

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 294/GT/2020

Coram:

Shri Jishnu Barua, Chairperson

Shri Arun Goyal, Member

Shri Pravas Kumar Singh, Member

Date of Order: 19th May, 2024

In the matter of:

Petition for truing-up of tariff of Kahalgaon Super Thermal Power Station, Stage-I (840 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 - 110 003

.....Petitioner

Vs

1. Bihar State Power Holding Company Limited,
Vidyut Bhawan, Bailey Road, Patna – 800 001
2. Jharkhand Urja Vikas Nigam Limited,
Engineering Building, HEC, Dhurwa, Ranchi – 834004
3. GRIDCO Limited,
24, Janpath, Bhubaneswar – 751007
4. Power Department,
Govt. of Sikkim, Kazi Road, Gangtok, Sikkim-737101
5. Assam Power Distribution Company Limited,
Bijulee Bhawan, Paltan Bazar, Guwahati-781001.
6. Tamil Nadu Generation and Distribution Corporation Limited,
NPKRP Maalgail, 800, Anna Salai, Chennai – 600002
7. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg, Lucknow – 226001
8. Rajasthan Urja Vikas Nigam Limited,
(on behalf of Discoms of Rajasthan)
Vidyut Bhawan, Janpath, Jaipur – 302 005
9. Power Development Department (J&K),
Govt. of J&K Secretariat, Srinagar



10. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-VI, Panchkula, Haryana-134109
11. Punjab State Power Corporation Limited,
The Mall, Patiala- 147001
12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place, New Delhi-110019
13. BSES Yamuna Power Limited,
Shakti Kiran Building, Karkardooma, Delhi
14. Tata Power Delhi Distribution Limited,
NDPL House, Hudson Lane, Kingsway Camp, Delhi-110009. **...Respondents**

Parties present:

Shri Venkatesh, Advocate, NTPC
Shri Ashutosh K. Srivastava, Advocate, NTPC
Shri Jayant Bajaj, Advocate, NTPC
Shri Vijendra, NTPC
Shri Mansoor Ali Shoket, Advocate, TPDDL
Shri Nitin Kala, Advocate, TPDDL
Shri Kunal Singh, Advocate, TPDDL
Ms. Shefali Solti, TPDDL
Shri Buddy Ranganathan, Advocate, BSES Discoms
Ms. Megha Bajpeyi, BRPL
Shri R.K. Mehta, Advocate, GRIDCO
Ms. Himanshi Andley, Advocate, GRIDCO
Shri Durga M Sahoo, GRIDCO
Shri Mahfooz Alam, GRIDCO
Shri S. Vallinayagam, Advocate, TANGEDCO
Shri B. Rajeswari, TANGEDCO
Ms. R. Ramalakshmi, TANGEDCO
Ms. R. Alamelu, TANGEDCO
Shri Nishant Kumar, Advocate, BSPHCL

ORDER

This petition has been filed by the Petitioner, NTPC limited, for the truing up of the tariff of Kahalgaon Super Thermal Power Station, Stage-I (840 MW) (in short 'the generating station') for the period 2014-19 in terms of Regulation 8 (1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short 'the 2014 Tariff Regulations'). The generating station with an installed capacity of 840 MW comprises four units of 210 MW each, and the dates of commercial operation of the units of the generating station are as under:



	Capacity (MW)	Actual COD
Unit-I	210	1.1.1995
Unit-II	210	1.4.1995
Unit-III	210	1.2.1996
Unit-IV	210	1.8.1996

2. The Commission, vide its order dated 30.7.2016 in Petition No. 279/GT/2014, had determined the capital cost and the annual fixed charges of the generating station for the period 2014-19 as under:

Capital Cost allowed

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	214765.38	216265.38	216495.38	219239.38	219269.38
Add: Projected Additional Capital Expenditure allowed	1500.00	230.00	2744.00	30.00	2722.27
Closing Capital Cost	216265.38	216495.38	219239.38	219269.38	221991.65

Annual Fixed Charges allowed

	<i>(Rs.in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5083.26	5202.11	5443.25	5717.60	6066.48
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	20629.47	20780.54	20868.45	20950.44	21031.79
Interest on Working Capital	6311.68	6408.46	6487.31	6692.02	6796.41
O&M Expenses	20076.00	21336.00	22680.00	24108.00	25628.40
Compensation Allowance	420.00	630.00	735.00	840.00	840.00
Total	52520.41	54357.11	56214.00	58308.06	60363.09

3. Against this order, the Petitioner filed a Review Petition No. 46/RP/2016 seeking a review of the decision to disallow the expenditure of Rs. 510.00 lakh incurred towards augmentation of the firefighting system. However, the Commission, vide its order dated 21.2.2017, disposed of the said petition, observing that the capitalization of said expenditure has been kept open, pending the report of the CEA.

Present Petition

4. As stated, the present petition has been filed by the Petitioner for the truing-up of tariff for the period 2014-19, in terms of Regulation 8(1) of the 2014 Tariff Regulations, which 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.”

