

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 220/GT/2020

Coram:

**Shri P.K. Pujari, Chairperson
Shri I.S Jha, Member
Shri Arun Goyal, Member
Shri Pravas Kumar Singh, Member**

Date of Order: 25th September 2021

IN THE MATTER OF

Petition for revision of tariff of Ramagundam Super Thermal Power Station Stage-III (500 MW) for the period from 1.4.2014 to 31.3.2019 after truing-up exercise

AND

IN THE MATTER OF

NTPC Limited,
NTPC Bhawan, Core-7 Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003

...Petitioner

Vs

1. Andhra Pradesh Eastern Power Distribution Company Limited,
Corporate Office P&T Colony, Seethammadhara,
Visakhapatnam-530013
2. Andhra Pradesh Southern Power Distribution Company Limited,
Corporate Office, Back Side Srinivasa Kalyana Mandapam,
Tiruchhanur Road, Kesavayana Gunta,
Tirupathi-517503
3. Telangana State Northern Power Distribution Company Limited,
H. No. 2-5-31/2, Vidyut Bhawan, Nakkal Gutta Hanamkonda,
Warangal-506001
4. Telangana State Southern Power Distribution Company Limited,
Mint Compound Corporate Office,
Hyderabad-500 063
5. Tamil Nadu Generation & Distribution Corporation Limited,
144, Anna Salai,
Chennai-600002



6. Bangalore Electricity Supply Company Limited,
Krishna Rajendra Circle,
Bangalore-560 001, Karnataka

7. Mangalore Electricity Supply Company Limited,
MESCOM Bhavana, Corporate Office, Bejai, Kavoor Cross Road,
Mangaluru-575004

8. Chamundeshwari Electricity Supply Corporation Limited,
Corporate Office, No. 29 Vijaynagar, 2nd Stage, Hinkal,
Mysore-570017

9. Gulbarga Electricity Supply Company Limited,
Main Road, Gulbarga,
Gulbarga-585102, Karnataka

10. Hubli Electricity Supply Company Limited,
Corporate Office, PB Road, Navanagar,
Hubli-580025

11. Kerala State Electricity Board Limited,
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695004

12. Electricity Department,
Government of Puducherry,
137, Netaji Subash Chandra Bose Salai,
Puducherry-605001

...Respondents

Parties Present:

Shri Venkatesh Advocate NTPC
Shri Anant Singh Advocate NTPC
Shri Abhishek Nangia Advocate NTPC
Shri Vinodh Kanna Advocate TANGEDCO

ORDER

This Petition has been filed by the Petitioner, NTPC Limited (in short, 'NTPC') for revision of tariff of Ramagundam Super Thermal Power Station Stage-III (500 MW) (hereinafter referred to as "the generating station") for the period 2014-19 in accordance with Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 (hereinafter referred to as 'the 2014 Tariff Regulations').



Background

2. The generating station with a capacity of 500 MW was declared under commercial operation on 25.3.2005. The Commission vide its order dated 8.11.2016 in Petition No.268/GT/2014 had determined the tariff of the generating station for the period 2014-19. The capital cost and annual fixed charges allowed by the Commission in the said order dated 8.11.2016 are as under:

Capital Cost allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	156863.30	157606.00	157606.00	157606.00	157606.00
Add: Additional Capital Expenditure	742.70	0.00	0.00	0.00	1600.00
Closing Capital Cost	157606.00	157606.00	157606.00	157606.00	159206.00
Average Capital Cost	157234.65	157606.00	157606.00	157606.00	158406.00

Annual Fixed Charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	8332.96	8352.64	8352.64	2903.84	2963.92
Interest on Loan	2210.19	1535.94	854.35	399.29	209.20
Return on Equity	9250.11	9316.88	9316.88	9316.88	9364.17
Interest on Working Capital	3830.76	3852.61	3866.18	3834.57	3870.26
O&M Expenses	8326.73	8831.73	9366.73	9936.73	10541.73
Compensation Allowance	0.00	100.00	100.00	100.00	100.00
Total	31950.76	31989.80	31856.78	26491.30	27049.29

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

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

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

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4. The capital cost and the annual fixed charges claimed by the Petitioner in the present petition are as under:



Capital Cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	156863.29	157518.65	157434.20	158260.75	158160.36
Add: Addition during the year/period	728.58	35.57	109.69	0.00	0.00
Less: De-capitalization during the year/period	73.22	156.90	34.72	105.25	200.40
Add: Discharges during the year/period	0.00	36.88	751.58	4.86	11.44
Closing capital cost	157518.65	157434.20	158260.75	158160.36	157971.41
Average capital cost	157190.97	157476.43	157847.48	158210.56	158065.89

Annual Fixed Charges claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	8330.65	8357.81	8376.01	2920.91	2915.15
Interest on Loan	2222.96	1535.60	863.38	413.79	178.97
Return on Equity	9248.02	9309.69	9331.63	9353.09	9369.20
Interest on Working Capital	4424.85	4457.39	4543.45	4536.63	4584.82
O&M Expenses (inclusive of water charges & capital spares)	8424.23	9033.23	9614.49	10101.05	10921.96
Compensation Allowance	0.00	100.00	100.00	100.00	100.00
Total Annual Fixed Charges (A)	32650.71	32793.73	32828.96	27425.47	28070.10
Additional O&M Expenses					
Impact of Pay Revision	0.00	21.84	1136.79	1293.53	1294.16
Impact of GST	0.00	0.00	0.00	89.97	127.05
Total Additional O&M Expenses (B)	0.00	21.84	1136.79	1383.50	1421.21
Total Annual Fixed Charges (A+B)	32650.71	32815.57	33965.75	28808.97	29491.31

5. The Petition was heard through video conferencing on 13.8.2020 and the Commission after directing the Petitioner to file certain additional information reserved its order in the matter. In compliance with the directions of the Commission, the Petitioner vide affidavit dated 4.11.2020 has filed the additional information. The Respondent, Kerala State Electricity Board Limited (KSEBL) vide affidavit dated 13.8.2020 and the Respondent, Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) vide affidavits dated 27.8.2020 and 5.3.2021 have filed their replies and the Petitioner vide affidavit dated 4.12.2020 has filed its rejoinder to the said replies. Subsequently, the petition was re-listed on 13.4.2021 and the Commission after hearing the parties sought clarifications with regard to the claim of



the Petitioner for additional O&M expenses considering the impact of wage revision and the details of Gross Calorific Value (GCV) for the purpose of interest on working capital (IWC) and reserved its order in the matter. In compliance to the directions, the Petitioner vide affidavit dated 31.5.2021 has filed the additional information. Based on the submissions of the parties and the documents available on record, we proceed for truing-up the tariff of the generating station for the 2014-19 tariff period on prudence check as stated in the subsequent paragraphs.

Capital Cost

6. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects. Clause 3 of Regulation 9 of the 2014 Tariff Regulations provides as under:

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

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

(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and

(c) expenditure on account of renovation and modernization as admitted by this Commission in accordance with Regulation 15

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7. The Petitioner in Form 1(i) of the petition has claimed capital cost for the 2014-19 tariff period as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	156863.29	157518.65	157434.20	158260.75	158160.36
Add: Addition during the year/period	728.58	35.57	109.69	0.00	0.00
Less: De-capitalization during the year/period	73.22	156.90	34.72	105.25	200.40
Add: Discharges during the year/period	0.00	36.88	751.58	4.86	11.44
Closing capital cost	157518.65	157434.20	158260.75	158160.36	157971.41
Average capital cost	157190.97	157476.43	157847.48	158210.56	158065.89



Capital cost as on 1.4.2014

8. The annual fixed charges claimed by the Petitioner is based on the opening capital cost of Rs.156863.29 lakh (excluding un-discharged liabilities of Rs.2407.96 lakh) as on 1.4.2014 which is at variance with the capital cost of Rs.156863.30 lakh (excluding un-discharged liabilities of Rs.2338.58 lakh) as on 1.4.2014 as approved vide order dated 8.11.2016 in Petition No.268/GT/2014. Further, the Petitioner has furnished the value of capital cost and liabilities as on 1.4.2014 as per the books in Form-9E of the petition. The details of liabilities and capital cost has been reconciled with the information available with the records of the Commission as under:

	<i>(Rs. in lakh)</i>		
	As per Form-9E	As per records of Commission	Differences
Capital cost as on 1.4.2014 as per books	165673.01	165673.01	0.00
Liabilities included in the above	2407.96	2407.96	0.00

9. Out of the un-discharged liabilities of Rs.2407.96 lakh as on 1.4.2014, only liabilities amounting to Rs.2338.58 lakh corresponds to the approved capital cost of Rs.156863.30 lakh (on cash basis) as on 31.3.2014. Accordingly, the capital cost as on 1.4.2014, after removal of un-discharged liabilities amounting to Rs.2338.58 lakh, works out to Rs.156863.30 lakh (on cash basis) and the same has been considered as the opening capital cost as on 1.4.2014.

10. Further, out of un-discharged liabilities amounting to Rs.2338.58 lakh deducted as on 1.4.2014, the Petitioner has discharged Rs.1.16 lakh in 2015-16 Rs.734.42 lakh in 2016-17 and Rs.14.69 lakh in 2018-19 and has also reversed Rs.1587.12 lakh during 2015-16. These discharges along with discharge corresponding to assets admitted on cash basis, is considered as additional capital expenditure for the respective years of the 2014-19 tariff period.



Additional Capital Expenditure

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

“14. Additional Capitalization and De-capitalization:

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

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

(ii) Works deferred for execution;

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

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

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

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

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

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

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

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

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

(3) The capital expenditure in respect of existing generating station or the transmission system including communication system incurred or projected to be incurred on the following counts after the cut-off date may be admitted by the Commission subject to prudence check:

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

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

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

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



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

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

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

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

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

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

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

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

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

12. The Commission in its order dated 8.11.2016 in Petition No. 268/GT/2014 had allowed the projected additional capital expenditure of Rs.2342.70 lakh (i.e. 742.70 lakh in 2014-15 and Rs.1600.00 lakh in 2018-19) in respect of the works relating to



‘Ash Pond or Ash Handling System’. The Petitioner, in the present petition, has claimed actual additional capital expenditure (on cash basis) for the 2014-19 tariff period as detailed below:

(Rs. in lakh)

Package	Regulation	2014-15	2015-16	2016-17	2017-18	2018-19
Work relating to Ash Pond or Ash Handling System	14(3)(iv)	728.58	0.00	0.00	0.00	0.00
Electronic Pitless weighbridge 100 MT (is:9281)	14(3)(x)	0.00	35.57	0.00	0.00	0.00
Effluent quality monitoring system- Stage-III	14(3)(ii)	0.00	0.00	38.49	0.00	0.00
100KW Grid Connected Solar Panels-U-7 car parking	14(3) & 54	0.00	0.00	71.20	0.00	0.00
Additional capital expenditure claimed		728.58	35.57	109.69	0.00	0.00
De-capitalization of spares	14(4)	(-) 73.22	(-) 156.90	(-) 34.72	(-) 105.25	(-) 200.40
Discharge of liability	14(3)(vi)	0.00	36.88	751.58	4.86	11.44
Total additional capital expenditure claimed		655.36	(-) 84.45	826.55	(-)100.39	(-)188.95

Works relating to Ash pond or Ash handling system

13. The Petitioner, in Form 9A of the petition, has claimed additional capital expenditure of Rs.764.29 lakh in 2014-15 under Regulation 14(3)(iv) of the 2014 Tariff Regulations, on accrual basis, for works related to Ash pond or Ash handling system. The Petitioner has submitted that there is un-discharged liability of Rs.35.72 lakh and, accordingly, additional capital expenditure of Rs.728.58 lakh has been claimed on cash basis in terms of Regulation 14(3)(iv) of the 2014 Tariff Regulations. The Petitioner has further submitted that the Commission in its order dated 8.11.2016 in Petition No.268/GT/2014 had allowed additional capital expenditure of Rs.742.70 lakh in 2014-15 for the said work relating to ash pond or ash handling system. The Respondent KSEBL has submitted that despite specific directions of the Commission vide its order dated 8.11.2016 in Petition No.268/GT/2014, the Petitioner has not furnished the details of the expenditure incurred towards the ash dyke work in the original scope of work. The Respondent



has further submitted that the claim towards ash pond and ash handling system was only restricted for the year 2014-15. Similar submission has been made by the Respondent TANGEDCO. In response, the Petitioner in its rejoinder has clarified that the details of amount capitalised under ash handling system and ash dyke works has been submitted vide affidavit dated 4.11.2020.

14. The matter has been examined. The Commission in its order dated 8.11.2016 in Petition No.268/GT/2014 had allowed the projected additional capital expenditure of Rs.2342.70 lakh (i.e. Rs.742.70 lakh in 2014-15 and Rs.1600.00 lakh in 2018-19) in respect of the work relating to 'Ash Pond or Ash Handling System' under Regulation 14(3)(iv) of the 2014 Tariff Regulations, on the ground that the said expenditure is for planned works related to ash pond or ash handling system which is of continuous nature during the operational life of generating station, with the following observations:

"13. we are inclined to allow the capitalization of the expenditure on works relating to Ash Pond or Ash Handling System during 2014-19 under Regulation 14(3)(iv) of the 2014 Tariff Regulations. However the Petitioner is directed to submit the estimated expenditure envisaged for Ash Handling system/ Ash Dyke Raising in the original scope of work at the time of truing-up of tariff in terms of the Regulation 8 of the 2014 Tariff Regulations

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15. As the Petitioner, in the present petition, had not furnished the estimated expenditure envisaged for ash handling system/ ash pond/ ash dyke raising within the original scope of work, the Commission vide ROP of the hearing dated 13.8.2020, again directed the Petitioner to furnish the said details along with actual expenditure incurred under these heads, as on COD of the generating station and from COD till 31.3.2019. In compliance with the said direction, the Petitioner vide affidavit dated 4.11.2020 has submitted that on the basis of price level of 3rd quarter of 1998, the Board of the Petitioner Company approved an amount of Rs.29.03 crore towards Ash dyke related works. It has also submitted that the expenditure on Ash



handling system forms part of the main Plant turnkey project. The Petitioner has furnished the detailed break-up of the activities along with the actual expenditure incurred in respect of each works related to Ash pond/ Ash handling system/ Ash dyke raising and submitted that these are within the original scope of work from COD of the generating station to the year 2018-19. The expenditure capitalized towards Ash handling system and Ash dyke works are as under:

<i>(Rs. in lakh)</i>		
Description of work	Amount capitalized	Year of capitalization
Ash Handling System		
U#7 Ash Handling System	344.21	2005-06
Main Plant Supply-AHP	34.94	2005-06
Total amount claimed towards ash handling works	379.15	
Ash Dyke works		
Additional pedestals around ash dyke (Garland Area)	0.35	2007-08
Ash Pond: Construction of pump house sump discharge channel RCC culverts and service roads along downstream of N2 main dyke in ash pond area	3.63	2007-08
Adjustment of Balance works in hydrogen building foam pump house ash	(-)1.03	2007-08
Ash Silo area development works - Stage-III	31.51	2007-08
N2 starter dyke and first raising flood escape and downstream of N2 Flood Escape works	12.38	2007-08
N2 Pond starter dyke downstream seepage works	20.99	2007-08
Ash brick pavement and associated works	20.66	2007-08
Sub-total	88.49	
Raising of N-1 Dyke	678.05	2008-09
Ash brick pavement and associated works	3.43	2008-09
Sub-total	681.48	
Ash Pond raisings	10.94	2009-10
Ash Silo-2 Fabrication and Erection works	16.89	2009-10
Sub-total	27.83	
Ash Pond raisings	13.33	2010-11
Ash Pond raisings	547.08	2011-12
Raising of Ash Dyke in N1 pond (Total Service Cost)	685.63	2014-15
Material Cost in Raising of N1 pond	78.66	2014-15
Total amount claimed towards Ash Dyke Works	2122.49	

16. It is observed that the total actual additional expenditure towards Ash pond and Ash dyke works from COD (25.3.2005) of the generating station to 31.3.2019 is Rs.2122.49 lakh, which is lesser than the total expenditure of Rs.2903.00 lakh as per Investment approval. Further, out of the total amount capitalized towards Ash handling and Ash dyke works, only an expenditure of Rs.379.15 lakh has been



capitalized in 2005-06 towards Ash handling system, which form part of the Main Plant Turnkey package within the original scope of work of the project. Since the claim of the Petitioner is towards deferred works related to Ash pond and/or Ash handling system as per the approved scheme and is within the original scope of work of the project, we allow the additional capitalization of Rs.728.58 lakh (on cash basis) in 2014-15 towards works related to Ash pond or Ash handling system.

