

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

**Petition No. 392/GT/2020
with IA No.39/2021**

Coram:

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

Date of Order: 29th March, 2023

IN THE MATTER OF

Petition for truing-up of tariff of Talcher Super Thermal Power Station, Stage-II (2000 MW) for the period 2014-19.

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 – 530 013 - (AP)
2. Andhra Pradesh Southern Power Distribution Company Limited,
Corporate Office, Back Side Srinivasa Kalyana Mandapam
Tiruchhanur Road, Kesavayana Gunta, Tirupathi- 517 503 (AP)
3. Telangana State Northern Power Distribution Company Limited,
H.No. 2-5-31/2, Vidyut Bhavan, Nakkalagutta, Hanamkonda
Warangal – 506 001 (AP)
4. Telangana State Southern Power Distribution Company Limited,
Mint Compound, Corporate Office, Hyderabad (AP) – 500 063
5. Tamil Nadu Generation & Distribution Corporation Limited,
144, Anna Salai, Chennai – 600002
6. Bangalore Electricity Supply Company Limited,
Krishna Rajendra Circle, Bangalore - 560 009



7. Mangalore Electricity Supply Company Limited,
MESCOM Bhavana, Corporate Office, Bejai,
Kavoor Cross Road, Mangaluru-575004, Karnataka
8. Chamundeshwari Electricity Supply Corporation Limited,
Corporate Office, No. 29, Vijayanagar, 2nd Stage, Hinkal,
Mysore-570017
9. Gulbarga Electricity Supply Company Limited,
Main Road, Gulbarga, Karnataka, Gulbarga-585 102
10. Hubli Electricity Supply Company Limited,
Corporate office, P.B. Road, Navanagar
Hubli – 580 025
11. Kerala State Electricity Board Limited,
Vaidyuthi Bhavanam, Pattom
Thiruvananthapuram – 695 004
12. Electricity Department, Puducherry
137, NSC Bose Salai
Puducherry- 605001
13. Grid Corporation of Orissa Limited,
Vidyut Bhavan, Janpath,
Bhubaneswar- 751022

...Respondents

Parties Present:

Ms. Swapna Seshadri, Advocate, NTPC
Shri Anand K. Ganesan, Advocate, NTPC
Ms. Ritu Apurva, Advocate, NTPC
Shri Jai Dhanani, Advocate, NTPC
Shri R.K.Mehta, Advocate, GRIDCO
Shri S. Vallinayagam, Advocate, TANGEDCO
Ms. B. Rajeswari, TANGEDCO
Ms. R. Ramalakshmi, TANGEDCO
Ms. R. Alamelu, TANGEDCO

ORDER

This petition has been filed by the Petitioner, NTPC Limited for truing up of tariff of Talcher Super Thermal Power Station, Stage-II (2000 MW) (in short 'the generating station') for the period 2014-19, in accordance with Regulation 8(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short 'the 2014 Tariff Regulations'). The generating station with a total capacity of



2000 MW comprises of four units of 500 MW each and the date of commissioning of the units are as under:

Unit-I	1.8.2003
Unit-II	1.3.2004
Unit-III	1.11.2004
Unit-IV	1.8.2005

2. The Commission vide its order dated 16.2.2017 in Petition 293/GT/2014 had approved the capital cost and the annual fixed charges of the generating station for the period 2014-19, as under:

Capital Cost allowed

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	528943.95	533012.94	540576.13	548593.25	553827.53
Add: Addition during the year/ period	4068.99	7563.19	8017.12	5234.28	20898.54
Closing capital cost	533012.94	540576.13	548593.25	553827.53	574726.07
Average capital cost	530978.44	536794.53	544584.69	551210.39	564276.80

Annual Fixed Charges allowed

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	27505.82	27807.1	28210.65	9278.1	10319.56
Interest on Loan	2316.91	653.07	0.00	0.00	181.02
Return on Equity	31237.46	31732.61	32193.12	32584.8	33357.22
Interest on Working Capital	10424.82	10541.26	10684.04	10579.18	10793.35
O&M Expenses	36000.68	38020.68	40414.72	42964.9	45672.23
Compensation Allowance	200.00	300.00	400.00	400.00	400.00
Total	107685.69	109054.73	111902.53	95806.98	100723.39

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

“8. Truing up

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

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

4. In terms of the above regulations, the Petitioner has filed this petition, for truing-up of tariff of the generating station for the period 2014-19 and has claimed the following annual fixed charges and capital cost:



Capital Cost claimed*(Rs. in lakh)*

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital cost	528943.95	539211.01	541793.71	545897.91	551341.76
Add: Addition during the year/period	9553.38	1987.87	3722.22	6782.14	7049.24
Less: Decapitalization during the year/period	121.65	12.73	409.77	1443.51	615.94
Add: Discharges during the year/period	835.33	607.56	791.75	105.22	382.65
Closing Capital Cost	539211.01	541793.71	545897.91	551341.76	558157.70
Average Capital cost	534077.48	540502.36	543845.81	548619.83	554749.73

Annual Fixed Charges claimed*(Rs. in lakh)*

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	27673.22	28006.67	28182.09	9098.82	9612.98
Interest on Loan	2454.68	797.23	0.00	0.00	0.00
Return on Equity	31421.38	31953.42	32151.08	32433.31	32882.23
Interest on Working Capital	14624.65	14782.13	15030.25	15153.92	15446.40
O&M Expenses	36229.21	38737.54	40345.99	43748.10	46167.19
Compensation Allowance	200.00	300.00	400.00	400.00	400.00
Total (A)	112603.15	114576.99	116109.41	100834.13	104508.80
Additional O&M Expenditure					
Impact of Pay Revision	0.00	38.31	2859.95	3771.91	4880.34
Impact of GST	0.00	0.00	0.00	391.16	499.23
Ash Transportation Expenditure	0.00	0.00	0.00	0.00	713.88
Total (Additional O&M) (B)	0.00	38.31	2859.95	4163.07	6093.45
Total (A+B)	112603.15	114615.30	118969.36	104997.20	110602.25

5. The Respondent TANGEDCO vide affidavits dated 9.12.2020 and 30.12.2020, the Respondent GRIDCO vide affidavits dated 7.6.2021, 25.6.2021, 19.7.2021, 8.9.2021, 2.2.2022, 1.10.2022 and 12.11.2022 and the Respondent KSEBL vide affidavit dated 7.6.2021 have filed their replies. The Petitioner has filed its rejoinders to the said replies vide affidavits dated 4.3.2021, 28.7.2021, 4.11.2022. The Petitioner has also filed the additional information vide affidavit dated 4.6.2021. The Commission vide ROP of the hearing dated 11.6.2021, directed the Petitioner to furnish certain additional information. In compliance to the same, the Petitioner has filed the additional information. The Petitioner has also filed IA No. 39/2021 vide affidavit dated 7.6.2021 seeking implementation of the judgment of APTEL dated 13.6.2007 and subsequently disposed of by the Hon'ble Supreme Court vide its order dated 10.4.2018 in Civil



Appeal Nos.3776/2011 and 8112/2011. Thereafter, the petition along with IA was heard on 4.1.2022 along and the Commission, after hearing the parties, reserved its order in the matter, after directing the Petitioner to submit certain additional information vide ROP dated 4.1.2022 and subsequently, vide letter 10.8.2022. In compliance to the above directions, the Petitioner has filed the additional information vide affidavit dated 7.3.2022 and 23.9.2022, after serving copies on the Respondents. Based on the submissions of the parties and the documents available on record and on prudence check, we proceed to revise the tariff for the period (in terms of the judgment of APTEL, for the periods 2004-09 and 2009-14) and for truing-up the tariff of the generating station for the period 2014-19, as stated in the subsequent paragraphs

Interlocutory Application

6. During the pendency of this petition, the Petitioner has filed Interlocutory Application (I.A.No. 39/IA/2021) seeking implementation of the judgments dated 18.8.2010 and 4.2.2011 of the Appellate Tribunal for Electricity ('APTEL') in Appeal Nos. 66/2008 and 192/2010 read with judgment dated 10.4.2018 of the Hon'ble Supreme Court in Civil Appeal No. 3776/2011 and Civil Appeal No. 8112/2011 (CERC v NTPC & ors). The background facts leading to implementation of the aforesaid judgments are narrated below:

7. Against the orders of the Commission determining tariff for various generating stations of the Petitioner for the period 2004-09, the Petitioner filed several appeals (Appeal Nos. 139 to 142, 151 to 156, 207, 216 to 218, 239 & 240/2006 and Appeal Nos. 10, 11 & 23/2007) before APTEL, on the following issues, amongst others:

- (a) Consequences of refinancing of loan;*
- (b) Treating of depreciation as deemed repayment of loan;*
- (c) Cost of maintenance spares related to additional capitalization;*
- (d) Depreciation availability up to 90% in the event of disincentive; and*
- (e) Impact of de-capitalization of assets on cumulative repayment of loan.*



8. APTEL vide its judgment dated 13.6.2007 allowed the prayers of the Petitioner on the above issues and remanded the matters to the Commission for re-determination of tariff of the generating stations of the Petitioner for the period 2004-09. Against the APTEL judgment dated 13.6.2007, the Commission filed several appeals (Civil Appeals C.A. Nos. 5434/2007 to 5452/2007 and 5622/2007) before the Hon'ble Supreme Court and the Hon'ble Court on 26.11.2007, stayed the operation of the judgment dated 13.6.2007, on the above issues. However, on 10.12.2007, the Hon'ble Supreme Court passed interim order as under:

“Learned Solicitor General appearing on behalf of the National Thermal Power Corporation stated that pursuant to the remand order, following five issues shall not be pressed for fresh determination:

- (a) Consequences of refinancing of loan;*
- (b) Treating of depreciation as deemed repayment of loan;*
- (c) Cost of maintenance spares related to additional capitalization;*
- (d) Depreciation availability up to 90% in the event of disincentive; and*
- (e) Impact of de-capitalization of assets on cumulative repayment of loan*

The Commission may, however, proceed to determine other issues.

It is clarified that this order shall apply to other cases also.

In view of this, the interim order passed by the Court on 26th November, 2007, is vacated. The interlocutory applications are, accordingly, disposed of.”

Orders of Commission

9. While so, in Petition No. 179/2004 filed by the Petitioner for determination of tariff of this generating station, for the period from 2004-09, the Commission by order dated 31.1.2008 disposed of the same. Subsequently, in Petition No.146/2008 filed by the Petitioner, the Commission by order dated 5.1.2010, revised the tariff of this generating station for the period 2004-09, considering the impact of additional capital expenditure incurred for the period 2004-08. Thereafter, in Petition No.138/2009, filed by the Petitioner, the Commission by order dated 19.2.2010, revised the tariff of this generating station, considering the impact of the additional capital expenditure for the period 2008-09.



Judgments of APTEL

10. Against the Commission's order dated 31.1.2008 in Petition No.179/2004, the Petitioner filed appeal (Appeal No. 66/2008) before APTEL, on the following issues, amongst others:

- (a) Exclusion of un-discharged liabilities*
- (b) Depreciation as deemed repayment of loan*
- (c) Interest During Construction*
- (d) Ignoring the amount of Opening capital cost as on 01.04.2004*

11. Similarly, against the Commission orders dated 5.1.2010 and 19.2.2010 (in Petition Nos. 146/2008 and 138/2009), the Petitioner filed appeals (Appeal No. 64/2010 and Appeal No.92/2010) before APTEL on issues (a) to (d) above, including the 'Cost of maintenance spares related to additional capitalization'.

12. Thereafter, APTEL vide its judgment dated 18.8.2010 in Appeal No. 66/2008 set aside the findings of the Commission and directed the re-examination of the issues namely (i) Un-discharged liabilities; (ii) Disallowance of IDC on notional loan; and (iii) Treatment of depreciation as deemed loan repayment, in the light of its judgment dated 13.6.2007 in Appeal Nos.139-142/2006 & batch, and the judgments dated 10.12.2008 and 16.3.2009 in Appeal Nos. 151 & 152/2007 (NTPC v CERC & ors), and Appeal Nos. 133,135, 136 and 148/2008 (NTPC v CERC & ors) respectively. Subsequently, APTEL vide its judgments dated 4.2.2011 and 18.7.2011 in Appeal Nos. 92/2010 and 64/2010 respectively, allowed the prayers of the Petitioner, on the aforesaid issues, which include the 'Cost of maintenance spares related to additional capitalization', in terms of its earlier judgments dated 13.6.2007 and 10.12.2008/ 16.3.2009, as aforesaid.



13. Against the judgment of APTEL dated 18.8.2010 in Appeal No. 66/2008, the Commission filed appeal (C.A. No.3776/2011) before the Hon'ble Supreme Court and the Hon'ble Court on 25.4.2011 passed interim order as under:

"It is pointed out that in connected appeals, orders have already been passed admitting those appeals.

Our attention is also drawn to an order passed by this Court in the connected appeals, which is dated 10.12.2007. In the said interim order passed by this Court by way of vacation of the earlier interim order, this Court recorded the statement of the Solicitor General for India that in view of order of remand, the following five issues would not be pressed for fresh determination:

- a) Consequences of refinancing of loan;*
- b) Treating depreciation available as deemed of loan;*
- c) Cost of maintenance of spares related to additional capitalization;*
- d) Depreciation Availability upto 90% in the event of disincentive; and*
- e) Impact of de-capitalization of assets on cumulative repayment of loan.*

In view of the aforesaid statement made this Court made it clear that the Commission may apply to other cases also.

Counsel appearing for the appellant also states that although in the Synopsis and List of Dates, it was stated that the present appeal would be confined to three issues, namely,

- 1. Un-discharged liabilities;*
- 2. Interest during construction; and*
- 3. Treatment of depreciation and its adjustment towards deemed repayment of loans.*

According to him, he would not press for stay so far as the first two issues are concerned. Taking notice of the entire facts and circumstances of the case, the delay of 71 days is condoned.

This civil appeal is admitted.

The interim order dated 10.12.2007 would also apply to the present case as issues are stated to be identical.

Tag with Civil Appeal No. 5434 of 2007."

14. Also, against the judgment of APTEL dated 4.2.2011 in Appeal No. 92/2010, the Commission filed Civil Appeal [Civil Appeal 8112/2011] on the said issues.

15. It is pertinent to mention that, the Commission, keeping in view the spirit of the interim order dated 10.12.2007 and 25.4.2011 of the Hon'ble Supreme Court (as quoted above) and since tariff is a composite package, had, while revising the tariff of this generating station for 2004-09 by order dated 29.12.2011 (revised vide corrigendum order dated 21.2.2012) in Petition No.179/2004, deferred the implementation of the aforesaid issues, till the final disposal of the Civil Appeals. This



is evident from the observations of the Commission in its order dated 29.12.2011 in Petition No.179/2004 which is extracted hereunder:

“36. Keeping in view the spirit of the interim orders dated 10.12.2007 and 25.4.2011 of the Hon'ble Supreme Court as quoted above and since tariff is a composite package, we defer the implementation of the issues covered under the said interim orders dated 10.12.2007/25.4.2011, till the final disposal of the said Civil Appeals. Other issues namely, un-discharged liabilities and IDC has been considered for capitalization for the purpose of tariff, subject to final outcome of the Civil Appeals pending before the Hon'ble Supreme Court.”

16. However, on 10.4.2018, the Hon'ble Supreme Court, while holding that there was no merit, dismissed the Civil Appeals (C.A. Nos 3776/2011 and 8112/2011) filed by the Commission, in respect of this generating station. It is pertinent to mention that the judgment of APTEL dated 13.6.2007 was implemented by the Commission through various orders issued in respect of the other generating stations of the Petitioner. However, the tariff of this generating station for the period 2004-09 could not revised, as this aspect was lost sight of by the Commission, inadvertently. Thereafter, the Petitioner vide its letter dated 31.5.2019 requested the Commission to revise the tariff of this generating station for the period 2004-09, in line with the judgments of APTEL dated 18.8.20210 and 4.2.2011. Subsequently, based on directions of this Commission, the Petitioner, on 1.4.2021, has filed this IA seeking implementation of the judgments of APTEL, in respect of this generating station, for the period 2004-09, pursuant to the rejection of the civil appeals filed by the Hon'ble Supreme Court, as aforesaid, and the consequential impact on tariff for subsequent periods also.

17. In this background, it has become necessary to revise the tariff of this generating station as determined by the Commission's order dated 29.12.2011/ corrigendum order dated 21.2.2012 in Petition No.179/2004 for the period 2004-09, in respect of the issues applicable for this generating station, namely (i) Treating depreciation available as deemed of loan (ii) Cost of maintenance spares related to additional capitalization and (iii) Impact of de-capitalisation of assets on deemed repayment of



loan. Further, the revision of tariff for the period 2004-09, would entail the revision of the tariff determined vide Commission's common order dated 26.8.2015 (and corrigendum order 16.10.2015) in Petition Nos.320/GT/2013 and 208/GT/2014, in respect of this generating station, for the periods 2009-14 and 2014-19.