5. The Petitioner has submitted that the Commission, vide its order dated 30.7.2016 in Petition No. 279/GT/2014, had determined the tariff of the generating station for the period 2014-19 and vide order dated 27.7.2016 in Petition No. 271/GT/2014, had revised the tariff of generating station for the period 2009-14, after truing-up exercise. Subsequently, the Petitioner had filed a Review Petition No. 45/RP/2016 (in Petition No. 271/GT/2014 and the Commission vide its order dated 21.2.2017 had revised the tariff, including the closing capital, as on 31.3.2014. Accordingly, the capital cost and the annual fixed charges claimed by the Petitioner in the present petition are as under:

Capital cost claimed

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	214862.51	215857.43	218210.11	219864.55	220769.59
Add: Addition during the year / period	1243.87	2544.54	2072.83	3744.58	2851.59
Less: Decapitalisation during the year /period	313.16	355.49	460.76	2850.31	1155.88
Add: Discharges during the year /period	64.21	163.64	42.37	10.77	0.00
Closing Capital Cost	215857.43	218210.11	219864.55	220769.59	222465.31
Average Capital Cost	215359.97	217033.77	219037.33	220317.07	221617.45

Annual Fixed Charges claimed

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	4987.68	5161.80	5539.85	5865.36	6784.64
Interest on Loan	-	-	-	-	-
Return on Equity	20620.75	20819.59	20938.04	21013.69	21146.22
Interest on Working Capital	7232.04	7333.31	7598.50	8028.39	8074.77
O&M Expenses	20402.51	21726.53	23158.05	26987.60	26784.28
Compensation Allowance	420.00	630.00	735.00	840.00	840.00
Additional O&M expenses					
Impact of Pay Revision	-	29.68	2818.97	3502.04	3989.86
Impact of GST	-	-	-	172.11	244.39
Total Annual Fixed Charges	53662.97	55700.91	60788.40	66409.19	67864.16

6. Subsequently, the Petitioner, vide affidavit dated 10.5.2022, has revised the capital cost and annual fixed charges, and the same are tabulated below:



Capital cost claimed (revised)*(Rs. in lakh)*

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	214862.51	216311.92	218664.61	220319.05	221224.09
Add: Addition during the year / period	1698.36	2544.54	2072.83	3744.58	2851.59
Less: Decapitalisation during the year /period	313.16	355.49	460.76	2850.31	1155.88
Add: Discharges during the year /period	64.21	163.64	42.37	10.77	0.00
Closing Capital Cost	216311.92	218664.61	220319.05	221224.09	222919.80
Average Capital Cost	215587.22	217488.26	219491.83	220771.57	222071.94

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

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5014.77	5220.11	5598.16	5923.67	6842.95
Interest on Loan	-	-	-	-	-
Return on Equity	20634.12	20846.46	20964.91	21040.56	21173.16
Interest on Working Capital	7232.50	7334.80	7608.34	8038.42	8084.80
O&M Expenses	20402.51	21726.53	23158.05	26987.60	26784.28
Compensation Allowance	420.00	630.00	735.00	840.00	840.00
Additional O&M					
Impact of Pay Revision	-	29.68	2818.97	3502.04	3989.86
Impact of GST	-	-	-	172.11	244.39
Total Annual Fixed Charges	53703.89	55787.58	60883.42	66504.40	67959.44

7. The Respondents, UPPCL and TANGEDCO, have filed their replies vide affidavits dated 27.5.2020 and 29.9.2021, respectively, and the Petitioner has filed its rejoinders to the same vide affidavits dated 18.12.2020 and 23.3.2021, respectively. The Respondent, TPDDL, has also filed its reply vide affidavit dated 30.6.2021. Subsequently, the Petitioner, vide an additional affidavit dated 28.6.2021, has submitted certain additional information after serving a copy on the Respondents. Thereafter, the Respondent, UPPCL, has filed its reply to the same, vide affidavit dated 17.7.2021. The Respondents, GRIDCO, BSPHCL, and BYPL have filed their replies vide affidavits dated 22.7.2021, 23.7.2021 and 23.7.2021, respectively. The Respondent, GRIDCO, has also filed an additional affidavit dated 8.9.2021. Subsequently, the Petitioner, vide separate affidavits dated 1.10.2021, has filed its rejoinders to the replies of the