Electronic Pit-less Weighbridge

17. The Petitioner has claimed actual additional capital expenditure of Rs.35.57 lakh in 2015-16 towards Installation of Electronic Pit-less weighbridge under Regulation 14(3)(x) of the 2014 Tariff Regulations and has submitted that the said expenditure has been incurred towards fuel receiving system of the generating station for ensuring accurate measurement of coal and to ensure minimum transit and handling loss. The Respondent TANGEDCO has submitted that the Petitioner has not furnished the details of existing weighbridge and the prevalent mechanism adopted for weighment of fuel or whether the said expenditure is for repair or for construction of a new weighbridge. It is also submitted that the Petitioner has not furnished any supportive documents along with approval of the competent authority for installation of the said weighbridge. The Respondent KSEBL has submitted that said expenditure can be claimed only 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. It has also submitted that as the Petitioner has not furnished any relevant justification, the additional capital expenditure towards electronic pit-less weighbridge was disallowed by the Commission vide its order dated 8.11.2016 in Petition No.268/GT/2014. Accordingly, it has prayed that the same may be disallowed.



18. The Commission vide ROP of the hearing dated 13.8.2020 directed the Petitioner to furnish clarification as to whether the claim for capitalization of electronic pitless weighbridge is on account of the non-materialization of coal supply corresponding to full coal linkage. In compliance, the Petitioner vide its affidavit dated 4.11.2020 has submitted that the weighbridge is meant for weighing a stationary wagon but not de-linked with the rake. It has stated that the system includes all equipment and materials required for Electronic pit-less weighbridge system including associated electrical civil & structural works. The Petitioner has further stated that the system covers supply, installation, commissioning and testing of static type pit-less electronic rail weighbridge installed on the existing railway track for weighing of a standard 2&4 axle Indian Railway wagon. The Petitioner has also submitted that the additional capital expenditure was incurred on fuel receiving system of the generating station for ensuring accurate measurement of coal and to ensure minimum transit and handling loss.

19. The matter has been examined. The Petitioner has claimed additional capitalization of Rs.35.57 lakh in 2015-16 towards Installation of Electronic Pit-less weighbridge under Regulation 14(3)(x) of the 2014 Tariff Regulations. This Regulation provides for allowing expenditure 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. Therefore, claimed additional expenditure can be allowed to be capitalized only if any modification is required or done in the fuel receiving system due to non-materialization of coal supply corresponding to full coal linkage. From the submissions of the Petitioner, there appears to be no difficulty with regard to supply of coal corresponding to full coal linkage nor any modification was required to be



made by the Petitioner in the fuel receiving system, due to non-materialization of coal supply. Since modification has been carried out by the Petitioner only for ensuring accurate measurement of coal, we find no reason to allow the additional capital expenditure of Rs.35.57 lakh in 2015-16 towards installation of Electronic Pit-less Weighbridge under Regulation 14(3)(x) of the 2014 Tariff Regulations.

Effluent Quality Monitoring System

20. The Petitioner has claimed actual additional capital expenditure of Rs.38.49 lakh in 2016-17 lakh towards Effluent Quality Monitoring System under Regulation 14(3)(ii) of the 2014 Tariff Regulations i.e. Change in law. In justification of the same, the Petitioner has submitted that the Central Pollution Control Board (CPCB) vide its order dated 5.2.2014 has directed to ensure the installation of instruments for monitoring of emission and effluent quality. The Respondent, TANGEDCO has submitted that the Petitioner has not furnished any documentary evidence such as original consent order at time of execution of project and corresponding consent to operate for 2014-15, 2015-16 and 2016-17 or documents pertaining to installation of instruments for monitoring of emission and effluent quality or the approval of the competent authority for incurring said expenditure. Accordingly, the Respondent has prayed that the Petitioner may be directed to furnish the aforesaid information. Similar submissions have been made by the Respondent KSEBL. In addition, the Respondent KSEBL has prayed that the Petitioner may be directed to meet the said expenditure from the O&M expense allowed to the generating station. The Petitioner, in its rejoinder, has reiterated the submissions made in the petition.

21. The matter has been examined. The Petitioner has claimed the additional capital expenditure of Rs.38.49 lakh in 2016-17 lakh towards effluent quality monitoring system based on Order dated 5.2.2014 of CPCB wherein all the State



Pollution Control Boards (SPCB) and Pollution Control Committees (PCC) are required to manage common hazardous waste & biomedical waste and to comply with the norms. The said order empowers SPCBs and PCCs to stipulate standards for discharge of environmental pollutants for various categories of industries and common effluent treatment plants common hazardous waste and biomedical waste incinerators which are more stringent than those notified by the Central Government under the Environment Protection Act 1986. In our view, the directions/ orders of CPCB and SPCB requiring compliance by the Petitioner is a change in law event and, therefore, the actual additional capital expenditure of Rs.38.49 lakh in 2016-17 towards Effluent quality monitoring system is allowed under Regulation 14(3)(ii) of the 2014 Tariff Regulations.

100 kW Grid connected Solar Panels U-7 car parking

22. The Petitioner has claimed additional capital expenditure of Rs.83.96 lakh (on accrual basis) in 2016-17 towards Installation of Solar panels under Regulation 14(3) read with Regulation 54 of the 2014 Tariff Regulations. The Petitioner has stated that there is un-discharged liability of Rs.12.76 lakh and has accordingly claimed actual additional capitalization of Rs.71.28 lakh on this count. In justification of the said claim, the Petitioner has stated that installation of 100 kW Grid Rooftop Solar PV was an initiative towards Environment and Energy Conservation measures to reduce Green House Gases (GHG) and to save electricity. The Respondent TANGEDCO has submitted that the claim of the Petitioner is not admissible and if required the said expenditure can be carried out under the normative O&M expenses approved by the Commission. The Respondent has further submitted that there is no provision under the 2014 Tariff Regulations to admit such expenditure and, therefore, the claim of the Petitioner may be disallowed. Similar submissions have been made by the Respondent KSEBL. The Petitioner, in its rejoinder, has



clarified that the approach of the Petitioner was to reduce emission of gases in generation of electricity. The Petitioner has further submitted that the Commission in its order dated 13.7.2020 in Petition No.270/GT/2019 {TPL vs TPL (Ahmedabad Distribution) & Ors.} had allowed the additional capital expenditure incurred by TPL towards installation of Rooftop Solar panels and, therefore, the same may be allowed.

23. We have considered the submissions of the Respondents TANGEDCO and KSEBL and the Petitioner. As regards the exercise of the power to relax the Appellate Tribunal for Electricity (APTEL) vide its judgment dated 25.3.2011 in Appeal No. 130/2009 (RGPPL vs CERC & Anr) had observed as under:

“18.1 The Regulations of the Central Commission and the decision of the Tribunal and the Supreme Court confer the judicial discretion to the Central Commission to exercise power to relax in exceptional case. However while exercising the power to relax there should be sufficient reason to justify the relaxation and non-exercise of discretion would cause hardship and injustice to a party or lead to unjust result. It has also to be established by the party that the circumstances are not created due to act of omission or Commission attributable to the party claiming relaxation. Further the reasons justifying relaxation have to be recorded in writing.”

24. We notice that the Petitioner has not furnished any justification for capitalization of this asset, except the statement that the approach was to reduce emission of gases and to save electricity. The Petitioner has also not furnished the benefits/ advantages, which the beneficiaries will derive on account of installation of solar rooftop in plant premises. In the absence of proper justification, we find no reason to relax the provisions of the regulations and grant additional capitalization of the said expenditure. The order dated 13.7.2020 in Petition No. 270/GT/2019 cannot, therefore, be made applicable in the present case. Accordingly, the claim of the Petitioner for Rs.83.96 lakh towards installation of solar panels is not allowed.

25. Based on the above discussion, the additional capital expenditure allowed for the 2014-19 tariff period is as under:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Work relating to Ash Pond or Ash Handling System	728.58	0.00	0.00	0.00	0.00
Electronic pitless weighbridge 100 MT (is:9281)	0.00	0.00	0.00	0.00	0.00
Effluent quality monitoring system-Stage-III	0.00	0.00	38.49	0.00	0.00
100KW Grid Connected Solar Panels-U-7 car parking	0.00	0.00	0.00	0.00	0.00
Additional capital expenditure allowed	728.58	0.00	38.49	0.00	0.00

De-capitalization of Spares (Part of capital cost)

26. The Regulation 14(4) of 2014 Tariff Regulations provides as under:

“(4) In case of de-capitalisation of assets of a generating company or the transmission licensee as the case may be the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place duly taking into consideration the year in which it was capitalised.”

27. The Petitioner has de-capitalized capital spares in books of account amounting to Rs.73.22 lakh in 2014-15, Rs.156.90 lakh in 2015-16, Rs.34.72 lakh in 2016-17, Rs.105.25 lakh in 2017-18 and Rs.200.40 lakh in 2018-19 under Regulation 14(4) of the 2014 Tariff Regulations. Since these capital spares which form part of the capital cost of the generating station had been de-capitalized the same is allowed under Regulation 14(4) of the 2014 Tariff Regulations.

Reconciliation of actual additional capital expenditure

28. The additional capital expenditure claimed by the Petitioner for the 2014-19 tariff period is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Closing Gross Block as per audited books of accounts	434033.81	442711.81	154783.79	170167.71	182053.18
Less: Opening Gross Block as per audited books of accounts	423392.34	434033.81	139684.64	154783.79	170167.71
Additional capital expenditure as per audited books of accounts	10641.47	8678.00	15099.15	15383.92	11885.46
Less: Additional capital expenditure pertaining to other Stages	9162.16	9895.96	12961.08	15245.81	10561.92



Additional capital expenditure pertaining to the generating station	1479.32	(-)1217.96	2138.07	138.12	1323.55
Less: Adjustment due to IND-AS	0.00	0.00	(-) 1347.81	(-)217.54	(-)1214.83
Additional Capital Expenditure as per books (as per IGAAP)	1479.32	(-)1217.96	790.26	(-)79.42	108.72
Less: Exclusions	953.16	(-)1271.85	695.37	25.82	309.12
Additional Capital Expenditure claimed (on accrual basis)	526.16	53.89	94.89	(-)105.25	(-)200.40
Less: Un-Discharges Liabilities	(-)129.20	175.22	19.92	0.00	0.00
Add: Discharge of Liabilities	0.00	36.88	751.58	4.86	11.44
Net additional capital expenditure claimed (on cash basis)	655.36	(-)84.45	826.55	(-)100.39	(-)188.95

The closing gross block and opening gross block for the period 2016-19 is as per the IND-AS.

Exclusions

29. It is observed from the details furnished by the Petitioner that the actual additional capital expenditure claimed by the Petitioner is at variance with the additional capital expenditure as per books of accounts. This is on account of exclusion of certain expenditures and exclusion of liabilities in the additional capital expenditure considered for the purpose of tariff. The summary of exclusions for the purpose of tariff for the 2014-19 tariff period are examined hereunder:

Exclusions claimed for 2014-15

Sl. No.	Head of work/Equipment	(Rs. in lakh)		
		Additional capital expenditure claimed under Exclusion		
		Accrual basis	Un-discharged liability included	Cash basis
I	Items not claimed			
a	Balance Civil Works of Sewerage System Within Plan	0.23	-	0.23
b	Plant and machinery	2.93	-	2.93
c	Diesel Engine Portable Fire Water Pump-FIRE Station	2.10	-	2.10
d	Ultrasonic Flow Meter	10.30	-	10.30
	Sub-total	15.55	0.00	15.55
II	Capitalisation of spares	633.60	17.66	615.94
III	Capitalisation of MBOA	323.52	14.37	309.15
IV	De-capitalization of MBOA (part of capital cost)	(-)10.09	-	(-)10.09
V	De-capitalization of MBOA (not part of capital cost)	(-)9.31	-	(-)9.31
VI	Inter Unit Transfer	(-)0.12	-	(-)0.12
	TOTAL	953.16	32.04	921.13



Items not claimed

30. The Petitioner has submitted that an amount of Rs.5.25 lakh in 2014-15 on account of balance civil works Plant & Machinery and diesel engine portable fire water pump was not claimed under the 2014 Tariff Regulations and kept under exclusion. It has also submitted that an amount of Rs.10.30 lakh towards Ultrasonic flow meter which was capital addition under energy conservation scheme has not been claimed and kept under exclusion. In view of this, the total exclusion of Rs.15.55 lakh (Rs. 5.25 + Rs.10.30) in 2014-15 is allowed.

Capitalization of Spares

31. The Petitioner has procured spares for Rs.633.60 lakh in 2014-15 which includes un-discharged liability of Rs.17.66 lakh. As capitalization of spares over and above initial spares procured after the cut-off date of the generating station are not allowed for the purpose of tariff as they form part of the O&M expenses as and when consumed. The Petitioner has excluded the said amount. Accordingly, the exclusion of Rs.615.94 lakh on cash basis under this head is in order and allowed.

Capitalization of Miscellaneous Bought out Assets (MBOA)

32. The Petitioner has procured MBOAs amounting to Rs.323.52 lakh including un-discharged liability of Rs.14.37 lakh in 2014-15. As capitalization of MBOA procured after the cut-off date of the generating station is not allowed for the purpose of tariff, the Petitioner has excluded the said amount. Accordingly, the exclusion of Rs.309.15 lakh, on cash basis, under this head is in order and allowed.

De-capitalization of MBOA (Part of the capital cost)

33. The Petitioner has de-capitalized MBOA amounting to Rs.10.09 lakh in 2014-15 in books of accounts. After examining the exclusions sought on de-capitalization



of MBOA, it is noticed that an amount of Rs.4.33 lakh has been recovered by the Petitioner under depreciation. Regulation 14(4) of 2014 Tariff Regulations provides as under:

(4) In case of de-capitalisation of assets of a generating company or the transmission licensee as the case may be the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place duly taking into consideration the year in which it was capitalised.

34. The de-capitalization of MBOA includes furniture & fixtures and communication equipment which were capitalized prior to the cut-off date of the generating station i.e. 31.3.2006 in terms of the 2004 Tariff Regulations. Hence, the amount de-capitalized pertaining to MBOA form part of the capital cost of the generating station for the purpose of the tariff. As such, in terms of Regulation 14(4) of the 2014 Tariff Regulations, the de-capitalized amount is to be deducted in order to arrive at the capital cost for the purpose of tariff. Accordingly, the exclusion of Rs.10.09 lakh on account of de-capitalization of MBOA is not allowed for the purpose of tariff.