Tariff period 2004-09

Petition No.179/2004

18. The capital cost, interest on working capital and the annual fixed charges approved vide corrigendum order dated 21.2.2012 is as under:

Capital Cost

(Rs in lakh)

	2004-05		2005-06		2006-07	2007-08	2008-09
	1.4.2004 to 31.10.2004	1.11.2004 to 31.3.2005	1.4.2005 to 31.7.2005	1.8.2005 to 31.3.2006			
Opening Capital Cost	260533.04	382154.83	386022.83	495818.48	495964.77	504123.72	508350.92
Add: Additional Capital Expenditure	183.74	3868.00	1767.78	146.29	8158.95	4227.20	9842.00
Closing Capital Cost	260716.78	386022.83	387790.62	495964.77	504123.72	508350.92	518192.92
Average Capital Cost	260624.91	384088.83	386906.73	495891.62	500044.24	506237.32	513271.92

Interest on Working Capital

(Rs in lakh)

	2004-05		2005-06		2006-07	2007-08	2008-09
	1.4.2004 to 31.10.2004	1.11.2004 to 31.3.2005	1.4.2005 to 31.7.2005	1.8.2005 to 31.3.2006			
Coal Stock-1.1/2 months	3130.87	5816.90	5771.02	8951.19	8899.50	8923.88	8899.50
Oil stock -2 months	448.15	749.08	581.14	1014.30	823.64	825.90	823.64
O & M expenses	780.00	1170.00	1216.25	1621.67	1686.67	1753.33	1825.00
Maintenance Spares	2583.56	3784.71	3814.65	4909.91	5106.31	5412.69	5737.45
Receivables	12613.92	22783.67	19895.57	33531.09	29816.78	29553.56	29094.98
Total Working Capital	19556.50	34304.37	31278.63	50028.15	46332.89	46469.35	46380.56
Rate of Interest	10.2500%	10.2500%	10.2500%	10.2500%	10.2500%	10.2500%	10.2500%
Total Interest on Working capital	2004.54	3516.20	3206.06	5127.89	4749.12	4763.11	4754.01



Annual Fixed Charges

(Rs in lakh)

	2004-05		2005-06		2006-07	2007-08	2008-09
	1.4.2004 to 31.10.2004	1.11.2004 to 31.3.2005	1.4.2005 to 31.7.2005	1.8.2005 to 31.3.2006			
Depreciation	9424.01	13862.05	13963.75	17851.28	18000.76	18223.70	18476.94
Interest on Loan	15824.25	22387.89	21703.51	25943.54	22054.33	18621.19	14636.07
Return on Equity	10946.25	16131.73	16250.08	20827.45	21001.86	21261.97	21557.42
Advance Against Depreciation	388.61	15734.43	0.00	34281.08	16716.77	17064.96	17107.63
Interest on Working Capital	2004.54	3516.20	3206.06	5127.89	4749.12	4763.11	4754.01
O&M Expenses	9360.00	14040.00	14595.00	19460.00	20240.00	21040.00	21900.00
Total	47947.66	85672.30	69718.41	123491.22	102762.85	100974.93	98432.06

19. In line with the judgments of APTEL dated 18.8.2020 and 4.2.2011 read with the Hon'ble Supreme Court's order dated 10.4.2018 in Civil Appeal Nos. 3776/2011 and 8112/2011, the tariff determined vide Commission's orders dated 29.12.2011/ 21.2.2012 in Petition No. 179/2004 for the period 2004-09, is revised as under:

Treatment of depreciation as deemed repayment of loan

20. As regards 'Depreciation as deemed repayment of loan' the APTEL vide its judgment dated 18.8.2010 in Appeal No.66/2008 held as under:

"30..... In the orders of this Tribunal dated November 14, 2006 and January 24, 2007 it has been laid down that the computation of outstanding loan will be on normative basis only (instead of normative or actual whichever is higher). In view of this there is no question of any adjustment of the depreciation amount as deemed repayment of loan.

It is to be understood that the depreciation is an expense and not an item allowed for repayment of loan. If a corporation does not borrow, it would not mean that the corporation will not be allowed any depreciation. Depreciation is an expense it represents a decline in the value of asset because of use, wear or obsolescence. The Accounting Principles Board of USA defines depreciation as under:

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It is well established that the depreciation is an expense and therefore, it cannot be deployed for deemed repayment of loan. In this view of the matter the CERC shall need to make a fresh computation of outstanding loan in the light of the aforesaid observation.

Interest on loan

21. Accordingly, the calculations for Interest on loan are as under:



a) Gross normative loan as on 1.4.2004, 1.11.2004, 1.4.2005 and 1.8.2005, has been retained as considered in Commission's order dated 21.2.2012 in Petition No.179/2004;

b) Cumulative repayment of loan and net opening normative loan, as on 1.4.2004 has been retained as considered in order dated 21.2.2012;

c) Weighted Average Rate of Interest (WAROI) as considered in Commission's order dated 21.2.2012 has been retained.

(d) Repayment of normative loan has been considered as equal to normative repayment as per formula below:

$$\text{Normative Repayment} = \frac{\text{Actual repayment} \times \text{Net opening loan (normative)}}{\text{Net loan opening (actuals)}}$$

22. Accordingly, Interest on loan is re-computed and allowed as under:

	2004-05		2005-06		2006-07	2007-08	2008-09
	1.4.2004 to 31.10.2004	1.11.2004 to 31.3.2005	1.4.2005 to 31.7.2005	1.8.2005 to 31.3.2006			
Gross Opening Loan – Considered now	182373.13	267508.38	270215.99	347072.94	347175.34	352886.60	355845.64
Cumulative Repayment of Loan upto previous year	3333.56	10633.61	22877.64	26101.32	63466.11	103833.98	156564.50
Net Loan Opening	179039.57	256874.77	247338.35	320971.62	283709.22	249052.62	199281.14
Addition of loan due to additional capital expenditure allowed for 2004-09	128.62	2707.60	1237.45	102.40	5711.27	2959.04	6889.40
Repayment of loan	7300.05	12244.02	3223.68	37364.80	40367.87	52730.52	43380.24
Net Loan Closing	171868.13	247338.34	245352.12	283709.22	249052.62	199281.14	162790.30
Average Loan	175453.85	252106.56	246345.23	302340.42	266380.92	224166.88	181035.72
Weighted Average Rate of Interest on Loan	9.0190%	8.8803%	8.8360%	8.6197%	8.3162%	8.3433%	8.1191%
Interest on Loan	15824.18	22387.82	21767.06	26060.84	22152.77	18702.92	14698.47



Cost of Maintenance Spares

23. APTEL vide its judgement dated 13.6.2007 in Appeal No.139/2006 and others held that Additional Capitalisation after the date of commercial operation should also be considered for computation of maintenance spares as under:

“It is clear from the abovementioned Clause 18 of the CERC Regulations that additional capitalization after the date of commercial operation is recognized as part of the capital expenditure. Historical cost does not literally mean that the cost on the date of the commercial operation. The term historical cost is used so as to distinguish it from ‘book value’ or ‘the replacement cost’. The cost of maintenance spares limited to 1% of the historical cost corresponds to the plant and equipment and installations which are required to be maintained. If the cost of additional equipment is not included in the historical cost, how spares for the additional equipment be procured for maintenance of the additional equipment. In this view of the matter, the CERC needs to examine afresh in the light of the aforesaid observations.”

24. In terms of the above decision, the additional capital expenditure allowed subsequent to COD, has been considered, while arriving at the maintenance spares for the purpose of calculating interest on working capital.

25. Based on the above, the total maintenance spares are computed and allowed is as under:

	<i>(Rs. in lakh)</i>						
	1.4.2004 to 31.10.2004	1.11.2004 to 31.3.2005	1.4.2005 to 31.7.2005	1.8.2005 to 31.3.2006	2006-07	200-08	2008-09
Maintenance spares- on capital cost up to COD	2583.56	3784.71	3814.65	4909.91	5106.31	5412.69	5737.45
Maintenance spares- on additional capital expenditure	0.92	19.34	8.84	0.73	82.35	129.56	235.76
Total Maintenance spares	2584.48	3804.05	3823.49	4910.64	5188.66	5542.25	5973.20

ANNUAL FIXED CHARGES FOR THE PERIOD 2004-09

26. Accordingly, the annual fixed charges in respect of the generating station stands revised for the period 2004-09 as under:

	2004-05		2005-06		2006-07	2007-08	2008-09
	1.4.2004 to 31.10.2004	1.11.2004 to 31.3.2005	1.4.2005 to 31.7.2005	1.8.2005 to 31.3.2006			
Depreciation	9424.01	13862.15	13963.85	17851.11	18000.59	18223.53	18476.76



	2004-05		2005-06		2006-07	2007-08	2008-09
	1.4.2004 to	1.11.2004 to	1.4.2005 to	1.8.2005 to			
	31.10.2004	31.3.2005	31.7.2005	31.3.2006			
Interest on Loan	15824.18	22387.82	21767.06	26060.84	22152.77	18702.92	14698.47
Return on Equity	10946.25	16131.73	16250.08	20827.45	21001.86	21261.97	21557.42
Advance Against Depreciation	388.62	15734.33	0.00	34281.25	16716.94	17065.13	17107.80
Interest on Working Capital	2004.64	3518.21	3208.09	5130.00	4759.42	4778.04	4779.68
O&M Expenses	9360.00	14040.00	14595.00	19460.00	20240.00	21040.00	21900.00
Total	47947.69	85674.24	69784.09	123610.64	102871.58	101071.58	98520.13

27. Consequent to the revision of tariff for the period 2004-09 as above, the tariff approved for the period 2009-14, will also undergo revision, as stated in the subsequent paragraphs:

TARIFF PERIOD 2009-14

28. The Commission vide order dated 26.8.2015 in Petition No. 320/2013 and Petition No. 208/GT/2014 (corrigendum order dated 16.10.2015), had approved the annual fixed charges as under:

	<i>(Rs. in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	25818.16	25896.01	26030.01	26334.14	26990.51
Interest on Loan	11643.49	9610.96	7834.73	5854.5	4174.83
Return on Equity	35050.13	34771.79	34573	34989.7	36687.52
Interest on Working Capital	8938.72	8975.46	9042.35	9093.17	9206.27
O&M Expenses	26000	27480	29060	30720	32480
Cost of Secondary Fuel Oil	3048.92	3048.92	3057.27	3048.92	3048.92
Total	110499.43	109783.15	109597.35	110040.43	112588.05

29. Considering the admitted capital cost as on 1.4.2009, the admitted additional capital expenditure and the weighted average rate of interest (as approved in order dated 26.8.2015/16.10.2015), the annual fixed charges for the period 2009-14, for the generating station, stands revised, as under:



(Rs. in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	25818.16	25896.01	26030.01	26334.14	26990.51
Interest on Loan	11696.26	9663.58	7888.41	5906.87	4227.49
Return on Equity	35050.13	34771.79	34573.00	34989.70	36687.52
Interest on Working Capital	8939.82	8976.56	9043.47	9094.26	9207.37
O&M Expenses	26000.00	27480.00	29060.00	30720.00	32480.00
Cost of Secondary Fuel Oil	3048.92	3048.92	3057.27	3048.92	3048.92
Total	110553.29	109836.87	109652.16	110093.89	112641.81

TARIFF PERIOD 2014-19

Capital Cost

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

“9. Capital Cost:

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

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

31. The Commission vide its order dated 28.6.2015 Petition No. 208/GT/2013 had allowed the closing capital cost of Rs. 528943.95 lakh (on cash basis) as on 31.3.2014 and the same has been considered as the opening capital cost, as on 1.4.2014, in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

Additional Capital expenditure

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

“14. *Additional Capitalisation and De-capitalisation:*

(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 recognised 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 recognised to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.”

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialisation 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 stabilisers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalisation 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 Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.”

33. The actual additional capital expenditure claimed by the Petitioner, on cash basis, for the period 2014-19 are as under:

<i>(Rs. in lakh)</i>							
SI No.	Claimed	Regulation	2014-15	2015-16	2016-17	2017-18	2018-19
A	Already allowed Items						
1	Works related to Ash Pond/ Ash handling system	14 (3) (iv)	4015.93	1851.80	2826.83	2581.78	3480.24
2	Interlocking at Exchange Yard	14 (3) (x)	379.39	-	-	-	-
3	Replacement of MS Ash slurry pipes with Basalt Pipes	14 (3) (ii)	48.51	-	825.39	1401.61	298.86
4	3.5 Km MGR to Kaniha mines	14 (3) (x) & 14(3)(vi)	112.61	-	-	-	-
5	Construction Of Road Under Bridge on MGR Track	14(3)(ii)	110.96	-	-	-	-
6	Ballastless track	14 (3) (x)	196.95	-	64.20	46.56	-
7	Land for Left out portion of MGR	14 (3) (x)	221.23	-	-	38.00	-
8	Upgradation of ESP						
a	Renovation & Retrofitting of Electrostatic Precipitator package Stage-II (Supply portion)	14(3) (ii)	-	-	-	2699.09	2065.14



SI No.	Claimed	Regulation	2014-15	2015-16	2016-17	2017-18	2018-19
b	Inland Transportation, Insurance, Installation, Testing & Commissioning of Renovation & Retrofitting of Electrostatic Precipitator package for TSTPS-II	14(3) (ii)	-	-	-	-	537.00
9	Fire Detection and Protection System	14(3) (ii)	-	-	-	-	66.85
10	Sub-Total (A)		5085.58	1851.80	3716.43	6767.04	6448.09
B	New Claims						
11	Compensation for land	14(3)(i)	-	-	-	14.66	-
12	Freehold land	14 (3) (i)	-	-	-	-	93.63
13	Interest provision capitalised on land cases	14(3)	-	-	-	0.44	-
14	EQMS main equipment	14 (3) (ii)	-	36.19	0.01	-	-
15	Continuous Emission Monitoring System (CEMS)	14 (3) (ii)	-	99.89	5.73	-	-
16	LED Lighting	14(3)(ii)	-	-	-	-	507.53
17	Purchase of Locos	14 (3) (x)	4467.80	-	0.05	-	-
18	Sub-Total (B)		4467.80	136.07	5.79	15.10	601.15
C	Decapitalization						
19	Decapitalisation of Spares (part of capital cost)	14(4)	(-)25.45	(-)12.73	(-)409.77	(-)1105.23	(-)522.33
20	Decapitalisation of CCTV (part of capital cost)		(-)96.21				
21	Unit-3 MS Ash slurry pipes					(-)338.28	(-)68.64
22	De-capitalisation of Unit-6 CHP-Offsite Area Civil Works Pkg-1& Pkg II, Stage-II						(-)24.97
23	Sub-Total (C)		(-)121.66	(-)12.73	(-)409.77	(-)1443.51	(-)615.94
24	Additional capital expenditure claimed (before		9431.72	1975.14	3312.45	5338.63	6433.30



SI No.	Claimed	Regulation	2014-15	2015-16	2016-17	2017-18	2018-19
	discharge of liabilities)						
25	Add: Discharge of Liabilities	14(3)(vi)	835.33	607.56	791.75	105.22	382.65
26	Net Additional capital expenditure claimed (including discharges of liabilities) (A+B+C)		10267.05	2582.70	4104.20	5443.85	6815.95

A. Already allowed Items

Works related to Ash Pond/ Ash handling system

34. The Petitioner has claimed total additional capitalisation of Rs. 14756.57 lakh, on cash basis, during the period 2014-19 i.e. Rs. 4015.93 lakh in 2014-15, Rs. 1851.80 lakh in 2015-16, Rs. 2826.83 lakh in 2016-17, Rs. 2581.78 lakh in 2017-18 and Rs. 3480.24 lakh in 2018-19. In justification for the same, the Petitioner has submitted that these works are approved by order dated 16.2.2017 in Petition No. 293/GT/2014. The Petitioner has also stated that ash handling and ash pond related works are of continuous nature during the operational life of the generating station and is covered within the original scope of the project. Accordingly, the Petitioner has prayed that the additional capital expenditure claimed may be allowed.

35. The Respondent, TANGEDCO has submitted that the expenditure on account of evacuation of ash is to be met from the revenue generated from the sale of fly ash. The Respondent has also submitted that the claim may not be allowed, as the details of work orders with documentary proof, certificate that no part of work is related to Stage-I has not been furnished by the Petitioner. The Respondent, GRIDCO has submitted that the Petitioner's claim towards ash pond and ash handling system claimed under Regulation 14(3)(iv) may not be allowed as there is already an ash pond and ash handling system, in place since 2003/ 2005. The Respondent has also submitted that the works of raising ash dyke claimed cannot be termed as "deferred



works” since the same was not envisaged within the original scope of the project. The Respondent has stated that any repair/ maintenance work taken up from time to time for ash disposal in the pond can be accounted for under the O&M expenses, allowed to the generating station. The Respondent has added that the Petitioner has failed to achieve 100% of ash utilization as contemplated under the MOEF Notification dated 14.9.1999 and its subsequent amendments.

36. In response to the above, the Petitioner has submitted the details of the work and has also certified that no part of work is related to Stage-I of the generating station. The Petitioner has also submitted that in order to enhance ash utilisation, it has signed MoU with NHAI for transportation of ash, but, despite all efforts, the sale of fly ash has not been possible due to demand-supply mismatch.

37. The Commission, vide ROP of the hearing dated 4.1.2022, directed the Petitioner to submit details of the ash generation and utilization for the period 2014-19 and in response the Petitioner has submitted the following:

- a) As per the standard practice adopted by the petitioner in Ash Dyke management, exact level to which ash dyke is filled is not measurable as ash out of the ash slurry gets settled near the point of discharge. Level of ash is not uniform across the lagoons/ dykes. Further, no such level marking is maintained or installed in ash dyke as a standard industry practice. However, quantity of ash filled in the Lagoon -1 & 2 as on 31.0.2014 is approx. 297 LM3 (in Lagoon-1 and Lagoon-2) based on the generation level and quality of coal received during the past periods.
- b) The gestation period for raising the height of ash dyke is around one and half to two years. Apart from earlier work which was going on prior to 1.4.2014, the capacity, which was created in Ash dyke, by mainly raising of height (three raising of 5 meter each in Lagoon-1 and two raising of 5 metres each in Lagoon-2) and through peripheral area filling at and other work to strengthen the ash dykes during 2014-19 is about 147,50,000 M³ (147.5 LM3).
- c) In compliance to the directions, the details are under:

Year	Ash filled in the dyke as on 31.3.2014 (LM3)	Capacity created by height raising (LM3)	Ash Generated (MT)	Ash Utilized (MT)	Ash (approx) disposed in the dyke (MT)*	% ash utilisation
2014-15	297	147.5	4346460	1838133	2508327	42.3



Year	Ash filled in the dyke as on 31.3.2014 (LM3)	Capacity created by height raising (LM3)	Ash Generated (MT)	Ash Utilized (MT)	Ash (approx) disposed in the dyke (MT)*	% ash utilisation
2015-16			4520877	1928133	2592744	42.6
2016-17			4747621	2048114	2699507	43.2
2017-18			5280288	2507455	2772833	47.5
2018-19			5056860	2537830	2519030	50.2
Total			23952107	10859666	13092441	

*The specific gravity of ash disposed lies somewhere around 1.1

- d) The ash dyke of the generating station was designed with specific coal consumption of 0.67 kg/kwh. Over the period quality of received coal has also deteriorated and specific coal consumption of the station is around 0.83 kg/kwh resulting in much higher generation of ash compared to that was envisaged during the planning of the Station. Further the norms have also been raised to 85% of PLF/availability. The quantum of actual annual ash produced i.e. approximately 45 lakh cum has been much more than that envisaged i.e. 32 lakh cum at the time of designing.

