 lakh excluding IEDC, IDC & Pre-commissioning expenses. It is submitted that estimated cost of Rs. 471.8 Cr as per approved DPR for R&M does not include Pre-Commissioning expenses, IEDC Expenses & IDC etc. It is submitted that the Petitioner has taken up with both MoP, Gol and Government of Bihar for funding of these essential additional expenditures associated with R&M such as Pre-commissioning, IEDC and IDC etc. through Govt. Grant, however, the same was denied by both MoP Gol and Govt. of Bihar. It is submitted that the funds for schemes under DPR were provided by GOI under RSVY and funds by GOI under RSVY were capped at Rs 471.80 crore as per MOP, GOI letter dated 26.5.2009.

Subsequently, after much efforts on part of Petitioner, it was agreed with Bihar to fund the same in 70:30 debt equity ratio as per clause 7.1.1(ii) of Power Purchase Agreement (PPA) dated 22.08.2006 for MTPS Stage-I. In line with above clause, KBUNL has taken up with Bihar State Power Generating Company Ltd. (Equity partner in KBVNL) for funding of these additional through letter dtd 10.09.2013 and the same was agreed by Bihar State Power Generating Company Ltd vide its letter dtd 11.10.2013.



It is submitted that Commission vide order dated 07.07.2017 in Review petition 20/RP/2016 filed in order dated 09.02.2016 in Pet No. 207/GT/2013 & 260/GT/2014 while reviewing the disallowance of any expenditure over and above the grant for tariff of Unit-I after R&M had granted liberty to consider the same once the R&M of both units is completed. In view of above and also keeping in view the essentiality of incurring those expenses Commission may be pleased to reconsider the disallowance of Rs 44.24 Cr capitalization over and above the grant for Unit-I vide order dated 09.02.2016 in Petition No. 207/GT/2013 & 260/GT/2014 and allow capitalization of expenditures over and above grant which were not included in DPR i.e of IEDC, IDC and pre-commissioning etc.

70. The details of the total expenditure towards R&M of units and expenditure over and above the sanctioned government grant as furnished by the Petitioner are as under:

(₹ in lakh)

Expenditure on R&M of Stage I	Unit I	Unit II	Unit-II	Stage-I (as a whole)	Total Stage-I
COD date	1.11.2013	15.10.2010			
Re-commissioning date	-	-	14.11.2014		
Expenditure on gross basis upto 31.3.2015					
Capital expenditure on R&M upto COD date (excl. transfer cost of existing assets)	28236.42	11510.73			39747.15
Additional capitalization 2010-11(15.10.2010-31.3.2011)		13.64			13.64
Additional capitalization 2011-12		40.74			40.74
Additional capitalization 2012-13		13.89			13.89
Additional capitalization 2013-14		84.31			84.31
Additional capitalization 2014-15(upto 14.11.2014)	1250.59	62.88			1313.47
Capital expenditure on re-commissioning date of Unit-2		-	17234.16	-	17234.16
Additional capitalization 2014-15(15.11.2014-31.3.2015)		-	-	5.79	5.79
Expenditure on R&M (a)	29487.01	11726.19	17234.16	5.79	58453.15
Transfer cost of existing assets(b)	1654.58	6202.25	-	-	7856.83
Total Gross block	31141.59	17928.44	17234.16	5.79	66309.98
Funded through grant(received)-(c)	23590.00	6513.54	12863.46	-	42967.00
Difference(a-c)	5897.01	5212.65	4370.70	5.79	15486.15
Grants to be received (sanctioned grant ₹47180 lakh-grant received ₹42967 lakh)	-	-	-	-	4213.00
Excess expenditure over original grant of ₹47180 lakh (d)	-	-	-	-	11273.15
IDC & EDC included in R&M expenses (not included in R&M DPR) (e)	-	-	-	-	15473.17
Pre-commissioning expenses (not included in R&M DPR) (f)	-	-	-	-	(-) 4460.25
Expenditure claimed in Form 9A not within the original scope of work (g)	-	-	-	-	264.59
Excess expenditure on R&M over and above sanctioned grant (h) = (d-e-f-g)	-	-	-	-	(-)4.36



71. It can be observed from the above table that the total gross block as on COD of the generating station (15.11.2014) is ₹66309.98 lakh. Thus, the excess expenditure over and above the grant amount of ₹47180 lakh is mainly due to IDC, EDC and pre-commissioning expenses. The Petitioner has furnished the break-up of the R&M expenditure to be incurred within the grant amount of ₹471.80 crore, as below:

<i>(₹ in crore)</i>	
Description	
Short-term restoration of BTG of Unit-II by BHEL	39.76
Short-term restoration of BOP (Unit-2] by KBUNL	17.04
Sub-total (I)	56.80
Major R&M of Stage-I BTG by BHEL	245.00
Major R&M of Stage-I BOP by KBUNL	170.00
Sub-total (II)	415.00
Grand Total (I+II)	471.80

72. The Respondent BSPHCL vide its affidavit dated 21.5.2018 has submitted that the Petitioner has not placed on record the details of the investment and cost approvals as provided in the DPR and in the absence of the same, it could not be ascertained whether the said expenses were allowed or not. The Respondent has also stated that the Petitioner being a subsidiary of NTPC, cannot rely upon the cost estimates prepared by NTPC consultancy wing and hence, the revised cost estimates prepared by NTPC, which provides for pre-commissioning expenses, IEDC and IDC under the head "New item" are liable to be rejected. The Respondent has added that the Petitioner may be directed to get the same verified by an Independent Agency which does not have direct and indirect vested interest in the Petitioner or its plant. The Respondent has referred to the Commission's order dated 7.7.2017 in Petition No. 20/RP/2016 and submitted that the claim of IDC accrued on the loan for capitalization for the purpose of tariff was rejected. It has also stated that the Commission, in the said order had held that all expenses claimed by the Petitioner were to be adjusted from the funds/grant for R&M and therefore, the Petitioner cannot re-agitate the issue again in the present Petition.



Accordingly, the Respondent has submitted that the prayer of the Petitioner to allow the pre-commissioning expenses, IEDC and IDC may be rejected. In response, the Petitioner vide its rejoinder affidavit dated 9.7.2018 has submitted that it has submitted all the documents as directed by the Commission, including the DPR for R&M vide its affidavit dated 24.11.2011 in Petition No. 271/2010 with advance copy to the Respondent. The Petitioner has also submitted that at the time when the costs and investments were finalized, BSEB was an equity shareholder in the Petitioner Company and was a party to the decision making process of appointing NTPC as Consultant for R&M work in 2nd and 3rd Board meetings of the Petitioner Company on 13.10.2006 and 29.1.2007 respectively. It has pointed out that at the relevant time, the Respondent did not raise any allegations of vested interest or otherwise or raise any doubts on the consultancy work to be undertaken by NTPC. Accordingly, the Petitioner has stated that the issue being raised belatedly by the Respondent is as an afterthought. The Petitioner has further submitted that at the relevant time, NTPC had agreed to fund/provide loan to the Petitioner Company so as to hasten the entire R&M process, in order to cater to the urgent power requirements of the State of Bihar. The Petitioner has submitted that since NTPC is a JV partner, any decision taken in respect of cost expenditure and estimates is thoroughly reviewed by its representatives. The Petitioner has clarified that the Commission in its order dated 7.7.2017 has only given a finding as to whether the bridge gap loans funded by NTPC could be allowed as a pass through in tariff or not and there has been absolutely no finding on the issue as to whether the same can be recovered from the Respondents on the basis of their express consent in letter dated 11.10.2013. The Petitioner has clarified that the Commission in the said order dated 7.7.2017 has however granted liberty for considering the expenditure over and above the grant, after completion of R&M of both units. The Petitioner has stated that it has filed appeal before the Appellate Tribunal for Electricity



(‘Tribunal’), amongst others, on the issue of disallowance of IDC on NTPC loans and the same is pending. Accordingly, the Petitioner has submitted that the contentions of the Respondent may be rejected.

Analysis and Decision

73. The submissions have been considered. It is observed that the details of the capital expenditure towards R&M of only Unit-I were available at the time of passing the Order dated 9.2.2016 (Petition Nos.207/GT/2013 & 260/GT/2014) and Order dated 7.7.2017 (Petition 20/RP/2016). Unit-II was subsequently taken out for R&M with effect from 29.3.2012 and had been re-commissioned on 15.11.2014 (during the 2014-19 tariff period). Hence, the details of the total actual R&M expenditure incurred for both the units, over and above the grant amount, were not available when Unit-I had achieved COD on 1.11.2013. For this reason, the Commission in its order dated 7.7.2017 had deferred the decision on treatment of the expenditure incurred, over and above the ‘taken over price’ of plant, until the completion of R&M of both the units. It is evident from the submissions that the R&M expenditure, over and above the received grant of ₹42967.00 lakh, has been incurred by the Petitioner. In the light of the observations of the Commission in order dated 7.7.2017 to consider the issue of treatment of the expenditure incurred over and above the grant amount after completion of R&M of the units and since R&M of both the units have actually been completed, we examine the issue of treatment of cost over and above the grant in this order. The detailed aspects with regard to the R&M of both the units are summarised hereunder:

- a) MOP vide its letter dated 26.5.2009 had approved the estimated cost/grant of ₹471.80 crore under RSVY. In the said letter, it had been indicated that any expenditure over and above the said cost, would be borne by the State Government of Bihar.



- b) R&M of Unit-I had commenced on 15.4.2010 (i.e. the date of award of BTG package to M/s BHEL) and was completed on 1.11.2013.
- c) Unit-II had commenced generation from 15.10.2010 (after short term restoration) and was taken out for R&M work on 29.3.2012. R&M of Unit-II was completed on 15.11.2014. Accordingly, between the period 29.3.2012 and 31.10.2013, the R&M of both units were in progress simultaneously.
- d) The total grant of ₹471.80 crore was equally apportioned between Units-I & II at ₹235.90 crore each.
- e) The R&M of BTG package of both units was awarded to M/s BHEL for ₹284.76 crore and the R&M of BOP was to be carried out by Petitioner at a cost of ₹187.04 crore, thereby totalling ₹471.80 crore. The payment towards BTG package was to be released by MOP, GOI directly to M/s BHEL, in stages, based on completion of the work. Hence, the Petitioner had no control over the grant pertaining to the BTG package. The amount of grant pertaining to BOP was also being released by MOP, GOI, depending on the progress of the work. It is however noticed that MOP, GOI had released a grant amount of ₹429.67 crore, as against the total sanctioned grant of ₹471.80 crore
- f) The Petitioner had received an amount of ₹65.14 crore, as grant towards the partial restoration of Unit-II, till 15.10.2010 and same was reduced from the opening capital cost of Unit-II as on 15.10.2010. As on the date of COD of Unit-I (1.11.2013) after its R&M, the grant received by the Petitioner was ₹429.67 crore. Accordingly, the Petitioner has adjusted a grant amount of ₹235.90 crore, from the opening capital cost of Unit-I. Thus, as on 1.11.2013, the Petitioner has adjusted the capital cost by an amount of ₹301.04 crore (65.14+235.90) out of the total grant of ₹429.67 crore received till that date. The balance amount of the grant received i.e ₹128.63 crore has been incurred by the Petitioner towards R&M of Unit-II (including BTG and BOP) which was under R&M for 19 months ie from 29.3.2012. It cannot therefore be inferred that as on 1.11.2013, the balance grant of ₹128.63 crore was available for reduction from the opening capital cost of Unit-I of the generating station.