Respondents UPPCL, GRIDCO, and BYPL. The Respondent, BRPL, has filed its reply vide affidavit dated 24.2.2022. Thereafter, the matter was part-heard on 25.2.2022 along with Petition No. 440/GT/2020 (determination of the tariff of the generating station for the period 2019-24), and the Commission sought certain additional information from the Petitioner. The Petitioner submitted its note of arguments on 25.2.2022. Subsequently, the Petitioner, vide affidavit dated 10.5.2022, submitted the additional information and also its rejoinder to the reply of Respondent BRPL, vide affidavit dated 24.5.2022. The Respondent, GRIDCO, has also filed its reply vide affidavit dated 18.6.2022 to the additional information furnished by the Petitioner on 10.5.2022. The Petitioner, vide affidavits dated 12.7.2022 and 11.11.2022, has filed its rejoinder to the reply of the Respondents GRIDCO and BSPHCL. Thereafter, on 6.1.2023, the case was heard along with Petition No. 440/GT/2020, and the Commission, after hearing the parties, sought certain additional information from the Petitioner and reserved its order in the matter. The Petitioner, vide affidavit dated 19.1.2023, has furnished its written submissions and, vide additional affidavit dated 13.2.2023, submitted certain additional information (in response to ROP of the hearing dated 6.1.2023). Subsequently, the Respondent GRIDCO, vide affidavit dated 4.3.2023, filed its reply to the said additional information, and the Petitioner, vide affidavit dated 27.3.2023, has filed its rejoinder to the same. However, as the order in the petition could not be passed, prior to one Member, who formed part of the Coram demitting office, the Petition was re-listed and heard on 31.1.2024, and the Commission, after directing the Petitioner to file certain additional information, reserved its order in the petition. The Petitioner has furnished the additional information vide affidavit dated 29.2.2024 after serving copies on the Respondents. Taking into consideration the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner in this petition on prudence check, as stated in the subsequent paragraphs.



Capital Cost

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

“9. Capital Cost:

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

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

9. As stated, the Commission vide its order dated 30.7.2016 in Petition No. 279/GT/2014 had determined the tariff of the generating station for the period 2014-19, considering the closing capital cost of Rs. 214765.38 lakh, as on 31.3.2014. Thereafter, in terms of the order dated 21.2.2017 in Review Petition No. 45/RP/2016 (in Petition No. 271/GT/2014), the Commission revised the tariff of the generating station for the period 2009-14 and also approved the closing capital cost of Rs. 214862.50 lakh as on 31.3.2014. Accordingly, the capital cost of Rs. 214862.50 lakh, as claimed by the Petitioner as on 31.3.2014, has been considered as the opening capital cost, as on 1.4.2014, for the purpose of truing-up of tariff for the period 2014-19, in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

Additional Capital Expenditure

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

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

- i. Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
- ii. Change in law or compliance of any existing law;*
- iii. Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies or 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 undischarged 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 stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

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

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

11. Regulation 17 of 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 useful life:

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

12. The Petitioner, in Form-9A of the petition, has claimed the actual additional capital expenditure (on a cash basis), as stated below:

(Rs. in lakh)

S. No.		Regulation	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Allowed Works								
1	Ash Dyke Lagoon-II	14(3)(iv)	-	1566.89	6.94	-	1490.11	3063.94
2	Fire Detection & Protection System for cable gallery	4(3)(ii) & (iii)	-	-	-	508.67	-	508.67
3	Wagon Tippler	14(3)(vi)	-	-	-	102.54	-	102.54
Subtotal			0.00	1566.89	6.94	611.21	1490.11	3675.14
New Claims								
4	Land Plant-Area	14(3)(i)	1090.68	262.68	120.31	107.15	93.98	1674.79
5	132 KV Cable laying work	14(3)(iii) with Regulation 54	153.19	-	-	7.33	-	160.52
6	Continuous Emission Monitoring System		-	246.16	-	-	-	246.16
7	Turbo supervisory / turbine vibration monitoring system		-	395.50	569.64	1.65	1.39	968.18
8	Upgrade of exist relay control system make up water pump		-	73.30	-	-	-	73.30
9	DDCMIS Renovation Modernization		-	-	1332.40	2299.65	1233.44	4865.49
10	Effluent Quality Monitoring System (EQMS)		-	-	33.19	-	0.45	33.63
11	Real time Environmental data Transmission		-	-	10.35	-	-	10.35
12	Air Compressor system of NTPC Kahalgaon, Stage-I		-	-	-	255.75	17.58	273.32
13	Steam and Water Analysis System		-	-	-	240.54	14.66	255.20
14	Replacement of MoCB with SF6 breaker.		-	-	-	221.31	-	221.31
Subtotal			1243.87	977.65	2065.89	3133.38	1361.48	8782.27
15	Decap of Spares (part of capital cost)	14(4)	(-)313.16	(-)355.49	(-)460.76	(-)2850.31	(-)1155.88	(-)5135.60
Subtotal			(-)313.16	(-)355.49	(-)460.76	(-)2850.31	(-)1155.88	(-)5135.60
16	Discharge of Liabilities	14(3)(vi)	64.21	163.64	42.37	10.77	-	280.99
Subtotal			64.21	163.64	42.37	10.77	-	280.99
Total Additional Capital Expenditure claimed			994.92	2352.68	1654.44	905.04	1695.71	7602.80