38. The matter has been examined. It is observed that the Commission vide its order dated 16.2.2017 in Petition No. 293/GT/2014 had allowed additional capitalisation of Rs. 15578.68 lakh 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:

*"33. The Commission, vide ROP of the hearing dated 24.5.2016 had directed the petitioner to file additional information with regard to the additional capital expenditure of Rs. 307.15 crore during the period 2014-19 towards work related to Ash pond and in response the petitioner has submitted that the proposed expenditure of **Rs. 307.15 crore is for 4th, 5th, 6th & 7th raising of Lagoon 1 and Lagoon 2 along with peripheral filling.** It has further submitted that 40% of ash (approx.) is utilized at the generating station as a whole and dyke raising constitute a major part of ash utilization (95%) and the balance 5% is utilized in brick industries including ash brick plant for Talcher STPS and asbestos industries. It has further clarified that a revenue of `0.046 crore has been generated from sale of ash since the COD of the generating station till 31.3.2014.*

*34. The matter has been examined. It is observed from the submissions of the petitioner that the projected expenditure towards Ash dyke raising is for planned works related to ash pond/ ash handling system which is of continuous nature during the operational life of generating station. Moreover, the works for which the expenditure has been claimed is as per approved scheme under the original scope of work. **It is observed that the petitioner had capitalized an expenditure of Rs. 151.18 crore towards Ash dyke works for the period from 1.8.2005 to 31.3.2014 and in this***



background the claim of the petitioner for the period 2014-19 appears to be on higher side. In the absence of comparison of the cost with similar work undertaken by the petitioner, the reasonableness of the estimated cost from the break-up of proposed ash dyke works during the period 2014-19 as submitted by the petitioner, cannot be worked out. Moreover, when the capitalization of Rs. 10000.00 lakh for dry Fly Ash extraction system has been proposed in 2018-19, the reason for capitalization of the said amount for 7th raising in 2018-19 is also not understood, more so, when a major portion of ash (80%approx.) generated has been disposed of in dry form. In this background, we are inclined to restrict the proposed additional capital expenditure to Rs. 115.98 crore which was allowed during the period 2009-14, with an annual escalation of 6.35% each year during the period 2014-19. This works out to Rs. 15578.68 lakh. Considering the capitalization submitted by the petitioner, this amount is pro-rated each year and accordingly the same works out to Rs. 3689.99 lakh in 2014-15, Rs. 5589.19 lakh in 2015-16, Rs. 2235.68 lakh in 2016-17, Rs. 1284.28 lakh in 2017-18 and Rs. 2979.54 lakh in 2018-19. The petitioner is however directed to submit the details of work orders along with complete scope of work of ash handling system, estimated cost, and actual cost incurred along with documentary proof at the time of truing up exercise in terms of Regulation 8 of the 2014 Tariff Regulations. The petitioner is also directed to furnish a certificate to the effect that Ash Pond & Ash handling related works executed pertains to generating station only and no part of work is related to Stage-I.”

39. It is observed that out of the proposed additional capital expenditure of Rs. 30715.00 claimed by the Petitioner, the Commission vide its order dated 16.2.2017 in Petition No. 293/GT/2014, had restricted the admitted additional capital expenditure to Rs. 15578.68 lakh for the period 2014-19. It is pertinent to mention that for the period 2009-14, the Commission vide its common order dated 26.8.2015 in Petition No. 320/GT/2013 and Petition No. 208/GT/2014 had allowed additional capital expenditure of Rs. 11597.00 lakh towards ash pond/ash handling system. In addition to this, the Petitioner has claimed additional capitalisation of Rs. 27170.00 lakh during the period 2019-24.

40. It is pertinent to mention that the Commission in its order dated 16.2.2017 in Petition No. 293/GT/2014, had observed that in the absence of comparison of the cost with similar work undertaken by the petitioner, the reasonableness of the estimated cost from the break-up of proposed ash dyke works during the period 2014-19 as submitted by the petitioner, cannot be worked out. Accordingly, the Commission, while restricting the additional capitalisation allowed for this item, had also directed the Petitioner to submit the details of work orders along with complete scope of work of



ash handling system, estimated cost, and actual cost incurred along with documentary proof at the time of truing up exercise. In response to the directions of the Commission vide ROP, the Petitioner, in the present case, has only details such as, three raisings of 5 meter each in Lagoon-1 and two raisings of 5 meters each in Lagoon- 2, Ash available is 297 LM3 as on date, the capacity created is 147.5 LM3, the ash generated is 239.52 LMT, the ash utilized is 108.60 LMT and the ash disposed to ash dyke is 130.92 LMT, i.e., to accommodate 130.92 LMT ash, 147.5 LM3 ash dyke capacity was created. Considering the above details, we are inclined to **allow** the additional capital of Rs. 14756.47 lakh claimed by the Petitioner.

Interlocking of Exchange yard

41. The Petitioner has claimed additional capital expenditure for Rs. 379.39 lakh in 2014-15 along with discharge of liability of Rs. 50.70 lakh in 2018-19 towards Interlocking of exchange yard. In justification for the same, the Petitioner has submitted that the Commission, vide its order dated vide order dated 28.5.2013 in Petition No. 269/2009 had approved the additional capital expenditure for this work during the period 2009-14. The Petitioner has also submitted that the execution of the work got delayed by East Coast Railways (ECR), even though the same was approved by the Commission in order dated 28.5.2013 in Petition No. 269/2009 in 2011-12. It has further submitted that the expenditure form part of the ongoing works, and is required for safety of rakes and shall reduce banking of Locos.

42. The Respondent GRIDCO, has submitted that the Petitioner's claim for undischarged liability towards Interlocking at exchange yard is on account of failure of the Petitioner and its contractor M/s ECR to execute the work within the scheduled time. In response, the Petitioner has clarified that though the said work was allowed by order dated 28.5.2013 in Petition No. 269 of 2009, however, the said work could



not be capitalised during the period 2009-14, since the delay had occurred due to local disturbances and R&R issues.

43. The matter has been examined. It is observed that the additional capitalisation of the said work was allowed by order dated 28.5.2013 in Petition No. 269/2009. Further, the said work was allowed vide order dated 16.2.2017 Petition No. 293/ GT/ 2014, for Rs. 379.00 lakh in 2014-15, after acknowledging that the delay was on account of ECR. Though the Petitioner has claimed additional capital expenditure for Rs. 379.39 lakh, in this petition, it has not furnished the details for increase in the cost, the amount recovered due to delay, the LD encashed from ECR due to its delay including communications, if any, made in this regard. However, considering the fact that the said item/asset is associated with MGR, the safety of the rakes, including the reduction in time for increased coal receipts without the need for banking locos, the additional capital expenditure of Rs.379.39 lakh claimed, on cash basis, is allowed. However, the discharge of liability for Rs. 50.70 lakh in 2018-19 is not allowed as no justification has been provided.

Replacement of MS Ash slurry pipes with Basalt Pipes

44. The Petitioner has claimed total additional capital expenditure of Rs. 2547.37 lakh i.e., Rs. 48.51 lakh in 2014-15, Rs. 825.39 lakh in 2016-17, Rs. 1401.61 lakh in 2017-18 and Rs 298.86 in 2018-19. In justification for the same, the Petitioner has submitted the Commission vide its order dated 16.2.2017 in Petition No.293/GT/2014 had approved the additional capital expenditure for this work for the period 2014-19, and the work was progressively executed and capitalised during the said period, depending on the opportunity to execute the work.

45. The Respondent GRIDCO, has submitted that the Petitioner may be directed to submit details regarding the bidding process adopted for replacement of MS pipes with



cast Basalt pipelines and associated works. The Respondent KSEBL has submitted that the claim of the Petitioner may be rejected, as the Petitioner has not complied with the directions of the Commission, to submit a valid consent letter of the Orissa State Pollution Control Board (OSPCB) at the time of truing up of tariff.

46. In response to the above, the Petitioner has submitted that being a PSU, it follows the best practices as the works are awarded through competitive bidding process and most competitive bidder is selected for execution of the work. The Petitioner has also furnished the consent letter of OSPCB. It has also submitted that the Commission had allowed additional capitalisation for Replacement of MS pipes with Cast basalt pipelines, after adjustment of the gross block of MS Pipes. The Petitioner has also claimed the decapitalization of MS pipes for (-) Rs 406.92 lakh during the period 2014-19.

47. The matter has been examined. It is noticed that the Petitioner has claimed total additional capital expenditure of Rs. 2574.37 lakh during the period 2014-19 and Rs. 845.00 lakh during the period 2019-24. It is further noticed that the said work was allowed by order dated 16.2.2017 in Petition No. 293/GT/2014 for Rs.3190.44 lakh during the 2014-19 period based on the following:

16. We have examined the matter. It is noticed that OSPCB vide letter dated 12.7.2011 has granted consent to the petitioner to operate the units of generating station, subject to compliance of certain terms and conditions till 31.8.2011. Subsequently, OSPCB vide letter dated 13.1.2012 had extended the validity of consent order up to 31.3.2012 within which time the generating station was required to comply with the conditions in the consent order to keep the same valid. It is further noticed that the consent order relates to product quality, specific outlets, discharge quantity and quality, specified chimney/stack, emission quantity and quality of emissions.

17. Considering the fact that the petitioner is required to comply with the terms and conditions for Prevention and Control of Air and Water Pollution in terms of the provisions of Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act and the directions contained in the letters dated 12.7.2011 and 13.1.2012, we are inclined to allow the additional capital expenditure of Rs. 1674.00 lakh (Rs. 1960.00-Rs. 286.00 lakh) and Rs. 1516.44 lakh (Rs. 1866.00-Rs.349.56 lakh) for the years 2015-16 and 2016-17 respectively after adjustment of the gross block of MS pipes.



48. It is evident from the above, that the subject works were carried out by the Petitioner, to replace the existing MS pipes with cast basalt pipes to avoid leakage and to protect the surroundings, in compliance to the directions of the OSPCB. In this background, the total additional capital expenditure of Rs. 2547.37 lakh claimed is **allowed**. The Petitioner has also submitted the decapitalization of (-) Rs. 551.35 lakh for MS pipes in respect to Unit-3 only. However, the decapitalization amount has not been provided for the remaining three units (Units-1,2 & 4). Accordingly, the decapitalization amount has been considered under 'assumed deletions.

3.5 Km MGR to Kaniha mines

49. The Petitioner has claimed additional capital expenditure of Rs. 112.61 lakh in 2014-15. In justification for the same, the Petitioner has submitted that the Commission vide common order dated 26.8.2015 in Petition No 320/GT/2013 and Petition No. 208/GT/2014, had approved the additional capital expenditure of Rs. 2733.00 lakh for this work during the period 2009-14.

50. The Respondent GRIDCO has submitted that the claim for 3.5 km MGR to Kaniha Mines is untenable since the Petitioner, is yet to complete the entire work during the period 2014-19 and that the balance work is stated to be executed during the period 2019-24. In response, the Petitioner has submitted that it has not claimed any expenditure under this head would claim the same as and when the work starts.

51. The matter has been examined. It is observed that the Commission vide the said common order dated 26.8.2015 had approved the actual additional capitalization of Rs. 2733 lakh for the said work during the period 2009-14 period as under.

22. We have carefully examined the matter. The Commission in order dated 28.5.2013 while allowing the claim of the petitioner for 3.5 Km MGR-Kaniha Mines had observed as under:

"31.....Kaniha mines are the linked mines for the generating station. The said work is within the scope of work and the development of linked mine was delayed by CIL thereby



affecting the progress of the work. Also due to problems in land acquisition for MGR system and the R&R plan yet to be approved by the State Government, the petitioner has taken all efforts to arrange coal from other sources like the IB valley through Rail network and import of coal. Considering the above facts in totality, we are of the view that the claim of the petitioner for capitalization of expenditure is justified. Hence the same is allowed in terms of Regulation 9(2)(vii) of the 2009 Tariff Regulations.”

23. *It is observed that the MGR package was awarded in 2004 at a value of Rs. 767.00 lakh and there was substantial delay in the development of Kaniha mines. Accordingly, the work could be started only in the year 2011 matching with the schedule for development of Kaniha mines. Further, due to MORTH specification for re-grading of road subsequent to the declaration of captive road of NTPC as National Highway by NHAI, there has been additional work like re-grading of road up to a distance of 1 Km, widening of road, construction of culvert in the captive road declared as National Highway. Thus, due to the high inflationary period and as the development of National Highway as per the MORTH specification did not emerge at the time of original projection, there is difference between the projected and the actual expenditure. Therefore, the claim of the petitioner is justified. In view of this, the actual expenditure of Rs. **2355.00 lakh in 2012-13 and Rs. 378.00 lakh in 2013-14** is in order and is allowed under Regulation 9(2) (vii) of the 2009 Tariff Regulation.*

52. It is further noticed that additional capitalisation of Rs. 434.00 lakh was allowed in order dated 16.2.2017 in Petition No. 293/GT/2014, towards signalling and telecommunication at 3.5 km MGR to Kaniha mines, as under:

“44. It is noticed that the work for MGR lines to Kaniha Mines has got delayed due to delay in the development of Kaniha mines and accordingly the signalling and telecommunication activities could not be started by the petitioner. It is observed that the work of signalling and telecommunication is within the original scope of work of the project and forms an integral part of MGR system. Accordingly, we are inclined to allow the additional capital expenditure of Rs. 434.00 lakh in 2016-17 for the said work.”

53. The Petitioner has claimed total additional capital expenditure for Rs. 112.61 lakh during the period 2014-19 and Rs. 460.00 lakh during the period 2019-24. Considering the fact that the item/asset is associated with the Signalling and Telecommunication, which is within the original scope of work, and forms an integral part of 3.5 km MGR to Kaniha mines, the additional capital expenditure of Rs. 112.61 lakh claimed during the period 2014-19 is allowed.

Construction of Road under Bridge (RUB) on MGR track

54. The Petitioner has claimed additional capital expenditure of Rs. 110.96 lakh in 2014-15. In justification for the same, the Petitioner has submitted that the Commission had allowed these works under Regulation 9(2)(ii) of the 2009 Tariff



Regulations and 1 no. RUB was capitalised in 2013-14 and one no. RUB was capitalised in 2014-15 and therefore, the claim may be allowed.

55. The Respondent GRIDCO has submitted that since the additional capitalisation of Rs. 163.00 lakh claimed in 2013-14 had been allowed, the present claim for additional capitalisation, may be rejected. In response, the Petitioner has clarified that though the claim was allowed by common order dated 26.8.2015 in Petition Nos. 320/GT/2013 and 208/GT/2014, the projection of 2nd RUB was inadvertently missed while filing the tariff petition for 2014-19. It has also submitted that as per directions of the ECR, the 2nd RUB had been constructed and capitalized in 2014-15. In this regard, the letters of ECR dated 30.10.2010 and 29.3.2011 have been submitted by the Petitioner.

56. The matter has been examined. It is observed that the Commission vide its common order dated 26.8.2015 in Petition No 320/GT/2013 and Petition No. 208/GT/2014, had allowed the additional capitalisation of Rs. 163.00 lakh towards construction of 2 nos. of RUBs as observed below:

“Construction of Road under Bridge (RUB) on MGR track

*32. The petitioner has claimed actual expenditure of Rs.163.00 lakh in 2013-14 under Regulation 9(2)(ii) of the 2009 Tariff Regulations towards the Construction of Road Under Bridge (RUB) on MGR track. **The petitioner has submitted that the East Coast Railway (ECR) vide letters dated 30.10.2010 and 29.03.2011 had directed the construction of two RUBs at the crossings of MGR track.** It has also submitted that new Talcher-Bimlagarh broad gauge line being constructed by East Coast railway runs near the MGR track and since the East Coast Railway were constructing RUBs at **two crossings and the distance between MGR and Railway lines is only 30 to 35 meters, the petitioner was directed to construct the RUBs on MGR track to ensure safe and secure commutation of road users.** The respondent, KSEB has pointed out that the said claim of the petitioner do not fall under any of the provisions of Regulation 9(2) of the 2009 Tariff Regulations. In response, the petitioner has clarified that these works were not previously envisaged and the construction of RUBs was carried out as per directions of the ECR. The respondent, GRIDCO has pointed out that since the construction of RUBs is for the convenience of road users and as MGR track is catering coal supply to both stages (Stage-I and II), the expenditure should be utilized from the O&M expenses, or the compensation allowance allowed under Regulation 19(e) of the 2009 Tariff Regulations. It has also submitted that there is no notification indicating the occurrence of change in law and hence the claim of the petitioner may not be permitted. In response, the petitioner has clarified that these works were not previously envisaged and were executed as per the directions of the*



ECR. It has also stated that in terms of Regulation 19(e) the compensation allowance is admissible for units which have completed more than 10 years of life and hence no compensation allowance has been claimed. Accordingly, the petitioner has prayed for approval of the said expenditure.