74. From the details of the total expenditure towards R&M of units and expenditure over and above the sanctioned grant as furnished by the Petitioner above, it is evident that the R&M expenditure of ₹584.53 crore as on COD of Unit-II after R&M, had exceeded the sanctioned grant of ₹471.80 crore and the released grant of ₹429.67 crore, which is only on account of the pre-commissioning expenses, IEDC and IDC. However, from the details in the table under para 67 above, it is clear that the grant amount of ₹471.80 crore had envisaged only the



R&M activities of the units and does not include the pre-commissioning expenses, IEDC and IDC of the project. On overall basis, an expenditure of ₹112.73 crore has been incurred by the Petitioner, over and above the grant of ₹471.80 crore. As stated, the plant which was under shut down since October 2003, was taken over by the Petitioner from BSEB on 8.9.2006. The R&M of Unit-II was completed on 15.11.2014, after a time span of more than 8 years. It is observed that IEDC for the generating station works out to ₹132.90 crore, as on 15.11.2014 (after completion of R&M of Unit-II) and the major portion of EDC is attributed to the salaries of the employees from the date of takeover of plant, till the completion of R&M of both the units. It is unlikely that the R&M proposal would have considered the expenditure incurred towards employees cost for the period from the date of takeover in 2006 till 15.10.2010. Apart from EDC, the balance expenditure pertains to IDC and Pre-commissioning expenses. It is however noticed that pre-commissioning expenses of (-) ₹44.60 crore had been adjusted in the capital cost, on overall basis. It is further noticed that the expenditure over and above the grant amount was refused by BSEB stating that in terms of the MOP, GOI letter dated 26.5.2009, the cost as well as the scope of the work of the R&M works could not be altered and fund, if any, required over and above the approved cost of R&M, should be arranged by the Company itself. It can therefore be concluded that the expenditure over and above the grant amount incurred towards IEDC, IDC and Pre-commissioning expenses do not form part of the R&M proposal. As such, this expenditure has not been paid to the Petitioner by the State Government as per the requirement of PPA and the MOP letter dated 26.5.2009. In view of this and considering the fact that expenditure over and above the received grant of ₹42967.00 lakh from MOP, GOI has been incurred by the Petitioner, we allow the same after prudence check of the claims of the Petitioner.



75. The total grant received upto the COD of Unit-I (1.11.2013) is ₹42967.00 lakh and an amount of ₹23590 lakh had been claimed as grant amount utilised for Unit-I. Accordingly, the capital cost, excluding the above grant received for Unit-I is ₹4095.38 lakh as considered vide Commission's order dated 9.2.2016 is as under:

		(₹ in lakh)
a	Value of taken over assets on COD of unit-I	1368.00
b	R&M Expenditure as on COD of unit-I	28013.59
c	less: Pro-rata reduction in establishment cost	(-) 813.50
d	add: Interest during Construction	-
e	Capital Cost as on accrual basis (a+b-c+d)	28568.09
f	less: Un-discharged liabilities	(-) 882.71
g	Capital Cost on cash basis as on 1.11.2013 (e-f)	27685.38
h	Grants received (for Unit-I)	23590.00
i	Capital Cost on cash basis excluding grant as on COD of Unit-I (g-h)	4095.38

76. However, the Commission, after considering the above capital cost, allowed only the take-over price, excluding the revenue earned from infirm power, as capital cost amounting to ₹990.07 lakh (1368.00-377.93) for the purpose of tariff.

77. In view of our decision above to allow the expenditure over and above the grant received by the Petitioner i.e. expenditure over and above the take-over price, the amount of ₹4095.38 lakh, would form the basis for allowing the capital cost of Unit-I in this order. Accordingly, the tariff of Unit-I for 2013-14 as approved by the Commission vide its order dated 9.2.2016 in Petition No. 207/GT/2013 & 260/GT/2014 stands modified as under:

Revision of Tariff of Unit-I for 2013-14

IDC

78. The Commission while considering the capital cost of ₹4095.38 lakh as above had not allowed the IDC claimed by the Petitioner in its order dated 9.2.2016. This was affirmed by the Commission vide its order dated 17.7.2017 in Petition No. 20/RP/2016 filed by the Petitioner on the disallowance of IDC. As such, the IDC has not been allowed.



Discharge of liabilities

79. As stated in para 74 above, the expenditure over and above the grant received from MOP, GOI has been allowed. In view of this, the discharge of liabilities which was not allowed from COD of Uni-1 to 31.3.2014 is considered with the reduction of un-discharged liabilities. The Petitioner in Petition No.20/RP/2016 had submitted as under:

"It is submitted that the Petitioner has inadvertently taken liability as on 31.03.2014 as Rs. 596.40 lakh in place of Rs. 501.10 lakh. The liability flow statement is enclosed as Annexure-III and the revised form-9 including the discharge of liability is also provided at Annexure-IV. The reduction in liabilities was due to discharge and not on account of any adjustment. Hence, the Hon'ble Commission may be pleased to take this information on record and allow the impact of Rs. 381.60 lakh liabilities discharged during 01.11.2013 to 31.03.2014 on annual fixed cost for the purpose of tariff.

80. In view of the clarification furnished by the Petitioner along with the revised Form-9, the discharge of liabilities amounting to ₹381.60 lakh is allowed. The Petitioner has not claimed any additional capital expenditure for 2013-14 for Unit-I

Capital Cost of Unit-I as on 31.3.2014

81. Accordingly, the capital cost allowed for the purpose of tariff as on 31.3.2014 is revised as under:

(₹ in lakh)		
a	Value of taken over assets on COD of Unit-I	1368.00
b	R&M Expenditure as on COD of Unit-I	28013.59
c	less: Pro-rata reduction in establishment cost	(-) 813.50
d	Add: Interest during Construction	-
e	Capital Cost as on accrual basis (a+b-c+d)	28568.09
f	Less: Un-discharged liabilities	(-) 882.71
g	Capital Cost on cash basis as on 1.11.2013 (e-f)	27685.38
h	Grants used for Unit-I	23590.00
i	Capital Cost on cash basis excluding grant as on COD (g-h)	4095.38
j	Discharge of liabilities allowed	381.60
k	Capital cost as on 31.3.2014	4476.98

Debt-equity ratio

82. The Petitioner in Petition no. 260/GT/2014 had claimed the debt equity ratio of 90.89:9.11 as on COD of unit-I i.e. 1.11.2013. As regards debt equity ratio, the PPA dated 22.8.2006 entered into between the Petitioner and the Respondent provides as under:



7.1.1 (ii) For the purpose of tariff, the entire transfer price shall be considered as equity. Entire expenditure through grant shall be treated as debt and further expenditure thereafter shall be split in 70:30 debt equity ratio.

83. The debt equity ratio has been reworked based on the above provision i.e., by treating the take-over price as equity, the amount of grant received as loan and the further expenditure in the debt equity ratio of 70:30. Accordingly, the debt equity ratio of 91.09:8.91 has been allowed.

	(₹ in lakh)
	1.11.2013 to 31.3.2014
Gross Notional Equity	364.70
Addition due to Additional Capitalisation	33.98
Closing Equity	398.68
Average Equity	381.69
Return on Equity (Base Rate)	15.50%
Tax rate	0.00%
Rate of Return on Equity (Pre Tax)	15.50%
Return on Equity (Pro rata)	24.48

Return on Equity

84. From the annual report of the Petitioner Company for the year 2013-14 it is observed that there was no taxable income and accordingly no tax was payable for the said year. As such, the Return on Equity cannot be permitted to be grossed up with the MAT rate as applied by the Petitioner. Hence, Return on Equity has not been grossed up as no tax has been paid against the same. As such, Return on equity has been computed as under:

	(₹ in lakh)
	1.11.2013 to 31.3.2014
Gross Notional Equity	1228.61
Addition due to Additional Capitalisation	114.48
Closing Equity	1343.09
Average Equity	1285.85
Return on Equity (Base Rate)	15.50%
Tax rate	0.00%
Rate of Return on Equity (Pre Tax)	15.50%
Return on Equity (Pro rata)	82.45



Interest on loan

85. For the purpose of interest on normative loan, the Petitioner has used the weighted average rate of interest arrived at on the basis of the loans availed from NTPC. As the loan from NTPC has not been considered by the Commission as project loans, the weighted average rate of interest claimed by the Petitioner cannot be considered as the reference rate for calculation of Interest on loan. It is further noticed that in Petition No. 74/GT/2017 that the Petitioner has availed commercial loans for Stage-II. Based on the loan details furnished in Petition No. 74/GT/2017, the weighted average rate of interest for the purpose of tariff in the present case (Unit-I) for 2013-14 has been reworked. Accordingly, interest on normative loan has been allowed as under:-

	(₹ in lakh)
	1.11.2013 to 31.3.2014
Gross Notional loan	3730.68
Cumulative Repayment of loan upto previous year	0.00
Net Opening loan	3730.68
Addition during the period	347.62
Repayment of loan during the period	159.59
Net Closing loan	3918.71
Average loan	3824.70
Weighted Average Rate of Interest on loan	12.29%
Interest on loan (pro-rata)	194.49

Depreciation

86. As observed by the Commission in order dated 9.2.2016, the Petitioner has claimed depreciation considering the balance life of 15 years after the completion of R&M. As per Clause 7.1.1(i) of the PPA, the life of the generating station shall be considered as 15 years from the date of takeover in 2006 for the purpose of depreciation. The Petitioner was directed to furnish the details on the estimated life extension after completion of R&M and in response, the Petitioner has submitted that the expected life of the Units is 10 to 15 years, after completion of R&M. It is further noticed that in order dated 9.2.2016 that the committee on RLA



had recommended the life of major equipment's like drum, economisers, water walls, re-heaters as 10 years and the life of Turbine, after stress analysis, has been recommended as 9 years. In view of the above, the Commission in its order dated 9.2.2016 had considered the balance useful life, after completion of R&M of Unit-I as 10 years. Accordingly, in line with this decision, the depreciable value (90%) has been spread over the balance useful life of 10 years and depreciation has been worked out as under:

	(₹ in lakh)
	1.11.2013 to 31.3.2014
Opening Gross Block	4095.38
Addition during 2009-14 due to actual/ projected additional capitalisation	381.60
Closing Gross Block	4476.98
Average Gross Block	4286.18
Value of freehold land included in gross block	0.00
Value of gross block excluding land	4286.18
Rate of Depreciation	-
Depreciable Value	3857.56
Remaining life of the plant	10.00
Remaining Depreciable value	3857.56
Depreciation (pro-rata)	159.59

O & M Expenses

87. The O&M expenses for Unit-I for the period from 1.11.2013 to 31.3.2014 as allowed in Commission's order dated 9.2.2016 as under, has been considered:

(₹ in lakh)
1.11.2013 to 31.3.2014
1492.17

Interest on Working Capital

88. Interest on working capital has been worked out as under:

	(₹ in lakh)
	1.11.2013 to 31.3.2014
Cost of coal for 2 months	1619.25
Secondary fuel oil for 2 months	105.57
O&M expenses (one month)	124.35
Receivables (Capacity charges-2 months)	511.48
Receivables (Energy charges-2 months)	1619.25
Maintenance Spare (20% of the O&M expenses)	298.43
Total Working Capital	4278.33



Interest Rate	13.20%
Interest on Working Capital (pro-rata)	564.74

Fixed Charges

89. Accordingly, the fixed charges allowed for Unit-I for the period from 1.11.2013 to 31.3.2014 is summarized as under:

	(₹ in lakh)
	1.11.2013 to 31.3.2014
Depreciation	159.59
Interest on Loan	194.49
Return on Equity	24.48
Interest on Working Capital	564.74
O&M Expenses	1492.17
Secondary fuel oil	633.44
Total Fixed Charges	3068.90

Approval of tariff of Units I & II for the period 2014-19

90. As stated in para 81 above, the capital cost allowed in respect of Unit-I as on 31.3.2014 is ₹4476.98 lakh. The same has been considered as opening capital cost as on 1.4.2014.