De-capitalization of MBOA (Not part of capital cost)

35. The Petitioner has de-capitalized MBOA amounting to Rs.9.31 lakh in 2014-15 in books of accounts. The Petitioner has sought exclusion of the de-capitalization of Rs.0.84 lakh towards furniture & fixtures, Rs.7.38 lakh for EDP WP machines & SATCOM, Rs.0.82 lakh on vehicles including speedboat and Rs.0.27 lakh on communication equipment for the purpose of tariff. The Petitioner has submitted that the total de-capitalization of Rs.9.31 lakh pertains to assets which were disallowed by the Commission in its earlier orders for the tariff period from 2007-08 to 2013-14. Since MBOAs de-capitalized in 2014-15 do not form part of the capital cost, the



same are considered for the purpose of tariff. Accordingly, the exclusion of de-capitalization of Rs.9.31 lakh in 2014-15 is in order and allowed.

Inter-Unit Transfer

36. An amount of Rs.0.12 lakh in 2014-15 has been excluded on account of inter-unit transfer. The Petitioner has submitted that the items under inter-unit transfer were not considered by the Commission for the purpose of tariff and hence kept under exclusion. The Petitioner has not furnished the reference of the Commission's order in which the inter-unit transfer was disallowed by the Commission for the purpose of tariff. In view of above, exclusion of Rs.0.12 lakh on account of inter-unit transfer is not allowed.

37. Based on the above discussion, the summary of exclusions allowed/ not allowed on cash basis for the year 2014-15 for the purpose of truing-up of tariff is as under:

<i>(Rs. in lakh)</i>	
Exclusions claimed on cash basis (A)	921.13
Exclusions allowed on cash basis (B)	931.34
Exclusion not allowed (A-B)	(-)10.21

Exclusions claimed for 2015-16

		<i>(Rs. in lakh)</i>		
Sl. No.	Head of Work / Equipment	Additional capital expenditure claimed under Exclusion		
		Accrual basis	Un-discharged liability included	Cash basis
I	Items not claimed			
a	Humidity chamber for fuel and coal section	0.11	0.00	0.11
b	Capitalisation of MBOA			
(i)	Furniture and Fixtures	29.95	0.20	29.75
(ii)	Other Office Equipment's	64.93	0.00	64.93
(iii)	EDP WP machines and SATCOM Equipment	121.43	1.81	119.62
(iv)	Vehicles including Speed Boats	15.79	0.03	15.76
(v)	Communication Equipment	1.71	0.00	1.71
(vi)	Hospital Equipment	7.88	0.00	7.88
(vii)	Software	2.08	0.00	2.08
	Sub-total of (2) above	243.78	2.04	241.74
c	Capitalisation of spares	431.30	10.19	421.11



	Items not claimed	675.19	12.23	662.96
II	De-capitalization of MBOA (part of capital cost)	(-)67.88	0.00	(-)67.88
III	De-capitalization of MBOA (Not part of capital cost)	(-)91.59	0.00	(-)91.59
IV	Reversal of Liability	(-)1778.90	(-)1778.90	0.00
V	Inter unit Transfer	0.00	0.00	0.00
	Total Inter unit Transfer	(-)8.67	0.00	(-)8.67
	Total Exclusion	(-)1271.85	0.00	496.80

Items not claimed

38. The Petitioner has not claimed an amount of Rs.675.19 lakh including un-discharged liability of Rs.12.23 lakh capitalized in books of accounts in 2015-16 towards humidity chamber for fuel & coal section MBOA and capital spares by keeping these expenditures under exclusion. In terms of the 2014 Tariff Regulations, the expenditure towards capital spares and MBOAs are not allowed for the purpose of tariff. However, the exclusion of corresponding positive entries arising in books of accounts are allowed for the purpose of tariff. Accordingly, an amount of Rs.662.96 lakh i.e. (Rs.675.19 - Rs.12.23) on cash basis is allowed under exclusion.

De-capitalization of MBOA (Part of capital cost)

39. The Petitioner has de-capitalized MBOA amounting to Rs.67.88 lakh in 2015-16 in books of accounts. The Petitioner has submitted that the capitalization of MBOA items is not allowed in respect of the generating station and, hence, the de-capitalized MBOA items are claimed under exclusion. It is pertinent to mention that the capitalization of MBOAs is not allowed after the cut-off date. There is no bar on the generator to procure MBOAs before the cut-off date and as such MBOAs allowed for the purpose of tariff are required to be de-capitalized as and when they are removed from service. It is noticed that the amount pertaining to MBOA form part of the capital cost of the generating station for the purpose of tariff. Hence, the exclusion of Rs.67.88 lakh on account of de-capitalization is not justifiable and, accordingly, the same is not allowed for the purpose of tariff.



De-capitalization of MBOA (Not part of capital cost)

40. The Petitioner has de-capitalized MBOA amounting to (-) Rs.91.59 lakh in 2015-16 in books of accounts. The Petitioner has sought exclusion of de-capitalization for Rs.0.50 lakh towards furniture & fixtures, Rs.88.64 lakh for EDP WP machines & SATCOM. Rs.0.47 lakh for hospital equipment and Rs.1.98 lakh on communication equipment for the purpose of tariff. The Petitioner has submitted that items capitalized before 2014 (i.e. some of the EDP WP machines & SATCOM hospital equipment and communication equipment) were not allowed by the Commission in its order dated 11.1.2010 in Petition No.123/2009 (NTPC Limited vs UPPCL & Ors.), Order dated 4.2.2014 in Petition No.137/GT/2013 (NTPC Limited vs Transmission Corporation of Andhra Pradesh Limited & ors) and Order dated 8.8.2016 in Petition No.219/GT/2014 (NTPC Limited vs APPCC & ors.) respectively at the time of capitalization and, hence, their de-capitalization has been claimed under exclusion. The Petitioner has further submitted that for de-capitalization of MBOA capitalized during 2014-19 tariff period (i.e. for furniture & fixtures and some of the EDP WP machines & SATCOM), the capitalization of MBOA beyond the cut-off date is not admissible in terms of the 2014 Tariff Regulations. Accordingly, in the present case, the capitalization and de-capitalization of the aforesaid items are claimed under exclusion. The Petitioner has also submitted that de-capitalized assets are the ones whose capitalization was not allowed for the purpose of tariff, has been verified from the list of assets de-capitalized during the year 2015-16 (Form-9Bi) and it has been observed that these assets were put to use after the cut-off date which reflects the fact that their capitalization was not considered for the purpose of tariff. Accordingly, the exclusion of de-capitalization of Rs.91.59 lakh is in order and allowed.



Inter-Unit Transfer

41. The Petitioner has excluded an amount of Rs.8.67 lakh in 2015-16 on account of inter-unit transfer and has submitted that the items under inter-unit transfer were not considered by the Commission for the purpose of tariff and, hence, kept under exclusion. The Petitioner has not furnished the reference of the Commission's order in which the inter-unit transfer was disallowed by the Commission for the purpose of tariff. In view of above, the exclusion of Rs 8.67 lakh on account of inter-unit transfer is not allowed.

42. Based on the above discussion, the summary of exclusions allowed/ not allowed on cash basis for the year 2015-16 for the purpose of truing-up of tariff is as under:

<i>(Rs. in lakh)</i>	
Exclusions claimed on cash basis (A)	496.80
Exclusions allowed on cash basis (B)	573.35
Exclusion not allowed (A-B)	(-) 76.55

Exclusions claimed for 2016-17

Head of Work/ Equipment	<i>(Rs. in lakh)</i>				
	Accrual basis	Additional capital expenditure claimed under Exclusion			
Ind-AS adjustment		Accrual as per IGAAP	Un-discharged liability included	Cash basis	
Items not claimed					
Capitalisation of spares	696.39	0.00	696.39	22.31	674.09
De-capitalisation other than de-capitalisation of Spares	(-)0.37	(-)0.65	(-)1.02	0.00	(-)1.02
Indian AS Adjustment (Overhauling)	1324.95	(-)1324.95	0.00	0.00	0.00
Total Exclusion	2020.98	(-)1325.61	695.37	22.31	673.07

Capitalization of Spares

43. The Petitioner has procured spares amounting to Rs.696.39 lakh including un-discharged liability of Rs.22.31 lakh in 2016-17. As capitalization of spares over and above the initial spares procured after the cut-off date of the generating station is not allowed for the purpose of tariff as they form part of O&M expenses as and



when consumed, the Petitioner has excluded the said amount. Accordingly, the exclusion of the amount under this head is in order and allowed.

De-capitalization other than de-capitalization of spares

44. The Petitioner has de-capitalized certain assets (other than spares) of gross value amounting to Rs.1.02 lakh including digital turbidity meter, conductivity meter and portable PH meter in 2016-17. In justification of the same, the Petitioner has submitted that the capitalization of these items as replacements is not being allowed for the generating station. Hence, the corresponding de-capitalization is being claimed as exclusion. After examination, it is observed that the assets for which exclusion has been sought, Rs.0.53 lakh has been recovered by the Petitioner as depreciation till the date of de-capitalization. As such, the amount pertains to assets (i.e. digital turbidity meter, conductivity meter and portable PH meter) which form part of the capital cost of the generating station for the purpose of tariff. Hence, the exclusion of Rs.1.02 lakh in 2016-17, on account of de-capitalization, is not allowed for the purpose of tariff.

45. Based on the above discussion, the summary of exclusions allowed/ not allowed, on cash basis, for 2016-17 tariff is as under:

<i>(Rs. in lakh)</i>	
Exclusions claimed on cash basis (A)	673.07
Exclusions allowed on cash basis (B)	674.09
Exclusion not allowed (A-B)	(-)1.02

Exclusions claimed for 2017-18

(Rs. in lakh)

Head of Work/ Equipment	Additional capital expenditure claimed under exclusion				
	Accrual basis	Ind-AS adjustment	Accrual as per IGAAP	Undischarged liability included (included in column 3)	Cash basis
(2)	(3)	3A	3B=3+3A	(4)	(5=3B-4)
Items not claimed					
Capitalisation of spares	152.51	1.55	154.06	14.96	137.55
Capitalisation of MBOA	2.19	0.00	2.19	0.00	2.19
De-capitalisation of Spares:	(-)7.67		(-)7.67		(-)7.67



not part of capital cost					
De-capitalisation of MBOAs: part of capital cost	(-)6.79	(-)25.53	(-)32.32	0.00	(-)32.32
De-capitalisation of MBOAs: not part of capital cost	(-)31.90	(-)52.31	(-)84.21	0.00	(-)84.21
Inter Unit Transfers	(-)5.80	(-)0.43	(-)6.23	0.00	(-)6.23
Overhauling	72.52	(-)72.52	0		0.00
Total Exclusion	175.06	(-)149.24	25.82	14.96	9.31

Capitalization of Spares

46. The Petitioner has procured spares amounting to Rs.154.06 lakh after Ind-AS adjustment including un-discharged liability of Rs.14.96 lakh in 2017-18. As capitalization of spares over and above the initial spares procured after the cut-off date of the generating station are not allowed for the purpose of tariff as they form part of O&M expenses as and when consumed, the Petitioner has excluded the said amount. Accordingly, the exclusion of Rs.137.55 lakh on cash basis, under this head is in order and allowed.

De-capitalization of Spares (not part of capital cost)

47. The Petitioner has de-capitalized spares amounting to (-) Rs.7.67 lakh in 2017-18 in books of accounts. In justification of the same, the Petitioner has submitted that capitalization of spares beyond the cut-off date of the generating station is not admissible in terms of the 2014 Tariff Regulations. Accordingly, the capitalization of these spares has been claimed under exclusion. It is observed from the list of de-capitalized assets that the de-capitalized spares were capitalized in books of accounts after the cut-off date and as such do not form part of the capital cost for the purpose of tariff. Accordingly, the exclusion of de-capitalization of Rs.7.67 lakh on cash basis is in order and allowed.

Capitalization of MBOA

48. The Petitioner has procured MBOA amounting to Rs.2.19 lakh in 2017-18. As capitalization of MBOA procured after the cut-off date of the generating station is not



allowed for the purpose of tariff, the Petitioner has excluded the said amount. Accordingly, the exclusion of the said amount under this head is in order and allowed.

De-capitalization of MBOA (Part of capital cost)

49. The Petitioner has de-capitalized MBOA amounting to Rs.32.32 lakh after Ind-AS adjustment in 2017-18 in books of accounts. The Petitioner has sought exclusion for de-capitalization of furniture & fixtures, EDP, WP machines and SATCOM for the purpose of tariff. After examining the exclusions sought on de-capitalization of MBOA, it is noticed that an amount of Rs.5.54 lakh for furniture & fixtures and Rs.13.27 lakh for EDP WP machines & SATCOM has been recovered as depreciation. The amount pertains to MBOA which were put to use and capitalized in books of accounts by the Petitioner during the 2004-05 tariff period and 2005-06 tariff period i.e. before the cut-off date of the generating station (31.3.2006) and formed part of the capital cost of the generating station for the purpose of tariff. Hence, the exclusion of Rs.32.32 lakh, on cash basis, in 2017-18 on account of de-capitalization of MBOA is not justified and the exclusion of corresponding negative entries is not allowed for the purpose of tariff.

De-capitalization of MBOA (not part of capital cost)

50. The Petitioner has de-capitalized MBOA amounting to Rs.84.21 lakh after Ind-AS adjustment in 2017-18 in books of accounts. The Petitioner has sought exclusion for de-capitalization of furniture & fixtures other office equipment, communication equipment, and hospital equipment for the purpose of tariff. In justification of the same, the Petitioner has submitted that MBOA (capitalized before the year 2014) were not allowed by the Commission in its order dated 11.1.2010 in Petition No.123/2009 (NTPC Limited vs UPPCL & ors.), Order dated 4.2.2014 in Petition No.137/GT/2013 (NTPC Limited vs Transmission Corporation of Andhra Pradesh



Limited & Ors.) and order dated 8.8.2016 in Petition No.219/GT/2014 (NTPC Limited vs APPCC & ors) at the time of capitalization. Hence, their de-capitalization has been claimed under exclusion. Further, de-capitalization of MBOA (which was capitalized during 2014-19 tariff period) beyond the cut-off date is not admissible as per the 2014 Tariff Regulations. Accordingly, capitalization and de-capitalization of the aforesaid items are claimed under exclusion. Since the de-capitalized assets of Rs.84.21 lakh claimed under exclusion were put to use and were capitalized in books of accounts between the period from 2007-08 to 2016-17 i.e. after the cut-off date of the generating station, the capitalization of these MBOA do not form part of the capital cost considered for the purpose of tariff. Accordingly, the exclusion of de-capitalization of Rs.84.21 lakh, on cash basis, is in order and allowed.

Inter-Unit Transfer

51. An amount of Rs.6.23 lakh has been excluded on account of inter-unit transfer in 2017-18. The Petitioner has submitted that the items under inter-unit transfer were not considered by the Commission for the purpose of tariff and, hence, kept under exclusion. The Petitioner has not furnished the reference of the Commission's order in which the inter-unit transfer was disallowed by the Commission for the purpose of tariff. In view of above, the exclusion of Rs 6.23 lakh, on cash basis, in 2017-18 on account of inter-unit transfer is not allowed.

52. Based on the above discussion, the summary of exclusions allowed/ not allowed on cash basis for the year 2017-18 for the purpose of truing-up of tariff, is as under:

<i>(Rs. in lakh)</i>	
Exclusions claimed on cash basis (A)	9.31
Exclusions allowed on cash basis (B)	47.86
Exclusion not allowed (A-B)	(-) 38.55



Exclusions claimed in 2018-19

(Rs. in lakh)

Head of Work / Equipment	Additional capital expenditure claimed under Exclusion				
	Accrual basis	Ind-AS adjustment	Accrual as per IGAAP	Undischarged Liability included	Cash basis
Items not claimed					
Capitalisation of spares	374.32	0.00	374.32	12.39	361.93
De-capitalisation of spares: not part of capital cost	(-)48.73	(-)14.11	(-)62.84	0.00	(-)62.84
De-capitalisation of MBOAs: not part of capital cost	(-)0.57	0.00	(-)0.57	0.00	(-)0.57
Inter Unit Transfers	(-)1.79	0.00	(-)1.79	0.00	(-)1.79
Overhauling	1065.97	(-)1065.97	0.00	0.00	0.00
Total Exclusions	1389.20	(-)1080.08	309.12	12.39	296.73

Capitalization of Spares

53. The Petitioner has procured spares amounting to Rs.374.32 lakh including undischarged liability of Rs.12.39 lakh in 2018-19. As capitalization of spares over and above initial spares procured after the cut-off date of the generating station are not allowed for the purpose of tariff as they form part of O&M expenses as and when consumed, the Petitioner has excluded the said amount. Accordingly, the exclusion of Rs.361.93 lakh (Rs.374.32 - Rs.12.39), on cash basis, is in order and allowed.