13. It is noticed that the regulations under which the certain additional capital expenditures namely, 132 kV Cable laying, Vibration Monitoring System, DDCMIS Renovation & Modernization, Continuous Emission Monitoring System, Effluent Quality Monitoring System, real-time environmental data Transmission, Upgrade of the existing Relay Control System, Make-up Water Pump etc., have been claimed, are at variance with the claims indicated in the different parts of the petition, including the regulations under which such claims have been made for the same item, in various years. The Petitioner vide additional submissions and, in its rejoinder to the replies of the Respondents, has admitted to such variations. In addition, the Petitioner has revised Form 9A for 2014-15, wherein the additional capital expenditure of Rs. 454.49 lakh has been claimed for Wagons, which was earlier claimed under exclusion. Considering these inconsistencies, the Commission vide ROP of the hearing dated 6.1.2023, had directed the Petitioner to furnish the duly filled Form 9A, i.e., the provisions of the regulations under which each of the additional capital expenditures have been claimed, which shall be consistent with the summary sheet and the year-wise sheets of Form 9A. In compliance with the same, the Petitioner, vide affidavit dated 13.2.2023, has revised Form 9A, indicating the additional capital expenditure claimed along with relevant provisions of the regulations, as under:

S. No.		Regulation	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Allowed Works								
1	Ash Dyke Lagoon-II & III	14(3)(iv)	-	1566.89	6.94	-	1490.11	3063.94
2	Fire Detection & Protection system for Cable gallery	14(3)(ii) & (iii)	-	-	-	508.67	-	508.67
3	Wagon Tippler	14(3)(vi)	-	-	-	102.54	-	102.54
	Sub-total		-	1566.89	6.94	611.21	1490.11	3675.14
New Claims								
4	Land Plant-Area	14(3)(i)	1090.68	262.68	120.31	107.15	93.98	1674.79
5	132 kV Cable laying work	14(3)(iii) with 54	153.19	-	-	7.33	-	160.52
6	Continuous Emission Monitoring System	14(3)(ii)	-	246.16	-	-	-	246.16



S. No.		Regulation	2014-15	2015-16	2016-17	2017-18	2018-19	Total
7	Turbo Supervisory / Turbine Vibration Monitoring System	14(3)(iii) with 54	-	395.50	569.64	1.65	1.39	968.18
8	Upgrade of existing Relay Control System & Make up water pump	14(3)(iii) with 54	-	73.30	-	-	-	73.30
9	DDCMIS Renovation & Modernization	14(3)(iii) with 54	-	-	1332.40	2299.65	1233.44	4865.49
10	Effluent Quality Monitoring System (EQMS)	14(3)(ii)	-	-	33.19	-	0.45	33.63
11	Real time Environmental data Transmission	14(3)(ii)	-	-	10.35	-	-	10.35
12	Air Compressor system	14(3)(iii) with 54	-	-	-	255.75	17.58	273.32
13	Steam and Water Analysis System	14(3)(iii) with 54	-	-	-	240.54	14.66	255.20
14	Replacement of MoCB with SF6 breaker.	14(3)(ix) with 54	-	-	-	221.31	-	221.31
15	Wagon (10 nos.)	14(3)(x)	454.49	-	-	-	-	454.49
	Sub-total		1698.36	977.65	2065.89	3133.38	1361.48	9236.76
16	Decapitalization of Spares (part of capital cost)	14(4)	(-)313.16	(-)355.49	(-)460.76	(-)2850.31	(-)1155.88	(-)5135.60
	Subtotal		(-)313.16	(-)355.49	(-)460.76	(-)2850.31	(-)1155.88	(-)5135.60
17	Discharge of Liabilities	14(3)(vi)	64.21	163.64	42.37	10.77	-	280.99
	Subtotal		64.21	163.64	42.37	10.77	-	280.99
Total Additional Capital Expenditure claimed			1449.41	2352.68	1654.44	905.04	1695.71	8057.29

14. As regards the additional capital expenditure claimed, the Respondents have submitted that the additional capital expenditure claimed by the Petitioner is higher than the amount allowed in an order dated 30.7.2016 and that the Petitioner has also not provided any justification along with supporting documents, such as invoice, report, etc., for such an increase in the cost. The Respondents have further stated that since the plant is to complete its useful life in July 2021 in terms of Regulation 27(7) of the 2014 Tariff Regulations, the Petitioner may be directed to submit the details of the proposed additional capital expenditure incurred at the fag end of the project (5 years before the completion of useful life) along with proper justification and the proposed life extension. The Respondents have also pointed out that the Petitioner has claimed new items,



including the replacement of equipments, on account of obsolescence, over and above the items allowed in an order dated 30.7.2016, and the same is attributable to the lack of adequate planning by the Petitioner. The Respondents have further submitted that since the Petitioner has claimed Compensation allowance, the additional capital expenditure claimed, which are in the nature of O&M expenses or do not fall under the sub-clauses (i) to (iv) of Regulation 14(3) of the 2014 Tariff Regulations, may not be allowed in terms of the second proviso to Regulation 14(3) of the 2014 Tariff Regulations. The Respondents have also contended that though the Petitioner has claimed certain additional capital expenditures under Regulation 14(3)(iii) of the 2014 Tariff Regulations, it has not furnished any supporting documents showing the advice/direction by Government authority/agency. They have also pointed out that in case of the additional capital expenditures claimed under the power to relax, the said powers are limited, and the essential provision of the regulations cannot be changed under the garb of power to relax.