Commissioning Schedule and Time Overrun of Unit-II

91. The Petitioner has submitted that the contract for R&M of the generating station was awarded to M/s BHEL on 15.4.2010 and thereafter, Unit-I was immediately handed over to M/s BHEL for R&M. It has submitted that Unit-II was made operational after its partial refurbishment due to specific needs of the Respondents as the State of Bihar was facing acute power shortage at that time. The Petitioner has stated that BSEB vide its letter dated 7.3.2012 had requested the Petitioner to takeover Unit-II under R&M and consequent upon this, Unit-II was handed over to M/s BHEL for R&M on 29.3.2012. The Petitioner has pointed out that as per R&M contract with M/s BHEL, the completion period of R&M for both the units was 28 months i.e. 24 months for first unit and 28 months for the second unit from the date of start of R&M. However, this timeline of 24 months and 28 months could be applicable only if both the units were handed over to M/s BHEL



concurrently, which is not the case here due to obligation of the Petitioner to keep supplying power to the State of Bihar. Accordingly, the Petitioner has submitted that while calculating the delay in respect of commissioning of Unit-II, its scheduled completion time has been considered as 24 months from the date of handing over of Unit-II for R&M i.e. w.e.f. 29.3.2012, as all the resources were required to be mobilized afresh for undertaking the R&M of Unit-II. The Petitioner has added that the actual duration for completion of R&M of Unit-II has been 31 months 16 days from 29.3.2012 to 15.11.2014, causing a delay of 7 months and 16 days (i.e total 231 days). The Petitioner has stated that the said delay was mainly due to delay in TG box-up and related activities due to the following reasons:

- (a) Failure of LP turbine blades during transportation.
- (b) Failure of Generator Rotor in RSO test.
- (c) Difficulty in commissioning seal oil system due to use of indigenously developed Unproven design Generator DPRV (Differential Pressure Regulator valves).
- (d) Difficulty in proving of newly supplied jacking oil pump.

92. The Petitioner has submitted that it has furnished detailed reasons in Form 5(1), as follows, along with all supporting documents and has prayed that the Commission may consider these reasons for delay, which were beyond the control of the Petitioner and condone the said delay while deciding the tariff.

Sl. No.	Problems faced	Reasons for Delay	Activities Affected
a	Failure of LP turbine blades during transportation.	Repaired LP turbine rotor received at KBUNL site on 1.8.2013 from BHEL Hyderabad site. During inspection of turbine at site, 14 nos of stage-IV blades, 2 nos. blades of Stage-III & damping wire passing through were found damaged. Pre delivery inspection of turbine was also carried out by KBUNL at BHEL Hyderabad site and turbine was found healthy during checks. LPT blades and wire got damaged during transportation. Repairing of failed turbine blades involved requirement / availability of healthy/new blades, damping wire, slow speed balancing machine & expert services and all those were not readily available at KBUNL. The repairing of damaged LP Rotor took time and was completed by M/s BHEL on 14.1.2014. Trim	Turbine Box-up and all the subsequent commissioning activities



		balancing machine was arranged by site BHEL from BHEL Kolaghat and same was received at KBUNL site on 7.2.2014. LP Rotor slow speed balancing was completed on 17.4.2014. both the parties, M/s BHEL and the Petitioner made sincere efforts for early availability of LP Turbine which tool time due to degree of precision and skill involved in the job. This was an unforeseeable event, which is no way can be comprehended earlier.	
b	Failure of Generator Rotor in RSO test.	<p>During the final stages of R&M it was during testing Unit-II generator failed in RSO Test, indicating inter turn short fault in generator rotor (Report of failed RSO test report dated 24.12.2012 enclosed). The rotor had in past successfully passed the RSO test carried out in the year 2006 & 2010 and the rotor was found in healthy condition. It remained in operation without any abnormality till Nov-2011 and thereafter Unit-II was handed over to BHEL for R&M on 29.3.2012.</p> <p>It was suggested by M/s BHEL to carry out complete rewinding with insulating material. The rewinding of rotor could not be carried out on site and would have taken almost six months if rotor was sent to BHEL workshop. For early completion of R&M of Unit-2, KBUNL made efforts to borrow the rotor from NTPC Tanda & Barauni TPS-Unit-6 on returnable basis but unfortunately Tanda and Barauni rotors were also failed during RSP tests. KBUNL then placed an open order to M/s BHEL on 20.3.2014 for urgent rewinding of failed Generator Rotor. After lot of effort M/s BHEL proposed that KBUNL may take rewinded rotor of Patratu thermal power station which was lying at BHEL Hyderabad site. In view of rotor being of similar sized unit and also with a view to save time KBUNL agreed to take reminded rotor of patratu from BHEL. Patratu rotor reached at site on 26.4.2014. However same could not be replaced one to one as the rotor was fouling with generator seal body due to length of the rotor being 7 mm shorter. It was concluded by site BHEL that a spacer ring shall be required to be inserted and also service of expert were also requested by site BHEL in view of nature of job involved. Required spacer ring was then fabricated at BHEL Hyderabad site and same was received at KBUNL site on 18.7.2014. Due to degree of precision involved in the job, experts were also deputed by BHEL at KBUNL. All this</p>	Turbine Box-up and all the subsequent commissioning activities



		resulted in delay in TG box.	
c	Difficulty in commissioning seal oil system due to use of indigenously developed Unproven design Generator DPRV (Differential Pressure Regulator valves)	MTPS Stage-I turbines were manufactured with design philosophy of M/s SKODA (erstwhile Czechoslovakia). BHEL, under R&M, was required to supply and commission new DPRV (one to one replacement) for both the units among other R&M works. However, M/s BHEL supplied (without prior consent of the Petitioner) indigenously developed Generator seal oil system DPRV which were neither proven nor prototype tested. New design DRPV were first installed I Unit-I and its performance was not found satisfactory and wide variations w.r.t design, in H2 & Air side differential pressure were observed (reports enclosed). KBUNL was concerned with reliability and safety of plant hence use of new design DPRV was denied by KBUNL and its was requested with M/s BHEL to supply OEM make DPR and it was also intimated to BHEL that if they are not able to supply OEM make DPR then KBUNL shall procure on its own and commercial settlement shall be done. BHEL then commissioned seal oil system of Unit-I after cannibalising old DRPV of Unit-II and same was allowed by KBUNL for early completion of R&M of Unit-I. Subsequent to KBUNLs denial for using unproven DPRV, BHEL asked KBUNL to procure the same from OEM, accordingly KBUNL placed an urgent order to OEM (M/s GEPSIL) for supply of DPRVs which were imported from Czechoslovakia & reached site on 12.7.2014. Subsequently, the OEM made DPRVs were commissioned and proved on 24.9.2014. Generator Air Tightness Test was successfully completed on 24.9.2014.	Generator ATT and subsequent commissioning activities
d	Difficulty in proving of newly supplied jacking oil pump.	M/s BHEL had to supply and commission new jacking oil pumps in both the units under R&M. However during implementation of R&M M/s BHEL informed that the newly supplied jacking oil pumps are of different type than the existing ones due to design obsolescence and same cannot be retrofitted and new headers and piping were required for oil distribution to various bearings. M/s BHEL also informed, in contract review meeting held on 28.9.2012 that design of the same header is under engineering stage at their Hyderabad site. M/s BHEL, at the time of commission of Unit-I, requested to cannibalize the components of Unit-II existing JOP system (as Unit-II was taken under R&M by then). KBUNL allowed the same for early	TG Barring Gear, Lube Oil flushing and subsequent commissioning activities



		<p>commissioning of Unit-I. This meant that Unit-II had to be commissioned with new JOP and associated systems as Unit-II components were cannibalized and used in Unit-I. After completion of engineering and fabrication of headers and pipings for new design Jacking Oil Pump erection of main equipment along with piping work started on 7.5.2014 & erection work completed on 23.6.2014. Due to design change & several modifications it took almost three months after completion of erection of main equipment in proving Jacking Oil Pump even after availability and involvement of BHEL Hyderabad expert & BHEL PSER commissioning/ trouble shooting expert. The new jacking oil system was proven on 18.9.2014 and TG was successfully lifted and taken on barring gear on the same date i.e. 18.9.2014.</p>	
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93. The Commission vide ROP of the hearing dated 27.2.2018 directed the Petitioner to furnish, amongst others, the following:

“(i) Schedule and actual completion time of different activities on the account of time overrun of 7.5 months. PERT / bar chart indicating the critical activities/ milestones which were affected due to each period of delay and reasons thereof. The parallel activities which were simultaneously affected due to one or more reason to be indicated with the effective days lost”

94. In response, the Petitioner vide its affidavit dated 30.3.2018 has reiterated its submissions made in the petition and has enclosed the PERT chart for R&M schedule originally envisaged verses the actual R&M.

95. The Respondent BSPHCL vide its affidavit dated 21.5.2018 has submitted that the Petitioner has not made reference to a force majeure or a change in law event. It has pointed out that the delay in re-commissioning is purely technical in nature and due to default on the part of the supplier. The Respondent has also submitted that the re-commissioning of Unit-II after R&M, as pleaded by the Petitioner, is view of the Commission’s order dated 30.7.2016 in Petition No. 259/GT/2014, wherein, the Commission had observed in 2016 that Unit-II was yet to declare COD. Therefore, the Petitioner may be directed to submit documentary



proof confirming the date of commercial operation of the plant after R&M. The Respondent while pointing out that the reasons furnished by the Petitioner in Form 5(1) are technical in nature and do not fall under any of the Force Majeure event has submitted that the time overrun may not be allowed as the delay caused is on account of contractual issues between the Petitioner and M/s BHEL. It has submitted that Regulation 12(1) (c) of the 2014 Tariff Regulations provides that any delay in execution of the project on account of contractor, supplier or agency of the generating company cannot be treated as a controllable factor. The Respondent has further submitted that since entire responsibility of procurement of material is that of the Petitioner, in case of any dispute regarding the non-supply of material, defect in the material received, the same should have been taken up with the contractor supplying the material. Referring to the judgment of the Tribunal dated 26.2.2015 in Appeal No. 107/2014 (PGCIL V CERC & ors), the Respondent has submitted that the matter of delay in supply by contractor has to be sorted out between the contractor/supplier for the time overrun. Accordingly, the Respondent has submitted that the delay claimed by the Petitioner cannot be allowed on the basis of treating the technical difficulties as uncontrollable event. In response, the Petitioner has clarified that the Petitioner in its affidavit dated 19.1.2013 in Petition No. 207/GT/2013 & 260/GT/2014 had submitted that the issue of delay in supply of critical materials and execution of R&M works has been discussed at various forums and meetings attended by the representatives of NTPC, BHEL, BSEB, the Govt. of Bihar CEA and the Ministry of Power and Planning Commission. In addition to this, the Petitioner has stated that in terms of the Commission's order dated 21.1.2014 approving the tariff of Farakka STPS, Stage-III of NTPC, the liability for delay in R&M is to be shared between the beneficiary and generator. The Petitioner has also pointed out to the Energy account of SLDC Bihar for October, 2014 & November, 2014 and has stated that Unit-II has since been re-



commissioned with effect from 15.11.2014 and has been injecting power into the grid and consistently declaring availability of power which was being scheduled by the Respondent with effect from 15.11.2014 onwards.

96. The matter has been considered. The schedule date of commissioning from zero date and the actual COD of Unit-II is as under:

	Zero Date	Scheduled COD	Actual COD	Time overrun (days)
Unit-II	29.3.2012	29.03.2014	15.11.2014	231

97. The Petitioner has prayed that the Commission may consider that the reasons for delay, were beyond the control of Petitioner and accordingly, the delay of 231 days may be condoned while deciding tariff. Per contra, the Respondent has submitted that in terms of Regulation 12(1)(c) of the 2014 Tariff Regulations, the delay in execution of the project on account of contractor, supplier or agency of the generating company is to be treated as ‘controllable factors’. Regulation 12 of the 2014 Tariff Regulations provides as under:

“12. Controllable and Uncontrollable factors: The following shall be considered as controllable and uncontrollable factors leading to cost escalation impacting Contract Prices, IDC and IEDC of the project :

(1) The “controllable factors” shall include but shall not be limited to the following:

a) Variations in capital expenditure on account of time and/or cost overruns on account of land acquisition issues;

b) Efficiency in the implementation of the project not involving approved change in scope of such project, change in statutory levies or force majeure events; and

c) Delay in execution of the project on account of contractor, supplier or agency of the generating company or transmission licensee.

(2) The “uncontrollable factors” shall include but shall not be limited to the following:

i. Force Majeure events; and

ii. Change in law.”