De-capitalization of Spares (Not part of capital cost)

54. The Petitioner has de-capitalized spares amounting to Rs.62.84 lakh after Ind-AS adjustment in 2018-19 in books of accounts. In justification of the same, the Petitioner has submitted that it has claimed de-capitalization of spares amounting to Rs.23.54 lakh which were put to use during 2010 to 2013 under exclusion as these were not allowed by the Commission in its orders dated 4.2.2014 and 8.8.2016 in Petition No.137/GT/2013 (NTPC Limited vs Transmission Corporation of Andhra Pradesh Limited & ors.) and Petition No.219/GT/2014 (NTPC Ltd. vs APPCC) respectively at the time of capitalization. Further, in respect of exclusion of an amount of Rs.39.30 lakh, the Petitioner has submitted that capitalization of spares beyond the cut-off date of the generating station is not admissible in terms of the



2014 Tariff Regulations. Accordingly, in the present case, the capitalization and de-capitalization of these spares are claimed under the exclusion. It is noticed from the list of assets de-capitalized [Form (9Bi)] that these spares were procured for the period from 2010-11 to 2016-17 i.e. beyond the cut-off date of the generating station. Therefore, they do not form part of the capital cost considered for the purpose of tariff. Accordingly, the exclusion of de-capitalization of Rs.62.84 lakh, on cash basis, in 2018-19 is in order and allowed.

De-capitalization of MBOA (not part of capital cost)

55. The Petitioner has de-capitalized MBOA amounting to Rs.0.57 lakh after Ind-AS adjustment in 2018-19 in books of accounts. In justification of the same, the Petitioner has submitted that capitalization of MBOA beyond the cut-off date of the generating station is not admissible in terms of the 2014 Tariff Regulations. Accordingly, in the present case, the capitalization of these items has been claimed under exclusion. It is noticed from the list of assets de-capitalized [Form (9Bi)] that these MBOAs were procured in 2015-16. Since these de-capitalized MBOAs were capitalized in books of accounts and put to use by the Petitioner in 2015-16 i.e. after the cut-off date, it do not form part of the capital cost considered for the purpose of tariff. Accordingly, the exclusion of de-capitalization of Rs.0.57 lakh on cash basis in 2018-19 is in order and allowed.

Inter-Unit Transfer

56. An amount of Rs.1.79 lakh in 2018-19 has been excluded on account of inter-unit transfer. The Petitioner has submitted that items under inter-unit transfer were not considered by the Commission for tariff purpose and, hence, kept under exclusion. The Petitioner has not furnished the reference of the Commission's order in which the inter-unit transfer was disallowed by the Commission for the purpose of



tariff. In view of above, the exclusion of the amount of Rs 1.79 lakh, on cash basis, in 2018-19 on account of inter-unit transfer is not allowed.

57. Based on the above discussion, the summary of exclusions allowed/ not allowed on cash basis, for 2018-19 is as under:

<i>(Rs. in lakh)</i>	
Exclusions claimed on cash basis (A)	296.73
Exclusions allowed on cash basis (B)	298.52
Exclusion not allowed (A-B)	(-) 1.79

58. Accordingly, the summary of exclusions allowed/ not allowed, on cash basis, for the 2014-19 tariff period is as under:

<i>(Rs in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Exclusions claimed on cash basis (A)	921.13	496.80	673.07	9.31	296.73
Exclusions allowed on cash basis (B)	931.34	573.35	674.09	47.86	298.52
Exclusion not allowed on cash basis (A-B)	(-)10.21	(-)76.55	(-)1.02	(-)38.55	(-)1.79

Ind-AS Adjustment (Overhauling)

59. The Petitioner has kept amounts of Rs.1324.95 lakh in 2016-17, Rs. 72.52 in 2017-18 and Rs.1065.97 lakh in 2018-19 along with Indian Accounting Standard (Ind-AS) adjustment value (zero on net basis) under exclusion for overhauling and has submitted that the same is on account of change in accounting standards. The Commission has consistently allowed additional capital expenditure for the purpose of tariff based on historical cost (i.e. IGAAP). The Petitioner has not claimed the impact of IND-AS in this petition. In view of above, the Petitioner's claim on IGAAP has been considered for the purpose of tariff.

Foreign Exchange Rate Variation (FERV)

60. The Petitioner in Form-9A has claimed additional capital expenditure towards package FERV for the period 2014-17 (the corresponding claim on cash basis is 'nil'). The Commission while dealing with the tariff petitions for additional capital



expenditure in respect of other generating stations for the Petitioner had in earlier orders allowed FERV as part of additional capital expenditure. Accordingly, the same is allowed for the purpose of tariff.

Discharge of liabilities

61. The Petitioner has claimed discharge of liabilities amounting to Rs.36.88 lakh in 2015-16, Rs.751.58 lakh in 2016-17, Rs.4.86 lakh in 2017-18 and Rs.11.44 lakh in 2018-19. However, considering the details of discharges as provided in the liability flow statement, the admissible discharges works out to Rs.36.88 lakh in 2015-16, Rs.751.88 lakh in 2016-17 and Rs.14.69 lakh in 2018-19.

Reversal of Liability

62. The Petitioner has claimed reversal of liability of Rs.1778.90 lakh against the liability reversal of Rs.1630.72 lakh in 2015-16 as mentioned in the liability flow statement. The Petitioner has submitted that the tariff allowed is on cash basis and accordingly reversal of liabilities has been kept under exclusion. In view of this, the differential and the un-reconciled de-capitalization of Rs.148.18 lakh has been disallowed for the purpose of tariff.

Net additional capital expenditure allowed

63. Based on the above, the net additional capital expenditure allowed for the purpose of tariff is as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Additional capital expenditure allowed on Projection basis in Petition No.268/GT/2014	742.00	0.00	0.00	0.00	1600.00
Additional capital expenditure allowed after True-up of additions (a)	728.58	0.00	38.49	0.00	0.00
Deletion in the books claimed and allowed (b)	(-)73.22	(-)156.90	(-)34.72	(-)105.25	(-)200.40
Exclusions in deletion not allowed (c)	(-)10.21	(-)76.55	(-)1.02	(-)38.55	(-)1.79
Net additional capital expenditure allowed for the purpose of tariff after	645.15	(-) 233.45	2.75	(-)143.80	(-) 202.19



True up (d)=(a)+(b)+(c)					
Add: Discharges of Liabilities	0.00	36.88	751.88	0.00	14.69
Add: Un-reconciled reversal of liabilities	0.00	(-) 148.18	0.00	0.00	0.00
Net Additional capital expenditure	645.15	(-) 344.75	754.63	(-) 143.80	(-) 187.50

Capital Cost for the 2014-19 tariff period

64. The capital cost approved for the 2014-19 tariff period is as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	156863.30	157508.45	157163.70	157918.33	157774.53
Add: Additional capital expenditure	645.15	(-) 344.75	754.63	(-) 143.80	(-) 187.50
Closing Capital Cost	157508.45	157163.70	157918.33	157774.53	157587.03
Average Capital Cost	157185.87	157336.07	157541.01	157846.43	157680.78

Debt–Equity Ratio

65. Regulation 19 of the 2014 Tariff Regulations provides as under:

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014 the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost equity in excess of 30% shall be treated as normative loan:

Provided that: i. where equity actually deployed is less than 30% of the capital cost actual equity shall be considered for determination of tariff:

ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.

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

(2)The generating company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014 debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014 but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014 the Commission shall approve



the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

66. Accordingly, the gross loan and equity amounting to Rs.109804.31 lakh and Rs.47058.99 lakh respectively as on 1.4.2014 as considered vide order dated 8.11.2016 in Petition No.268/GT/2014 has been considered as gross loan and equity as on 1.4.2014.

Return on Equity

67. Regulation 24 of the 2014 Tariff Regulation 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 kilometer.”*

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



“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

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

69. The Respondent KSEBL has submitted that the additional capital expenditure claimed by the Petitioner is not in order and, accordingly, the claim for return on equity may be disallowed. The Respondent has further submitted that Regulation 24 of the 2014 Tariff Regulations stipulates that the rate of return on equity shall be reduced by 1.00% if the generating station has not implemented Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO) data telemetry communication system up to load dispatch center or protection system. Accordingly, it has prayed that the rate of return on equity may be fixed only based on the achievement of the operation of RGMO/FGMO data telemetry and communication system. The Petitioner, while pointing out that COD of the generating station is 25.3.2005, has submitted that Regulation 24 of the 2014 Tariff Regulations



is applicable only in respect of projects whose COD occurs during the 2014-19 tariff period. We have considered the submissions of KSEB and the Petitioner. Return on Equity has been worked out in terms of Regulations 24 and 25 of the 2014 Tariff Regulations as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Notional Equity - Opening	47058.99	47252.53	47149.11	47375.50	47332.36
Addition of Equity due to additional capital expenditure	193.55	(-) 103.42	226.39	(-) 43.14	(-) 56.25
Normative Equity - Closing	47252.53	47149.11	47375.50	47332.36	47276.11
Average Normative Equity	47155.76	47200.82	47262.30	47353.93	47304.24
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate	20.961%	21.342%	21.342%	21.342%	21.549%
Rate of Return on Equity (Pre Tax)	19.610%	19.705%	19.705%	19.705%	19.758%
Return on Equity (Pre Tax) - (annualized)	9247.24	9300.92	9313.04	9331.09	9346.37

Interest on loan

70. 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 up to the date of de-capitalization of such asset

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

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

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

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

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



(7) The generating company or the transmission licensee as the case may be shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such refinancing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee as the case may be in the ratio of 2:1.

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

(9) In case of dispute any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 as amended from time to time including statutory re-enactment thereof for settlement of the dispute: Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

71. The Respondent KSEBL has submitted that the Petitioner has not furnished the details of gains on account of refinancing of loan and gain due to operational parameters. Accordingly, the Respondent has prayed that the Commission may direct the Petitioner to furnish the aforesaid information. The Petitioner, in its rejoinder, has clarified that no re-financing of loan was done for the generating station and that the sharing of gains due to operational parameters has always been shared in the ratio of 60:40 between the generating station and beneficiaries.

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

- i) The gross normative loan amounting to Rs.109804.31 lakh has been considered as on 1.4.2014;
- ii) Cumulative repayment of Rs.78959.41 lakh as on 1.4.2014 as considered in order dated 8.11.2016 in Petition No.268/GT/2014 has been considered;
- iii) Accordingly, the net normative opening loan as on 1.4.2014 works out to Rs.30844.90 lakh;
- iv) Addition to normative loan on account of additional capital expenditure approved above has been considered;
- v) Depreciation allowed has been considered as repayment of normative loan during the respective years of 2014-19 tariff period. Further, proportionate adjustment has been made to the repayments corresponding to discharges and reversal of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009. Also, repayments have been adjusted for de-capitalization of assets considered for the purpose of tariff;



- vi) In line with the provisions of the regulation stated above, the weighted average rate of interest has been calculated by applying the actual loan portfolio existing as on 1.4.2014 along with subsequent additions during the 2014-19 tariff period, if any, for the generating station. In case of loans carrying floating rate of interest, the details of rate of interest as provided by the Petitioner has been considered for the purpose of tariff. Further, it is observed that in case of CBI-II loan the Petitioner has claimed rate of interest of 10.25% for 2014-15 and 9.886% for 2015-16, as against the applicable fixed rate of interest of 7.00% and the same has been adjusted accordingly. Further, in case of loan drawl from LIC-III, the Petitioner has changed the nomenclature of these loans from LIC-III (T4D1) and LIC-III (T4D4) as considered in order dated 8.11.2016 in Petition No.268/GT/2014 to LIC-III (T2D3) and LIC-III (T2D6) respectively and has also additionally claimed upfront fee of 0.0158% in the rate of interest for these loans. The Petitioner, during the previous tariff period of 2009-14 (trued-up tariff allowed in Petition No.219/GT/2014) had neither claimed nor was allowed any upfront fee towards these loans. Accordingly, the loan details corresponding to LIC-III loan as considered in order dated 8.11.2016 in Petition No. 268/GT/2014 has been considered for the purpose of tariff.

73. Necessary calculation of interest of loan is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan	109804.31	110255.91	110014.59	110542.83	110442.17
Cumulative repayment of loan up to previous year / period	78959.41	87250.00	95849.66	104212.39	107022.76
Net Loan Opening	30844.90	23005.91	14164.93	6330.44	3419.41
Addition on account of additional capital expenditure	451.61	(-) 241.32	528.24	(-) 100.66	(-) 131.25
Repayment of loan during the year	8335.24	8347.29	8357.31	2903.97	2899.34
Less: Repayment adjustment on account of de-capitalization	44.65	130.93	23.07	93.60	140.18
Add: Repayment adjustment on account of discharges / reversals corresponding to un-discharged liabilities deducted as on 1.4.2009	0.00	383.29	28.48	0.00	3.55
Net Repayment	8290.59	8599.65	8362.73	2810.37	2762.71
Net Loan Closing	23005.91	14164.93	6330.44	3419.41	525.45
Average Loan	26925.40	18585.42	10247.69	4874.93	1972.43
Weighted Average Rate of Interest on Loan	8.2040%	8.1208%	8.1342%	8.1912%	8.3656%
Interest on Loan	2208.95	1509.28	833.57	399.31	165.01

Depreciation

74. 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 license as the case may be shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) 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.”



75. The cumulative depreciation amounting to Rs.79105.69 lakh as on 31.3.2014 as considered in the Commission's order dated 8.11.2016 in Petition No. 268/GT/2014 has been considered for the purpose of tariff. Accordingly, the balance depreciable value (before providing depreciation) for the year 2014-15 works out to Rs.62361.60 lakh. The generating station has completed useful life of 12 years from COD of the generating station (25.3.2005) during the year 2016-17. Accordingly, for the period 2014-17, depreciation has been calculated by applying weighted average rate of depreciation and for the period 2017-19, depreciation has been calculated by spreading over of the remaining depreciable value over the balance useful life for the respective years. It is noted that the Petitioner has claimed depreciation considering the weighted average rate of depreciation of 5.2930% for 2014-15 and 5.31% for 2015-17 and for the period 2017-19 depreciation has been claimed by spreading over of the remaining depreciable value over the balance useful life for the respective years. However, considering the details of assets as submitted vide Form-11 vis-à-vis the rates of depreciation as specified in Appendix-II to the 2014 Tariff Regulations, the weighted average rate of depreciation (WAROD) works out as 5.3028% for 2014-15, 5.3054% for 2015-16, 5.3048% for 2016-17, 1.8397% for 2017-18 and 1.8387% for 2018-19. The calculation of WAROD is enclosed as Annexure-I to this order. The same has been considered for the purpose of tariff. Necessary calculations in support of depreciation are as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (A)	156863.30	157508.45	157163.70	157918.33	157774.53
Additional capital expenditure (B)	645.15	(-)344.75	754.63	(-)143.80	(-)187.50
Closing Capital Cost [C = (A+B)]	157508.45	157163.70	157918.33	157774.53	157587.03
Average Capital Cost [D = (A+C)/2]	157185.87	157336.07	157541.01	157846.43	157680.78
Value of freehold land included above (E)	0.00	0.00	0.00	0.00	0.00
Aggregated depreciable	141467.28	141602.47	141786.91	142061.79	141912.71



value [F = (D-E) X 90%]					
Remaining aggregate depreciable value at the beginning of the year [F - Cumulative Depreciation (Shown at N) at the end of previous year]	62361.60	54206.19	45791.07	37703.22	34743.77
Number of completed years at the beginning of the year (G)	9.02	10.02	11.02	12.02	13.02
Balance useful life at the beginning of the year (H)	15.98	14.98	13.98	12.98	11.98
Weighted Average Rate of Depreciation (WAROD) (I)	5.3028%	5.3054%	5.3048%	1.8397%	1.8387%
Combined Depreciation during the year (J)	8335.24	8347.29	8357.31	2903.97	2899.34
Cumulative Depreciation at the end of the year (before adjustment for de-capitalization) [K = J + Cumulative Depreciation (shown at N) at the end of previous year]	87440.93	95743.57	104353.16	107262.54	110068.28
Add: Cumulative Depreciation adjustment on account of un-discharged liabilities deducted as on 1.4.2009 (L)	0.00	383.21	28.48	0.00	3.55
Less: Depreciation adjustment on account of de-capitalization (M)	44.65	130.93	23.07	93.60	140.18
Cumulative depreciation at the end of the year/period [N = (K + L - M)]*	87396.28	95995.84	104358.56	107168.94	109931.65

*Note: The Cumulative Depreciation at the end of 2013-14 is Rs.79105.69 lakh.