15. In response, the Petitioner has submitted that the additional capital expenditures have been claimed under Regulation 14 (3) of the 2014 Tariff Regulations and not under Regulation 27 (7) of the 2014 Tariff Regulations since these works are broadly covered under a change in law or for works required for the safety of plant due to obsolescence. The Petitioner has further submitted that the work of the generating station was awarded on a turnkey basis to a USSR-based vendor in 1990, and the main contractor had awarded the different packages to the different vendors spread across the erstwhile USSR. With the disintegration of the USSR and the passage of time, technological support and spares were not available, and therefore, this has resulted in reliability issues and unsafe operation of the machines. Therefore, the additional capitalization was not claimed for life extension. The Petitioner has further stated that the Compensation allowance, which is on a normative basis after tax, is utilized for other



minor works/MBOA items and for the various disallowed items (claimed under exclusion) and some MBOA items funded from the compensation allowance, will be capitalized during the next control period.

16. In response to the Commission's query regarding the reason for not taking any prior approval for the new claims and for furnishing an undertaking (that the additional capitalization and capital spares do not pertain to the O&M expenses and have not been met from the Compensation allowance), the Petitioner has submitted that in respect of the expenditure claimed for works under a change in law and for the safety of the plant due to obsolescence of the existing equipment, etc., the regulations do not mandate any prior approval. It has also contended that it would be difficult to project all expenses to be incurred during the next five years, since many times certain works, which were not planned, are also required to be undertaken, based on the urgent requirement, for ensuring the reliable operation/ safety and security of the plant or due to change in the law. The Petitioner has also submitted that the additional capitalization claimed is under the provisions of Regulation 14 of the 2014 Tariff Regulations and, therefore, does not fall under the ambit of the compensation allowance. In addition, the Petitioner has stated that the objective of allowing compensation allowance is to take care of the expenses towards new assets of a capital nature, including minor assets, and as the requirement of such assets may arise after certain years of operation, these are allowed on a normative basis, irrespective of the expenditure incurred. Accordingly, the Petitioner submitted that the compensation allowance does not cover other necessary expenses, which are imperative to run the plant efficiently and safely. The Petitioner has added that the additional capital expenditure and capital spares (not part of the capital cost) claimed for the works/items for the period 2014-19 have not been funded through the compensation allowance.



17. In light of the submissions of the parties above, we examine the actual additional capital expenditure claimed by the Petitioner in the subsequent paragraphs.

Ash Dyke Lagoon – II

18. The Petitioner has claimed the additional capital expenditure of Rs. 1566.89 lakh in 2015-16 and Rs. 6.94 lakh in 2016-17 towards Ash Dyke Lagoon-II and Rs. 1490.11 lakh in 2018-19 towards Ash Dyke Lagoon-III under Regulation 14(3)(iv) of 2014 Tariff Regulations. In justification for the Ash Dyke Lagoon-II, the Petitioner has submitted that the Ash pond / Ash handling system is within the original scope of work and has been admitted by the Commission during the year 2014-15. The Petitioner has further submitted that most of the work of Ash Dyke Lagoon-II was completed in 2014-15 but could be put to use in 2015-16, and the remaining work was completed and capitalized in 2016-17. As regards Ash Dyke Lagoon-III, the Petitioner has submitted that the Ash Pond / Ash Handling system is within the original scope of work and was admitted by the Commission during the years 2016-17 and 2017-18 but could be put to use in 2018-19 and the remaining work will be carried out in the subsequent years.

19. The Respondents GRIDCO, BYPL and BRPL have submitted that the Petitioner should furnish the details of the competitive bidding such as the tender issuance date, the number of bidders participated, the number of bidders techno-commercially qualified, the price bid opening date, lowest qualified bidder, the lowest rate, letter of award, scope of works, timelines for completion, etc. for the above works, to justify the expenditure claimed, particularly, the excess claim made for the projected additional capital expenditure allowed in order dated 30.7.2016. Accordingly, the Respondents have stated that in the absence of such information, the claims may not be allowed. The Respondents have further submitted that in terms of MOEF&CC's notification dated 25.1.2016, the Petitioner should achieve 100% ash utilization. Otherwise, penalty is



attracted. Respondents have, accordingly, argued that there was no requirement for an ash dyke to accommodate the ash generated from the generating station. In response, the Petitioner has submitted that it had furnished detailed justification in the relevant forms, and being a CPSU, the Petitioner is guided by the directions/guidelines issued by the Central Govt. and/or its own procedures for its transparent functioning and is further answerable to statutory authorities like CAG, CVC, etc. The Petitioner has also stated that the issue of ash transportation and the raising of ash dyke, are two separate issues which have no bearing on each other. It has also stated that the expenditure on account of ash transportation has been settled by the Commission, and the same has been allowed to the generating stations. The Petitioner has further submitted that the issue of raising the Ash dyke is an operational issue within the plant and is done as per the availability of the ash dyke and the ash generated, and the expenditure on this count is necessary for the smooth operation of the plant. The Petitioner has further submitted that the Commission's regulations unequivocally permit such additional capital expenditure which is incurred during the life of the Project, depending upon the actual Ash generation. In addition, the Petitioner has stated that the projected additional capital expenditure in respect of Ash Dyke Lagoons-II and III was allowed in an order dated 30.7.2016.