98. In the present case, there is time-overrun of 231 days from the scheduled date of commissioning (29.3.2014) to the actual date of commissioning (15.11.2014) of Unit-II after R&M. The Petitioner in its submissions has mainly attributed the delay



in commissioning of Unit-II to the failure of LP turbine blades during transportation, failure of Generator Rotor in RSO test, difficulty in commissioning seal oil system due to use of indigenously developed Unproven design Generator DPRV (“Differential Pressure Regulator valves”) and difficulty in proving of newly supplied jacking oil pump along with the reasons thereof. It is observed that in the case of damage of turbine blades during transportation, there is neither any mention of any natural calamity nor any case of accident/incident. The damage of blades, in our view, is attributable to the improper packing/handling of sophisticated and precious equipment’s. Such damage cannot therefore be termed as an event which is beyond the control of the EPC contractor/Petitioner. Similarly, the failure of equipment’s such as generator rotor and jacking oil pump seal oil system during testing and trial, is a technical problem which had arisen out of equipment’s quality including the skill of the manpower deployed and cannot therefore be termed as an ‘uncontrollable factor’. In our considered view, the reasons for time overrun is squarely covered under Regulation 12(1)(c) wherein, the delay in execution of the project on account of contractor, supplier or agency of the generating company or transmission licensee has been termed as a ‘controllable factor’. In view of this, we conclude that the damage/ failure of machinery is attributable to M/s BHEL, the contractor of the Petitioner and the same cannot be termed as an uncontrollable factor. According to us, the delay in supply and the commissioning of critical equipment or the defects in equipment supplied was required to be taken up by Petitioner with the contractor M/s BHEL and the impact of the same cannot be passed on to the beneficiaries. Based on the above discussions, we hold that the delay of 231 days in the commissioning of Unit-II after R&M is attributable to the Petitioner and is therefore not condoned.



99. Accordingly, the total time overrun from SCOD to actual COD of the project and the time overrun allowed/ disallowed is summarized as under:

Scheduled COD	Actual COD	Total Time overrun (days)	Time overrun allowed (days)	Time overrun disallowed(days)
29.3.2014	15.11.2014	231	0	231

100. The Petitioner has claimed the following capital cost as on the COD of Unit-II (15.11.2014) based on audited accounts, after completion of R&M of Unit-II:

(₹ in lakh)

	Capitalization of Unit-II (R&M works) as on COD of Unit-II (15.11.2014)	Liability corresponding to Unit-II as on 14.11.2014	Total capitalization as on COD of Unit-II (15.11.2014)
Capital Cost including IDC, FC, FERV & Hedging cost (2)	17234.16	2957.21	14276.95
Total IDC,FC,FERV & Hedging Cost	93.13	0.00	93.13
Capital cost excluding IDC & FC	17141.03	2957.21	14183.82
Grant included in the above	12863.46	0.00	12863.46
Capital cost excluding IDC & FC and grant	4277.57	2957.21	1320.36

101. The Commission vide ROP of hearing dated 27.2.2018 had directed Petitioner to furnish the following:

(i) Actual cost incurred in different packages till actual COD of units compared to the awarded value. The implication of time overrun on cost, separately indicating the details of increase in prices of different packages, increase in IDC & IEDC from the scheduled COD to the actual/ anticipated COD

ii) Relevant forms i.e. form- 5E (i) (in case of cost overrun), Form- 5E (ii) (in case of time overrun, Form-13 D (IEDC up to scheduled COD and up to actual COD), Form- 13 E (expenditure under different packages up to scheduled COD and up to actual COD).

102. In response, the Petitioner vide its affidavit dated 30.3.2018 has submitted that it has booked IEDC & IDC amounting to ₹1231.60 lakh and ₹93.13 lakh respectively, pertaining to Unit-II till COD of Unit-I (1.11.2013). The same has been provided in Form 9A (1) of the affidavit dated 25.10.2017. The IEDC & IDC pertaining to Unit-II beyond 31.10.2013 to the actual re-commissioning date of Unit-II i.e. 15.11.2014 is 'nil'. Therefore, there is no increase in the IEDC & IDC



from the date of scheduled re-commissioning/COD of Unit-II as on 29.3.2014, to its actual re-commissioning/COD of 15.11.2014. The total IEDC expenses as on SCOD and COD of Unit-II is ₹1231.60 lakh. As such, there is no increase in the IEDC & IDC corresponding to the delay of 231 days. Accordingly, no deduction in IEDC for the period of delay not condoned has been effected.

IDC

103. The Petitioner has claimed IDC amounting to ₹93.13 lakh towards capitalisation for Unit-II after R&M. The Petitioner has claimed IDC on the loans availed from the holding company, NTPC. The details of the loans have been submitted vide Form-7 (details of project specific loans) of the Petition. It is pertinent to mention that the Commission vide its order dated 9.2.2016 in Petition No. 207/GT/2013 had observed the following:-

“32. It is pertinent to mention that the Board Resolutions of the Petitioner Company dated 13.10.2006 and dated 31.12.2007 for availing loans of `20.00 crore and `12.03 crore respectively, indicate that the loans would be short term working capital loans. It is therefore apparent that these loans were not intended for meeting the capital expenditure of the project. Hence, the IDC claimed by the Petitioner on the loan raised from NTPC has not been allowed to form part of the capital cost of the project.”

104. As stated, the Petitioner had sought review on the issue of disallowance of the IDC in Petition No. 20/RP/16 and the Commission vide its order dated 7.7.2017 had disallowed the same observing as under:

“16. We have examined the matter. As discussed earlier, the entire project cost for the R&M of the generating station has been envisaged to be met through RSVY grant, and any variation in the final completion cost from the original estimate was to be funded by State government, and as such no borrowing was either approved or envisaged in the said scheme. While the Petitioner has incurred the expenditure more than the amount of grant received, thereby leading to a funding gap, such funding gap was supposed to be met by State government as per approved scheme. It is noticed that the Petitioner has not furnished any justification and/or document reasoning the necessity for availing an interest bearing loan from NTPC for bridging the funding gap instead of resorting to the methodology of approaching State government as per MOU for R&M scheme. From the submissions of the Petitioner, there appears no justification for availing the loan. Moreover, as observed in para 32 of the order dated 9.2.2016, the Board Resolutions of the Petitioner Company dated 13.10.2006 and 31.12.2006 reveal that loans of `20.00 crore and `12.03 crore respectively were availed for meeting



the working capital requirement only. Even otherwise, it is noticed from letter dated 10.9.2013 placed on record by the Petitioner that the issue of funding the expenditure like pre-commissioning expenses, IEDC and IDC had been taken up with the State Government vide letter dated 11.10.2013. As such, we are not inclined to consider the said loan from NTPC as a project loan for availing IDC to be capitalized as part of the capital cost. Accordingly, the IDC accrued on the loan has not been allowed for capitalization for the purpose of tariff. In view of this, the prayer of the Petitioner for review of the order dated 9.2.2016 is rejected.”

105. In line with the observations of the Commission above, the IDC claimed by the Petitioner has been disallowed.

Normative IDC

106. The Petitioner has claimed normative IDC amounting to ₹6415.82 lakh as on 15.11.2014. The Petitioner has claimed the same for the period since short term restoration of Unit-II till COD. The Petitioner vide its affidavit dated 27.4.2019 has submitted the calculations, duly certified by auditor. It is noticed that for calculating equity in excess of 30% of the project expenditure, the Petitioner has excluded the amount of grant from the total expenditure. The calculation of normative IDC by the Petitioner has been reworked based on the provisions of the PPA which provides as under:-

7.1.1 (ii) For the purpose of tariff, the entire transfer price shall be considered as equity. Entire expenditure through grant shall be treated as debt and further expenditure thereafter shall be split in 70:30 debt equity ratio.

107. The revised calculations based on the PPA reveals that the equity infusion for the entire period has been below 30% of the total project expenditure. As such, the normative IDC claimed by the Petitioner has not been allowed.

Un-discharged liability as on COD

108. The Petitioner has claimed ₹2957.21 lakh of un-discharged liability with respect to the capitalisation of Unit-II as on 15.11.2014. The Commission vide ROP dated 13.3.2019 had directed the Petitioner to furnish statement in respect of the details of the un-discharged liabilities claimed, duly certified by auditor. The Petitioner has submitted the same vide its affidavit dated 27.4.2019. Based on



this, the un-discharged liabilities amounting to ₹2957.21 lakh has been considered as on 15.11.2014.

Grant included in capitalisation of Unit-II as on COD (15.11.2014)

109. As per the statement of capital cost submitted by the Petitioner vide its affidavit dated 27.4.2019, duly certified by auditor, the amount of RSVY grant received in respect of Unit-II capitalisation is ₹12863.46 lakh. The same has been deducted from the capital expenditure to arrive at the capital cost for tariff.

Capital cost of Unit-II as on 15.11.2014

110. Based on the discussions in the foregoing paragraphs, the capital cost allowed with respect to Unit-II as on COD is as below:-

<i>(₹ in lakh)</i>		
Sl No.	Description	Amount
1	Capital cost claimed as on COD	17234.16
2	Less: Un-discharged liabilities	2957.21
	Capital cost claimed on cash basis	14276.95
3	Less: Grant amount	12863.46
4	Less: IDC claimed/ disallowed	93.13
5	Capital cost of Unit-II, on cash basis	1320.36

Discharge of liabilities

111. The Petitioner has claimed discharge of liabilities as under:

<i>(₹ in lakh)</i>						
1.4.2014 to 14.11.2014 (Unit-I)	1.4.2014 to 14.11.2014 (Unit-II)	15.11.2014 to 31.3.2015 (Stage-I)	2015-16	2016-17	2017-18	2018-19
35.70	0.00	327.99	69.74	0.00	0.00	0.00

112. As directed by the Commission vide ROP of the hearing dated 13.3.2019, the Petitioner has furnished the Auditor's certificate with respect to the discharge of liabilities claimed. Based on the same, discharge of liabilities is allowed as claimed by the Petitioner. This is subject to truing-up based on the reconciliation of the year wise discharges with the balance sheet of the respective years.



Initial Spares

113. The Petitioner has submitted that in R&M awarded package, initial spares were not part of package/PO. Hence no initial spares were capitalized in respective packages. However capital spares were procured separately as agreed with sole beneficiary Bihar and have been capitalized as additional capitalization. Thus, the initial spares claimed under additional capitalization shall be dealt under additional capitalization on merit.

Sale of infirm power from synchronization to COD of Unit-II

114. The Petitioner in the petition has submitted that the amount of infirm power sold up to COD is ₹156.44 lakh. The Petitioner has also adjusted the amount of sale of infirm power in the pre-commissioning expenses. Therefore, no separate adjustment of amount in the capital cost is required on account of sale of infirm power.

Liquidated Damages

115. In response to the directions of the Commission vide ROP of the hearing dated 27.2.2018, the Petitioner vide its affidavit dated 30.3.2018 has submitted that LD has not been recovered in any package, as some of the leftover works in various packages are still underway and the contract closing has not been accomplished. It has stated that even for packages which have been completed, the contract closing takes some time. The Petitioner has submitted that it follows the LD clause as per the "Contract Agreement" with its contractors and the levy of LD recoverable from the contractor can be assessed and finalized at the time of contract closing after satisfactory resolution of various issues like completion schedule and performance related issues. Considering the fact that no deduction is done in IEDC due to time overrun as of now, we direct that the LD amount if any, recovered at the time of closure of contract from the contractor, shall however be



deducted from the capital cost and the said details shall be submitted to the Commission, on affidavit.