33. The matter has been examined. From the documentary evidence furnished by the petitioner it is noticed that the ECR authorities have specifically directed the petitioner to construct the RUB on MGR track for the safe movement of men and material in the unmanned level crossing. In view of the above, we allow the capitalization of additional expenditure of Rs.163.00 lakh in 2013-14 under Regulation 9(2) (ii) of the 2009 Tariff Regulations.

57. It is observed from the above that the Petitioner had claimed the additional capitalisation of this asset/item for Rs 163.00 lakh in 2013-14 and the same was allowed vide the said common order dated 26.8.2015. However, the Petitioner has now submitted that the said amount of Rs. 163.00 lakh claimed in 2013-14 was towards 1(one) RUB only and that it had inadvertently missed the additional expenditure claim toward the 2nd (second) RUB, which was capitalised in 2014-15. In response to the direction vide ROP, the Petitioner has submitted that 2 nos. of RUB were to be constructed at Km 29/2 and Km 24/5 on NTPC Kaniha siding line by ECR, on deposit basis, for a total expenditure of Rs. 325.00 lakh, and that 1 no. RUB was constructed and capitalized in 2013-14 for Rs.163.00 lakh and that the 2nd RUB was capitalised in 2014-15 due to local disturbances. It is pertinent to mention that the Petitioner has claimed any projected additional capital expenditure for this item/asset in Petition No. 293/GT/2014 (determination of tariff for the period 2014-19). Considering the fact that the claim of the Petitioner for Rs. 163.00 lakh is towards two nos of RUBs, which was allowed and capitalised by the Petitioner during the period 2009-14, we find no merit in the submission of the Petitioner to allow the claim of the Petitioner during the period 2014-19. Accordingly, the claim of the Petitioner, for Rs. 110. 96 lakh in 2014-15, is not allowed.

Ballastless track

58. The Petitioner has claimed total additional capital expenditure of Rs. 307.72 lakh i.e., Rs. 196.95 lakh in 2014-15, Rs. 64.20 lakh in 2016-17 and Rs. 46.56 lakh in 2017-



18. In justification for the same, the Petitioner has submitted that the Commission had allowed the actual capitalisation of this asset/item for Rs 789.00 lakh for 2009-14 under Regulation 9(2)(vii) of the 2009 Tariff Regulations vide order dated 28.5.2013 in Petition No. 269/2009, as against the admitted cost of Rs 1300.00 lakh. The Petitioner has also submitted that due to local disturbances and R&R issues, the balance work was capitalised during the period 2014-19 and hence the expenditure claimed may be allowed.

59. The Respondent TANGEDCO has submitted that the Petitioner may be directed to furnish the date of award of the contract, date of commencement and completion of the work and the date of issue of payment to the contractors, to ascertain the applicability of the period for incurring the said expenditure, along with proper justification for the delay in execution and the consequent spill over to this tariff period. The Respondent KSEBL has submitted that the claim is not on account of non-materialization of coal supply, as there were no coal shortage issues and hence the same may not be allowed under Regulation 14(3)(x) of the 2014 Tariff Regulations. The Respondent GRIDCO has submitted that the claim may not be allowed.

60. In response the Petitioner has submitted that though the work started during the period 2009-14, however, due to local disturbance and R & R issues, the work for Rs. 789 lakh could only be capitalised during the period 2009-14 and the balance work is sought to be capitalized during the period 2014-19. It has also submitted that there is no cost overrun claimed due to such work being shifted to the period 2014-19 and therefore, the additional capitalization may be permitted under Regulation 14 (3) (x) of the 2014 Tariff Regulations.

61. The matter has been examined. It is observed that the Commission vide its order dated 28.5.2013 in Petition No. 269/ 2009 had allowed total additional capitalisation of



Rs. 1300.00 lakh for the said asset/item, during the period 2009-14. Thereafter, the Petitioner had capitalised amount of Rs. 789.00 lakh during the period 2010-13 and the same was allowed by common order dated 26.8.2015 in Petition No 320/GT/2013 and Petition No. 208/GT/2014 in 2013-14. In the above background, we allow the total additional capital expenditure of Rs. 307.72 lakh claimed during the period 2014-19.

Land for left out portion of MGR

62. The Petitioner has claimed total additional capital expenditure of Rs. 259.23 lakh i.e. Rs. 221.23 lakh in 2014-15 and Rs 38.00 lakh in 2018-19. In justification for the same, the Petitioner has submitted the Commission vide its order dated 28.5.2013 in Petition No. 269/2009 had allowed the additional capital expenditure for the period 2009-14.

63. The Respondent TANGEDCO and Respondent GRIDCO, have submitted that the Petitioner may be directed to submit the certificate from Special Land LAO, Government of Odisha, along with sale deed of the land, failing which, the amount claimed may be disallowed. In response, the Petitioner has furnished the certificate of possession of land issued by Special Land Acquisition Officer, Angul and also the communication received from the Sub Registrar, Talcher for payment of stamp duty/ registration fees, as documentary evidence, and has submitted the following:

- a) The capitalization of Rs. 600 lakh was proposed during the period 2009-14 and allowed by order dated 28.5.2013 towards the “land for left out portion of MGR”.
- b) The land corresponds to the 11 villages and has an area of 119.5 acres.
- c) During the period 2009-14, the possession of land in 6 villages totalling 80.1 acre could be done and the amount of Rs.520 lakh (out of Rs 600 lakh) for the same could be capitalized during the period 2009-14.
- d) During the period 2014-19, the possession of the remaining amount of land from the rest 5 villages and projection for Rs. 81 lakhs (Rs 600 lakh – Rs 520 lakh) was made while filing the petition for 2014-19, as the amount for land was not confirmed at the time of projections.



- e) Possession of 39.4 acres of land was taken during the period 2014-19 at an amount of Rs. 221.00 lakh as land acquisition process is a lengthy and cumbersome process which takes much time. Land possession documents are also attached as Annex- IX of the petition.
- f) An amount of Rs 38 lakh was capitalized towards payment of stamp duty and registration charges for execution of 8 no. of deed of conveyance of land. The communication received from Sub Registrar, Talcher is attached.

64. The matter has been examined. It is observed that the said work was allowed for Rs. 600.00 lakh for the period 2009-14, vide order dated 28.5.2013 in Petition No. 269/2009, as under:

*“31. A total expenditure of Rs. 4685 lakh for 2010-12 (Rs. 149.00 lakh towards MGR–Talcher connectivity for 2010-11, Rs. 3769.00 lakh towards 12.5 km MGR to Kaniha Mines and Rs. 767.00 lakh towards 3.5 km MGR to Kaniha Mines) has been claimed for installation of MGR system. As regards MGR-Talcher connectivity, the petitioner has submitted that the work got delayed because of delay in link mine development by CIL and the revised estimate given by East Coast railway is for balance work only. With regard to the work of 12.5 km MGR to Kaniha mines, the petitioner has submitted that the delay in the work is due to problem of acquisition of land and that the linked mine developed by CIL affected the progress of the work. **It has also submitted that physical possession of private land for 12.5 kms package is yet to be obtained and entire money has been submitted, the disbursement of which is going on. It has further submitted that R&R plan is yet to be approved by the State Authorities. Kaniha mines are the linked mines for the generating station. The said work is within the scope of work and the development of linked mine was delayed by CIL thereby affecting the progress of the work. Also due to problems in land acquisition for MGR system and the R&R plan yet to be approved by the State Government, the petitioner has taken all efforts to arrange coal from other sources like the IB valley through Rail network and import of coal. Considering the above facts in totality, we are of the view that the claim of the petitioner for capitalization of expenditure is justified. Hence the same is allowed in terms of Regulation 9(2)(vii) of the 2009 Tariff Regulations.***

xxx

33. The petitioner has claimed total expenditure of Rs. 600 lakh (Rs.300 lakh each for the years 2010-11 and 2011-12) towards land for left out portion of MGR system. The petitioner has submitted that due to delay in land acquisition problem and mine development by CIL, the work, which is under the original scope of work and approved before cut-off date, was delayed. The work is for left out MGR line to Kaniha mines which are the linked mines for the generating station. Moreover, development of mine work by CIL and R&R problem had also delayed the said work. Since the land is required for MGR system, we allow the expenditure in terms of Regulation 9 (2)(vii) of the 2009 Tariff Regulations.”

65. Thereafter, the Petitioner had claimed additional capitalisation of Rs. 300.00 lakh during the period 2009-14 and the same was allowed vide common order dated 26.8.2015 in Petition No 320/GT/2013 and Petition No. 208/GT/2014. However, for the



period 2014-19, the Commission vide order dated 16.2.2017 in Petition No. 293/GT/2014 had observed the follows.

Land for left out portion of MGR and 12.5 km MGR to Kaniha Mines

45. The petitioner has claimed additional capital expenditure of Rs. 81.00 lakh in 2016-17 towards Land for left out portion of MGR and Rs. 3769.00 lakh towards work of 12.5 km MGR to Kaniha Mines. In justification of the same, the petitioner has submitted that the expenditure was allowed by the Commission in order dated 28.5.2013 in Petition No. 269/2009 during the period 2009-14. It has also submitted that the work could not be started due to delay in the process of land acquisition, the same being private land and the Govt. of Orissa is yet to disburse the amount to the landowners. Accordingly, the petitioner has prayed for grant of the said expenditure.

46. The matter has been examined. The Commission vide order dated 28.5.2013 in Petition No. 269/2009 had allowed an expenditure of Rs. 600.00 lakh and Rs. 3769.00 lakh towards Land for left out portion of MGR and 12.5 km MGR to Kaniha mines respectively during the period 2009-14. Thereafter the Commission vide order dated 26.8.2015 in Petition No. 320/GT/2013 had allowed the actual additional capital expenditure of Rs. 60.00 lakh in 2011-12, Rs. 9.00 lakh in 2012-13 and Rs. 451.00 lakh in 2013-14 (i.e. total Rs. 520.00 lakh) during the period 2009-14 out of the expenditure towards Land for left out portion of MGR. Since, the total amount claimed by the petitioner under this head form part of the expenditure allowed and the work has been delayed due to delay in land acquisition required for MGR system by Govt. of Odisha, we are inclined to allow the additional capital expenditure claimed under this head.

66. It is evident that the land for left out portion of MGR of Rs. 81.00 lakh is associated with 12.5 km MGR to Kaniha mines for Rs. 3769.00 lakh, which were envisaged to be capitalised in 2016-17. However, the Petitioner has now claimed the additional capitalisation of Rs. 221.23 lakh in 2014-15 and Rs. 38.00 lakh in 2018-19 towards land for left out portion of MGR, but has not claimed any additional capitalisation for 12.5 km MGR to Kaniha mines. In view of this, the additional capital expenditure claimed by the Petitioner towards land for the left-out portion of MGR is not allowed. However, the Petitioner is granted liberty to approach the Commission for the subject works along with the linked 12.5 km MGR to Kaniha mines at the time of truing-up of tariff, for the period 2019-24, along with reasons for higher claim as compared to those allowed by order dated 16.2.2017 in Petition No. 293/GT/2014, along with supporting documents.



Upgradation of ESP

67. The Petitioner has claimed total additional capital expenditure of Rs. 5301.23 lakh i.e. Rs. 2699.09 lakh in 2017-18 and Rs. 2602.14 lakh (2065.14+537.00) (which includes IDC of Rs.114.40 lakh) in 2018-19. In justification for the same, the Petitioner has submitted the Commission vide its order dated 16.2.2017 in Petition No. 293/GT/2014 had approved the additional capital expenditure for this work during the period 2016-19.

68. The Respondent TANGEDCO has submitted that the Petitioner has only furnished the annual average emission level, but has not furnished the details for each pass and each unit. The Respondent KSEBL has submitted that though the Petitioner was directed to submit the actual emission levels of ESP during the last 5 years, the Petitioner has not complied with the same and therefore, the claim may not be allowed. The Respondent GRIDCO, has submitted that the Petitioner has claimed additional capitalization towards ESP up-gradation which includes Rs. 114.40 lakh IDC, which may not be allowed.

69. In response, the Petitioner has submitted that works for ESP upgradation was taken up to comply with the directions of OSPCB vide its letters dated 12.7.2011 and 13.1.2012. The Petitioner has further submitted that pass-wise emission level is not monitored at the generating station, but the unit-wise emission levels, for the last five years has been furnished as directed by the Commission.

70. The matter has been examined. It is observed that the Petitioner has claimed total additional capital expenditure of Rs. 5301.23 lakh during the period 2014-19 and Rs. 7700.00 lakh during the period 2019-24 for the said asset/item. It is noticed that the Commission vide its order dated 16.2.2017 in Petition No. 293/GT/2014 had



allowed the total additional capitalisation of Rs. 11250.00 lakh for the period 2014-19 as under:

*“20. We have examined the matter. It is observed that the area around the generating station has been identified as critically polluted and therefore necessary steps are required to be taken by all stakeholders in order to implement the CEPI action plan. Accordingly, in compliance with the CEPI action plan notified by OSPCB during the year 2012, long term works of up-gradation of ESP has been proposed to be undertaken by the petitioner during the period 2016-19. Though the petitioner was directed vide ROP of the hearing dated 24.5.2016 to submit details of the emission levels of the generating station and the expected level of emission after Up-gradation of ESP, it has not furnished the same. However, considering the fact that the expenditure is incurred in compliance with the statutory guidelines of OSPCB, we are inclined to allow the projected additional capital expenditure of Rs. 3750.00 lakh each for the years 2016-17, 2017-18 and 2018-19 for Up-gradation of ESP of Stage-II under Regulation 14(3)(ii) of the 2014 Tariff Regulations. **The petitioner is however directed to furnish the actual emission level of ESP during the last five years, categorically for each pass and each unit of the generating station at the time of truing up in the terms of Regulation 8 of the 2014 Tariff Regulations.**”*

71. In response to the directions above, the Petitioner has not submitted the pass wise emission levels for ESP, but however submitted the unit wise details as under:

- a. ESP upgradation was completed for two units during the period 2014-19 and upgradation for other two units has been completed by 2020-21. As directed by the Commission, the emissions achieved after upgradation of ESP for all the units of the station are as under:

Emission level Post ESP R & M for TSTPS-II		
Unit No	Sample date	PM in mg/NM3
1	24.09.2021	40.2
2	25.12.2021	34.3
3	20.03.2021	38.8
4	11.01.2022	36.4

72. In consideration of the above submissions, the total additional capital expenditure of Rs. 5186.83 lakh (Rs, 5301.23 lakh minus IDC amount of Rs. 114.40 lakh) for the period 2014-19 is allowed. However, the IDC amount of Rs. 114.40 is allowed to be recovered as a one-time expense in 2018-19.

Fire Detection and Protection System

73. The Petitioner has claimed total additional capital expenditure of Rs. 66.85 lakh on cash basis (Rs. 83.52 lakh on accrual basis) in 2018-19. In justification for the same, the Petitioner has submitted that the Commission vide its order dated 16.2.2017



in Petition No. 293/GT/2014 had granted liberty to the Petitioner to claim this expenditure at the time of truing up of tariff.

74. The Respondent GRIDCO, has submitted that the Petitioner has not placed on record the confirmation that the expenditure on augmentation of fire-fighting system/ protection system follows the TAC guidelines and hence the amount claimed is liable to be rejected. In response, the Petitioner submitted that no discount was received from the insurance company and that the work of augmentation of firefighting system/ protection system follows the TAC guidelines. The Petitioner has submitted the certificate vide affidavit dated 28.7.2021.

75. The matter has been examined. It is observed that the Commission vide its order dated 16.2.2017 in Petition No. 293/GT/2014 had approved the capitalization of the said item/asset, during the period 2014-19 as follows:

“27.....the Commission is of the view that the matter needs to be examined in the larger perspective i.e., whether the CEA Regulations 2010 and 2011 are applicable to the existing generating stations and if so, whether the implementation of the augmentation of firefighting system should be considered as Change in law and is required for Safety and security of the plant in terms of Regulation 14(3)(ii) and (iii) of the 2014 Tariff Regulations. Accordingly, the Commission has decided to consult the CEA in this regard. Therefore, the Staff of the Commission is directed to refer the matter to CEA for necessary clarification. Pending clarification in the matter, the claim of the petitioner has not been decided in this order. If on the basis of the report of the CEA, the Commission comes to a decision to allow the expenditure for augmentation of fire-fighting/ protection system under Change in law and for Safety and security of the plant, and in that event, the claim of the petitioner shall be considered at the time of truing-up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations. The petitioner shall also place on record the confirmation that the expenditure on augmentation of fire-fighting system/protection system is in compliance with the TAC guidelines and the discount, if any, received from the Insurance companies at the time of truing-up.

76. In line with the above directions, the Petitioner has submitted that the augmented fire-fighting system/ protection system complies with the TAC guidelines. In view of this, the additional capital expenditure claimed is allowed.



B. New Claims

Compensation for land, Freehold land and interest provision capitalised on land cases

77. The Petitioner has claimed additional capital expenditure of Rs.14.66 lakh for Compensation of land in 2017-18, Rs. 93.63 lakh for freehold land in 2018-19 and Rs.0.44 lakh for interest provision capitalised on land cases, on cash and accrual basis. In justification for the same, the Petitioner has submitted that Rs. 14.66 lakh, was paid as enhanced compensation as per the directions of the District court, Angul vide order dated 21.12.2017, towards acquisition of land/ tree along with solatium and interest. The Petitioner has also submitted that additional compensation of Rs. 93.63 lakh was paid to station affected persons (SAP) of the generating station, wherein the rehabilitation grant cash package @ Rs 15 lakh per SAP, was deposited with the District Administration, pursuant to the decision taken in the 7th RPDAC meeting and high-level committee meeting held under the chairmanship of the Hon'ble Minister of Revenue. The Petitioner has furnished the copy of office order of Collector and the DM Angul, in support of the claim.