O & M Expenses

76. The Commission in its order dated 8.11.2016 in Petition No.268/GT/2014 had allowed O & M expenses as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses allowed	8000.00	8505.00	9040.00	9610.00	10215.00
Water Charges allowed	326.73	326.73	326.73	326.73	326.73
Total O&M Expenses	8326.73	8831.73	9366.73	9936.73	10541.73

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



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses under Regulation 29(1) of the 2014 Tariff Regulations	8000.00	8505.00	9040.00	9610.00	10215.00
O&M expenses under Regulation 29(2) of the 2014 Tariff Regulations	0.00	0.00	0.00	0.00	0.00
Water Charges	351.01	371.33	538.75	378.13	443.72
Capital Spares	73.22	156.90	35.74	112.92	263.24
Sub-total O&M Expenses	8424.23	9033.23	9614.49	10101.05	10921.96
Impact of Pay revision	0.00	21.84	1136.79	1293.53	1294.16
Impact of GST	0.00	0.00	0.00	89.97	127.05
Total O&M Expenses	8424.23	9055.07	10751.28	11484.55	12343.17

78. The Respondent TANGEDCO in its reply has submitted that the additional information furnished by the Petitioner towards O&M expenses has not been certified by the Auditor. Accordingly, it has prayed that the Commission may direct the Petitioner to furnish the said information duly certified by Auditor. The Petitioner, in its rejoinder, has clarified that the breakup of the actual O&M expenses incurred for the 2014-19 tariff period are in the auditor certified balance sheet.

79. The normative O&M expenses claimed in terms of Regulation 29(1)(a) of the 2014 Tariff Regulations were allowed vide order dated 8.11.2016 in Petition No.268/GT/2014. Accordingly, the same is allowed for the purpose of trueing-up of tariff of the generating station for the 2014-19 tariff period.

Water Charges

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

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

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

81. 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. The Commission vide ROP of the hearing dated 13.8.2020 has directed the Petitioner to furnish the following information:

“ To furnish year-wise computation for the water charges claimed for the tariff period 2014-19 including (i) actual quantity of water consumed (ii) rate (in Rs./M³) charged by the State authorities (iii) cost of electricity consumed for pumping water from Yellampally project to NTPC reservoir if it forms part of the water charges claimed and in that event the Auditor certificate to the effect that the cost of electricity was booked under the head of ‘water charges’ during the period from 2008-09 to 2012-13 and (iv) any other cost which form part of the water charges claimed.

xxxx”

82. In compliance to the above direction, the Petitioner vide affidavit dated 4.11.2020 has submitted the year-wise computation of the water charges including the (i) actual quantity of water consumed, (ii) rate (in Rs./M³) charged by the State authorities, and (iii) cost of electricity consumed for pumping water from Yellampally project to NTPC reservoir forming part of the water charges for the generating station as under:

(Rs. in lakh)

Year	Actual quantity of water consumed in cubic metres	Rate (in Rs./M ³) inclusive of cost of pumping	Cost of water	Cost of electricity consumed for pumping water	Total
2014-15	14518544	2.363	151.70	191.31	343.01
2015-16	10099029	3.520	208.81	146.64	355.44
2016-17	13177959	3.959	292.34	229.42	521.76
2017-18	9192616	3.916	230.14	129.82	359.96
2018-19	10133564	4.230	248.09	180.51	428.60

83. The Petitioner, vide affidavit dated 4.11.2020, has also submitted that the Irrigation Department of the Government of Telangana is supplying raw water to the Petitioner from Sripada Yellampalli Project (SYP). It has stated that water pumping system for the Petitioner started in August 2012 and since then, water is being supplied to NTPC reservoir as and when water is available in SYP as per the requirement and accordingly power charges are being paid. The Petitioner has stated that prior to this, water was supplied from Sri Ramsagar Project (SRSP) which is under natural drift irrigation scheme and no power charges were paid for the same. The details furnished by the Petitioner for 2012-13 are as under:



(Rs. in lakh)

	Actual quantity of water consumed in cubic metres	Rate (in Rs./M3)	Cost of water	Cost of electricity consumed for pumping water	Total
RSTPS-I&II	74300022	1.491	710.23	397.37	1107.60
RSTPS-III	17690482	1.491	169.10	94.61	263.71
Total	91990504	1.491	879.34	491.98	1371.31

84. The Petitioner has submitted that an amount of Rs.1371.31 lakh in 2012-13 was paid towards water charges operation, out of which, an amount of Rs.491.98 lakh was paid towards power charges for the period from August 2012 to March 2013 in respect of the project. Further, for 2012-13, an amount of Rs.263.71 lakh was paid towards water charges, out of which an amount of Rs.94.61 lakh was paid towards power charges for the period from August 2012 to March 2013 for Stage-III of the project. The apportionment of water charges for different stages of the Project (Ramagundam STPS-Stages I II & III) have been done based on the capacity of the generating station. The Commission vide its order dated 8.11.2016 in Petition No.268/GT/2014 had considered and allowed water charges of Rs.326.73 lakh per year for the 2014-19 tariff period, on provisional basis. The Petitioner vide affidavit dated 4.11.2020, has claimed water charges based on actual water consumption and pumping charges duly audited as under:

(Rs. in lakh)

	Units	2014-15	2015-16	2016-17	2017-18	2018-19
Type of Cooling Tower	-	IDCT				
Type of Cooling Water System	-	Closed Cycle				
Water Contracted	Mcft	6500				
Actual water drawl (A)	Mcft	2814.22	2013.63	2569.25	1861.73	1981.97
Rate of water charges (B)	Rs./Mcft	28030.00	53922.80	59168.38	64281.43	65090.96
Water charges paid (C) = (A)x(B)	Rs./lakh	788.83	1085.80	1520.18	1196.74	1290.08
Special charges (power bills) as per agreement (D)	Rs./lakh	1036.43	845.11	1281.33	763.40	1017.27
Total water Charges Paid (E)= (C+D)	Rs./lakh	1825.26	1930.91	2801.51	1966.25	2307.35
Apportioned to RSTPS-I&II (out of E)	Rs./lakh	1474.25	1559.58	2262.76	1588.13	1863.63
Apportioned to RSTPS-III (out of E)	Rs./lakh	351.01	371.33	538.75	378.13	443.72



85. It is observed that water charges claimed as per computation submitted by the Petitioner vide affidavit dated 4.11.2020 are lower than the year-wise claim of water charges, duly certified by Auditor. The Petitioner has also submitted calculation of water charges for 2012-13, excluding the township water charges. Accordingly, the water charges has been allowed as under:

(Rs. in lakh)

Year	Water charges allowed vide order dated 8.11.2016 in Petition No.268/GT/2014 (A)	Water charges as per Auditor's certificate and main Petition (B)	Water charges claimed (C)
2014-15	326.73	351.01	343.00
2015-16	326.73	371.33	355.44
2016-17	326.73	538.75	521.76
2017-18	326.73	378.13	359.96
2018-19	326.73	443.72	428.60

Capital Spares

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

“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”.

87. In terms of the above proviso, capital spares consumed are admissible separately, at the time of truing up of tariff, based on the details furnished by the Petitioner. The Petitioner has claimed total capital spares amounting to Rs. 642.02 lakh (i.e. Rs. 73.22 lakh in 2014-15, Rs. 156.90 lakh in 2015-16, Rs. 35.74 lakh in 2016-17, Rs. 112.92 lakh in 2017-18 and Rs. 263.24 lakh in 2018-19) as per values shown in column A of the table below and has segregated the total consumption of spares forming part of the capital cost (column B) and not forming part of capital cost (column C) duly certified by Auditor.



(Rs. in lakh)

Year	Value of capital spares claimed (A)	Consumed capital spares which are part of the capital cost (B)	Consumed capital spares which are not the part of capital cost (C)
2014-15	73.22	73.22	0.00
2015-16	156.90	156.90	0.00
2016-17	35.74	34.72	1.02
2017-18	112.92	105.25	7.67
2018-19	263.24	200.39	62.85

88. We have examined the list of the capital spares consumed as furnished by the Petitioner. It is evident from the audited statement of the respective years filed by the Petitioner that the capital spares claimed comprised of two categories i.e. (i) spares which form part of the capital cost of the project and (ii) spares which do not form part of the capital cost of the project. In respect of capital spares which form part of the capital cost of the project, the Petitioner has been recovering tariff since their procurement and, therefore, the same cannot be allowed as part of the additional O&M expenses. Accordingly, only those capital spares which do not form part of the capital cost of the project are being considered in this order. It is pertinent to mention that the term 'capital spares' has not been defined in the 2014 Tariff Regulations. The term capital spares, in our view, is a piece of equipment or a spare part of significant cost that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt. Keeping in view the principle of materiality and to ensure standardized practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs.1 (one) lakh, on prudence check of the details furnished by the Petitioner in Form-17 of the petition, has only been considered for the purpose of tariff. The Commission is also of the view that spares of value less than Rs. one lakh would normally form part of normal repair and maintenance expenses. Based on this, the details of the capital spares considered for the 2014-19 tariff period is summarized as follows:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Capital Spares claimed (not part of capital cost) (A)	0.00	0.00	1.02	7.67	62.84
Value of capital spares (of Rs.1 lakh and below) disallowed on individual basis (B)	0.00	0.00	1.02	0.00	0.00
Net total value of capital spares considered (C) = (A-B)	0.00	0.00	0.00	7.67	62.84

89. No capital spares (which are not part of capital cost) have been consumed for 2014-15 and 2015-16. For 2016-17, 2017-18 and 2018-19, the net total value of capital spares consumed has been allowed as indicated in the table under paragraph 88 above.

90. Also, considering the fact that the original value of capital spares taken out of service is neither available nor has been furnished by the Petitioner for the 2014-19 tariff period, we are of the view that the salvage value of the capital spares being replaced is required to be deducted from the net total value of capital spares considered during the 2014-19 tariff period. In view of the above, the salvage value of 10% has been deducted from the net total value of capital spares considered during the 2014-19 tariff period. Accordingly, the net capital spares allowed is summarized as follows:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Net total value of capital spares considered (A)	0.00	0.00	0.00	7.67	62.84
Salvage value @ 10% (B)	0.00	0.00	0.00	0.76	6.28
Net value of capital spares allowed (C) = (A)-(B)	0.00	0.00	0.00	6.91	56.56

Additional O&M expenses on account of Goods and Service Tax

91. The Petitioner has claimed additional O&M expenses of Rs.89.97 lakh in 2017-18 and Rs.127.05 lakh in 2018-19 on account of payment of Goods and Service Tax (GST). The Respondent, TANGEDCO has submitted that the Petitioner has not furnished the data showing details of the Plant and Machinery or the goods which



entailed additional liability towards GST. It has, therefore, submitted that in absence of any relevant documents with Auditor's certificate supporting the additional liability towards claim of the Petitioner for recovery of impact of GST may be disallowed. Similar submissions have been made by the Respondent KSEBL. The Petitioner in its rejoinder has clarified that the Commission in its order dated 14.3.2018 in Petition No.13/SM/2017 and the Appellate Tribunal for Electricity in its judgment dated 14.8.2018 in Appeal No. 111 of 2017 (GMR Warora Energy vs CERC & Ors.) had observed that GST is a change in law event. Accordingly, the Petitioner has prayed that the Commission may allow the claim of the Petitioner on account of impact of GST.

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

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

93. Further, the escalation rates considered in the O&M expense norms is only after accounting for the variations during the past five years of the 2014-19 tariff period, which in our view, takes care of any variation in taxes also. It is pertinent to mention that in case of reduction of taxes or duties, no reimbursement is ordered. In this background, we find no reason to grant additional O&M expenses towards payment of GST. Accordingly, the claim of the Petitioner is not allowed.



Additional O&M Expenses on account of impact of Pay Revision

94. The Petitioner has claimed amount of Rs.21.84 lakh in 2015-16, Rs.1136.79 lakh in 2016-17, Rs.1293.53 lakh in 2017-18 and Rs.1294.16 lakh in 2018-19 as additional O&M expenses on account of the impact of pay revision of employees of CISF and Kendriya Vidyalaya Staff from 1.1.2016 and the employees of the Petitioner posted in the generating station with effect from 1.1.2017. However, it is noticed that the said claim of the Petitioner includes the impact on account of the payment of additional PRP/ ex-gratia to its employee's consequent upon wage revision. As such, as per consistent methodology adopted by the Commission of excluding PRP/ ex-gratia from actual O&M expenses of past data for finalization of O&M norms for various tariff settings, the additional PRP/ ex-gratia paid, as a result of wage revision impact, has been excluded from the wage revision impact claimed by the Petitioner in the present case. Accordingly, the claim of the Petitioner in respect of wage revision impact stands reduced to Rs.3380.74 lakh with the following year-wise break-up.

	<i>(Rs. in lakh)</i>				
	2015-16	2016-17	2017-18	2018-19	Total
Wage revision impact claimed (excluding PRP/ex-gratia)	21.84	1136.79	1212.32	1009.80	3380.74

95. The Respondent TANGEDCO has submitted that the Petitioner has not furnished the statement showing the existing basic pay and the revised basic pay in respect of non-executives and workmen executives. It has further submitted that the Petitioner has not furnished any statement showing the excess of expenditure incurred beyond the normative O&M expenses allowed by the Commission vide its order dated 8.11.2016 in Petition No.268/GT/2014. Placing reliance on the order dated 11.7.2017 in Petition No.135/GT/2015 (NLC Tamil Nadu Power Limited vs Transmission Corporation of Andhra Pradesh & ors.), the Respondent has submitted that the revenue expenses due to the deployment of security forces has been



included in the normative O&M expenses. With regard to the claim of the Petitioner towards wage revision of Kendriya Vidyalaya (KV) staff, the Respondent has submitted that KV staff are not direct employees of the Petitioner and the expenses towards 'maintenance of school' form part of the employee welfare cost which is covered under O&M expenses allowed as per regulations. Similar submissions have been made by the Respondent KSEBL. The Petitioner has clarified that the increase in salaries and wages which form part of the O&M expenses were notified after the framing of the 2014 Tariff Regulations and, therefore, was not considered while specifying the normative O&M expense norms. The Petitioner has further submitted that the increase in wages is due to the implementation of the 7th Pay Commission which was communicated vide Office Memorandum (OM) of DPE dated 3.8.2017. The Petitioner has also submitted that Regulation 29(1)(a) of the 2014 Tariff Regulations provides for O&M expenditure norms which includes the employees cost besides Repair & Maintenance and Administrative & General expenses. The Petitioner has further submitted that the revision in salary and wages for employees and the staff of CISF and KV from 1.1.2017 and 1.1.2016 respectively is a necessary expenditure as the employees of CISF provide safety to the generating station which is located in remote areas and the Kendriya Vidyalaya is the only government school for the project. The Petitioner has also submitted that the Commission has allowed the impact of pay revision vide its order dated 12.10.2012 in Petition No.35/MP/2011 (NTPC vs. WBSEDCL & Ors.), order dated 11.12.2012 in Petition No.201/MP/2011 (Neyveli Lignite Corporation Limited Chennai vs. TANGEDCO & Ors.) and order dated 1.1.2013 in Petition No.101/MP/2010 (PGCIL vs. Bihar State Electricity Board Patna & Ors.). Accordingly the Petitioner has prayed to allow the increase in the O&M expenses due to pay revision under Regulation 54



(Power to relax) and Regulation 55 (Power to remove difficulty) of the 2014 Tariff Regulations.