20. In response to the Commission's query vide ROP of the hearing dated 6.2.2023, the Petitioner has submitted that the works are within the original scope of work, and as per Investment approval, the original approved cost for the Ash handling system was Rs. 2670 lakh at 1988 Price Level and the total actual investment made towards Ash dyke during the period 2001-14 is Rs. 8097.78 lakh. It has also been submitted that a prudence check, with respect to the original approved cost, may not be appropriate, as the same is around 30 years old. The Petitioner also stated that as the Ash dyke works, including the Ash dyke raising with ash, earth covering, construction of sand blanket



and sand chimney, construction of rock toe, inner slope with flat ash brick pitching and outer slope with grass, construction of decanting well for the collection of decanted water for re-use, buttressing, laying of Hume pipe for drainage of toe drain water, slope drain on each embankment to escape the rainwater from the road, construction of toe guard on each embankment etc., involve huge quantum of civil material like coarse, aggregates, sand and also require the mobilization of manpower over the period of last three decades, the cost of civil materials involved in the ash related/ash handling works, including the labour cost, has increased enormously. The Petitioner has further stated that as the entire ash produced cannot be utilized right away, the Ash handling system is required, and bottom ash is to be transported to the Ash dyke through AWRS, after the water is settled. The Petitioner also stated that at the time of inception, the PLF of the generating station was considered 62.8%, but the actual PLF increased to 85% during the period 2014-19, thereby resulting in increased Ash generation. It has also been submitted that even though steps were being taken for the ash disposal, due to the remote location of the plant, the Ash utilization was below 50% in 2016-19. The Petitioner has further submitted that the total ash pond area for the whole Kahalgaon STPS (Stages- I & II) is 1395 acres, i.e., 540 acres for Lagoon-II, 340 acres for lagoon-III AB, 182 acres for Lagoon-IIIC, 210 acres for lagoon-IIID and 165 acres for overflow lagoon, AWRS, etc., It further stated that four (4) raisings have been completed for Lagoon-II, III AB and III C and one (1) raising has been completed for Lagoon-III D, and the average natural ground level along dyke alignment for all four lagoons is 30 mts.

21. In response to the information sought vide ROP of the hearing dated 31.1.2024 regarding the details of the total expenditure incurred for Ash dyke Lagoon- III and the apportionment of the expenses between Stages-I and II, the Petitioner vide affidavit dated 29.2.2024, submitted that the Commission vide its order dated 30.7.2016 in Petition No. 279/GT/2016, had approved an expenditure of Rs. 3200 lakh for Kahalgaon



Stage-I towards Ash Dyke Lagoon-III and out of this, works were completed for Rs. 1490.11 lakh in 2018-19 and the same was capitalized. The Petitioner further submitted that the expenditure for Ash dyke work depends on many factors, such as the operational requirements, the demand / actual PLF, Ash utilization, etc., for each stage, and the work is undertaken, as per the need, depending on such factors. Based on the operational requirement, the Petitioner submitted that the remaining work shall be undertaken during the period 2019-24, and the details thereof, on an actual basis, at the time of truing-up of the tariff for the period 2019-24 will be submitted. Accordingly, the details of the total works undertaken for Lagoon-III and the approval sought, on an accrual basis, in the respective petitions are as under:

Year	Claimed in Petition for Stage I (Rs.in lakh)	Claimed in Petition for Stage II (Rs. In lakh)
2014 – 15		945.65
2015 – 16		18.66
2016 – 17		3687.62
2017 – 18		768.12
2018 – 19	1490.11	405.95
Total	1490.11	5826.00

22. The matter has been considered. It is observed that the Petitioner has claimed additional capital expenditure of Rs. 1573.83 lakh and Rs. 1490.11 lakh towards Ash dyke works of Lagoon-II and Lagoon-III, respectively, and these claims are over and above the investment cost approved for the subject works. It is noticed that Kahalgaon STPS, Stages I & II taken together have Lagoon-II, Lagoon III-AB, Lagoon III-C and Lagoon III-D Ash dykes. In Petition No. 362/GT/2020 filed by the Petitioner for truing up of tariff of Kahalgaon Stage-II during the period 2014-19, it had claimed additional expenses for Lagoon-II and III, and the Commission had allowed certain expenses associated with Lagoon-III only, but not for Lagoon-II. Also, the Commission vide its order dated 30.7.2016 in Petition No. 279/GT/2016 (determination of tariff of Kahalgaon Stage-I for the period 2014-19), had already approved Rs. 1500 lakh and Rs. 3200 lakh for Ash Dyke Lagoon-II and III, respectively. Accordingly, the additional capital



expenditure of Rs. 1566.89 lakh in 2015-16 and Rs. 6.94 lakh in 2016-17 claimed towards Ash Dyke Lagoon-II and Rs. 1490.11 lakh in 2018-19 towards Ash Dyke Lagoon-III is **allowed**. As regards the submission of the Petitioner that the remaining work of Lagoon-III will be carried out in the subsequent years, the Petitioner is at liberty to claim the same, which will be considered in accordance with the law. Further, keeping in view the submissions of the Respondents regarding bidding, award, etc., in the interest of the end consumer, the Petitioner is directed to share the relevant information such as bidding, scope of works, timelines, cost of award, etc., with the beneficiaries.