78. The Respondent, TANGEDCO has submitted that the Petitioner has claimed an amount of Rs.108.73 lakh (14.66 lakh + 93.63 lakh + 0.44 lakh) towards payment made through out of court settlement for Land plant area under Regulation 14(3)(i) of the 2014 Tariff Regulations. The Respondent has submitted that the Petitioner may be directed to furnish the details of the payments released based on the Court order dated 21.12.2017 and in the absence of which, the claim may be dismissed. In response, the Petitioner submitted that enhanced compensation was paid towards land as per the directions of the Hon'ble District Court, Angul dated 21.12.2017.

79. The matter has been examined. It is observed that though the Petitioner has claimed additional capital expenditure i.e. compensation for land, freehold land and



interest provision capitalised on land cases in compliance to the District Court order dated 21.12.2017, it has not furnished the details of compensation paid to the parties. However, considering the fact that the expenditure incurred are in compliance to the order of the District Court of Angul, we allow the additional capitalisation of Rs. 14.66 lakh in 2017-18 claimed towards compensation of land and Rs. 93.63 lakh in 2018-19 towards freehold land. In addition, the amount Rs. 0.44 lakh claimed for interest provision on land cases, is allowed as a one-time expense.

Effluent Quality Management System (EQMS) Main equipment and Continuous Emission Monitoring System (CEMS)

80. The Petitioner has claimed additional capital expenditure of Rs. 36.19 lakh in 2015-16 and Rs. 0.01 lakh in 2016-17 towards EQMS main equipment and has also claimed total additional capital expenditure of Rs. 99.89 lakh in 2015-16 and Rs. 5.73 lakh in 2016-17 towards Continuous Emission Monitoring System (CEMS). In justification for CEMS, the Petitioner has submitted that the same is a statutory requirement as per guidelines issued by the Central Pollution Control Board (CPCB) vide direction dated 5.2.2014 and as per these guidelines, the stack emission is to be continuously monitored. The Petitioner has further submitted that the capitalization of CEMS is for compliance of the directions of CPCB which is admissible under Regulation 14 (3) (ii) of the 2014 Tariff Regulations.

81. The Respondent, TANGEDCO has submitted that the Petitioner has not furnished documents in support of its claim namely, the original Consent Order at the time of execution of project and the corresponding Consent to Operate (CTO) copies for the years 2014-15 and 2015-16, along with documents pertaining to the installation of instruments for monitoring of emission and effluent quality. It has also submitted that the Commission may direct the Petitioner to furnish the approval of the competent authority for incurring the expenditure and the same may be approved after prudence



check. The Respondent GRIDCO has submitted that the Petitioner may be directed to furnish details regarding the bidding process adopted for procurement, installation and commissioning of CEMS & EQMS, in order to examine whether the contractors/suppliers were selected prudently, including the terms and conditions of contracts, the commercial operation certificate from SPCB, after commissioning of the equipment, the benchmark cost fixed by the appropriate Authority/ Commission for both the equipment's. The Respondent KSEBL has submitted that as the Petitioner has sought approval for FGD, which is under consideration, the additional capital expenditure may be disallowed. In response to the above, the Petitioner while reiterating its submissions in the petition, has also submitted that these equipment are in operation for long time and the monitoring system being installed in FGD system are in a different location. The Petitioner has further submitted that OSPCB in its CTO dated 27.3.2017 issued for the generating station has also directed the Petitioner to operate the CEMS and EQMS uninterruptedly.

82. In response to the direction of the Commission vide ROP, the Petitioner has submitted that CEMS & EQMS is a statutory requirement as per guidelines issued by CPCB on 5.2.2014, directing the implementation of these systems by all industries including Power sector. It has further submitted that prior to installation of CEMS and EQMS, opacity meters were used, which are still in service and the decapitalised value of the items decapitalised will be provided in the truing -up petition for the period 2019-24 after decapitalisation of asset / equipment, as applicable.

83. The matter has been examined. It is noticed that the Petitioner had capitalised an amount of Rs 149.00 lakh towards Ambient Air Quality Monitoring System (AAQMS) outside the plant premises during the period 2009-14 as per directives dated 13.1.2012 of the OSPCB, which was allowed in common order dated 26.8.2015 in



Petition No. 320/GT/2013 and Petition No. 208/GT/2014 'under Change in law'. The Petitioner has claimed the additional capital expenditure of Rs. 32.20 lakh and Rs.105.62 lakh towards EQMS and CEMS respectively stating that the said systems are at different location from the monitoring system being installed in FGD system. It is observed that the order dated 5.2.2014 of CPCB issued to State Pollution Control Board (SPCB) and Pollution Control Committees (PCC) under Section 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 is extracted below:

"WHEREAS, the SPCBs and PCCs are also required to ensure installation and regular operation of the requisite pollution control facilities in the polluting industries; and

WHEREAS, there is need to inculcate habit of self-monitoring mechanism within the industries for complying the prescribed standards and this can be achieved by the methods like installing online effluent and emission monitoring devices; and

WHEREAS, number of industries (as per list) under 17 category (Annexure-I) which are operating in the state/UT have been identified can be suitably directed for installation and commissioning of online monitoring systems (emission and or effluent); and

WHEREAS, number of Common Hazardous waste and Biomedical waste incinerators and CETPs operating in the state/UT (as per list) can also be considered for installation and commissioning of online monitoring systems (emission and or effluent); and..."

84. Keeping in view that the claim of the Petitioner is in terms of the directions of the CPCB, the additional capital expenditure for EQMS main equipment and CEMS are **allowed** under Regulation 14 (3) (ii) of the 2014 Tariff Regulations. However, the Commission directs that as and when the existing opacity meters are declared redundant, the same shall be decapitalized.

LED Lighting

85. The Petitioner has claimed additional capital expenditure for Rs.507.53 lakh in 2018-19 towards LED lightning under Regulation 14(3)(ii) of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that in line with the objective, Unnat Jyoti by affordable LEDs for all (UJALA) and Street Lighting National Programme, which is being implemented by M/s EESL, the Petitioner was



mandated by MOP, GoI vide letter dated 2.8.2017, to replace all old bulbs with LED bulbs in all NTPC buildings including compound/ street lighting occupied by the Petitioner. The Petitioner has also submitted that in order to comply with the said directions of GOI, it has replaced old inefficient lights, with efficient LED lighting, in the premises of the generating station compound/ building owned and operated by the Petitioner.

86. The Respondent TANGEDCO has submitted that the expenditure claimed is not admissible and the same can be carried out under the normative O&M expenses approved for the generating station. In response, the Petitioner has reiterated that the additional capital expenditure claimed pertains only to the plant area.

87. The matter has been considered. It is noticed that the additional capital expenditure incurred towards installation of 'LED lights' is in terms of the MOP, GoI letter dated 2.8.2017, which recommends the replacement of existing old bulbs with LED bulbs, resulting in reduction of about 50% to 90% in energy consumption by lighting. In our view, the letter of the MOP, GOI, is recommendatory in nature and cannot be construed as a 'change in law' event or for compliance to an existing law, in order to consider the additional capital expenditure claimed by the Petitioner. Moreover, the benefits of replacement of incandescent light with LED lighting system, accrues to the benefit of the Petitioner. In view of these, the additional capital expenditure of Rs.507.23 lakh claimed by the Petitioner is not allowed.

Purchase of Locos

88. The Petitioner has claimed total additional capital expenditure of Rs. 4467.85 lakh i.e., Rs. 4467.80 lakh in 2014-15 and Rs. 0.05 lakh in 2016-17. In justification for the same, the Petitioner has submitted that coal is transported from various sources (linked mines of Lingraj, Kaniha and through imported coal) and the generating station



is having only 14 no of locos, against the requirement of 17 LOCO. It has stated that 1 no loco was transferred from Barh station, which has been transferred back to Barh in 2015-16, and accordingly there is shortage of 4 Locos. It has stated that additional 4 locos are required to transport the coal continuously from linked Kaniha mines due to lower average speed of rakes, gradient and curvature and reverse curve on track. The Petitioner has stated that certain Locos are continuously engaged in hauling coal through MGR and some are required for receiving coal rakes other than MGR i.e. through Indian Railways and about 2/3rd are under maintenance/ overhauling.

89. The Respondent GRIDCO has submitted that in terms of the second proviso to Regulation 14 (3) (x) of the 2014 Tariff Regulations, any capital expenditure other than that of the nature specified in Regulation 14 (i) to (iv) of the said regulations, for coal/ lignite-based stations, shall be met from the compensation allowance allowed to these stations. The Respondent TANGEDCO has submitted that the Commission vide its order dated 28.5.2013 in Petition No. 269/2009 had disallowed the expenditure towards purchase of additional locos and wagons and capitalization of these assets was not allowed. In response, the Petitioner has submitted that the item/asset claimed in Petition No 269/2009 is not applicable to the present case.

90. In response to the directions vide ROP, the Petitioner has submitted that Talcher Kaniha is receiving coal from linked mines of Lingraj and Kaniha and other sources, to haul the coal from linked mines. It has stated that total 13 locomotives are required, of which Lingraj circuit has very high gradient of 1 in 100 and in order to haul each rake of coal from Lingraj mines, there is a requirement of three locomotives (two leading and one banking for rakes in Lingraj circuit) due to high gradient in the circuit and unavailability of engine escape line at loading point. The Petitioner has also submitted that two locomotives are required for transferring each rake in Kaniha circuit



for push-pull purpose, due to unavailability of engine escape line at loading point. The Petitioner has stated that in addition to MGR rakes from the above two sources, the generating station also receives Imported Coal and Coal from other sources, through Exchange yard. It has submitted that 2 no. locomotives are required for hauling these rakes from exchange yard to unloading points– wagon tippers and track hoppers. The Petitioner has added that 2/3rd locomotives are under scheduled maintenance at station workshops, out of the total 17 no of locomotives required for coal transportation.

91. The matter has been examined. It is observed that the additional capital expenditure claimed by the Petitioner in Petition No. 269/2009 was disallowed vide order dated 28.5.2013 as under:

“We have examined the matter. It is noticed that MGR system to Kaniha Mines is being installed to receive coal from the linked mines. With the current arrangement of coal receiving system for the generating station, it is noticed that the generating station has been achieving 85% PLF. Based on the additional capitalization allowed for MGR system to Kaniha mines as stated in the above para, the coal for the generating station would be received through MGR from the linked mines (Kaniha) in future. In view of this, we do not feel the requirement of additional rolling stock/wagons at this stage, which would only burden the beneficiaries. Accordingly, the prayer of the petitioner for capitalization of the said expenditure under this head is not allowed.”

92. As per the submissions of the Petitioner, it is noted that this additional capital expenditure is different from that claimed by the Petitioner vide order dated 28.5.2013. Further, the need of locos is justified considering that 2 no. locomotives are required for hauling of the MGR rakes from exchange yard to unloading points. In case some of the locomotives remain under scheduled maintenance, it is imperative that extra locos would be required for coal transportation. Accordingly, the claim of the Petitioner, is **allowed**. However, the petitioner may carry out exercise for decapitalizing locos which are not being put to use or beyond repair. The result of the exercise shall be placed before the Commission at the time of truing up of tariff for the period 2019-24.



Decapitalization of items

93. Regulation 14(4) of the 2014 Tariff Regulations, provides as under:

“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.”

94. The Petitioner has claimed the following de-capitalisation:

Sl. No.	Decapitalised items	2014-15	2015-16	2016-17	2017-18	2018-19
1	Decapitalisation of spares	96.21	12.73	409.77	1105.23	522.33
2	Decapitalisation of CCTV (part of capital cost)	25.45	0.00	0.00	0.00	0.00
3	UNIT#3 MS Ash slurry pipes	0.00	0.00	0.00	338.28	68.64
4	De-capitalisation of Unit -6 CHP-Offsite Area Civil Works Pkg-1& Pkg li, Stage-II	0.00	0.00	0.00	0.00	24.97

95. The decapitalisation of spares, CCTV and CHP offsite area civil works as claimed by the Petitioner is allowed. However, as discussed above, the decapitalization of old replaced MS pipes with basalt pipes, with newly replaced MS pipes with basalt pipes has been considered under assumed deletions.

Assumed Deletions

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



“Assumed deletion”. Further, in absence of the gross value of the asset being de-capitalized, the same is calculated by de-escalating the gross value of new asset @ 5% per annum till the year of capitalization of the old asset.

97. It is observed that the Petitioner, while claiming additional capital expenditure in 2018-19, has not provided the de-capitalization value of old asset for some of the items which are being replaced. Accordingly, based on above methodology, the decapitalization value of old asset has been worked out as shown below.

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
Replacement of MS Ash slurry pipes with Basalt Pipes	Additional capitalization allowed	48.51	0.00	825.39	1401.61	298.86
	considered for Decapitalisation (under assumed deletions)	31.27	0.00	482.59	780.47	158.49

Exclusions

98. The summary of exclusions from books of accounts, as claimed (on accrual basis) by the Petitioner for the period 2014-19, is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Items not allowed during the period 2009-14	0.00	0.00	0.00	2054.43	0.00
Items not claimed as additional capitalization during the period 2014-19	411.57	284.71	6.59	0.00	2458.84
Capitalization of Capital spares	1287.68	1954.13	3813.45	3859.24	2085.83
Inter-Unit Transfer	(-)8.75	(-)1329.21	3410.83	4902.42	(-)168.17
De-capitalization of Spares: Not part of capital cost	(-)132.32	(-)693.16	(-)378.97	(-)346.20	(-)584.19
Capitalization of MBOA	137.74	232.22	398.94	579.65	409.36
De-capitalization: MBOAs not part of capital cost	(-)10.95	(-)22.32	(-)59.91	(-)97.39	(-)293.62
De-capitalization of MBOA: Part of capital cost	(-)22.18	(-) 63.73	0.00	0.00	0.00
De-capitalization of Items- Not part of capital cost	(-)210.73	(-) 2.10	0.00	(-)459.68	0.00
Total Exclusions claimed	1452.04	360.53	7190.92	10492.47	3908.04

Items not allowed during the period

99. The Petitioner has claimed amount of Rs. 2054.43 lakh in 2017-18 towards items that were not allowed during the period 2009-14. It is noticed that the items claimed



under this head include 220 kV switchyard package, interconnecting conveyor, plant boundary wall, LT switchgear panel, water type fire extinguisher etc. These items have been disallowed by order dated 28.5.2013 in Petition 269/2009. Hence, the claim of the Petitioner under this head is allowed.

Items not claimed as additional capitalization during the period 2014-19

100. The Petitioner has claimed amounts of Rs. 411.57 lakh in 2014-15, 284.71 lakh in 2015-16, Rs.6.59 lakh in 2016-17 and Rs.2458.84 lakh in 2018-19, towards items claimed as additional capital expenditure during the period 2014-19. It is noticed that the items under this head, include supply and erection of 11 KV HT cable in township, construction of balance work for plant boundary wall and road near Sarthipal village, balance work of additional plant boundary wall near Patharmunda and Bhimkand village, construction of RCC cable trench in T/S, Construction of 48 nos. 'D'- type quarters at PTS of TSTPP, (Package-III), balance work of 44 nos. D-type quarters at PTS Stage-II (Package-V), construction of balance road in Stage-II township Part-I, erection of lightning arrestor, sewerage disposal system of St-II Area in PTS etc. The Petitioner has not claimed any these assets/items as additional capital expenditure during the period 2014-19. In view of this, the Petitioner's claim under the above head is allowed.

Capitalization of Capital Spares

101. The Petitioner has claimed exclusion of capital spares for Rs. 1287.68 lakh in 2014-15, Rs. 1954.13 lakh in 2015-16, Rs. 3813.45 lakh in 2016-17, Rs. 3859.24 lakh in 2017-18 and Rs. 2085.83 lakh in 2018-19. In justification for the same, the Petitioner has submitted that capital spares capitalized after cut-off date, are not allowable in terms of the 2014 Tariff Regulations and accordingly the same has been claimed as exclusion. As stated, the capitalization of spares over and above initial spares



procured after the cut-off date of the generating station is not allowed as part of capital cost as per the 2014 Tariff Regulations. Accordingly, the Petitioner's claim under this head is allowed.

Inter-Unit Transfer

102. The Petitioner has claimed exclusion of (-) Rs. 8.75 lakh in 2014-15, (-) Rs.1329.21 lakh in 2015-16, 3410.83 lakh in 2016-17 and Rs.4902.42 lakh in 2017-18 and (-)168.17 lakh on account of Inter-unit transfer of assets to/from the generating station. In justification for the same, the Petitioner has submitted that since the Commission is not considering the temporary inter-unit transfer of assets, for the purpose of tariff, the same has been kept under exclusions. The items claimed under this head have been examined and observed that Petitioner has not furnished capitalization / decapitalization of subject assets in the respective stations and the decapitalization of assets of the generating station at other generating stations. However, considering the fact that the inter-unit transfer, is temporary in nature, the same is ignored for the purpose of tariff. Hence, the exclusion claimed is allowed.

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

103. The Petitioner has claimed exclusion of de-capitalisation of capital spares for (-) Rs. 132.32 lakh in 2014-15, (-) Rs.693.16 lakh in 2015-16, (-) Rs.378.97 lakh in 2016-17, (-) Rs.346.20 lakh in 2017-18 and (-) Rs.584.19 lakh in 2018-19. The Commission vide letter dated 4.1.2022 had directed the Petitioner, to submit a declaration that these items do not form a part of capital cost. In justification of the same, the Petitioner has submitted that these capital spares do not form part of the capital cost allowed for the generating station and hence, their de-capitalisation has been claimed as exclusions. It is observed from the submission of the Petitioner that these capital spares do not form part of the approved capital cost of the generating station. Accordingly, the Petitioner's claim for exclusion under this head is allowed.