96. The Commission, while specifying the O&M expense norms under the 2014 Tariff Regulations, had considered the actual O&M expense data for the period from 2008-09 to 2012-13. However, considering the submissions of the stakeholders, the Commission in the Statement of Object and Reasons (SOR) to the 2014 Tariff Regulations had observed that the increase in employees cost due to impact of pay revision impact will be examined on a case to case basis balancing the interest of generating stations and the consumers. The relevant extract of SOR is extracted 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 macro economics 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.

33.2 The draft Regulations provided for a normative percentage of employee cost to total O&M expenses for generating stations and transmission system with an intention to provide a ceiling limit so that the same should not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission shall examine the increase in employee expenses on case to case basis and shall consider the same if found appropriate to ensure that overall impact at the macro level is sustainable and thoroughly justified. Accordingly clause 29(4) proposed in the draft Regulations has been deleted. The impact of wage revision shall only be given after seeing impact of one full year and if it is found that O&M norms provided under Regulations are inadequate/insufficient to cover all justifiable O&M expenses for the particular year including employee expenses then balance amount may be considered for reimbursement.”

97. In the present case, the Commission vide ROP of the hearing dated 13.8.2020 had directed the Petitioner to furnish the following information:

“To furnish (i) the detailed breakup of the actual O&M incurred during 2014-19 tariff period (including any arrear paid after 31.3.2019 towards wage revision) in the same



format which was issued by the Commission to generating stations for furnishing the actual O&M expenditure data for the period 2008-09 to 2012-13 (ii) comparative table indicating the actual O&M expenditure versus normative O&M expenses allowed to the instant station for 2014-19 tariff period (iii) Auditor certified statement with respect to wage revision impact including employee cost before the wage revision and employee cost after wage revision.

xxxx”

98. In compliance to the said direction, the Petitioner vide affidavit dated 4.11.2020 has furnished the detailed break-up of the actual O&M expenses incurred during the 2014-19 tariff period (including any arrear paid after 31.3.2019 on account of pay revision) for combined Stages (Stages-I II and III) of the generating station tabulated as under:

<i>(Rs. in lakh)</i>						
Sl. No.	Items	2014-15	2015-16	2016-17	2017-18	2018-19
1	Consumption of stores & spares	9466.48	9614.17	9038.34	9199.69	9953.25
2	Repair & Maintenance	9959.57	8855.58	10678.25	11435.12	12210.29
3	Insurance	837.44	735.46	701.34	662.59	636.63
4	Security	2018.65	2454.40	3086.40	3254.96	3657.47
5	Water Charges	1825.26	1930.91	2801.51	1966.25	2307.35
6	Administrative Expenses					
6.1	Rent	0.00	0.00	0.00	0.00	0.00
6.2	Electricity charges	514.78	485.73	458.29	472.70	459.61
6.3	Travelling & Conveyance	872.78	838.69	800.69	703.32	932.81
6.4	Communication Expenses	101.05	150.43	152.66	139.49	270.37
6.5	Advertising	22.43	11.37	28.56	16.53	22.14
6.6	Foundation Laying & Inauguration	0.00	0.00	0.00	0.00	0.00
6.7	Donation	0.00	0.00	0.00	0.00	0.00
6.8	Entertainment	47.88	56.61	64.45	80.55	266.21
6.9	Filing fee	114.40	114.40	114.40	114.40	114.40
	Subtotal (Administrative Expenses)	1673.32	1657.24	1619.05	1527.01	2065.55
7.0	Employee Cost					
7.1.1	Salaries Wages & Allowances	15568.26	15126.17	16905.27	18666.37	17125.23
7.1.2	Pension	1315.42	1344.69	1248.77	836.03	1007.66
7.1.3	Gratuity	(-)106.22	(-)56.05	3206.86	840.57	757.02
7.1.4	Provident Fund	1261.28	1277.16	1264.96	1212.05	1559.43
7.1.5	Leave Encashment	1732.47	1784.37	2370.14	1791.49	2304.73
7.2	Staff welfare expenses					
7.2.1	-Medical expenses on	3.39	6.87	0.00	1.59	1.61
7.2.2	-Medical expenses on regular	1500.32	1794.92	1438.89	1373.67	1413.39
7.2.3	-Uniform/Liveries & safety	272.94	266.78	344.44	272.18	547.30
7.2.4	-Canteen expenses	237.21	224.06	243.22	288.63	394.45
7.2.5	-Other staff welfare expenses	297.44	313.44	451.63	336.41	679.61
	Subtotal (Staff welfare Expenses)	2311.30	2606.07	2478.18	2272.48	3036.37
7.3	Productivity linked Incentive	376.81	250.78	0.00	(-)0.01	(-)0.02
7.4	Expenditure on VRS	186.63	0.00	0.00	0.00	417.86



7.5	Ex-gratia	1581.92	1478.40	1699.73	2693.33	2723.21
7.6	Performance Related Pay (PRP)	0.00	0.00	0.00	0.00	0.00
	Sub Total (Employee Cost)	24227.88	23811.60	29173.90	28312.33	28931.49
8	Loss of Store	1.65	1.94	1.93	0.74	0.59
9	Provisions	99.97	93.81	50.74	3052.09	432.04
10	Prior Period Expenses	33.23	19.17	0.00	0.00	0.00
11	Corporate Office expenses	7221.94	7434.97	7600.07	8910.85	9703.26
12	Others					
12.1	Rates & Taxes	123.90	122.89	125.42	401.49	443.67
12.2	Water cess	108.42	75.81	87.33	14.41	7.69
12.3	Training & recruitment expenses	85.08	63.12	81.99	91.10	100.22
12.4	Tender Expenses	157.59	108.68	91.35	112.92	18.66
12.5	Guest house expenses	24.02	62.27	95.07	130.02	126.75
12.6	Education expenses	254.27	20.63	24.81	92.74	60.89
12.7	Community Development	479.37	2368.03	1341.84	1132.56	1144.66
12.8	Ash utilisation expenses	136.06	(-)10.16	(-)27.88	(-)3.36	(-)5.11
12.9	Books & Periodicals	2.65	2.83	1.18	2.86	0.91
12.10	Professional Charges	59.35	69.42	92.20	82.44	108.64
12.11	Legal expenses	39.74	13.31	8.86	33.11	59.16
12.12	EDP Hire & other charges	90.08	83.34	84.95	92.88	170.09
12.13	Printing & Stationery	68.48	66.06	67.23	44.69	36.85
12.14	Misc. Expenses	913.40	957.60	655.17	805.25	812.79
	(Break-up Of Misc.)					
12.14.1	-Horticulture	130.91	132.37	196.83	211.21	170.48
12.14.2	-RLDC Fee & Charges	401.61	38.24	145.40	148.60	186.17
12.14.3	-Brokerage & Commission	30.72	30.87	22.48	51.76	73.23
12.14.4	-Transport-Vehicle Running exp.	2.07	0.96	0.36	0.21	0.57
12.14.5	-Hire charges & Operating exp - Construction Equipment	0.00	0.00	0.00	0.00	0.00
12.14.6	-Tree Plantation exp.	7.88	0.00	0.00	0.00	0.65
12.14.7	-R&D expenses	1.40	441.43	0.00	22.88	7.37
12.14.8	-Bank Charges	3.60	2.01	2.48	2.47	19.15
12.14.9	-Others	335.21	311.73	287.62	368.12	355.17
	Sub Total (Others)	2542.41	4003.82	2729.52	3033.12	3085.86
13	(Total 1 to 12)	59907.78	60613.07	67481.05	71354.75	72983.78
14	Revenue / Recoveries	(-)97.37	(-)101.51	(-)98.48	(-)95.29	(-)92.31
15	Net Expenses	59810.41	60511.56	67382.57	71259.46	72891.48
16	Capital spares consumed					
17	Total O&M Expenses	59810.41	60511.56	67382.57	71259.46	72891.48
18	Total O&M Expenses excluding water charges	57985.15	58580.65	64581.06	69293.21	70584.13

99. The Respondent TANGEDCO has submitted that the details of the corporate expenses are not certified by Auditor. The Petitioner, in its rejoinder, has clarified that corporate expenses form part of the O&M expenses which are derived from the auditor certified balance sheet.



100. The methodology indicated in the SOR quoted above suggests a comparison of the normative O&M expenses with the actual O&M expenses, on a year to year basis. However, in this respect, the following facts need consideration:

- a) The norms are framed based on the averaging of the actual O&M expenses of past five years to capture the year on year variations in sub-heads of O&M;
- b) Certain cyclic expenditure may occur with a gap of one year or two years and as such adopting a longer duration i.e. five years for framing of norms also captures such expenditure which is not incurred on year to year basis;
- c) Then generating companies find that their actual expenditure has gone beyond the normative O&M expenses in a particular year put departmental restrictions and try to bring the expenditure for the next year below the norms.

101. As such, in consideration of above facts, we find it appropriate to compare the normative O&M expenses with the actual O&M expenses for a longer duration so as to capture the variation in the sub-heads. Accordingly, it is decided that for ascertaining that whether the O&M expense norms provided under the 2014 Tariff Regulations are inadequate/ insufficient to cover all justifiable O&M expenses including employee expenses, the comparison of the normative O&M expenses and the actuals O&M expenses incurred shall be made for 2015-19 on a combined basis which is commensurate with the wage revision claim being spread over these four years.

102. In addition to the additional information sought vide ROP dated 13.8.2020, the Commission vide ROP of the hearing dated 13.4.2021 directed the Petitioner to submit the following:

- a) Breakup of actual O&M expenditure for the tariff period 2014-19 under various subheads (as per Annexure-A enclosed) after including the pay revision impact (employees CISF and KV) wage revision impact (minimum wages). (To be provided in both MS Excel and PDF format);
- b) Break-up of actual O&M expenses including pay revision impact for Corporate Centre/other offices & breakup of claimed wage revision impact on employee cost expenses on corporate centre and on salaries of CISF & KV employee of the generating station (as per Annexure-B & Annexure-C enclosed) for the 2014-19 tariff period along with the allocation of the total



O&M expenses to the various generating stations under construction operational stations and any other offices along with basis of allocating such expenditure.(to be provided in both MS Excel and PDF format);

103. In response, the Petitioner vide affidavit dated 31.5.2021 has furnished the above details in respect of all the stages of the generating station (2600 MW) including the Stage-III of the generating station (500 MW) for which the present true-up tariff has been filed. The Petitioner has also submitted the following:

- a) Detailed break-up of the actual O&M expenses for all the stages of the generating station (2600 MW) as well corporate center and its allocation to various generating stations;
- b) Comparative table indicating the actual O&M expenses incurred for Stage –III of the generating station (*prorated* in the ratio of 500/2600 MW) against the normative O&M expenses allowed by the Commission during the 2014-19 tariff period for the generating station;
- c) Actual impact of pay revision certified by Auditor after comparing salaries/wages prior to and after pay revision of pay for the generating station (i.e. 500 MW).

104. The matter has been examined on the basis of the submissions of the parties and the documents available on record. The Petitioner has furnished the detailed break-up of the actual O&M expenses incurred during 2014-19 tariff period for combined stages i.e. Stage-I, II and III of the generating station (2600 MW). It is noticed that the total O&M expenses incurred is more than the normative O&M expenses recovered during each year of the 2014-19 tariff period. The impact of the wage revision could not be factored by the Commission while framing the O&M expenses norms under the 2014-19 Tariff Regulations since the pay/ wage revision came into effect from 1.1.2016 (CISF & KV employees) and 1.1.2017 (employees of the Petitioner) respectively. As such, in terms of relevant provisions of SOR of the 2014 Tariff Regulations, the approach followed for arriving at the allowable impact of pay revision is given in the subsequent paragraphs.



105. First step is to compare the normative O&M expenses with the actual O&M expenses for the period from 2015-16 to 2018-19, commensurate to the period for which wage revision impact has been claimed. For like to like comparison, the components of O&M expenses like productivity linked incentive, water charges, filing fees, ex-gratia, loss of provisions, prior period expenses, community development, store expenses, ash utilization expenses, RLDC fee & charges and others (without breakup/ details) which were not considered while framing the O&M expenses norms for the 2014-19 tariff period, have been excluded from the yearly actual O&M expenses of the generating station as well as corporate centre. Having brought the normative O&M expenses and actual O&M expenses at same level, if normative O&M expenses for the period 2015-19 are higher than actual O&M expenses (normalized) for the same period, the impact of wage revision (excluding PRP and ex-gratia) as claimed for the period is not admissible/ allowed as the impact of pay revision gets accommodated within the normative O&M expenses. However, if the normative O&M expenses for the period 2015-19 are less than the actual O&M expenses (normalized) for the same period, the wage revision impact (excluding PRP and ex-gratia) to the extent of under recovery or wage revision impact (excluding PRP and ex-gratia), whichever is lower, is required to be allowed as wage revision impact for the period 2015-19.

106. In this regard, the details as furnished by the Petitioner for actual O&M expenses for Stage-I, II and III of the generating station (2600 MW) and wage revision impact (excluding PRP and ex-gratia) for Stage-III 500 MW of the generating station are as under:



(Rs. in lakh)

Sl. No		2014-15	2015-16	2016-17	2017-18	2018-19
1	Actual O&M expenses for generating station excluding water charges (2600 MW) (a)	57985.15	58580.65	64581.06	69293.21	70584.13
2	Actual O&M expenses for stage-III (500 MW) <i>(prorated)</i> (b)=(a)x500/2600 MW	11150.99	11265.51	12419.43	13325.62	13573.87
3	Normative O&M expenses (allowed vide order dated 8.11.2016 in Petition No. 268/GT/2014) (c)	8000.00	8505.00	9040.00	9610.00	10215.00
4	Under Recovery for stage-III (500 MW) (d)=(c)-(b)	(-)3150.99	(-)2760.51	(-)3379.43	(-)3715.62	(-)3358.87
5.	Wage revision impact claimed (excluding PRP and ex gratia) as given at paragraph 94 above	0.00	21.84	1136.79	1212.32	1009.80

107. As stated, for like to like comparison of the actual O&M expenses and normative O&M expenses, the expenditure against O&M expenses sub-heads as listed at paragraph 105 above, has been excluded from the actual O&M expenses to arrive at the actual O&M expenses (normalized) for the combined Stage-I, II and III of the generating station (2600 MW). Accordingly, the following table portrays the comparison of normative O&M expenses versus the actual O&M expenses (normalized) along with wage revision impact claimed by the Petitioner for the generating station (Stage-III 500 MW) for period 2015-19 (on combined basis) commensurate with the wage revision claim being spread over these four years:

(Rs.In lakh)

Sl. No		2015-16	2016-17	2017-18	2018-19	Total for 2015-19
1	Actual O&M expenses (normalized) for all stages of the generating station (2600 MW) (a)	52652.40	60387.91	60549.99	63592.34	237182.63
2	Actual O&M expenses (normalized) for Stage-III of the generating station <i>prorated</i> based on capacity (b)	10125.46	11613.06	11644.23	12229.30	45612.05
3	Normative O&M expenses for Stage-II of the generating	8505	9040	9610	10215	37370.00



	station (c)					
4	Under-recovery (d)=(c)-(b)	(-) 1620.46	(-) 2573.06	(-) 2034.23	(-) 2014.30	(-)8242.05
5	Wage revision impact claimed (excluding PRP/ex-gratia)	21.84	1136.79	1212.32	1009.80	3380.74

108. It is observed that for wage revision impact during the period 2015-19, the normative O&M expenses is less than the actual O&M expenses (normalized) and under-recovery is to the tune of Rs. 8242.05 lakh. The wage revision impact (excluding PRP/incentive) is of Rs.3380.74 lakh. As such, it implies that the normative O&M expenses were inadequate to meet the impact of wage revision. Accordingly, in terms of methodology described above, the wage revision impact (excluding PRP/incentive) of Rs.3380.74 lakh is allowable for Stage-III (500 MW) of the generating station.