Additional Capital Expenditure

116. Regulation 14 (3) of the 2014 Tariff Regulations provides as under:

“14(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:

117. The Petitioner has claimed actual/projected additional capital expenditure and discharge of liabilities from COD of Units-I & II of the generating station till 31.3.2019 in respect of works which are within the original scope of work and upto the cut-off date in terms of Regulation 14 (3) read with Regulation 54 & 55 of the 2014 Tariff Regulations as under:

(₹ in lakh)							
Sl. no	Description of items	2014-15		2015-16	2016-17	2017-18	2018-19
		1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015				
1.	Works under originally approved R&M schemes						
a	Capitalization of leftover works of TG & SG of Unit-I	1250.59	-	-	-	-	-
b	Works under Originally approved R&M schemes (Stage-1) Such as Refurbishment of motors, lift, LT switchgear, lining, HT motors and LDO pump	-	-	36.33	-	-	-
c	Works under Originally approved R&M schemes. R&M Consultancy Contract	-	-	-	187.00	-	-
d	Fire Fighting system	-	-	-	-	1112.68	-
e	R&M of Cooling Tower	-	-	-	-	16.00	-
f	Capitalization towards R&M Consultancy contract to NTPC Ltd for R&M services	-	-	-	-	150.00	-
g	R&M of Cooling Tower	-	-	-	-	-	112.00
h	R&M of Chlorination system	-	-	-	-	-	169.80
	Sub-total	1250.59	0.00	36.33	187.0	1278.68	281.80
2.	Other capitalization works necessary for running of units (Unit-2)						
a	Procurement and replacement of Diff Pr. Regulators for generator seal oil system	42.17	29.76	-	-	-	-
b	Bearing Induction Heater	1.27	-	-	-	-	-
c	Procurement and replacement of Complete actuator set for PA/FD IGV	8.25	-	-	-	-	-
d	Procurement and replacement of Heat	6.23	-	-	-	-	-



	Exchanger for mechanical seal of Boiler Feed Pump : Single shell double coil, 200 KHI						
e	Portable IR Thermo-vision camera	-	5.07	-	-	-	-
f	Moving Blades for LP Rotor Stage-4 & 4A (Unit-I)	-	-	219.92	-	-	-
g	Cross Over Pipe Expansion Bellow (ANGULAR)	-	-	49.10	-	-	-
h	Procurement of Generator Fault Recorder Relay	-	-	18.70	-	-	-
l	Refurbishment of GT-2	-	-	18.24	3.98	-	-
J	Procurement of Modified Coupling for BFPs.	-	-	18.43	-	-	-
K	Supply cum erection & commissioning of ABT RMS	-	-	12.90	-	-	-
L	15 & 25 NB CL-800 HP Globe Valves	-	-	14.41	-	-	-
m	Partial Discharge Test Kit*	-	-	13.18	-	-	-
N	Insulating Mat For HT/LT & Control Panel	-	-	12.61	-	-	-
o	Supply of Copper Cable for R&M of AHP/CW	-	-	11.52	-	-	-
p	CS Ball Valve :32nb,3pc Fb, Ball Ss304,Cl150	-	-	0.11	-	-	-
q	R&M of ESP Unit-2	-	-	4.02	-	-	-
r	Overhauling of LP & HP Valves of Unit -2	-	-	0.25	-	-	-
s	Supply of material for renovation of EOT Crane	-	-	0.00	-	-	-
t	Supply of Local Instruments for TG Auxiliaries	-	-	0.40	-	-	-
u	Motor Generator Welding Machine*	-	-	0.61	-	-	-
v	Arc Welding Machine :415V/440V:400A	-	-	0.15	-	-	-
w	Electronic Analytical Balance,Cap:220gm	-	-	2.58	-	-	-
x	APH Baskets	-	-	0.62	-	-	-
y	Replacement of Coal Pipe in Unit-2	-	-	0.03	-	-	-
z	Replacement of Central Feed Pipe	-	-	0.08	-	-	-
aa	Supply of LT control cables	-	-	3.59	-	-	-
ab	Supervision Of Erection, Testing &Commissioning of Circuit Breaker.	-	-	0.65	-	-	-
ac	Glass wedge replacement of CW Motor	-	-	0.68	-	-	-
ad	Procurement Of Resin Cast Indoor CT & PT-Unit-II Gen./UAT	-	-	0.30	-	-	-
ae	Supply of Solenoid Valves for BOP field	-	-	0.11	-	-	-
af	Strengthening & premix carpet of Township Roads, Culverts & drains.	-	-	3.40	-	-	-
ag	Work Shop item- Lath &	-	-	-	-	5.00	-



	EOT crane						
ah	Revival & restoration of flap gate and actuators of CHP	-	-	-	-	11.00	-
ai	Operation efficiency monitoring instruments	-	-	-	-	3.00	-
aj	NRV/Gate valve on discharge line of CW pumps - 5 Nos	-	-	-	-	6.00	-
ak	Ventilation System	-	-	-	-	0.00	240.00
al	Work Shop item-Lath & EOT crane	-	-	-	-	-	35.00
am	Revival & restoration of flap gate and actuator	-	-	-	-	-	77.00
an	Operation efficiency monitoring instruments	-	-	-	-	-	17.00
ap	NRV/Gate valve on discharge line of CW pumps - 5 Nos	-	-	-	-	-	42.00
	Sub-Total	57.92	34.84	406.59	3.98	25.00	411.00
3	Capital spares						
a	Electrical Reset Relay For Rxmnb4,ABB (for generator protection panel)	1.98	-	-	-	-	-
b	Pulse coupling stage module assembly (unit 1&2)	-	3.02	-	-	-	-
c	Spares for MAX DNA from BHEL	-	-	91.75	-	-	-
d	Cooling tower Gear Reducer Assembly #1 36 76-4399-1 14.84:1	-	-	18.81	-	-	-
e	Spares for DAVR	-	-	65.34	-	-	-
f	Spares for Seal Oil System	-	-	18.19	-	-	-
g	Components for Service Air Compressors	-	-	1.20	-	-	-
h	Circuit Breakers : SF 6 : 220kv : 3150a : Siemens Make	-	-	14.50	-	-	-
i	Circuit Breakers: SF 6 : 132kv	-	-	7.05	-	-	-
j	Relays for Switchyard & GRP	-	-	8.88	-	-	-
k	Moving blades for LP rotor stage-4A	-	-	17.56	-	-	-
l	Drive Shaft Assembly - Cooling Tower Fan	-	-	20.44	-	-	-
m	Procurement of Capital Spares	-	-	-	486.06	250.00	213.00
	Sub-Total	1.98	3.02	263.72	486.06	250.00	213.00
4.	MBOA items						
a	Furniture's & Fixtures	0.17	-	1.90	-	-	-
b	EDP, WP & SATCOM equipment's	2.81	11.27	29.17	-	-	-
c	Other office equipment	-	-	13.43	-	-	-
	Sub-Total	2.98	11.27	44.5	-	-	-
5	Construction of Ash Dyke & AWRS	-	-	-	-	-	4665.00
	Total	1313.47	49.13	751.15	677.04	1553.68	5570.80



Works under originally approved R&M schemes

118. The Petitioner has claimed total actual additional capital expenditure of ₹1250.59 lakh for the period from 1.4.2014 to 14.11.2014 towards 'Capitalization of leftover works of TG & SG of Unit-I'. The Petitioner has also claimed actual/projected additional capital expenditure of ₹1783.81 lakh for 2015-19 (₹36.33 lakh (excluding un-discharged liability of ₹33.00 lakh) for items like Refurbishment of CW, FD, ID, Mill motors material portion, R&M of service building lift, Erection, Commissioning & Testing of LT switchgear, Acid Alkali Proof Lining, LDO Pressuring Pump etc., in 2015-16, projected additional capital expenditure of ₹187.00 lakh for R&M Consultancy contract in 2016-17, ₹1278.68 lakh for Fire Fighting system, R&M of Cooling Tower, Capitalization towards R&M Consultancy contract for R&M services in 2017-18 and ₹281.80 lakh for R&M of Cooling Tower & R&M of Chlorination system in 2018-19) under the head 'Works under originally approved R&M schemes' under Regulation 14 (3) read with Regulation 54 & 55 of the 2014 Tariff Regulations. The Petitioner in justification of its claim has submitted that the works claimed are approved works within the original scope of R&M as per approved DPR by the Planning Commission. It has stated that the details of these capitalized works, package wise have been submitted in Form 9(1) of the Petition. The Petitioner has also stated that the detailed project report of the works to be carried out under R&M schemes were submitted vide affidavit dated 24.11.2011 in Petition No. 271/2010. The Petitioner has added that the leftover works of R&M within the original scope of works are justified and may therefore be allowed.

119. The matter has been considered. The COD of Unit-I after R&M is 1.11.2013 and the re-commissioned date of Unit-II is 15.11.2014. Regulation 14(3) of the 2014 Tariff Regulations provides for admission of additional capitalization in respect of



existing generating stations and after the cut-off date. As on 1.4.2014, the station was an existing generating station and one of its units, i.e. Unit-II was under R&M and had not achieved COD till 14.11.2014. After Unit-II was re-commissioned only on 15.11.2014, the generating station is considered to have achieved COD on 15.11.2014. Accordingly, Petitioner was left with no option but to claim the balance expenditure under Regulation 14 (3) with a prayer to relax the provision and allow the said additional capitalization. It is noticed that the left-over works of TG & SG of R&M within the original scope of work pertain to COD of Unit-I on 1.11.2013 after R&M. We have in para 35 above, permitted the additional capital expenditure of assets/works for Unit-II(prior to R&M) which are within the scope of work, by relaxation of the provision of Regulation 9(2) read with Regulation 44 of the 2009 Tariff Regulations on the ground that the assets there under were required for sustenance of smooth and efficient performance of the generating station. Since the capitalization of 'left over works of TG & SG of R&M of Unit-I', and projected capitalization of assets/items for the period 2015-19 fall within the original scope of work and is necessary for the efficient operation of the generating station, we, in exercise of the power under Regulation 54 of the 2014 Tariff Regulations, relax the provision of Regulation 14(3) and allow the additional capitalization as claimed by the Petitioner. The Petitioner is however directed to furnish, at the time of truing-up exercise, the reconciliation of originally approved works with the works completed upto COD along with the balance works claimed after COD with proper justification as to how some of the urgent nature of work like Firefighting works, Ventilation system and R&M of Cooling tower have been postponed to 2017-18 and 2018-19.



Other capitalization of works necessary for running of Unit-II from 1.4.2014 to 14.11.2014 & for Units I & II for the period from 15.11.2014 to 31.3.2015 to 2018-19

120. The Petitioner has claimed actual additional capital expenditure of ₹57.92 lakh in 2014-15 (from 1.4.2014 to 14.11.2014) for Unit-II towards Procurement and replacement of Diff Pr. Regulators for Generator seal oil system, Bearing Induction Heater, Procurement and replacement of Complete actuator set for PA/FD IGV and Procurement and replacement of Heat Exchanger for mechanical seal of Boiler Feed Pump, Single shell double coil 200 KHI. The Petitioner has also claimed total actual additional capital expenditure of ₹34.84 lakh (₹29.76 lakh for Procurement and replacement of Diff Pr. Regulators for Generator seal oil system and ₹5.07 lakh for Portable infrared thermovision camera) for the period from 15.11.2014 to 31.3.2015. It has further claimed total actual additional capital expenditure of ₹406.60 lakh (excluding un- discharge liability of ₹13.34 lakh) for item like Moving blades for LP rotor, Crossover Pipe Expansion Belllow, Procurement of Generator Fault Recorder relay, Refurbishment of GT-2, Procurement of modified coupling for BFPs, Supply cum erection & commissioning of ABT RMS, Partial discharge kit, Supply of copper cable, R&M of ESP Unit-2, Supply of material for renovation of EOT crane, Supply of LT control cables etc., in 2015-16, projected additional capital expenditure of ₹3.98 lakh for Refurbishment of GT-2 in 2016-17 ₹25.00 lakh in 2017-18 and ₹411.00 lakh in 2018-19 for items like Workshop item-Lath & EOT crane, Operation efficiency monitoring instruments, NRV/ Gate valve on discharge line of CW pumps, Ventilation system, and Revival & restoration of flap gate and actuator, under Regulation 14 (3) read with Regulation 54 &55 of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted the Stage-I turbines were manufactured with design philosophy of M/s SKODA (erstwhile Czechoslovakia). It has also stated that OEM make DPRV were procured and installed by the Petitioner for reliability of the crucial system of generator seal oil.