Capitalization of Miscellaneous Bought out Assets (MBOA)

104. The Petitioner has claimed capitalization of MBOA for Rs. 146.37 lakh in 2014-15, Rs. 249.40 lakh in 2015-16, Rs. 416.91 lakh in 2016-17, Rs. 606.85 lakh in 2017-18, Rs. 427.83 lakh in 2018-19 including undischarged liabilities of Rs. 8.63 lakh in 2014-15, Rs.17.19 lakh in 2015-16, Rs. 17.97 lakh in 2016-17, Rs. 27.81 lakh in 2017-18 and Rs.18.47 lakh in 2018-19. In justification of the same, the Petitioner has submitted that capitalization of MBOA beyond the cut-off date is not admissible, as per the 2014 Tariff Regulations. Since positive entries corresponding to the disallowed assets were not allowed to form part of the capital cost, for the purpose of tariff, the exclusion (of positive entries) as claimed by the Petitioner is in order. Accordingly, the exclusion of the said amounts, under this head, is allowed.

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

105. The Petitioner has claimed exclusion of de-capitalisation of MBOA for (-) Rs.10.95 lakh in 2014-15, (-) Rs. 22.32 lakh in 2015-16, (-) Rs. 59.91 lakh in 2016-17, (-) Rs. 97.39 lakh in 2017-18 and (-) Rs. 293.62 lakh in 2018-19. In justification for the same, the Petitioner has submitted that these MBOA's do not form part of the approved capital cost of the generating and accordingly their de-capitalisation has been claimed as exclusion. Since the de-capitalised MBOAs do not form part of the approved capital cost of the generating station, the exclusion claimed under this head is allowed.

De-capitalization of MBOA (Part of Capital Cost)

106. The Petitioner has claimed exclusion of de-capitalisation of MBOAs for (-) Rs. 22.18 lakh in 2014-15, (-) Rs.63.73 lakh in 2015-16, (-) Rs. 80.26 lakh in 2017-18 and Rs. 238.39 lakh. In justification for the same, the Petitioner has submitted that since the capitalisation of expenditure against these items are not allowed for the purpose of tariff in terms of the 2014 Tariff Regulations, the de-capitalisation of the same has



been claimed as exclusion. Since Regulation 14(4) of the 2014 Tariff Regulations provides that in case of de-capitalisation of assets, the original cost of such assets shall be removed from the admitted capital cost of the generating station, the claim of the Petitioner under this head is not allowed.

107. Based on the above discussions, the exclusions allowed and disallowed for the period 2014-19 is summarized below:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Items not allowed during the period 2009-14	-	-	-	2054.43	-
Items not claimed as additional capitalization during the period 2014-19	411.57	284.71	6.59	-	2458.84
Capitalization of Capital spares	1287.68	1954.13	3813.45	3859.24	2085.83
Inter-Unit Transfer	(-)8.75	(-)1329.21	3410.83	4902.42	(-)168.17
De-capitalization of spares: Not part of capital cost	(-)132.32	(-)693.16	(-)378.97	(-)346.20	(-)584.19
Capitalization of MBOA	137.74	232.22	398.94	579.65	409.36
De-Capitalization: MBOA not part of capital cost	(-)10.95	(-)22.32	(-)59.91	(-)97.39	(-)293.62
De-capitalization of MBOA: Part of capital cost	0.00	0.00	0.00	0.00	0.00
De-capitalization of Items-Not part of capital cost	(-)210.73	(-)2.10	0.00	(-) 459.68	0.00
Total Exclusions allowed	1474.22	424.26	7190.92	10492.47	3908.04
Total Exclusions disallowed	(-)22.18	(-)63.73	-	(-)80.26	(-)238.39

Discharge of Liabilities

108. The discharges of liabilities claimed by the Petitioner is as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Out of liabilities deducted as on 1.4.2009	592.61	-	127.29	-	-
Other liabilities	242.72	607.56	664.47	105.22	382.65
Total	835.33	607.56	791.76	105.22	382.65

109. The discharge of liabilities, as claimed above, are in order and has been considered for the purpose of tariff. However, as discussed above, discharge of liability of Rs. 50.70 lakh in 2018-19 towards interlocking of exchange yard is disallowed and reduced from the amount of discharges of Rs. 382.65 lakh claimed in 2018-19. Further, considering the reversal of liabilities, during the period 2014-19, which



correspond to the admitted capital cost, the flow of un-discharged liabilities corresponding to the admitted capital cost is as under:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
A) Out of Liabilities prior to 2009					
Opening Liabilities	2244.99 [#]	1178.75	1178.75	1051.46	1051.46
Addition During the Period	-	-	-	-	-
Discharges during the Period	592.61	0.00	127.29	0.00	0.00
Reversal during the Period	473.63	0.00	0.00	0.00	300.67
Closing Liabilities	1178.75	1178.75	1051.46	1051.46	750.79
B) Other liabilities					
Opening Liabilities	999.54	1659.34	1585.91	1225.14	1398.41
Addition During the Period	908.75	534.13	306.24*	407.17	900.79
Less : Discharges during the Period	242.72	607.56	664.47	105.22	331.95
Less: Discharges not allowed (towards interlocking of exchange yard)	0.00	0.00	0.00	0.00	50.70
Less: Reversal during the Period	6.22	0.00	2.55	128.68	0.00
Closing Liabilities	1659.34	1585.91	1225.14	1398.41	1916.56

*Amount indicated as per Form 18, #Considered as approved vide order dated 26.8.2015 in Petition No. 320/GT/2013 with Petition No. 208/GT/2014

110. Accordingly, the additional capital expenditure allowed for the period 2014-19 is summarized as under:

<i>(Rs. in lakh)</i>						
SI No.		2014-15	2015-16	2016-17	2017-18	2018-19
A	Already allowed Items					
1	Works related to Ash Pond/ Ash handling system	4015.93	1851.80	2826.83	2581.78	3480.24
2	Interlocking at Exchange Yard	379.39	0.00	0.00	0.00	0.00
3	Replacement of MS Ash slurry pipes with Basalt Pipes	48.51	0.00	825.39	1401.61	298.86
4	3.5 Km MGR to Kaniha mines	112.61	0.00	0.00	0.00	0.00
5	Construction Of Road Under Bridge on MGR Track	0.00	0.00	0.00	0.00	0.00
6	Ballastless track	196.95	0.00	64.20	46.56	0.00
7	Land for Left out portion of MGR	0.00	0.00	0.00	0.00	0.00
8	Upgradation of ESP					
a	Renovation & Retrofitting of Electrostatic Precipitator package (Supply portion)	0.00	0.00	0.00	2699.09	1950.74
b	Inland Transportation, Insurance, Installation, Testing & Commissioning of Renovation & Retrofitting of Electrostatic Precipitator package	0.00	0.00	0.00	0.00	537.00



SI No.		2014-15	2015-16	2016-17	2017-18	2018-19
9	Fire Detection and Protection System	0.00	0.00	0.00	0.00	66.85
10	Sub-Total (A)	4753.39	1851.80	3716.43	6729.04	6333.69
B	New Claims					
11	Compensation for land	0.00	0.00	0.00	14.66	0.00
12	Freehold land	0.00	0.00	0.00	0.00	93.63
13	Interest provision capitalised on land cases	0.00	0.00	0.00	0.44	0.00
14	EQMS Main equipment	0.00	36.19	0.01	0.00	0.00
15	Continuous Emission Monitoring System (CEMS)	0.00	99.89	5.73	0.00	0.00
16	LED Lighting	0.00	0.00	0.00	0.00	0.00
17	Purchase of Locos	4467.80	0.00	0.05	0.00	0.00
18	Sub-Total (B)	4467.80	136.07	5.79	15.10	93.63
	Additional capital expenditure allowed (C=A+B)	9221.19	1987.87	3722.22	6744.14	6427.31
C	Decapitalization					
19	Decapitalisation of Spares (part of capital cost)	(-) 96.21	(-)12.73	(-)409.77	(-)1105.23	(-)522.33
20	Decapitalisation of CCTV (part of capital cost)	(-)25.45	0.00	0.00	0.00	0.00
22	Decapitalisation of Unit-6 CHP-Offsite Area Civil Works PKG-1& PKG II, Stage-II	0.00	0.00	0.00	0.00	(-)24.97
	Assumed Deletion					
21	Unit-3 MS Ash slurry pipes	(-)31.27	0.00	(-)482.59	(-)780.47	(-)158.49
24	Sub-Total (D)	(-)152.93	(-)12.73	(-)892.36	(-)1885.70	(-)705.79
25	Add: Discharge of Liabilities	835.33	607.56	791.76	105.22	331.95
26	Net Additional capital expenditure allowed (including discharges of liabilities) (E=C+D)	9903.59	2582.70	3621.62	4963.66	6053.46
27	Decapitalisation of MBOA: Part of capital cost	(-)22.18	(-)63.73	0.00	(-)80.26	(-)238.39
28	Net Additional capital expenditure allowed	9881.41	2518.97	3621.62	4883.40	5815.07

Capital cost allowed for the period 2014-19

111. Based on the above, the capital cost allowed for the generating station is as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	528943.95	538825.36	541344.33	544965.95	549849.35
Add: Net Additional capital expenditure	9881.41	2518.97	3621.62	4883.40	5815.07
Closing capital cost	538825.36	541344.33	544965.95	549849.35	555664.42
Average capital cost	533884.66	540084.85	543155.14	547407.65	552756.88



Debt-Equity Ratio

112. 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 utilisation 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 modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

113. Accordingly, the gross normative loan and equity amounting to Rs. 370260.76 lakh and Rs.158683.18 lakh, respectively as on 1.4.2014, as considered in order dated 16.2.2017 in Petition No.293/GT/2014, has been considered as the gross normative loan and equity as on 1.4.2014. Further, the additional capital expenditure approved above, has been allocated to debt and equity in ratio of 70:30. Accordingly, the details



of debt-equity ratio in respect of the generating station as on 1.4.2014 and as on 31.3.2019 are as under:

	Capital cost as on 1.4.2014	(%)	Total cost as on 31.3.2019	(Rs. in lakh) (%)
Debt	370260.76	70%	388965.09	70%
Equity	158683.18	30%	166699.32	30%
Total	528943.94	100%	555664.42	100%

Return on Equity

114. 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 kilometre.”*

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

“25. Tax on Return on Equity: (1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income



stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”

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

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

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

(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.”

116. The Petitioner has claimed Return on Equity (ROE), after grossing up the base rate of ROE of 15.50% with MAT rates for each year, as per Regulation 25 of the 2014 Tariff regulations. ROE has been trued-up on the basis of the MAT rate applicable in the respective years and is allowed as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Notional Equity- Opening	158683.18	161647.60	162403.29	163489.78	164954.80
Add: Addition of Equity due to additional capital expenditure	2964.42	755.69	1086.48	1465.02	1744.52
Normative Equity – Closing	161647.60	162403.29	163489.78	164954.80	166699.32
Average Normative Equity	160165.39	162025.45	162946.54	164222.29	165827.06
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for respective years	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) - (annualised)	31408.43	31927.11	32108.62	32360.00	32764.11

Interest on loan

117. 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 Decapitalisation of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalisation of such asset*

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

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

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.*

118. The Petitioner has claimed Interest on loan for the years 2014-15 and 2015-16

only. Accordingly, Interest on loan has been worked out as under:

- i) The gross normative loan of Rs.370260.76 lakh as on 1.4.2014, as considered in order dated 16.2.2017 in Petition No. 293/GT/2014, has been retained as on 1.4.2014.
- ii) Cumulative repayment of Rs.328944.36 lakh as on 1.4.2014.
- iii) Accordingly, the net normative opening loan as on 1.4.2014 works out to Rs. 41316.40 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 year of the 2014-19 tariff period. Further, the repayments have been adjusted for de-capitalisation of assets considered for the purpose of tariff. Also, 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, corresponding to liabilities deducted, as on 1.4.2009
- vi) The Petitioner has claimed interest on loan considering weighted average rate of interest (WAROI) of 8.0728% in 2014-15 and 7.9152% in 2015-16. The WAROI, has been calculated by applying the actual loan portfolio existing as on 1.4.2014, along with subsequent additions during the 2014-19 tariff period for the generating station.

119. Necessary calculations for interest of loan for the years 2014-15 and 2015-16

as claimed by the Petitioner is as under:

		<i>(Rs. in lakh)</i>	
		2014-15	2015-16
A	Gross opening loan	370260.76	377177.75
B	Cumulative repayment of loan up to previous year	328944.36	356922.98
C	Net Loan Opening (A-B)	41316.40	20254.77
D	Addition due to additional capital expenditure	6916.99	1763.28
E	Repayment of loan during the year	27663.60	27986.13
F	Repayment adjustment on account of de-capitalisation	97.74	9.16
G	Repayment adjustment on account of discharges/reversals corresponding to un-discharged liabilities deducted as on 1.4.2009	412.75	0.00
H	Net Repayment of loan during the year (E-F+G)	27978.62	27976.97
I	Net Loan Closing (C+D-H)	20254.77	0.00
J	Average Loan [(C+I)/2]	30785.58	10127.39
K	Weighted Average Rate of Interest on loan	8.0725%	7.9152%
L	Interest on Loan (J x K)	2485.18	801.60

Depreciation

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

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

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



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

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

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

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

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

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

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

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

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

(8) In case of de-capitalisation 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-capitalised asset during its useful services.”

121. Cumulative depreciation for Rs. 297992.98 lakh, as on 31.3.2014, as considered in order dated 16.2.2017 in Petition No.293/GT/2014, has been considered on 1.4.2014. Since, as on 1.4.2014, the elapsed life of the generating station is 9.7 years, which is less than 12 years from the effective station COD of the generating station, depreciation has been computed considering weighted average rate of depreciation (as per Annexure-I to this order) for the years 2014-15, 2015-16 and 2016-17, and by spreading over the remaining depreciable value, for the balance



useful life for the period 2017-19. Accordingly, depreciation is worked out and allowed as under:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Average capital cost (A)	533884.66	540084.85	543155.14	547407.65	552756.88
Value of freehold land included above (B)	921.13	1031.74	1095.38	1185.57	1258.94
Aggregated depreciable Value [C = (A-B) x 90%]	479667.18	485147.80	487853.79	491599.87	496348.15
Remaining Aggregate Depreciable value at the beginning of the year (D = C – 'K' of previous year)	181874.20	159452.53	134181.55	110347.31	107642.34
Balance useful life at the beginning of the year (E)	15.29	14.29	13.29	12.29	11.29
Weighted average rate of depreciation (F)	5.1816%	5.1818%	5.1820%	-	-
Depreciation during the year G = (A x F) for the period 2014-17 and (D/E) for the period 2017-19	27663.60	27986.13	28146.30	8977.41	9532.90
Cumulative depreciation at the end of the year, before adjustment of de-capitalisation adjustment (H = G + 'K' of previous year)	325456.58	353681.40	381818.54	390229.97	398238.71
Cumulative Depreciation adjustment on account of un-discharged liabilities deducted as on 1.4.2009 (I)	336.42	0.00	40.16	0.00	94.87
Cumulative depreciation adjustment on account of de-capitalisation (J)	97.74	9.16	606.14	1524.15	744.01
Cumulative depreciation, at the end of the year (K = H + I-J)	325695.27	353672.24	381252.56	388705.81	397589.57

O&M Expenses

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

<i>(Rs. in lakh/MW)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
16.00	17.01	18.08	19.22	20.43

123. The O&M expenses claimed by the Petitioner in terms of the above regulations, is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
32000	34020	36160	38440	40860



124. The normative O&M expenses claimed by the Petitioner are in terms of Regulation 29(1)(a) of the 2014 Tariff Regulations and hence allowed.

Water Charges

125. Regulation 29(2) of the 2014 Tariff Regulations provides 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.”

126. The Petitioner has claimed water charges for the generating station as under:

<i>(Rs. in lakh)</i>						
	Units	2014-15	2015-16	2016-17	2017-18	2018-19
Type of cooling tower	-	Induced Draft Cooling Tower (IDCT)				
Type of cooling water system	-	Closed Cycle				
Water allocation/contracted	TMC	3.78	3.79	3.35	3.31	3.31
Actual water consumption	TMC	2.85	2.67	2.64	2.81	2.90
Rate of water charges	Rs./ m ³	5.60	5.60	5.60	6.16	6.72
Total water charges paid (for whole generating station)	Rs. in lakh	6001.02	6017.46	5312.55	5784.99	6301.01
Water charges paid as claimed in Petition	Rs. in lakh	4000.68	4011.64	3541.70	3856.66	4200.67

127. The Respondent, TANGEDCO has submitted that the Petitioner has not furnished the details of water charges. In response, the Petitioner has submitted that the details of water charges have been provided in Form-3B of the petition, and the relevant notifications are also attached as Annex-VII of the petition.