Fire Detection & Protection System for Cable Gallery

23. The Petitioner has claimed additional capital expenditure of Rs. 508.67 lakh in 2017-18 towards the Fire detection & Protection system for the Cable gallery under Regulation 14(3)(ii) and 14(3)(iii) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that the Commission vide its order dated 21.2.2017 in Review Petition No. 46/RP/2016 in Petition No. 279/GT/2014, had allowed the expenditure of Rs. 510 lakh in 2015-16, Rs. 460 lakh and Rs. 50 lakh in 2016-17 and though most of the works were completed in 2016-17, the system was put to use in 2017-18.

24. The Respondent, TANGEDC, submitted that although the Commission vide its order dated 30.7.2016 (along with corrigendum order dated 14.9.2016) in Petition No. 279/ GT/2014, had admitted an expenditure of Rs. 300 lakh towards Fire detection system, however, vide order dated 21.2.2017 in Petition No. 46/RP/2017, the prayer of the Petitioner to admit the expenditure of Rs. 510 lakh for capitalization of expenditure towards Augmentation of firefighting system was kept open, pending report of the CEA. It submitted that the Petitioner has not furnished any revised approval in this regard. The Respondent, GRIDCO, submitted that in terms of order dated 21.2.2017, the Petitioner may be directed to furnish the report/guidelines from the Technical Advisory



Committee of Central Electricity Authority (CEA) regarding the applicability of the CEA Regulations, 2010 and 2011 to the existing generating station and the same can be considered as a change in law event under Regulation 14(3)(ii) / 14(3)(iii) of the 2014 Tariff Regulations. The Respondents BYPL and BRPL have submitted that the Petitioner is required to submit a detailed completion report by an Independent consultant regarding the cost incurred towards installation of a Fire detection and Protection system for the Cable gallery and its status thereof. In response, the Petitioner reiterated the submissions made in the original petition and further submitted that the Commission, in an order dated 21.2.2017, chose to consult CEA only to assess whether the CEA Regulations, 2010 are a change in law event and/or compliance with any existing law.

25. The matter has been examined. It is noticed that the Petitioner has claimed the additional capital expenditure Rs. 508.67 lakh, towards the firefighting system for the Cable gallery. In Petition No. 279/GT/2014 (determination of tariff for the period 2014-19), the Petitioner had claimed additional capital expenditure of Rs. 300 lakh for the replacement of Halon based firefighting system with an Inert gas-based system and the expenditure of Rs. 510 lakh towards the addition of Fire detection and Protection system in CHP and the work was awarded to Sterling and Wilson Pvt. Ltd. in June 2014. However, the Commission vide its order dated 30.7.2017 had allowed the expenditure claimed towards the Replacement of Halon based firefighting system with an inert gas system but did not allow the expenditure for the Fire Detection and Protection system in CHP. In this regard, the Petitioner had filed Review Petition No. 46/RP/2016 and submitted that the above Fire detection and Protection system in CHP includes internal hydrant system for coal conveyors, automatic water spray system in cable gallery, fuel oil pump, coal conveyors, stacker and reclaimer, alarm/annunciation panels, PLC based control system, sensors and detectors etc., and prayed that the provisions in the CEA



Regulations, 2010 for augmentation of firefighting system constitutes a change in law, in terms of Regulation 14 (3) (ii) of 2014 Tariff Regulations i.e., necessary for compliance with any existing laws. Considering the above, the Commission, vide its order dated 21.2.2017, had kept open the claim of the Petitioner for capitalization of additional expenditure towards augmentation of the firefighting system, pending a report of the CEA. The relevant portion of the said order dated 21.2.2017 is extracted below:

'15. We have examined the matter. In the present review petition, the petitioner has sought review on the ground that the provisions in the CEA Regulations, 2010 for Augmentation of Fire- Fighting system constitutes change in law in terms of Regulation 14 (3) (ii) i.e. compliance of any existing laws, which has been overlooked by the Commission in order dated 30.7.2016. The Commission has considered the similar claim of the petitioner in Petition No. 293/GT/2014 (tariff of Talcher STPS, Stage-II for 2014-19) and had decided as under:

"27. We have examined the matter. It is observed that similar claim of the petitioner under Regulations 14(3)(ii) and 14(3)(iii) of the 2014 Tariff Regulations for Augmentation of Firefighting system was considered by the Commission in Petition No. 270/GT/2014 (tariff of Simhadri STPS for 2014-19) and the Commission by order dated 27.6.2016 had rejected the claim of the petitioner. On a review filed by the petitioner (in Petition No.36/RP/2016), the Commission by order dated 27.1.2017 allowed the prayer of the petitioner under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The petitioner in this petition has claimed the expenditure due to Change in law/compliance with existing law under Regulation 14(3)(ii) and for Safety and security of the plant under Regulation 14(3)(iii) of the 2014 Tariff Regulations in terms of the CEA Regulations 2010 and 2011. Though the prayer of the petitioner in the review petition was not allowed under Regulation 14(3)(ii) of the 2014 Tariff Regulations, 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 firefighting/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 firefighting 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."