The Petitioner has further stated that these works were carried out for successful and efficient running of units and were not covered in original scope of works approved for R&M. It has stated that these items were essential for reaping full benefits of R&M. The Petitioner has added that as the project is not eligible for Compensation Allowance and Special Allowance, the Commission may allow the capitalization of these items in tariff. It is observed that the Petitioner has procured these items before the completion of R&M of Unit-Ili.e from 1.4.2014 to 14.11.2014 on the ground that these items not within the scope of R&M are essential for successful running of the unit. As stated, the units were in a depleted state and the items essential for smooth running of the plant are either to be procured within the scope of R&M or through additional capitalization. Hence, the Petitioner's claim for actual/ projected additional capitalization during the aforesaid period is allowed in exercise of the power to relax, in terms of our decision above. However, as Unit-II was under shutdown during the period from 1.4.2014 to 14.11.2014, these items were put to use as on the COD of Unit-II on 15.11.2014. Therefore, the capitalization of the total amount incurred for the period from 1.4.2014 to 14.4.2104 is allowed as on COD of Unit-II (15.11.2014) after completion of R&M.

Capital Spares

121. The Petitioner has claimed actual additional capital expenditure of ₹1.98 lakh in 2014-15 (1.4.2014 to 14.11.2014) for Unit-II towards item namely Electrical Reset Relay for Rxm vb4, ABB') under Regulation 14 (3) read with Regulation 54 & 55 of the 2014 Tariff Regulations. The Petitioner has also claimed actual additional capital expenditure of Capital spares for ₹3.02 lakh from 15.11.2014 to 31.3.2015 towards Pulse coupling Stage Module assembly, ₹263.72 lakh (excluding un-discharge liability of ₹0.99 lakh) towards Max DNA from BHEL, Cooling tower Gear



reducer, Spares for DAVR & seal oil system components for service air compressor, Circuit breakers, Relays for switchyard, Drive Shaft assembly etc, and projected additional capitalization of ₹486.06 lakh in 2016-17, ₹250.00 lakh in 2017-18 and ₹213.00 lakh in 2018-19 towards Procurement of Spares under Regulation 14 (3) read with Regulations 54 &55 of the 2014 Tariff Regulations. As regards the actual additional capital expenditure claimed, the Petitioner has submitted that there was no provision for spares under R&M funded through Gol Grant. It has also stated that these spares are part of capital spares approved & accepted by Respondent BSPGCL vide its letter dated 11.10.2013. The Petitioner has stated that the capital spares are essential for smooth running of plant as well as for execution of R&M. It has added that the project is not eligible for Compensation Allowance and Special Allowance, the Commission may allow the capitalization of these items in tariff. As regards the projected additional capitalization claimed, the Petitioner has stated that capital spares are required to reduce downtime in case of major breakdowns and to ensure sustained operation of units in cases of failure of part/component of the system. It has also submitted that capital spares were not the part of the original DPR and hence the same were not provided by BHEL. The Petitioner has stated that it had assessed the requirement of essential capital spares and consent of the Respondent BSPGCL has also been obtained and accordingly capital spares have been projected for additional capitalization. It is observed that capital spares have not been included in the scope of R&M of the plant. Since these spares are considered essential for successful and efficient operation of the plant, we, in line with our decision above, allowed the actual/projected additional capital expenditure for the said period. However, as Unit-II was under shutdown during the period from 1.4.2014 to 14.11.2014, these spares are put to use as on COD of Unit-II on 15.11.2014. Therefore, the additional capitalization claim for ₹1.98 lakh



for the period from 1.4.2014 to 14.11.2014 is allowed as on the COD of Unit-II on 15.11.2014, after completion of R&M.

MBOA items

122. The Petitioner has claimed the actual additional capital expenditure of ₹2.98 lakh (₹2.81 lakh and ₹0.17 lakh) during the period from 1.4.2014 to 14.11.2014. It has also claimed the actual additional capital expenditure of ₹55.77 lakh [₹11.27 lakh in 2014-15 and ₹44.50 lakh (excluding un-discharge liability of ₹0.23 lakh in 2015-16)] under Regulation 14 (3) read with Regulation 54 & 55 of the 2014 Tariff Regulations. The expenditures have been claimed for MBOA items like EDP, WP & SATCOM equipments, furniture and fixtures and other office equipments. In justification of the same, the Petitioner has stated that there was no provision for MBOA items under R&M funded through GOI grant. It has also stated that these MBOA items are essential for smooth operation of the plant as well as for execution of R&M. The Petitioner has added that as the project is not eligible for Compensation Allowance and Special Allowance, the Commission may allow the capitalization of these items in tariff. It is observed that the actual additional capitalization claimed by the Petitioner are in respect of items like EDP, WP & SATCOM, furniture and fixtures which are not covered within the scope of R&M but are essential for the efficient operation of the plant. In view of this and in line with our decision above, we allow the additional capital expenditure claimed by the Petitioner for the said periods. However, as Unit-II was under shutdown during the period from 1.4.2014 to 14.11.2014 these items were put to use as on COD of Unit-II on 15.11.2014. Therefore, the additional capitalization for the period from 1.4.2014 to 14.11.2014 is allowed as on the COD of Unit-II on 15.11.2014, after completion of R&M.



Construction of Ash Dyke & AWRS

123. The Petitioner has claimed projected additional capital expenditure of ₹4665.00 lakh in 2018-19 for Construction of Ash Dyke & AWRS under Regulation 14 (3) read with Regulation 54 & 55 of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that as there is no proper ash dyke presently existing for Stage-I and the construction of proper ash dyke for disposal of ash was mandated by SPCB for statutory compliance. It has stated that the work of construction of ash dyke along with AWRS was also accepted /approved by Respondent BSPGCL as additional capitalization other than R&M capitalization by letter dated 11.10.2013. Accordingly, the Petitioner has prayed that the claim may be allowed. In our view, adequate system of Ash Dyke & AWRS is essential for any coal based thermal power plant. As the work of Ash Dyke & AWRS was not part of the original R&M scheme of the Project and since the expenditure projected to be incurred is towards statutory compliance of the directions of the State Pollution Control Board, we, in exercise of the power under Regulation 54 of the 2014 Tariff Regulations, relax the provision of Regulation 14(3) and allow the additional capitalization of ₹4665.00 lakh in 2018-19.

124. We have in this order decided that Unit-II was under shut down during the period 2012-13 (from 29.3.2012) and 2013-14 and hence, the additional capital expenditure of ₹13.89 lakh and 84.31 lakh allowed for the years 2012-13 & 2013-14 respectively shall be considered as part of the capital cost as on COD of Unit-II after R&M (15.11.2014) i.e. the date on which the assets were put to use. Similarly, the total actual additional capitalization of ₹62.88 lakh during the period of shut down of Unit-II from 1.4.2014 to 14.11.2014 has been allowed as on the COD of Unit-II (15.11.2014). Accordingly, a total additional capital expenditure of



₹161.08 lakh (98.20 + 62.88) has been considered as additional capitalisation as on the COD of Unit-II (15.11.2014).

125. Based on the above discussions, the total additional capital expenditure allowed for the period from 1.4.2014 to 2018-19 is summarized as under:

(₹ in lakh)

Sl. No	Description of items	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
1	Works under Originally approved R&M schemes	1250.59	0.00	36.33	187.00	1278.68	281.80
2	Other capitalisation works necessary for running of units	0.00	34.84	406.60	3.98	25.00	411.00
4	Capital Spares	0.00	3.02	263.72	486.06	250.00	213.00
5	MBOA	0.00	11.27	44.50	0.00	0.00	0.00
6	Construction of Ash Dyke & AWRS	0.00	0.00	0.00	0.00	0.00	4665.00
	Total	1250.59	49.13	751.15	677.04	1553.68	5570.8

126. Accordingly, the capital cost allowed for the purpose of tariff (excluding IDC, NIDC and FERV) for period 2014-19 is as under:-

(₹ in lakh)

		1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
1	Opening capital cost	4476.98	7244.71 (1320.36+ 5763.27+161.08)	7621.83	8442.72	9119.76	10673.44
2	Admitted additional capital expenditure	1250.59	49.13	751.15	677.04	1553.68	5570.80
3	Discharge of liability	35.70	327.99	69.74	0.00	0.00	0.00

127. The Petitioner in Form-1 has submitted that up to the COD of Unit-II (15.11.2014), the total grant received is ₹42967.00 lakh, out of total grant of ₹47180.00 lakh. Thus, the balance amount of grant, if received, would be adjusted in capital cost for the purpose of tariff at the time of truing-up exercise for the period 2014-19.

Debt Equity ratio (as on 15.11.2014)

128. The Petitioner has considered the debt equity ratio of 70:30 as on the COD of Unit-II i.e. on 15.11.2014. It is observed that the Petitioner has claimed capital



cost of ₹65139.69 lakh, on cash basis, as on 15.11.2014. As regards the debt equity ratio, the PPA provides as under:-

7.1.1 (ii) For the purpose of tariff, the entire transfer price shall be considered as equity. Entire expenditure through grant shall be treated as debt and further expenditure thereafter shall be split in 70:30 debt equity ratio.

129. The debt equity ratio has been reworked based on the above provision i.e., by treating the take-over price as equity, the amount of grant received as loan and the further expenditure in the debt equity ratio of 70:30. Accordingly, the debt equity ratio works out to 81.83:18.17 and the same has been considered for the purpose of tariff.

Return on Equity

130. Regulation 24 of the 2014 Tariff Regulations provides as under:

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19. (2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage: Provided that: i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I: ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever: iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid: iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system: v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues: vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers

131. Regulation 25 of the 2014 Tariff Regulations provides as under:

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.

132. The Petitioner has considered actual tax rate for 2014-15. The Petitioner has submitted that there was loss in the books of accounts in 2015-16 and hence the tax rate considered for 2015-16 is 0%. From 2016-17 onwards, the Petitioner has applied the MAT rate of the year 2016-17. This has been allowed for calculation of the RoE. The Petitioner is directed to furnish the detailed calculation of the effective tax rate, duly certified by Auditor and supported by tax audit report for the respective years, at the time of revision of tariff based on trueing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations. Accordingly, Return on Equity has been computed as under:

	(₹ in lakh)					
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
Gross Notional Equity	398.68	1316.38	1384.91	1534.06	1657.08	1939.39
Addition due to Additional Capitalisation	114.55	68.52	149.16	123.02	282.31	1012.23
Closing Equity	513.23	1384.91	1534.06	1657.08	1939.39	2951.62
Average Equity	455.95	1350.64	1459.48	1595.57	1798.24	2445.50
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate	22.56%	22.56%	0.00%	21.34%	21.34%	21.34%
Rate of Return on Equity (Pre Tax)	20.02%	20.02%	15.50%	19.71%	19.71%	19.71%
Return on Equity (Pro rata)	57.01	101.19	226.22	314.41	354.34	481.89



Interest on Loan

133. Regulation 26 of the 2014 Tariff Regulations provides as under:

“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 upto the date of de-capitalisation of such asset.

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

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

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

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

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

(7) The 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 re-financing 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 the loan.”



134. The Weighted Average Rate of Interest (WAROI) claimed by the Petitioner is based on the loan availed from NTPC, the holding company. As per the loan agreement submitted in Petition No. 207/GT/2013, the said loan is a working capital loan. The Petitioner was directed vide ROP of the hearing dated 27.2.2018 to furnish details of the commercial loan, if any, availed by the Petitioner, for purpose of calculation of the WAROI. In response, the Petitioner has computed WAROI based on the commercial loan availed for Stage-II of the project. The same has been considered for the calculation of interest on normative loan, subject to revision at the time of truing-up exercise. Accordingly, Interest on loan has been worked out and allowed as under:

	(₹ in lakh)					
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
Gross Notional Loan	4078.30	5928.33	6236.92	6908.66	7462.68	8734.05
Cumulative Repayment of Loan upto previous year	159.59	459.86	705.83	1475.00	2334.28	3348.45
Net Opening Loan	3918.71	5468.47	5531.09	5433.65	5128.39	5385.60
Addition during the period	1171.74	308.60	671.73	554.02	1271.37	4558.57
Repayment of Loan during the period	300.27	245.97	769.17	859.28	1014.17	1599.12
Net Closing Loan	4790.18	5531.09	5433.65	5128.39	5385.60	8345.05
Average Loan	4354.45	5499.78	5482.37	5281.02	5257.00	6865.32
Weighted Average Rate of Interest on Loan	12.56%	12.56%	10.38%	9.92%	9.67%	9.67%
Interest on loan	341.64	258.57	569.07	523.88	508.35	663.88

Depreciation

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

“27. Depreciation:

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



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

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

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

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff: Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

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

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system: Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 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.”