109. Accordingly, we, in exercise of the Power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 29(1) of the 2014 Tariff Regulations, and allow the reimbursement of the wage revision impact amounting to Rs. 3380.74 lakh, as additional O&M expenses for the period 2015-19. The arrear payments on account of the wage revision impact is payable by the beneficiaries in twelve equal monthly installments during 2021-22. Keeping in view the consumer interest, we as a special case, direct that no interest shall be charged by the Petitioner on the arrear payments on the wage revision impact allowed in this order. This arrangement, in our view, will balance the interest of both the Petitioner and the Respondents. Also, considering the fact that the impact of wage revision is being allowed in exercise of the power to relax, the expenses allowed are not made part of the O&M expenses and the consequent annual fixed charges determined in this order.



110. Accordingly, the total O&M expenses (as apportioned to Stage-III of the generating station) allowed, after excluding the impact of GST, is summarized as under:

	<i>(Rs. In lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Normative O&M expenses claimed under the Regulation 29(1) of the 2014 Tariff Regulations (a)	8000.00	8505.00	9040.00	9610.00	10215.00
Normative O&M expenses allowed under the Regulation 29(1) of the 2014 Tariff Regulations (b)	8000.00	8505.00	9040.00	9610.00	10215.00
Water charges claimed under the Regulation 29(2) of the 2014 Tariff Regulations (c)	351.01	371.33	538.75	378.13	443.72
Water charges allowed under the Regulation 29(2) of the 2014 Tariff Regulations (d)	343.00	355.44	521.76	359.96	428.60
Capital spares claimed under the Regulation 29(2) of the 2014 Tariff Regulations (e)	73.22	156.90	35.74	112.92	263.24
Capital spares allowed under the Regulation 29(2) of the 2014 Tariff Regulations (f)	0.00	0.00	0.00	6.91	56.56
Total O&M expenses allowed as per Regulation 29 of the 2014 Tariff Regulations (b+d+f)	8343.00	8860.44	9561.76	9976.87	10700.16
Impact of Pay revision claimed	0.00	21.84	1136.79	1293.53	1294.16
Impact of Pay revision allowed	0.00	21.84	1136.79	1212.32	1009.80
Impact of GST claimed	0.00	0.00	0.00	89.97	127.05
Impact of GST allowed	0.00	0.00	0.00	0.00	0.00

Operational Norms

111. The operational norms in respect of the generating station i.e. normative annual plant availability factor, gross station heat rate, specific fuel oil consumption and auxiliary power consumption are discussed as under:

Normative Annual Plant Availability Factor

112. 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”

113. The Commission vide its order dated 8.11.2016 in Petitioner No.268/GT/2014 had allowed the Normative Annual Plant Availability Factor (NAPAF) of 83% for the period 2014-17 and 85% for the period 2017-19. The same is considered in the instant petition for the purpose of revision of tariff.

Gross Station Heat Rate (kcal/kwh)

114. In terms of the Regulation 36(C)(a)(i) of the 2014 Tariff Regulations, the Gross Station Heat Rate (GSHR) of 2375 kCal/kWh, as allowed vide order dated 8.11.2016 in Petition No.268/GT/2014 has been allowed.

Specific Oil Consumption

115. In terms of the Regulation 36(D)(a) of the 2014 Tariff Regulations, the Secondary fuel oil consumption of 0.50 ml/kWh for coal-based generating station allowed vide order dated 8.11.2016 in Petition No.268/GT/2014, has been considered in this order.

Auxiliary Power Consumption

116. In terms of Regulation 36(E)(a) of the 2014 Tariff Regulations, the Auxiliary power consumption of 5.75% as allowed vide order dated 8.11.2016 in Petitioner No.268/GT/2014 has been considered in this order.

Interest on Working Capital

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

“28 (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 Cost and Energy Charges for Working Capital calculations

118. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of cost of fuel as a part of IWC is to be based on the landed price and gross calorific value of the fuel as per actuals for the three months preceding the first month for which the tariff is to be determined.

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

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

(6) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formula:

(a) For coal based and lignite fired stations

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

(b) xxxxx

Where

AUX = Normative auxiliary energy consumption in percentage.

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

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

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

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

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



GHR =Gross station heat rate in kCal per kWh.

LC = Normative limestone consumption in kg per kWh.

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

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

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

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

Therefore, in terms of the above regulation, for determination of the Energy Charges in working capital, the GCV on 'as received 'basis is to be considered.

120. Regulation 30(7) of the 2014 Tariff Regulations provides as under:

“(7) The generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e. domestic coal imported coal e-auction coal lignite natural gas RLNG liquid fuel etc. as per the forms prescribed at Annexure-I to these regulations:

*Provided that the details of blending ratio of the imported coal with domestic coal proportion of e-auction coal and the weighted average GCV of the fuels **as received** shall also be provided separately along with the bills of the respective month:*

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal imported coal e-auction coal lignite natural gas RLNG liquid fuel etc. details of blending ratio of the imported coal with domestic coal proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months.”

121. The Regulations for computation of energy charges was challenged by the Petitioner and other generating issue of 'as received' GCV specified in Regulation 30 of the 2014 Tariff companies through various writ petitions filed before the Hon'ble High Court of Delhi (W.P. No.1641/2014-NTPC v CERC). The Hon'ble Court directed the Commission to decide the place from where the sample of coal should be taken for measurement of GCV of coal on 'as received' basis on the request of Petitioners. In terms of the directions of the Hon'ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 (approval of tariff of Kahalgaon STPS for the 2014-19 tariff period) decided as under:



“58. In view of the above discussion the issues referred by the Hon’ble High Court of Delhi are decided as under:

“(a) There is no basis in the Indian Standards and other documents relied upon by NTPC etc. to support their claim that GCV of coal on as received basis should be measured by taking samples after the crusher set up inside the generating station in terms of Regulation 30(6) of the 2014 Tariff regulations.

(b)The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic Auger in accordance with provisions of IS 436(Part1/Section1)-1964 before the coal is unloaded. While collecting the samples the safety of personnel and equipment as discussed in this order should be ensured. After collection of samples the sample preparation and testing shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436(Part1/Section1)-1964 which has been elaborated in the CPRI Report to PSERC.”

122. The Review Petition No.11/RP/2016 filed by the Petitioner against the aforesaid order dated 25.1.2016 in Petition No. 283/GT/2014 was rejected by the Commission vide order dated 30.6.2016. The Petitioner has also filed Petition No. 244/MP/2016 before this Commission inter alia praying for removal of difficulties in view of the issues faced by it in implementing the Commission’s orders dated 25.1.2016 and 30.6.2016 with regard to sampling of coal from loaded wagon top for measurement of GCV. The Commission by its order dated 19.9.2018 disposed of the preliminary objections of the respondents therein and held that the petition is maintainable. Against this order, some of the respondents have filed appeal before the APTEL in Appeal Nos. 291/2018 (GRIDCO v NTPC & ors) and the same is pending adjudication.

123. In Petition No. 268/GT/2014 filed by the Petitioner for determination of tariff of this generating station for the 2014-19 tariff period, the Petitioner had not furnished GCV of coal on ‘as billed’ and on ‘as received’ basis for the preceding 3 months i.e. for January 2014, February 2014 and March 2014 that were required for determination of Interest on Working Capital (IWC). Therefore, the Commission vide its order dated 8.11.2016 in Petition No.268/GT/2014 had considered GCV of coal on as ‘billed basis’ and provisionally allowed adjustment for total moisture while



allowing the cost of coal towards generation & stock and two months' energy charges in the working capital.

124. As per the Commission's order dated 25.1.2016 in Petition No. 283/GT/2014, the Petitioner in Form-13 F has considered the average GCV of coal on "as received basis" i.e. from wagon top for the period from October 2016 to March 2019 for the purpose of computation of working capital for the 2014-19 tariff period. The Petitioner has further submitted that CEA vide letter dated 17.10.2017 has opined that a margin of 85-100 kCal/kg for pit-head station and a margin of 105-120 kCal/kg for non-pit head station is required to be considered as loss of GCV of coal on "as received" and on "as fired basis respectively. Accordingly, the Petitioner has considered a margin of 120 kCal/kg on average GCV of coal for the period from October 2016 to March 2019 for computation of working capital of the generating station. Accordingly, the cost of fuel component in the working capital of the generating station based on (i) 'as received' GCV of coal for 30 months from October 2016 to March 2019 with adjustment of 120 kCal/kg towards storage loss, (ii) landed price of coal for preceding three months i.e. January 2014 to March 2014 and (iii) GCV and landed price of Secondary fuel oil procured for the preceding three months i.e. January 2014 to March 2014 for the generating station, the Petitioner has claimed the cost of fuel component in the working capital as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (30 days)	6127.91	6127.91	6127.91	6275.57	6275.57
Cost of Coal towards Generation (30 days)	6127.91	6127.91	6127.91	6275.57	6275.57
Cost of Secondary fuel oil 2 months	133.09	133.46	133.09	136.30	136.30

125. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of 219.926 paise/kWh for the generating station based on GCV and price of fuel (coal and secondary fuel oil) as indicated above.



126. Clarification was sought from the Petitioner on the details of GCV on 'as received' basis for the months of January 2014 to March 2014 which was uploaded in the website of the Petitioner and shared with the beneficiaries. The Petitioner vide affidavit dated 31.5.2021 has submitted that though the computation of energy charges moved from 'as fired' basis to 'as received' basis with effect from 1.4.2014 in terms of Regulation 30(6) of the 2014 Tariff Regulations, for calculation of IWC under Regulation 28(2) of the 2014 Tariff Regulations, the GCV should be as per 'actuals' for the three months preceding the first month for which tariff is to be determined. It has further submitted that for the 2014-19 tariff period, Regulation 28(2) of the 2014 Tariff Regulations unequivocally provide that the actual cost and GCV of the preceding three months shall be considered and for these preceding three months (January 2014 to March 2014) by virtue of it falling under the 2009 Tariff Regulations shall be computed on the basis of 'as fired' GCV. Referring to the judgment of the Hon'ble Supreme Court in PTC India v CERC (2010) 4 SCC 603 and the judgment of APTEL in NEEPCO v TERC (2006) APTEL 148, the Petitioner has submitted that the Commission is bound by the provisions of the tariff regulations and that purposive interpretation ought to be given to the 2014 Tariff Regulations and interest on working capital ought to be computed in terms of Regulation 28(2) of the 2014 Tariff Regulations on actual GCV i.e. 'as fired' GCV. The Petitioner has submitted that without prejudice to the above submissions, it has furnished the details of GCV on 'as received' basis for the months of January 2014 to March 2014 in compliance with the directions of the Commission as under:

Sl. No.	Month	Weighted Average GCV of coal received (EM basis) (kcal/kg) (A)	Total Moisture (TM) (in %) (B)	Equilibrated Moisture (EM) (in %) (C)	Weighted Average GCV of coal received (TM basis) (kcal/kg) D=A*(1-B%)/(1-C%)
1	January 2014	3960	11.86	5.96	3712
2	February 2014	4017	11.96	5.92	3759



3	March 2014	4046	11.92	5.97	3790
	Average				3754

127. The submissions have been considered. As stated in paragraph 124 above, the Petitioner in Form-13 F, has considered the average GCV of coal on “as received basis” i.e. from wagon top for the period from October 2016 to March 2019 for the purpose of computation of working capital for the 2014-19 tariff period. In addition to the average GCV, it has also considered a margin of 120 kCal/kg for computation of the working capital of the generating station.

128. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of cost of fuel as a part of IWC is to be based on the landed price and gross calorific value of the fuel, as per actuals, for the three months preceding the first month for which the tariff is to be determined. Thus, calculation of IWC for 2014-19 period is to be based on such values for months of January 2014, February 2014 and March 2014. The Petitioner has not been able to furnish these values at the time of determination of tariff for the 2014-19 tariff period in Petition No. 268/GT/2014. In the instant truing up petition, the Petitioner has proposed that instead of GCV for January 2014, February 2014 and March 2014, the Commission should consider the average values for months of October 2016 to March 2019 since the measurement of ‘as received’ GCV has been done in accordance with directions of the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014. In our view, the proposal of the Petitioner to consider the retrospective application of 30 months’ (October 2016 to March 2019) average of ‘as received’ GCV data in place of ‘as received’ GCV of the preceding three months (January 2014 to March 2014) is not acceptable, keeping in view that the average GCV for 30 months may not be commensurate to the landed cost of coal for the preceding three months to be considered for calculating IWC in terms of Regulation 28(2) of the 2014 Tariff



Regulations and that due to efflux of time (gap of 30 month), the quality of coal extracted from the linked mines would have undergone considerable changes. Also, the consideration of loss of GCV of 120 kCal/kg cannot be considered, as the same is not as per provisions of the 2014 Tariff Regulations.

129. It is observed that though the Petitioner has furnished the details of 'as received' GCV for the three months of January 2014 to March 2014 as in table under paragraph 126 above, it has submitted that GCV of fuel is to be considered 'on actuals' for January 2014 to March 2014 and as such, GCV is required to be considered on an 'as fired' basis. In other words, the Petitioner has contended that since the period of January 2014 to March 2014 falls in the 2009-14 tariff period for measurement of GCV of coal, Regulation 18(2) read with Regulation 21(6) of the 2009 Tariff Regulations was applicable which mandates that generating company shall measure GCV on 'as fired' basis (and not on 'as received' basis). This submission of the Petitioner is also not acceptable in view of provisions of Regulation 21(6) of the 2009 Tariff Regulations that was amended on 31.12.2012, by addition of the following provisos:

"The following provisos shall be added under Clause (6) of Regulation 21 of the Principal Regulations as under namely:

Provided that generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e. domestic coal imported coal e-auction coal lignite natural gas RLNG liquid fuel etc. as per the form 15 of the Part-I of Appendix I to these regulations:

*Provided further that the details of blending ratio of the imported coal with domestic coal proportion of e-auction coal and the weighted average GCV of the fuels **as received** shall also be provided separately along with the bills of the respective month:*

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal imported coal e-auction coal lignite natural gas RLNG liquid fuel etc. details of blending ratio of the imported coal with domestic coal proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months."



130. Thus, in terms of the above amendment to the 2009 Tariff Regulations, the details regarding the weighted average GCV of the fuels on 'as received' basis was also required to be provided by the Petitioner along with bills of the respective month. Also, bills detailing the parameters of GCV and price of fuel were to be displayed by the Petitioner on its website, on monthly basis.