128. The matter has been examined. In terms of the first proviso to Regulation 29(2) of the 2014 Tariff Regulations, 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 and the relevant extract is as follows. It is noticed that the Commission vide order dated 16.2.2017 in Petition No.293/GT/2014 had allowed projected water charges as under:



(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
4000.68	4000.68	4254.72	4524.90	4812.23

129. In terms of the first proviso to Regulation 29(2) of the 2014 Tariff Regulations, the water charges allowed are determined for Talcher STPS- Stage-I & II, based on actual consumption of water as submitted by the Petitioner. Further, as the actual water consumption is proportionate to the electricity generated, the water charges allowed are apportioned to Stages-I & II, on the basis of their actual generation, considering the generation during the period from 2014-15 to 2018-19 (Stage I – 6921.98 MUs, 7252.27, 7011.26, 7045.40, 6449.85 MUs and Stage II – 15296.35, 15229.80, 14361.34, 14446.13, 13403.08 MUs), as per the data of the respective RPC. Accordingly, the details of the water charges allowed for the generating station are as follows:

	Units	2014-15	2015-16	2016-17	2017-18	2018-19
Actual water consumption	TMC	2.85	2.67	2.64	2.81	2.90
Rate of water charges	Rs./ m ³	5.60	5.60	5.60	6.16	6.72
Total water charges allowed for Stage-I & II	Rs. in lakh	4527.00	4235.57	4183.72	4897.53	5513.00
Generation Stage-I	MUs	6921.98	7252.22	7011.26	7045.39	6449.85
Generation Stage - II	MUs	15296.35	15229.80	14361.34	14446.13	13403.08
Water charges allowed for Stage I	Rs. in lakh	1410.36	1366.31	1372.46	1605.52	1791.07
Water charges allowed for Stage II	Rs. in lakh	3116.64	2869.27	2811.25	3292.02	3721.93

Capital Spares

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

“29(2)xxxx

xxxx

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”.



131. 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 capital spares claimed by the Petitioner is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
228.53	705.90	644.29	1451.44	1106.52

132. We have examined the list of spares furnished by the Petitioner along with the de-capitalisation details, submitted in Form-9Bi. The capital spares consumption claimed by the Petitioner comprise of two categories as under:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Capital spares (forming part of allowed capital cost)	96.21	12.73	409.76	1105.29	522.34
Capital spares (not forming part of allowed capital cost)	132.32	693.16	234.53	346.15	584.18
Total capital spares consumed claimed	228.53	705.9	644.29	1451.44	1106.52

133. 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.1.00 lakh, on prudence check of the details furnished by the Petitioner in Form-17 of the Petition, has been considered for the purpose of tariff. Based on this, the details of capital spares consumption allowed for the 2014-19 tariff period is summarized as under:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Total capital spares consumed claimed	228.53	705.90	644.29	1451.44	1106.52
Total capital spares consumed (not part of capital cost)	132.32	693.16	235.12	346.18	584.27



	2014-15	2015-16	2016-17	2017-18	2018-19
Less: Value of capital spares below Rs.1.00 lakh disallowed on individual basis	7.42	49.27	12.47	17.95	13.20
Net total value of capital spares considered	124.90	643.90	222.06	328.20	570.98

134. 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 period 2014-19, 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 period 2014-19. In view of this, the salvage value of 10% has been deducted from the net total value of capital spares considered during the period 2014-19. Accordingly, net capital spares allowed is summarized as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
					<i>(Rs. in lakh)</i>
Net total value of capital spares considered	124.90	643.90	222.06	328.20	570.98
Less: Salvage value @ 10%	12.49	64.39	22.21	32.82	57.10
Net capital spares allowed	112.41	579.51	199.86	295.38	513.88

Additional O&M Expenses

A. Impact of Goods and Service Tax

135. The Petitioner has claimed additional O&M expenses of Rs.391.16 lakh in 2017-18 and Rs.499.23 lakh in 2018-19 on account of payment of Goods and Service Tax (GST). The matter has been considered. It is observed that the Commission while specifying the O&M expense norms for the 2014-19 tariff period had considered taxes to form part of the O&M expense calculations and accordingly, had factored the same in the said norms. This is evident from paragraph 49.6 of the SOR (Statement of Objects and Reasons) issued with the 2014 Tariff Regulations, which is extracted hereunder:

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



136. 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.

B. Impact of Wage Revision

137. The Petitioner has submitted that the Commission while specifying the 2014 Tariff Regulations applicable for the 2014-19 tariff period, had taken note in SOR to the said regulations that any increase in the employee expenses, on account of pay revision shall be considered appropriately, on case-to-case basis, balancing the interest of generating station and consumers. The Petitioner has, therefore, claimed additional O&M expenses of Rs.38.31 lakh in 2015-16, Rs.2865.95 lakh in 2016-17, Rs.3771.91 lakh in 2017-18 and Rs. 4880.34 lakh in 2018-19, towards impact of wage revision of employees of CISF and Kendriya Vidyalaya (KV) from 1.1.2016 and the employees of the Petitioner posted in the generating station with effect from 1.1.2017. In this regard the Petitioner vide affidavit dated 4.6.2021 has submitted the following:

- (a) Detailed break-up of the actual O&M expenses booked by the Petitioner for the 2014-19 tariff period for the whole generating station
- (b) Detailed break-up of actual O&M expense of the Corporate Centre and its allocation to various generating stations, for the 2014-19 tariff period.
- (c) Break-up of claimed wage revision impact on employee cost, expenses on corporate centre and on salaries of CISF & Kendriya Vidyalaya employee of the generating station for the 2014-19 tariff period.

138. We have examined the submissions and the documents available on record. As stated, the Petitioner has claimed total amount of Rs. 11550.51 lakh (Rs.38.31 lakh in 2015-16, Rs.2865.95 lakh in 2016-17, Rs.3771.91 lakh in 2017-18 and Rs.4880.34 lakh in 2018-19) as impact of wage revision of employees of CISF and Kendriya



Vidyalya staff from 1.1.2016 and for employees of the Petitioner posted at 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 employees, 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 year wise claim of the Petitioner in respect of wage revision impact stand reduced is as follows.

<i>(Rs. in lakh)</i>					
	2015-16	2016-17	2017-18	2018-19	Total
Wage revision impact claimed (excluding PRP/ex-gratia)	38.31	2859.95	3476.94	3706.12	10081.32

139. 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 Objects and Reasons (SOR) to the 2014 Tariff Regulations, has 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 the 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.

xxxxx

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.”

140. The methodology indicated in SOR quoted above suggests a comparison of the normative O&M expenses with the actual O&M expenses, on year-to-year basis.

However, in this respect the following facts needs consideration:

- (a) The norms are framed based on the averaging of the actual O&M expense 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) When 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.

141. 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 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.



142. The Petitioner has furnished the detailed breakup of the actual O&M expenses incurred during the 2014-19 tariff period. It is noticed that the total O&M expenses incurred for generating station is less than that of the normative O&M expenses recovered during each year of the period 2014-19. The impact of wage revision/ pay revision could not be factored by the Commission while framing the O&M expense 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 SOR to the 2014 Tariff Regulations, the following approach has been adopted for arriving at the allowable impact of pay revision:

- (a) Comparison of the normative O&M expenses with the actual O&M expenses incurred 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 fee, 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 expense norms for the 2014-19 tariff period, have been excluded from the yearly actual O&M expenses. Having done so, if the normative O&M expenses for the period 2015-19 are higher than the actual O&M expenses (normalized) for the said period, then the impact of wage revision (excluding PRP and ex-gratia) as claimed for the said 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 lesser 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 Exgratia), whichever is lower, is required to be allowed as wage revision impact for the period 2015-19.

143. The details as furnished by the Petitioner for actual O&M expenses incurred towards wage revision impact (excluding PRP and ex-gratia) for the generating station are as under:



(Rs. in lakh)

	Actual O&M expenses excluding water charges & capital spares for the whole generating station	Wage revision impact claimed for the generating station i.e., Talcher Stage II TPS (2000 MW)
2014-15	54563.09	0.00
2015-16	79836.05	38.31
2016-17	54528.29	2859.96
2017-18	67602.6	3771.91
2018-19	71308.96	4880.33
	Total	11550.51

144. As a first step, the expenditure against sub-heads of O&M expenses as indicated in paragraph above have been excluded from the actual O&M expenses incurred to arrive at the actual O&M expenses (normalized) for the combined stages of the generating station. Accordingly, the comparison of the normative O&M expenses versus the actual O&M expenses (normalized) along with the wage revision impact claimed by the Petitioner for the generating station for the period 2015-19 is as follows:

(Rs. in lakh)

	2015-16	2016-17	2017-18	2018-19	Total
Actual O&M expenses (normalized) for the combined stages of the generating station (Stage-I to II for 3000 MW) – (a)	72380.48	48899.75	60643.12	63482.88	245406.23
Actual O&M expenses (normalized) for the generating station i.e., Talcher TPS, Stage-II (1000 MW) pro-rated based on capacity – (b)	48253.65	32599.83	40428.75	42321.92	163604.15
Normative O&M expenses for Talcher TPS, Stage-II as per Regulation 29(1) of the 2014 Tariff Regulations – (c)	34020	36160	38440	40860	149480.00
Under/(Excess) recovery for the generating station (f)=(b)-(c)	14233.65	(-)3560.17	1988.75	1461.92	14124.15
Wage revision impact claimed (excluding PRP/ex-gratia)	38.31	2859.95	3476.94	3706.12	10081.32

145. It is observed that for the wage revision impact during the period 2015-19, the normative O&M expenses is lesser than that the actual O&M expenses (normalized) and the excess recovery is to the tune of Rs. 14124.15 lakh. As such, in terms of methodology described above, the wage revision impact (excluding PRP/ex-gratia) of Rs. 10081.32 lakh for the generating station is allowable.



146. Accordingly, we, in exercise of the Power to relax 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 for this generating station, as additional O&M charges, for the period 2015-19, for Rs. 10081.32 lakh. The arrear payments on account of the wage revision impact is payable by the beneficiaries in twelve equal monthly instalments from the date of issue of this order. 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, these expenses are not made part of the O&M expenses and consequent annual fixed charges being determined in this order under the 2014 Tariff Regulations.

Additional O&M Expenses on account of Ash transportation charges

147. The Petitioner has claimed additional O&M expenses of Rs.713.88 lakh in 2018-19 on account of ash transportation charges. The Petitioner submitted that, a notification dated 25.1.2016 has been issued by Government of India, Ministry of Environment, Forest & Climate Change (MOEFCC) under the statutory provisions of Environment (Protection) Act 1986 which prescribed for bearing the transportation cost of Fly Ash generated at power stations. The Petitioner submitted that Petition no. 172/MP/2016 was filed before the Commission seeking reimbursement of the additional expenditure for fly ash transportation directly from the beneficiaries as the same was statutory expense. Subsequently, the Petitioner vide additional submissions dated 4.6.2021 mentioned that the Commission vide order dated 5.11.2018 in Petition No. 172/MP/2016, directed as follows:



“31. Accordingly, we in exercise of the regulatory power hold that the actual additional expenditure incurred by the Petitioner towards transportation of ash in terms of the MOEFCC Notification is admissible under “Change in Law” as additional O&M expenses. However, the admissibility of the claims is subject to prudence check of the following conditions on case to case basis for each station:

- a) Award of fly ash transportation contract through a transparent competitive bidding procedure. Alternatively, the schedule rates of the respective State Governments, as applicable for transportation of fly ash.*
- b) Details of the actual additional expenditure incurred on Ash transportation after 25.1.2016, duly certified by auditors.*
- c) Details of the Revenue generated from sale of fly ash/ fly ash products and the expenditure incurred towards Ash utilisation up to 25.1.2016 and from 25.1.2016 to till date, separately.*
- d) Revenue generated from fly Ash sales maintained in a separate account as per the MoEF notification.*

32. The Petitioner is granted liberty to approach the Commission at the time of revision of tariff of the generating stations based on truing –up exercise for the period 2014-19 in terms of Regulation 8 of the 2014 Tariff Regulations along with all details / information, duly certified by auditor.”

148. The Respondent, GRIDCO, has submitted the following:

- (a) No documents have been submitted by the Petitioner for the claim for Rs. 713.88 lakh towards Ash transportation. MoEF issued Notification dated 25.1.2016 according to which the deadline for all Thermal Power Plants to utilize 100 % of Fly Ash was before 31.12.2017.
- (b) NTPC has failed to achieve 100% utilization of Fly Ash within the stipulated time frame in compliance with MoEF notifications dated 3.11.2009 and 25.1.2016. Had NTPC been able to 100% utilization of Fly Ash within the stipulated period as per the said Notifications of MoEF, it might not have incurred expenditure towards ash transportation, or the transportation cost would have been much lower.
- (c) Except for the running fly ash transportation cost, the transportation cost towards legacy ash is no way admissible for reimbursement in the tariff as it was mandatory for NTPC to achieve 100% Ash Utilization by 31.12.2017 in accordance with MoEF Notification dated 25.01.2016.
- (d) NTPC has also not furnished the details as sought to ensure that the transportation contract has been awarded following a transparent competitive bidding procedure (if the same has not been awarded at scheduled rates of the State of Odisha). Therefore, the claim for the ash transportation cost is liable to be rejected.
- (e) NTPC has not furnished the detailed sharing of transportation charges with the user of fly ash beyond the radius of 100 km and up to 300 km in conformity with the above clause of MOEF&CC Notification.



- (f) The Petitioner shall submit details of competitive bidding with the terms and conditions of the bidding along with the date of tender and its opening date, no. of participating bidders, no. of qualified bidder, date of price bid opening, lowest evaluated bidder with the lowest evaluated cost, copy of work order, actual additional expenditure incurred on ash transportation after 25.1.2016, duly certified by auditors, details of revenue generated from sale of fly ash/fly ash products and the expenditure incurred towards ash utilization up to 25.1.2016 and from 25.1.2016.

149. In response to the above, the Petitioner has submitted that it is trying its best to achieve 100% ash utilisation. While pointing out that dyke raising constitutes major part of ash utilisation, it has stated that the generating station is remotely located, and small portion is utilised in sectors such as brick industries etc. The Petitioner has also submitted that to enhance the ash utilisation, it has also signed MoU with NHAI for transportation of ash. It has stated that though the Petitioner has acted in a prudent manner and has taken all possible steps for selling fly ash from the project, despite all efforts, the sale of fly ash has not been possible due to demand-supply mismatch. The Petitioner has pointed out that the Auditor Certificate has been furnished in the rejoinder filed to the reply of the Respondent. Accordingly, the Petitioner has incurred Rs. 1070.82 lakh in 2018 -19 for Stages-I & II of the generating station and apportioned them, on the basis of the installed capacity, and has claimed the expenses for the generating station, as per the annual audited records. The details of the reimbursement of additional expenditure towards fly ash transportation w.e.f. 25.1.2016 onwards has been claimed as follows:

	<i>(Rs. in lakh)</i>			
	2015-16 (25.1.2016 to 31.03.2016)	2016-17	2017-18	2018-19
Expenditure towards fly ash transportation (a)	-	-	-	713.88
Revenue earned from sale of Fly Ash (b)	-	-	-	0.00
Net Additional O&M expenses claimed (b-a)	-	-	-	713.88



150. The Commission vide ROP had directed the Petitioner to submit the end user certificates for ash utilization expenses claimed during the period 2014-19, and in response, the Petitioner has submitted the following;

- a) Auditor certificate in respect of the net expenditure of Rs 1070.82 lakh charged to P&L has been submitted. Expenditure incurred for the entire station has been allocated, based on the equated capacity of the stages. This is just a method of allocation of the total expenditure. However, irrespective of the method of allocation (based on equated capacity/generation), total expenditure claimed for the station will remain same.
- b) Ash from Talcher Super Thermal Power Station, Kaniha was transported for the projects of NHAI in compliance to the MoEF&CC Notification dated 3.11.2009 and its amendment dated 25.1.2016. Further, small quantum of ash was also transported to ash brick manufacturer and the rate for transportation of fly ash was as per the Schedule of Rates (SoR) of Odisha. As directed, the end user certificate has been submitted.
- c) An amount of Rs 1473.26 lakh has been incurred by Ash users for Talcher Super Thermal Power station in 2018-19 towards Ash Transportation. However, the net cost of Rs. 1070.82 lakh have been recognized as Ash Transportation expenses, based on the bills received from end users. Auditor certificate has been submitted based on the same and the balance amount will be claimed as and when the claim is made by end user.

151. We have considered the submissions. It is observed that the Petitioner has provided un-dated auditor certificate for Rs. 1070.80 lakh and end user certificates for Rs. 936.53 lakh and Rs. 136.74 lakh. However, the Petitioner has not furnished any information regarding the competitive bidding and comparison of the bid rates with regard to the Schedule of Rates. As per Petitioner's submission, it has incurred total amount of Rs. 1473.26 lakh, but has claimed only Rs. 1070.80 lakh. In this context, it is noticed that the information furnished in the auditor certificate is in slight variation with that of end user certificate and no details have been given for the same. Accordingly, based on end user certificate, we are inclined to allow the amount of Rs. 1061.27 lakh to Talcher STPS, and the same is apportioned to Stages-I and II, considering the generation during 2018-19 (Stage I-6449.85 MUs and Stage II-



13403.08 MUs), as per the data of the respective RPCs. Accordingly, the Ash transportation charges allowed in 2018-19, for the generating station as additional O & M expenses are as under:

<i>(Rs. in lakh)</i>		
Total for Stages I & II	Stage I	Stage II
1061.27	344.79	716.48

Summary

152. Accordingly, the total O&M expenses allowed to the generating station for the period 2014-19 is summarised below:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Normative O&M expenses claimed under Regulation 29(1)(a) of the 2014 Tariff Regulations (a)	32000	34020	36160	38440	40860
Normative O&M expenses allowed under Regulation 29(1)(a) of the 2014 Tariff Regulations (b)	32000	34020	36160	38440	40860
Water Charges claimed under Regulation 29(2) of the 2014 Tariff Regulations (c)	4000.68	4011.64	3541.70	3856.66	4200.67
Water Charges allowed under Regulation 29(2) of the 2014 Tariff Regulations (d)	3116.64	2869.27	2811.25	3292.02	3721.93
Capital Spares consumed claimed under Regulation 29(2) of the 2014 Tariff Regulations (e)	228.53	705.90	644.29	1451.44	1106.52
Capital Spares consumed allowed under Regulation 29(2) of the 2014 Tariff Regulations (f)	112.41	579.51	199.86	295.38	513.88
Total O&M expenses claimed under Regulation 29 of the 2014 Tariff Regulations (a + c + e)	36229.21	38737.54	40345.99	43748.1	46167.19
Total O&M expenses allowed under Regulation 29 of the 2014 Tariff Regulations (b + d + f)	35229.06	37468.78	39171.11	42027.39	45095.81
Additional O & M expenses					
Impact of Wage revision claimed	0.00	38.31	2859.96	3694.42	4572.89
Impact of Wage revision allowed	0.00	38.31	2859.95	3476.94	3706.12
Impact of GST claimed	0.00	0.00	0.00	391.16	499.23
Impact of GST allowed	0.00	0.00	0.00	0.00	0.00
Ash Transportation Charges claimed	0.00	0.00	0.00	0.00	713.88
Ash Transportation charges allowed	0.00	0.00	0.00	0.00	716.48

Compensation Allowance

153. Regulation 17 of the 2014 Tariff Regulations provides as under:

“17. Compensation Allowance: (1) In case of coal-based or lignite-fired thermal generating station or a unit thereof a separate compensation allowance shall be



admissible to meet expenses on new assets of capital nature which are not admissible under Regulation 14 of these regulations and in such an event revision of the capital cost shall not be allowed on account of compensation allowance, but the compensation allowance shall be allowed to be recovered separately.