136. Accordingly, depreciation has been calculated as below:

	(₹ in lakh)					
	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	4476.98	7244.71	7621.83	8442.72	9119.76	10673.44
Addition during 2009-14 due to	1286.29	377.12	820.89	677.04	1553.68	5570.80



actual additional capitalisation						
Closing Gross Block	5763.27	7621.83	8442.72	9119.76	10673.44	16244.24
Average Gross Block	5120.13	7433.27	8032.28	8781.24	9896.60	13458.84
Value of Freehold Land included in Gross Block	0.00	0.00	0.00	0.00	0.00	0.00
Value of Gross block excluding Land	5120.13	7433.27	8032.28	8781.24	9896.60	13458.84
Rate of Depreciation	-	-				
Depreciable value	4608.11	6689.94	7229.05	7903.12	8906.94	12112.96
Remaining life of the plant	9.59	9.48	8.48	7.48	6.48	5.48
Remaining Depreciable value	4608.11	6230.08	6523.22	6428.11	6572.66	8764.50
Depreciation (for the period)	300.27	245.97	769.17	859.28	1014.17	1599.12
Cumulative Depreciation (at the end of the year)	459.86	705.83	1475.00	2334.28	3348.45	4947.58

O & M Expenses

137. The Petitioner has claimed O&M expenses under Regulation 29(1) of the 2014 Tariff Regulations as under:

2014-15		2015-16	2016-17	2017-18	2018-19
1.4.2014 to 14.11.2014 Unit-I	15.11.2014 to 31.3.2015				
3946.80	7893.60	8390.80	8918.80	9479.80	10076.00

138. Regulation 29(1)(a) of the 2014 Tariff Regulations do not provide for the normative O&M expenses for 110 MW units of coal based generating stations. However, the said regulation provides the generating station specific normative O&M expenses for other 110 MW units like Talcher TPS, Chanderpura TPS, Tanda TPS, Badarpur TPS and Durgapur TPS. The Commission while determining the tariff of the Unit-I of this generating station of the Petitioner vide its order dated 9.2.2016 in Petition No 207/GT/2013 had observed that the project of the Petitioner is similar to Tanda TPS of NTPC and hence the normative O&M of Tanda



TPS is to be adopted in case of the Petitioner. The relevant portion of the order dated 9.2.2016 is quoted below.

“The O&M expenses norms in respect of 110 MW unit of Tanda TPS for the year 2013-14 under the 2009 Tariff Regulations is Rs.32.79 lakh/MW. Considering the fact that (i) the unit size of the generating station (MTPS) is same as that of Tanda TPS and (ii) the units have undergone R&M, the norms for O&M expenses in respect of Tanda TPS for 2013-14 are adopted and considered as O&M expense norms in respect of this generating station for 2013-14.”

139. Regulation 29(1) (a) of the 2014 Tariff Regulations provides the following O&M expense norms for 110 MW units of Tanda TPS and other generating stations:

Year	Talcher TPS	(₹ in lakh)
		Chandrapura TPS (Units 1 to 3), Tanda TPS, Badarpur TPS (Unit 1 to 3) , Durgapur TPS (Unit 1)
2014-15	43.16	35.88
2015-16	45.87	38.14
2016-17	48.76	40.54
2017-18	51.83	43.09
2018-19	55.09	45.80

140. Regulation 30(2) of the 2014 Tariff Regulations provides as under:

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

(2) The capacity charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

Xxx

Provided that in case of generating station or unit thereof or transmission system or an element thereof, as the case may be, under shutdown due to Renovation and Modernisation, the generating company or the transmission licensee shall be allowed to recover part of AFC which shall include O&M expenses and interest on loan only.”

141. The Respondent has submitted that this Commission may consider the claim of the Petitioner towards O&M Expenses in line with that of Tanda TPS in proportion of their respective capacities and after due verification and prudence check.

142. In addition to the O&M expenses claimed above, the Petitioner has also claimed O&M expenses of ₹3946.80 lakh for Unit-II during R&M for the period from 1.4.2014 to 14.11.2014 under Regulation 30(2) of the 2014 Tariff Regulations. However, during the same period, the Petitioner has claimed Capital Spares for



₹1.98 lakh and MBOA items such as Furniture & Fixtures and EDP etc. for ₹2.98 lakh and had also claimed 'Establishment Expenses' (including the Employment benefit expenses, Communication expenses, Power charges and other office & administrative expenses) for ₹1231.60 lakh during the period of R&M. The components of the O&M expenses such as employment benefit expenses, communication expenses, power charges and other office & administrative expenses, furniture & fixtures and EDP etc. have already been considered and allowed as additional capitalisation above and considering them under O&M expenses shall amount to duplication of these expenses. In view of this, we are not inclined to allow the O&M expenses for ₹3946.80 lakh for Unit-II during the period of R&M from 1.4.2014 to 14.11.2014. The Petitioner is however granted liberty to approach the Commission at the time of truing-up with the following details:

(a) For the period of unit/ station shut down for the purpose of carrying out R&M activities, the Petitioner shall provide two separate records as under and shall submit the same.

(b) IEDC including man power cost, Construction power cost, Water charges etc. booked under R&M expenses; and

(c) Normal O&M expenses of the generating station (not booked under R&M expenses) which were unavoidable even when the unit/s/station was under shut down.

Water Charges

143. Regulation 29(2) of the 2014 Tariff Regulations provide as under:

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

Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check.

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

144. In terms of the above regulation, water charges are to be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check of the details furnished by the Petitioner.



145. The Petitioner has submitted that water charges shall be paid in the subsequent years of the tariff period. Accordingly, it has prayed that the Commission may allow the same under Regulation 29(2) of the 2014 Tariff Regulations as and when claimed. In view of the submissions, the Petitioner is granted liberty to claim water charges, along with all relevant details, and the same shall be considered in accordance with law.

146. Accordingly, the O&M expenses allowed for the purpose of tariff is as under:

(₹ in lakh)					
1.4.2014 to 14.11.2014 (Unit-I)	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
3946.80	7893.60	8390.80	8918.80	9479.80	10076.00

Operational Norms

147. The following norms of operation for 110 MW units have been considered by the Petitioner for the purpose of tariff:

Parameter	2014-15	2015-16	2016-17	2017-18	2018-19
Target Availability (%)	68.71	40.05	38.72	49.16	49.16
Auxiliary Energy Consumption (%)	11.21	14.00	14.01	13.07	13.07
Gross Station Heat Rate (kCal/kWh)	3000	3000	3000	3000	3000
Specific Fuel Oil Consumption (ml/kWh)	2.48	3.09	2.21	2.59	2.59

148. The Commission vide ROP of the hearing dated 27.2.2018 directed the Petitioner to furnish the following information:

“Guaranteed improvement in Heat rate, AEC, Specific oil consumption etc. by BHEL after R & M and the actual operational data from completion of R & M to 31.3.2017;”

149. In response, the Petitioner vide its affidavit dated 30.3.2018 has submitted that as per MOU signed with M/s BHEL on 26.5.2006, there was no agreement on the guaranteed Heat Rate, APC & Specific Oil consumption. However, it has stated that as per the agreed DPR with BHEL, the anticipated heat rate, after R&M, was



3000 Kcal/kWh. The Petitioner has submitted that it had faced serious problems of non-payment of energy bills of by the sole beneficiary, the State of Bihar, in the past, which resulted in the Petitioner's inability to arrange fuel for the generating station, thereby resulting in poor operating performance. The Petitioner has furnished the detailed performance parameters achieved during the 3 years i.e 2014-15, 2015-16 & 2016-17 vide its affidavit dated 25.10.2017 in Petition 240/GT/2017. Accordingly, the Petitioner has prayed that the Commission may allow the operating norms based on actual average performance of generating station in past, as actuals:

Year	SFC (ml/kWh)	APC (%)	Heat Rate (kCal/kWh)	Availability %	Availability % Loss due to Fuel Shortage	Availability % Loss due to Forced outage	Major reasons of Availability loss for forced outages other than fuel shortage
2014-15	2.48	11.21	3000.00	68.71	17.38	12.32	BTL and turbine lube oil system related defects
2015-16	3.09	14.00	2979.00	40.05	17.06	39.69	LPT blade failure of both the units and generator stator earth fault in Unit-I
2016-17	2.05	14.01	3000.0	38.72	45.43	4.95	BTL and continued s/d of U-1 due to LPT blade failure till 9.4.2016
Average	2.54	13.07	2993.0	49.16	-	-	-

150. The Commission while determining the tariff of Unit-I of the generating station after R&M, had in its order dated 9.2.2016 in Petition No. 207/GT/2013 observed as follows:

“Analysis

81. We have examined the matter. Considering the fact that the R&M of Unit-I has just been completed and would take time to stabilize its performance, we are of the considered view that it would be difficult for this generating station at this stage to achieve the norms of operation in respect of Tanda TPS for 2009-14. Accordingly, considering the size of the units of this generating station, the following is decided:

- (i) **Normative Annual Plant Availability Factor: NAPAF as guaranteed by M/s BHEL is 80% and the actual availability submitted for the period 1.11.2013 to 31.3.2014 is 80.05%. Hence, NAPAF of 80% is considered.**



- (ii) **Gross Station Heat Rate:** It is observed from the Detailed Project Report (DPR) for R&M of the generating station, that the Station Heat Rate (SHR), post R&M, is expected to be 3000 kcal/kWh. Accordingly, SHR of 3000 kcal/kWh has been considered for tariff.
- (iii) **Auxiliary Power Consumption and Specific Fuel Oil Consumption:** As there is no information regarding the improvement in APC and Specific Fuel Oil Consumption, after R&M in the DPR, the actual value of Secondary Fuel Oil Consumption of 3.23 ml/kWh and APC of 11.89% for the period from 1.11.2013 to 31.3.2014 is considered.

82. Based on the above discussions, the following operational norms have been considered for Unit-I of the generating station for the purpose of tariff.

Parameter	1.11.2013 to 31.3.2014
Normative Annual Plant Availability Factor (%)	80
Specific Fuel Oil Consumption (ml/kWh)	3.23
Auxiliary Power Consumption (%)	11.89
Gross Station Heat Rate (Kcal /kWh)	3000

151. In the present case, the R&M of both the units are complete and the generating station is fully operational. Tanda TPS with 110 MW unit capacity had also undergone R&M which was completed during the period 2009-14 and the operational norms were allowed based on the actual performance parameters. Subsequently during the period 2014-19, the operational norms of Tanda TPS improved after R&M and accordingly, improved norms were allowed during the period 2014-19. The operational norms allowed for Tanda TPS for the period 2009-14 are as under:

Normative Annual Plant Availability Factor (%)	85
Specific Fuel Oil Consumption (ml/kWh)	1.0
Auxiliary Power Consumption (%)	12.0
Gross Station Heat Rate (Kcal /kWh)	2825

152. The Respondent BSHPCCL vide affidavit dated 21.5.2018 has submitted that the Petitioner cannot claim the normative availability on actuals on account of its own ineffectiveness. As regards other operational norms, the Respondent has submitted that the actuals claimed by the Petitioner are higher than the norms provided for Tanda TPS of NTPC and therefore the Commission may consider the operational norms provided for Tanda TPS in the case of the Petitioner.