131. As per SOR to the 2014 Tariff Regulations, we note that the main consideration of the Commission while moving from 'as fired' GCV to 'as received' GCV for the purpose of energy charges under Regulation 30(6) of the 2014 Tariff Regulations for the 2014-19 tariff period was to ensure that GCV losses which might occur within the generating station after receipt of coal are not passed on to the beneficiaries on account of improper handling and storage of coal by the generating companies. As regards the allowable (normative) storage loss within the generating station, CEA had observed that there is negligible difference between 'as received' GCV and 'as fired' GCV. As such, for the purpose of calculating energy charges, the Commission moved from 'as fired' GCV to 'as received' GCV under Regulation 30(6) of the 2014 Tariff Regulations without allowing any margin between the two measurements of GCV. Thus, 'as received' GCV was made applicable for the purpose of calculating working capital requirements based on the actual GCV of coal for the preceding three months of the first month for which tariff is to be determined in terms of Regulation 28(2) of 2014 Tariff Regulations. In case the submission of the Petitioner that 'as fired' is to be considered 'at actuals' for the preceding three months for purpose of IWC, the same would mean allowing (and passing through) all storage losses which would have occurred during the preceding three months (January 2014 to March 2014) for the 2014-19 tariff period. This, according to us, defeats the very purpose of moving from 'as fired' GCV to 'as received' GCV in the 2014 Tariff Regulations. In this background and keeping in view that in terms of



amended Regulation 21(6) of the 2009 Tariff Regulations, the Petitioner is required to share details of the weighted average GCV of the fuel on 'as received' basis, we consider the fuel component and energy charges for two months based on 'as received' GCV of the preceding three months (January 2014 to March 2014) for the purpose of computation of IWC in terms of Regulation 28(2) of the 2014 Tariff Regulations.

132. The Petitioner has calculated GCV of 3754 kCal/kg which represents simple average of GCVs of preceding three months. The weighted average GCV for three months based on the net coal quantities as per Form-15 of the petition and the monthly GCVs as submitted by the Petitioner (in the table above at paragraph 126 above) works out to 3752.11 kcal/kg.

133. It is further noticed that the Petitioner has claimed the cost of coal towards stock of 30 days (one of the components of working capital) which is applicable to non-pit head stations, whereas the generating station (Stage-III 500 MW) is a pit head station, for which cost of coal for 15 days stock only is allowable in terms of the 2014 Tariff Regulations. Similarly, while calculating the weighted average price of the coal, the Petitioner has used the Normative Transit and Handling loss of 0.8% which is applicable to non-pit head stations, whereas, the applicable Normative Transit and Handling loss for the generating station (stage-III 500 MW) which is a pit-head station is 0.2% only. Accordingly, the normative cost of coal for stock of 15 days and Normative Transit and Handling loss of 0.2% has been considered for the calculation of working capital requirements.

134. Accordingly, the cost for fuel components in working capital has been computed considering the fuel details (price and GCV) as per Form-15 of the petition except for 'as received' GCV of coal, which is considered as 3752.11 kCal/kg as



discussed above. All other operational norms such as Station Heat Rate Auxiliary Energy Consumption and Secondary Fuel Cost have been considered as per the 2014 Tariff Regulations for calculation of fuel components in working capital.

135. Based on the above discussion, the cost for fuel component in working capital is worked out and allowed as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (15 days)	2947.12	2947.12	2947.12	3018.14	3018.14
Cost of Coal towards Generation (30 days)	5894.25	5894.25	5894.25	6036.28	6036.28
Cost of Secondary fuel oil 2 months	133.10	133.46	133.10	136.30	136.30

136. The cost of coal towards stock and generation allowed for the 2014-19 tariff period is less than the cost claimed by the Petitioner for the following reasons:

- a) Cost of coal towards stock as considered by the Petitioner is for 30 days, whereas the Commission has considered the same for 15 days as applicable to pit-head stations;
- b) The Petitioner has considered average GCV of coal for 30 months as 3611.27 kCal/kWh (including adjustment of GCV of 120 kCal/kg) and weighted average price of coal as 3125.00 Rs/MT while the Commission has considered the same as 3752.11 kCal/kg and 3123.07 Rs/MT respectively. Storage loss of 120 kCal/kg as considered by the Petitioner has not been considered as there is no such provision in 2014 Tariff Regulations;
- c) The Petitioner has considered 'Normative Transit & Handling losses of 0.8%. However, the same has been restricted to 0.2% in terms of the 2014 Tariff Regulations.

Energy Charge Rate (ECR) for calculating working capital

137. Regulation 30(6)(a) of the 2014 Tariff Regulations provides for computation and payment of Energy Charge for thermal generating stations:

"6. Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:

$$(a) \text{ For coal based and lignite fired stations} \\ ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 \\ / (100 - AUX)$$

Where

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as received in kCal per kg per litre or per standard cubic metre as applicable.



CVSF = Calorific value of secondary fuel in kCal per ml.
 ECR = Energy charge rate in Rupees per kWh sent out.
 GHR = Gross station heat rate in kCal per kWh.
 LC = Normative limestone consumption in kg per kWh.
 LPL = Weighted average landed price of limestone in Rupees per kg.
 LPPF = Weighted average landed price of primary fuel in Rupees per kg per litre or per standard cubic metre as applicable during the month.
 SFC= Normative specific fuel oil consumption in ml/ kWh
 LPSFi= Weighted average landed price of secondary fuel in Rs/ ml during the month

138. The Petitioner has claimed ECR (ex-bus) of 219.926 paise/kWh for the generating station based on the average GCV of coal (average of 'as received' basis GCV for 30 months along with the margin of 120 kCal/kg) and oil procured and burnt for the preceding three months of 2014-19 tariff period for the generating station. Based on the above discussion, the allowable ECR has been worked out based on: (i) operational norms as specified in the 2014 Tariff Regulations, (ii) the weighted average 'as received' GCV (3752.11 kCal/kg) and price of coal (3123.07 Rs/MT) for the preceding three months and (iii) weighted average 'as received' GCV and price of oil for preceding three months as per Form-15 of the petition. Accordingly, ECR for the purpose of working capital has been worked out and allowed as under:

	Unit	
Capacity	MW	500
Gross Station Heat Rate	Kcal/kWh	2375.00
Aux. Energy Consumption	%	5.75
Weighted average GCV of oil	Kcal/lit	10075
Weighted average GCV of Coal	Kcal/kg	3752.11
Weighted average price of oil	Rs/KL	43934.48
Weighted average price of Coal	Rs/MT	3123.07
Rate of Energy Charge ex-bus	Rs/kWh	2.116

139. The Energy Charges for 2(two) months for the purpose of working capital have been worked out as under based on ECR of Rs.2.116/kWh:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
12083.65	12116.75	12083.65	12374.82	12374.82



140. Accordingly, the fuel component and energy charges allowed in working capital are as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal for 45 days	8841.37	8841.37	8841.37	9054.42	9054.42
Cost of Secondary fuel oil 2 months	133.10	133.46	133.10	136.31	136.31
Energy Charges for 2 months	12083.65	12116.75	12083.65	12374.82	12374.82

Working Capital for Maintenance Spares

141. The Petitioner vide Form-13B has claimed maintenance spares for working capital as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
	1684.85	1811.01	2150.26	2296.91	2468.63

142. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the O&M expenses as specified in the Regulation 29 of the 2014 Tariff Regulations. Accordingly, maintenance spares @20% of the O&M expenses is considered (including water charges and capital spares) and the same are allowed as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
	1668.60	1772.09	1912.35	1995.37	2140.03

Working Capital for Receivables

143. Receivables equivalent to two months of fixed charges and energy charges has been worked out and allowed as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - for two months	12083.65	12116.75	12083.65	12374.82	12374.82
Fixed Charges - for two months	5336.13	5320.41	5332.35	4416.74	4506.65
Total	17419.78	17437.16	17416.00	16791.56	16881.47



Working Capital for O & M Expenses

144. The O&M expenses for one month claimed by the Petitioner in Form-13B for the purpose of working capital are as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
702.02	754.59	895.94	957.05	1028.60

145. In terms of Regulation 28(a)(vi) of the 2014 Tariff Regulations, one month's O&M expenses allowed is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
695.25	738.37	796.81	831.41	891.68

146. There is difference in the O&M expenses (for 1 month) and maintenance spares claimed (in tables under paragraphs 141 and 144 of this order respectively) and the O&M expenses (for 1 month) and cost of maintenance spares allowed (in the tables under paragraphs 142 and 145 of this order). This is due to the fact that while the Petitioner's claim is based on O&M expenses inclusive of expenditure on impact of GST and impact of wage revision, these components have not been included in our calculations for working capital requirements

Interest on working capital

147. 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."

148. In terms of the above regulation, the rate of interest on working capital has been considered as 13.50%. Accordingly, Interest on working capital has been computed as under:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for Coal towards stock (15 days of generation)	2947.12	2947.12	2947.12	3018.14	3018.14
Working Capital for Coal towards Generation (30 days of generation)	5894.25	5894.25	5894.25	6036.28	6036.28
Working Capital for Secondary fuel oil (2 months of generation)	133.10	133.46	133.10	136.31	136.31
Working Capital for Maintenance Spares (20% of O&M expenses)	1668.60	1772.09	1912.35	1995.37	2140.03
Working Capital for Receivables (Two months of fixed charges & energy charges)	17419.78	17437.16	17416.00	16791.56	16881.47
Working Capital for O&M expenses (One month's O&M expenses)	695.25	738.37	796.81	831.41	891.68
Total Working Capital	28758.09	28922.45	29099.63	28809.06	29103.90
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	3882.34	3904.53	3928.45	3889.22	3929.03

Compensation Allowance

149. Regulation 17(1) of the 2014 Tariff Regulations provides as under:

“(1) Compensation Allowance: In case of coal-based or lignite-fired thermal generating station or a unit thereof a separate compensation allowance shall be admissible to meet expenses on new assets of capital nature which are not admissible under Regulation 14 of these regulations and in such an event revision of the capital cost shall not be allowed on account of compensation allowance but the compensation allowance shall be allowed to be recovered separately”.

150. The Commission vide order dated 8.11.2016 in Petition No. 268/GT/2014 had allowed Compensation Allowance of Rs.400 lakh for the period 2015-19 for the generating station. The Petitioner, in the present petition, has submitted that compensation allowance is utilized for assets of minor nature including MBOA and other items claimed as exclusions. The Respondent TANGEDCO has submitted that the Petitioner has not furnished any details with respect of the Compensation Allowance for 2016-17 and 2018-19. The details of Compensation Allowance allowed and incurred by the Petitioner in respect of the generating station is as under:



(Rs. in lakh)

Year	Amount allowed by the Commission	Amount utilized in other minor assets claimed under Exclusion	Remarks
2015-16	100	662.96	This includes furniture and fixtures other office equipment communication and hospital equipment software and spares etc.
2016-17	100	674.08	
2017-18	100	139.73	
2018-19	100	361.92	

151. The Petitioner has further submitted that the Compensation Allowance allowed by the Commission has been utilized in the funding of MBOA and other assets claimed under exclusion. It has also stated that the extra amount capitalized over and above the Compensation Allowance has been met from internal revenue. As such, the Compensation Allowance of Rs.100 lakh per year claimed for the period 2015-19 is allowed for the purpose of tariff.

Annual Fixed Charges

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

(Rs in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	8335.24	8347.29	8357.31	2903.97	2899.34
Interest on Loan	2208.95	1509.28	833.57	399.31	165.01
Return on Equity	9247.24	9300.92	9313.04	9331.09	9346.37
Interest on Working Capital	3882.34	3904.53	3928.45	3889.22	3929.03
O&M Expenses	8343.00	8860.44	9561.76	9976.87	10700.16
Compensation Allowance	0.00	100.00	100.00	100.00	100.00
Total	32016.78	32022.46	32094.13	26600.47	27139.90

153. The Petitioner has also filed Petition No. 244/MP/2016 seeking appropriate reliefs claiming difficulty faced by it in implementing Regulation 30(6) of the 2014 Tariff Regulations and the directions issued by the Commission in its order dated 25.1.2016 in Petition No. 283/GT/2014 and for consequential directions. The matter is presently pending adjudication of APTEL. In view of this, parameters of IWC and Energy charge allowed in this order are subject to the final decision of APTEL.



154. The difference between the annual fixed charges already recovered in terms of the Commission's order dated 8.11.2016 in Petition No. 268/GT/2014 and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 8 of the 2014 Tariff Regulations.

Summary

155. The total expenses allowed during the 2014-19 tariff period (on truing up) for the generating station are summarized as follows:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	32016.78	32022.46	32094.13	26600.47	27139.90
Wage revision impact (additional)	0.00	21.84	1136.79	1212.32	1009.80

156. Annexure-I given hereinafter shall form part of the order.

157. Petition No. 220/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(I.S Jha)
Member

Sd/-
(P.K. Pujari)
Chairperson



Depreciation for the period 2014-17 and 2017-19**(1) Depreciation for the period 2014-17***(Rs in lakh)*

Sr. No.	Assets Name	Depreciation Rate (As per Appendix-II)						
			Gross Block as on 1.4.2014	Depreciation amount	Gross Block as on 1.4.2015	Depreciation amount	Gross Block as on 1.4.2016	Depreciation Amount
1	Freehold Land	0.00%	-	-	-	-	-	-
2	Leasehold Land	3.34%	-	-	-	-	-	-
3	Roads Bridges Culverts & Helipad	3.34%	516.84	17.26	516.84	17.26	516.84	17.26
4	Main Plant Buildings	3.34%	4082.26	136.35	4082.26	136.35	4082.26	136.35
5	Other Buildings	3.34%	3584.81	119.73	3584.81	119.73	3584.81	119.73
6	Temporary Erection	100.00%	20.77	20.77	20.77	20.77	20.77	20.77
7	Plant and Machinery	5.28%	153173.87	8118.59	154348.36	8119.77	153218.77	8110.81
8	Furniture and Fixtures	6.33%	1279.84	82.13	1315.05	84.18	1344.63	85.12
9	Other Office Equipment	6.33%	855.20	56.37	925.81	60.64	990.17	62.68
10	EDP WP Machines & SATCOM Equipment	15.00%	765.73	121.95	860.30	126.18	822.08	123.31
11	Vehicles including Speedboats	9.50%	56.28	5.35	56.28	6.10	72.06	6.85
12	Construction Equipment	5.28%	-	1.55	58.57	3.09	58.57	3.09
13	Communication Equipment	6.33%	425.36	27.37	439.46	27.81	439.20	27.80
14	Hospital Equipment	5.28%	172.53	9.91	202.77	10.77	205.10	10.83
15	Laboratory and Workshop Equipment	5.28%	39.53	2.09	39.53	2.09	39.53	2.09
16	Leased Assets - Vehicles	9.50%	-	-	-	-	-	-
17	Software	15.00%	700.00	105.11	701.53	105.39	703.61	105.54
	Total		165673.02	8842.52	167152.33	8840.12	166098.39	8832.23
	Weightage Average Rate of Depreciation		5.3028%		5.3054%		5.3048%	



(2) Depreciation for the period 2017-19

(Rs in lakh)

Particulars	2017-18	2018-19
Opening Capital Cost (A)	157918.33	157774.53
Net Addition during the year/ period (B)	(-) 143.80	(-) 187.50
Closing Capital Cost [C = (A+B)]	157774.53	157587.03
Average Capital Cost [D = (A+C)/2]	157918.33	157774.53
Remaining Depreciable Value (E)	37703.22	34743.77
Balance Useful life of the plant (in years) (F)	12.98	11.98
Depreciation for the period [G = (E/F)]	2903.97	2899.34
Effective Weightage Average Rate of Depreciation [H = (G/D)]	1.8397%	1.8387%