(2) The Compensation Allowance shall be allowed in the following manner from the year following the year of completion of 10, 15, or 20 years of the useful life.”

Years of operation	Compensation Allowance (Rs. lakh/MW/year)
0-10	Nil
11-15	0.20
16-20	0.50
21-25	1.00

154. The Petitioner has claimed compensation allowance as follows:

(Rs. in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
200.00	300.00	400.00	400.00	400.00

155. In line with the above regulations, Compensation allowance for the generating station is as under:

	Unit-I	Unit-II	Unit-III	Unit IV	Total
Installed Capacity in MW	500.00	500.00	500.00	500.00	
COD	01-Aug-03	01-Mar-04	01-Nov-04	01-Aug-05	
Served life as on 1.4.2014	10.67	10.08	9.42	8.67	
Balance Useful life as on 1.4.2014 (in years)	14.33	14.92	15.58	16.33	
a) 10 Years	01-Aug-13	01-Mar-14	01-Nov-14	01-Aug-15	
2014-15	100	100	0	0	200.00
2015-16	100	100	100	0	300.00
2016-17	100	100	100	100	400.00
2017-18	100	100	100	100	400.00
2018-19	100	100	100	100	400.00
Total	500.00	500.00	400.00	300.00	1700.00

156. The Commission in its order dated 16.2.2017 in Petition No. 293/GT/2014 had allowed compensation allowance of Rs. 200.00 lakh in 2014-15, Rs. 300.00 lakh in 2015-16, Rs. 400.00 lakh in 2016-17, Rs.400.00 lakh in 2017-18 and Rs.400.00 lakh in 2018-19, for the generating station. The same has been considered by the Petitioner and is allowed for the period 2014-19.



Operational Norms

157. 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 below:

(a) Normative Annual Plant Availability Factor (NAPAF)

158. In terms of Regulation 36(A)(a) of the 2014 Tariff Regulations, the Commission vide its order dated 16.2.2017 in Petition No.293/GT/2014 had allowed NAPAF of 83% for the period 2014-17 and 85% for the period 2017-19. The same is considered for the purpose of tariff.

(b) Gross Station Heat Rate (kCal/kWh)

159. In terms of Regulation 36(C)(a) of the 2014 Tariff Regulations, the Gross Station Heat Rate (GSHR) of 2375 kCal/kWh as allowed in order dated 16.2.2017 in Petition No.293/GT/2014, is considered for the purpose of tariff.

(c) Specific Oil Consumption

160. In terms of Regulation 36(D)(a) of the 2014 Tariff Regulations, the secondary fuel oil consumption of 0.50 ml/kWh as allowed in order dated 16.2.2017 in Petition No.293/GT/2014, is considered for the purpose of tariff.

(d) Auxiliary Power Consumption

161. In terms of Regulation 36(E)(a) of the 2014 Tariff Regulations, the auxiliary power consumption of 5.75%, as allowed in order dated 16.2.2017 in Petition No.293/GT/2014, is considered for the purpose of revision of tariff.

Interest on Working Capital

162. Regulation 28 of the 2014 Tariff Regulations provides as under:

“28. Interest on Working Capital:

(1) The working capital shall cover:

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



- (i) Cost of coal or lignite and limestone towards stock if applicable for 15 days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;
 - (ii) Cost of coal or lignite and limestone for 30 days for generation corresponding to the normative annual plant availability factor;
 - (iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor and in case of use of more than one secondary fuel oil cost of fuel oil stock for the main secondary fuel oil;
 - (iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29;
 - (v) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and
 - (vi) Operation and maintenance expenses for one month.
- (2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this regulation shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period.
- (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof as the case may be is declared under commercial operation whichever is later.
- (4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”

Fuel Cost and Energy Charges in Working Capital

163. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of cost of fuel as part of Interest on Working Capital (IWC) is to be based on the landed price and GCV of fuel as per actuals, for the three months preceding the first month for which the tariff is to be determined.

164. Regulation 30(6)(a) 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 place in accordance with the following formula:

(a) For coal based and lignite fired stations

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

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”.

165. 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.

166. 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.”

167. The Regulations for computation of energy charges and issue of ‘as received’ GCV specified in Regulation 30 of the 2014 Tariff Regulations was challenged by the Petitioner Company 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 of Delhi 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.”

168. 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.

169. In Petition No. 293/GT/2014 filed by the Petitioner for determination of tariff of this generating station for the period 2014-19, the Petitioner had furnished GCV of coal on 'as billed' but not '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 16.2.2017 in Petition No. 293/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.

170. 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 100 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 100 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, has been claimed by the Petitioner 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 (15 days)	11079.67	11079.67	11079.67	11346.65	11346.65
Cost of Coal towards Generation (30 days)	22159.35	22159.35	22159.35	22693.31	22693.31
Cost of Secondary fuel oil (2 months)	579.36	580.94	579.36	593.32	593.32

171. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of 199.25 paise/kWh for the generating station based on GCV and price of fuel (coal and secondary fuel oil) as indicated above.

172. The Petitioner, suo-moto has submitted the additional details on the GCV on ‘as received’ basis which was sought by the Commission, in other similar matters 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 4.6.2021 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 APTEL judgment in NEEPCO vs 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. It also 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 in other similar matters 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	3794	12.96	6.88	3546
2	February 2014	3665	13.16	6.86	3417
3	March 2014	3423	14.77	7.85	3166
	Average				3376

173. The submissions have been considered. In this context it is noted that the Petitioner in Form-13F of original petition, 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 100 kCal/kg for computation of the working capital of the generating station.

174. 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. 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 100 kCal/kg cannot be considered, as the same is not as per provisions of the 2014 Tariff Regulations.

175. 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 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."

176. 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.

177. 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.

178. The Petitioner has calculated GCV 3376.44 kCal/kg which represents average of GCVs of preceding three months and landed price as Rs. 2249.40/MT. In this regards it is noted that the Petitioner has submitted that the plant has used imported coal for the subject months and has furnished the blending ratio for these months and considered "cost of diesel in transporting coal through MGR charges, if applicable" for the imported coal during the subject months in Form-15 submitted with the Petition.



As the imported coal is being supplied by railways till unloading point, the Commission is of the considered view not to allow such charges for the imported coal. Accordingly, the “cost of diesel in transporting coal through MGR charges, if applicable” claimed with respect to imported coal is excluded in determining landed cost of coal. In line with this and considering the blending ratio submitted, the GCV and landed cost of oil as well as coal are determined as follows:

	Allowed
Weighted Average GCV of Oil (kCal/ltr)	9510.31
Weighted Average cost of Oil (Rs./kl)	47809.56
Weighted Average GCV of Coal (kCal/kWh)	3376.44
Weighted Average cost of Coal (Rs./Tonne)	1962.96

179. 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) generation corresponding to NAPAF	8234.87	8234.87	8234.87	8433.30	8433.30
Cost of Coal towards Generation (30 days) generation corresponding to NAPAF	16469.74	16469.74	16469.74	16866.60	16866.60
Cost of Secondary fuel oil 2 months generation corresponding to NAPAF	579.36	580.94	579.36	593.32	593.32

Energy Charge Rate (ECR) for calculating working capital

180. 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:

(b) 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”.

181. The Petitioner has claimed Energy Charge Rate (ECR) of 139.22 Paise/kWh for the generating station. The allowable ECR, based on the operational norms as specified in Regulation 36(A) of the 2014 Tariff Regulations and the weighted average GCV and landed cost of oil and coal is worked out as under:

	Unit	2014-19
Capacity	MW	2000
Gross Station Heat Rate	kCal/kWh	2375
Aux. Energy Consumption	%	5.75%
Rate of Energy Charge ex-bus (rounded off to three decimals)	Rs./kWh	1.487

182. Accordingly, the energy charges for two months in working capital is allowed as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
33966.69	34059.75	33966.69	34785.17	34785.17

Working Capital for Maintenance Spares

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

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
7245.84	7755.17	8641.19	9582.23	10452.13

184. 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 (including the water charges and capital spares) allowed for the 2014-19 tariff period is as under:



<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
7045.81	7493.76	7834.22	8405.48	9019.16

Working Capital for Receivables

185. Receivables equivalent to two months of capacity charges and energy charges has been worked out duly, considering mode of operation of the generating station on secondary fuel, is allowed as under:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - for two months (A)	33966.69	34059.75	33966.69	34785.17	34785.17
Fixed Charges - for two months (B)	18095.93	18350.97	18571.72	15884.73	16591.53
Total (C = A+B)	52062.62	52410.72	52538.42	50669.90	51376.70

Working Capital for O&M Expenses (1 month)

186. The O&M expenses for 1 month as claimed by the Petitioner in Form-13B is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
3019.10	3231.32	3600.50	3992.60	4355.05

187. For consideration of working capital, O&M expenses of 1 month are to be considered. The normative O&M expenses allowed as per Regulation 29(1) of the 2014 Tariff Regulations, water charges and capital spares allowed as per Regulation 29(2) of the 2014 Tariff Regulations have been considered for calculating O&M expenses for 1 month as a part of working capital.

188. Accordingly, in terms of Regulation 28(1)(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
2935.75	3122.40	3264.26	3502.28	3757.98



Rate of interest on working capital

189. In terms of Regulation 28(3) of the 2014 Tariff Regulations, the rate of interest on working capital has been considered as 13.50% (Bank rate 10% + 350 bps).

Accordingly, interest on working capital has been computed as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Working capital for Cost of Coal towards Stock (15 days generation corresponding to NAPAF) (A)	8234.87	8234.87	8234.87	8433.30	8433.30
Working capital for Cost of Coal towards Generation (30 days generation corresponding to NAPAF) (B)	16469.74	16469.74	16469.74	16866.60	16866.60
Working capital for Cost of Secondary fuel oil (2 months generation corresponding to NAPAF) (C)	579.36	580.94	579.36	593.32	593.32
Working capital for Maintenance Spares (20% of O&M expenses) (D)	7045.81	7493.76	7834.22	8405.48	9019.16
Working capital for Receivables (2 months of sale of electricity at NAPAF) (E)	52062.62	52410.72	52538.42	50669.90	51376.70
Working capital for O&M expenses (1 month of O&M expenses) (F)	2935.75	3122.40	3264.26	3502.28	3757.98
Total Working Capital (G = A+B+C+D+E+F)	87328.16	88312.43	88920.87	88470.88	90047.06
Rate of Interest (H)	13.5000%	13.5000%	13.5000%	13.5000%	13.5000%
Interest on Working Capital (I = G x H)	11789.30	11922.18	12004.32	11943.57	12156.35

Annual Fixed Charges

190. Accordingly, the annual fixed charges approved for the period 2014-19 in respect of this generating station is summarised as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	27663.60	27986.13	28146.30	8977.41	9532.90
Interest on Loan	2485.18	801.60	0.00	0.00	0.00
Return on Equity	31408.43	31927.11	32108.62	32360.00	32764.11
Interest on Working Capital	11789.30	11922.18	12004.32	11943.57	12156.35
O&M Expenses	35229.06	37468.78	39171.11	42027.39	45095.81
Compensation Allowance	200.00	300.00	400.00	400.00	400.00
Total	108775.58	110405.80	111830.34	95708.37	99949.18

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

191. The difference between the annual fixed charges already recovered in terms of the Commission's order dated 16.2.2017 in Petition No. 293/GT/2014 and the annual



fixed charges determined by this order shall be adjusted in terms of Regulation 8(13) of the 2014 Tariff Regulations.

192. Annexure-I enclosed form part of this order.

193. Petition No. 392/GT/2020 along with IA No.39/2021 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(I.S. Jha)
Member



Annexure I

Depreciation for the period 2014-19

Apdx - III Ref	Asset Particulars	Gross Block as on 31.03.2014	Dep Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for 2014-15	Gross Block as on 31.03.2015	Dep Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for 2015-16	Gross Block as on 31.03.16	Dep Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for 2016-17
A	Land under full ownership	17,10,51,039	0.00	0	19,31,74,914	0.00	0	19,31,74,914	0.00	0
B	Land under lease	47,01,12,638	3.34	1,57,01,762	47,01,12,638	3.34	1,57,01,762	47,01,12,638	3.34	1,57,01,762
C(a)(ii)	Steam Electric NHRV & Wasteh eat recovery Boilers	47,32,09,16,055	5.28	2,49,85,44,368	48,43,64,11,639	5.28	2,55,74,42,535	48,72,25,03,916	5.28	2,57,25,48,207
C(b)	Cooling Tower & Circulating Water Systems	1,71,57,82,842	5.28	9,05,93,334	1,71,59,96,313	5.28	9,06,04,605	1,71,59,96,313	5.28	9,06,04,605
C(d)(i)	Offices & Showrooms	2,96,96,33,971	3.34	9,91,85,775	2,96,96,33,971	3.34	9,91,85,775	2,96,96,33,971	3.34	9,91,85,775
C(d)(iv)	Temporary Erections such as wooden structures	1,30,12,636	100.00	1,30,12,636	1,30,12,636	100.00	1,30,12,636	1,30,12,636	100.00	1,30,12,636
C(d)(v)	Roads other than kutcha roads	22,56,15,076	3.34	75,35,544	22,66,80,058	3.34	75,71,114	22,66,78,897	3.34	75,71,075
C(d)(vi)	Buildings & Civil Engg Works - Others	23,81,70,407	3.34	79,54,892	22,77,90,947	3.34	76,08,218	24,32,41,696	3.34	81,24,273
C(e)(i)	Transformers including foundations having rating of 100 KVA and above	1,03,89,81,936	5.28	5,48,58,246	1,03,89,81,936	5.28	5,48,58,246	1,03,89,81,936	5.28	5,48,58,246
C(h)	Batteries	2,49,99,259	5.28	13,19,961	2,49,99,259	5.28	13,19,961	2,49,99,259	5.28	13,19,961
C(h)(ii)	Cable duct system	15,16,06,262	5.28	80,04,811	15,16,06,262	5.28	80,04,811	15,16,06,262	5.28	80,04,811



Apndx - III Ref	Asset Particulars	Gross Block as on 31.03.2014	Dep Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for 2014-15	Gross Block as on 31.03.2015	Dep Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for 2015-16	Gross Block as on 31.03.16	Dep Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for 2016-17
C(i)(ii)	Lines on steel support operating at terminal voltage higher than 13.2 KV but not exceeding 66 KV	7	5.28	26,27,942	4,97,71,637	5.28	26,27,942	4,97,71,637	5.28	26,27,942
C(k)	Self propelled vehicles	17,20,805	9.50	1,63,476	17,20,805	9.50	1,63,476	17,20,805	9.50	1,63,476
C(l)(i)	Airconditioning plants - Static	21,23,83,953	5.28	1,12,13,873	21,23,83,953	5.28	1,12,13,873	21,23,83,953	5.28	1,12,13,873
C(l)(ii)	Airconditioning plants - Portable	1,52,13,589	9.50	14,45,291	1,55,84,969	9.50	14,80,572	1,57,49,218	9.50	14,96,176
C(m)(i)	Office furniture & furnishing	11,31,19,368	6.33	71,60,456	11,48,67,682	6.33	72,71,124	11,64,38,835	6.33	73,70,578
C(m)(ii)	Office Equipments	2,88,47,377	6.33	18,26,039	3,36,57,511	6.33	21,30,520	3,65,85,853	6.33	23,15,884
C(m)(iii)	Internal wiring including fittings & apparatus	6,72,31,269	6.33	42,55,739	7,89,45,794	6.33	49,97,269	7,89,45,794	6.33	49,97,269
C(o)(ii)	Telephone lines and Telephones	2,74,28,721	6.33	17,36,238	2,83,56,253	6.33	17,94,951	2,83,56,253	6.33	17,94,951
C(p)	IT Equipments	14,58,19,271	15.50	2,26,01,987	14,26,99,684	15.00	2,21,18,451	14,43,10,932	15.00	2,23,68,195
C(q)	Any other assets not covered above	17,79,52,613	5.28	93,95,898	17,81,40,933	5.28	94,05,841	18,09,38,526	5.28	95,53,554
	TOTAL	55,17,93,70,723		2,85,91,38,267	56,32,45,29,793		2,91,85,13,682	56,63,51,44,244		2,93,48,33,249
	Weighted Average Rate of Depreciation (%)			5.1816			5.1818			5.1820