153. In the above background, the operational norms considered for the generating station of the Petitioner for the purpose of tariff is as under:

Normative Annual Plant Availability Factor

154. Regulation 36 (A) of the 2014 Tariff Regulations provides as under:

(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 01.04.2014.

155. As per DPR, the availability after R&M was 80%. The Commission vide its order dated 9.2.2016 in Petition No. 207/GT/2013 had allowed the NAPAF of 80%, based on the guaranteed parameter by OEM and the actual availability of 80.05% furnished by Petitioner for the period 1.11.2013 to 31.3.2014. The Petitioner, in the present petition, has furnished the reason of low availability, as forced outage and the loss due to fuel shortage. Considering the availability data of the year 2016-17, the availability loss due to fuel shortage is 45.43% and forced outage is 4.95% only. This implies that the plant equipment is capable of NAPAF of at least 80% which has already been demonstrated by Unit-I during the year 2013-14. In view of this, we allow the NAPAF of 80% for purpose of tariff during the period 2014-19.

Gross Station Heat Rate

156. As per DPR, the agreed Gross Station Heat Rate (GSHR) was 3000 kcal/kWh. The Commission vide its order dated 9.2.2016 in Petition No. 207/GT/2013 had allowed the GSHR of 3000(kcal/kWh), based on parameter by OEM for the period 1.11.2013 to 31.3.2014. The Petitioner, in the present petition, has furnished the actual data for GSHR as 3000 kcal /kWh for 2014-15, 2979 (kcal/kWh) for 2015-16 and 3000 kcal/kWh for 2016-17. The average GSHR is 2993 kcal/kWh during the



period 2014-17. In view of the above, GSHR of 3000 kcal/kWh is allowed for the period 2014-19. The Petitioner is however directed to furnish the reasons for not achieving the Station Heat Rate after R&M at par with similar taken over stations comprising of units of 110 MW capacity like Tanda TPS (2750 kcal/kWh) at the time of truing-up exercise.

Auxiliary Power Consumption

157. The OEM had not specified any value for Auxiliary Power Consumption (APC) in DPR. The Commission vide its order dated 9.2.2016 in Petition No. 207/GT/2013 had allowed the APC of 11.89%, based on the actual parameters for Unit-I during 2013-14. The Petitioner, in the present petition has furnished the actual data for APC as 11.21% for 2014-15, 14.0% for 2015-16 and 14.01% for 2016-17. The average APC is 13.07 during the period 2014-17. The APC norms, after R&M, for similar station of 110 MW capacity i.e. Tanda TPS the Commission had allowed the APC of 12.0%. The Petitioner has also demonstrated the APC below 12% during the years 2013-14 and 2014-15 on actual basis. In view of this, the APC of 12% is allowed for the period 2014-19.

Specific Fuel Oil Consumption

158. Regulation 36(D)(a) of the 2014 Tariff Regulations, provides Secondary fuel oil Consumption of 0.50 ml/kWh for coal-based generating stations. The OEM has not specified any value for Specific Fuel Oil Consumption (SFC) in DPR. The Commission vide its order dated 9.2.2016 in Petition No. 207/GT/2013 had allowed the SFC of 3.23 ml/kWh, based on the actual parameters for Unit-I in 2013-14. The Petitioner in the present petition has furnished the actual data for SFC as 2.05 ml/kWh in 2016-17, whereas, the SFC norm, after R&M of Tanda TPS, as allowed by the Commission is 1ml/kWh. Considering the fact that the generating station



may take some time for stabilization, the SFC norm of 2ml/kWh is allowed for the period 2014-19. The same is subject to revision during the period 2019-24.

159. Based on the above discussions, the following operational norms have been considered for the generating station for the purpose of tariff.

Normative Annual Plant Availability Factor (%)	80
Specific Fuel Oil Consumption (ml/kWh)	2.0
Auxiliary Power Consumption (%)	12.0
Gross Station Heat Rate (Kcal /kWh)	3000

Interest on Working Capital

160. Sub-section (b) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

“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”

Fuel Component and Energy Charges in working capital

161. The Petitioner has claimed the cost for fuel component in working capital based on the price and on “as received” GCV of coal procured and burnt for the preceding three months of January, 2014, February, 2014, and March, 2014 and Secondary fuel oil for the preceding three months of January, 2014, February, 2014, and March, 2014 as under:



(₹ in lakh)

	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-19
Cost of coal for stock (30 days)	1789.80	3579.60	2082.38	2018.96	2560.19
Cost of coal for Generation (30 days)	1789.80	3579.60	2082.38	2018.96	2560.19
Cost of Secondary fuel oil 2 months	213.79	427.59	310.54	214.72	319.50

162. The computation of Energy Charges and Fuel component (coal cost) in working capital for the period 2014-19 is based on “as received GCV” of coal. The Petitioner has claimed Energy Charge Rate (ECR) of 392.24 paise/kWh based on the Weighted Average Price, GCV of coal (on ‘as received’ basis) & Oil procured and burnt for the preceding three months. The cost for fuel components in working capital has been computed at 80% NAPAF for the period 2014-19, based on ‘as received GCV’ of coal and price of coal procured and GCV and cost of secondary fuel oil procured for the preceding three months from 1.4.2014 as given under:

(₹ in lakh)

Year	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-19
Cost of coal for stock (30 days)	2088.44	4176.89	4176.89	4176.89
Cost of coal for Generation (30 days)	2088.44	4176.89	4176.89	4176.89
Cost of Secondary fuel oil 2 months	200.74	401.49	402.59	401.49

Energy Charge Rate

163. The Petitioner has claimed Energy Charge Rate (ECR) of 392.24 paise/kWh based on the weighted average price, GCV of coal & Oil procured and burnt for the preceding three months. The ECR, as worked out based on the operational norms specified in the 2014 Tariff Regulations and on “as received” GCV of coal for the preceding 3 months i.e. January, 2014 to March 2014, as given below, has been considered for allowing Energy Charge of 2 months in the working capital:



Description	Unit	2014-15 (1.4.2014- 14.11.2014)	15.11.2014 to 31.3.2019
Capacity	MW	110	220
Gross Station Heat Rate	Kcal/kWh	3000	3000
Aux. Energy Consumption	%	12.00	12.00
Weighted average GCV of oil	Kcal/lit	9610	9610
Weighted average GCV of Coal	Kcal/kg	3917.18	3917.18
Weighted average price of oil	Rs/KL	78122.76	78122.76
Weighted average price of Coal	Rs/MT	4331.63	4331.63
Rate of energy charge ex-bus	Rs./kWh	3.923	3.923

164. Energy charges for 2 months for the purpose of interest on working capital is worked out as under:

(₹ in lakh)

1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
4435.64	8871.29	8895.59	8871.29	8871.29	8871.29

Maintenance spares

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

(₹ in lakh)

1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
789.36	1578.72	1678.16	1783.76	1895.96	2015.20

166. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the operation & maintenance expenses as specified in Regulation 29. Accordingly, maintenance spares @ 20% of the operation & maintenance expenses as claimed by the Petitioner, is allowed.

Receivables

167. Receivables equivalent to two months of capacity charge and energy charges has been worked out and allowed as under:



(₹ in lakh)

	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
Capacity Charges- 2 months	923.46	1597.30	2158.44	2274.01	2403.90	2657.44
Energy Charges- 2 months	4435.64	8871.29	8895.59	8871.29	8871.29	8871.29

O & M Expenses (1 month)

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

(₹ in lakh)

1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
328.90	657.80	699.23	743.23	789.98	839.67

Rate of interest on working capital

169. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

“Interest on working Capital: (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.”

170. Interest on working capital has been worked out considering the interest rate in accordance with the 2014 Tariff Regulations. Accordingly, Interest on Working Capital is computed as under:

(₹ in lakh)

	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
Cost of coal for 2 months	4176.89	8353.77	8353.77	8353.77	8353.77	8353.77
Secondary fuel oil for 2 months	200.74	401.49	402.59	401.49	401.49	401.49
O&M expense (one month)	328.90	657.80	699.23	743.23	789.98	839.67
Receivables (capacity charges- 2 months)	923.46	1597.30	2158.44	2274.01	2403.90	2657.44
Receivables (Energy Charges- 2 months)	4435.64	8871.29	8895.59	8871.29	8871.29	8871.29
Maintenance Spares (20% of the O&M expenses)	789.36	1578.72	1678.16	1783.76	1895.96	2015.20



Total Working Capital	10854.99	21460.37	22187.78	22427.56	22716.39	23138.86
Rate of Interest	13.20%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	895.05	1084.45	2995.35	3027.72	3066.71	3123.75

Annual Fixed Charges

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

	1.4.2014 to 14.11.2014	15.11.2014 to 31.3.2015	2015-16	2016-17	2017-18	(₹ in lakh) 2018-19
Depreciation	300.27	245.97	769.17	859.28	1014.17	1599.12
Interest on Loan	341.64	258.57	569.07	523.88	508.35	663.88
Return on Equity	57.01	101.19	226.22	314.41	354.34	481.89
Interest on Working Capital	895.05	1084.45	2995.35	3027.72	3066.71	3123.75
O&M Expenses	3946.80	7893.60	8390.80	8918.80	9479.80	10076.00
Annual Fixed charges	5540.76	9583.79	12950.61	13644.09	14423.38	15944.63

Month to Month Energy Charges

172. The Petitioner Shall compute and claim the Energy Charges on month to month basis from the beneficiaries based on the formulae given under Regulation 30(6)(a) of the 2014 Tariff Regulations read with Commission's order dated 25.1.2016 in Petition No. 283/GT/2014.

173. The Petitioner has been directed by the Commission in its order dated 19.2.2016 in Petition No. 33/MP/2014 to introduce helpdesk to attend to the queries of the beneficiaries with regard to the Energy Charges. Accordingly, contentious issues if any, which arise regarding the Energy Charges, should be sorted out with the beneficiaries at the Senior Management level.

Enhancement of O&M expenses

174. The Petitioner has submitted that the salary / wage revision of the employees of the Petitioner will be due with effect from 1.1.2017. The Petitioner in the



Petition has claimed O&M expenses based on the 2014 Tariff Regulations and has submitted that the escalation of 6.35% provided in the O&M expense norm would not cover the enhanced employee cost w.e.f 1.1.2017. The Petitioner has accordingly prayed for enhancement in the O&M expenses, with effect from 1.1.2017, towards increased salary on account of salary revision due from 1.1.2017, based on actual payments, whenever paid by it.

175. The matter has been examined. The Commission in the Statement of Reasons to the 2014 Tariff Regulations has observed as under:

“29.26 Some of the generating stations have suggested that the impact of pay revision should be allowed on the basis of actual share of pay revision instead of normative 40% and one generating company suggested that the same should be considered as 60%. In the draft Regulations, the Commission had provided for a normative percentage of employee cost to total O&M expenses for different type of generating stations with an intention to provide a ceiling limit so that it does not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission would however, like to review the same considering the macroeconomics involved as these norms are also applicable for private generating stations. In order to ensure that such increase in employee expenses on account of pay revision in case of central generating stations and private generating stations are considered appropriately, the Commission is of the view that it shall be examined on case to case basis, balancing the interest of generating stations and consumers”

176. Accordingly, the prayer of the Petitioner for enhancement of O&M expenses if any, due to pay revision may be examined by the Commission, on a case to case basis, subject to the implementation of pay revision as per DPE guidelines and the filing of an appropriate application by the Petitioner in this regard.

Application filing fee and Publication Expenses

177. The Petitioner has sought reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The Petitioner has deposited the filing fees in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 5.1.2016 in Petition No.



232/GT/2014, we direct that the Petitioner shall be entitled to recover pro rata, the filing fees for the period 2014-19 and the expenses incurred on publication of notices directly from the respondents, on production of documentary proof.

178. The annual fixed charges approved for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

179. Petition Nos. 241/GT/2017 & 240/GT/2017 are disposed of in terms of the above.

Sd/-
(I.S.Jha)
Member

Sd/-
(Dr. M.K.Iyer)
Member

Sd/-
(P.K.Pujari)
Chairperson