16. Accordingly, the prayer of the petitioner in this review petition is allowed and the decision regarding the claim of the petitioner for capitalization of expenditure towards Augmentation of firefighting system is kept open pending report of the CEA. The review petition is disposed of in terms of the above.'

26. Accordingly, the Petitioner was directed vide ROP of the hearing dated 31.1.2024 to furnish the scope of works completed under the claim along with the confirmation that the works executed under this include all scope of works submitted in Petition No.



279/GT/2014 and Review Petition No. 46/RP/2016. In response, the Petitioner vide affidavit dated 29.2.2024 submitted that the works under the said package include Automatic fire detection cum medium velocity water spray system for the cable gallery, Fuel oil pump house including pump, Coal Conveyors, internal hydrant system for coal conveyors, TPs and Crusher House, Stacker-Reclaimer Machines, automation of foam system, Analogue addressable type Fire Alarm System / Annunciation Panels and PLC based control system, etc., and has also confirmed that the scope works include all the works submitted in Petition No. 279/GT/2014 and Review Petition No. 46/RP/2016.

27. It is pertinent to mention that no report was received from the CEA. Even otherwise, the claim of the Petitioner is required to be considered in terms of the provisions of the 2014 Tariff Regulations. Accordingly, the claim of the Petitioner is being considered in terms of Regulation 14(3) of the 2014 Tariff Regulations. Since the works executed, viz., fire protection system, is for the safety and security of the plant, the additional capital expenditure of Rs. 508.67 lakh in 2017-18 claimed by the Petitioner is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The Petitioner is, however, directed to furnish the details of obsolescence and decapitalization of old assets along with the year of such decapitalization/obsolescence at the time of truing up of tariff for the period 2019-24 for consideration.

Wagon Tippler

28. The Petitioner has claimed the additional capital expenditure of Rs. 102.54 lakh in 2017-18 towards the Wagon Tippler under Regulation 14(3)(iv) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that the same is towards the balance payment of the works allowed by the Commission for additional capitalization during the period 2009-14, as the contract closing and tax liabilities payment have been made during the current year.



29. The Respondent, TANGEDCO, while pointing out that the claim has been made under Regulation 14(3)(vi) of the 2014 Tariff Regulations, wherein liability for works is allowed after the cut-off date to the extent of discharge of such liabilities by actual payments, submitted that the Petitioner has not furnished details of any liability approval for admittance after the cutoff date. The Respondents BRPL and BYPL have submitted that in Petition No. 279/GT/2014, the Petitioner has submitted that the augmentation of Railway siding is part of the Wagon tippler scheme, which was approved vide order dated 23.5.2012, wherein the Commission had directed the Petitioner to furnish the details of progress of work at the time of truing up of tariff, but, the Petitioner has not furnished the same. Therefore, the Respondents have stated that the Petitioner may be directed to furnish the details regarding the tender issued, award of contract, etc, and the details of the tax liabilities incurred by it towards the same. In response, the Petitioner submitted that the Commission vide its order dated 23.5.2012 in Petition No. 245/2009 (tariff for the period 2009-14), had allowed the projected additional capital expenditure of Rs. 7019.76 lakh towards Wagon tippler. However, in Petition No. 271/GT/2014 (truing up of tariff for the period 2009-14), the Commission vide its order dated 27.7.2016, had allowed the additional capitalization of Rs. 5879.57 lakh towards payments made for contract closing and tax liabilities during 2017-18, for Wagon tippler works.

30. In response to the Commission's query regarding the details of the scope of works, the total amount allowed, the amount capitalized, and the liabilities created as on 31.3.2014, along with supporting documents, the Petitioner has submitted that the scope of works for Wagon tippler package includes design, engineering, manufacturing, shop fabrication, assembly, testing, packing, transportation and insurance for delivery at site, unloading, storage, erection, testing, commissioning, trial operation, performance guarantee test etc. The Petitioner has also submitted that the total cost



allowed for the Wagon tippler package during the period 2009-14 is Rs. 9328.72 lakh, wherein the actual expenditure incurred for the same is Rs. 8353.33 lakh and the liability as on 31.3.2014, is Rs. 575.54 lakh.

31. The matter has been considered. It is noticed that in Petition No. 245/2009, the Petitioner had submitted that the increase in PLF and deterioration of quality (GCV from 3050 kCal/kg to 2800 kCal/kg) from linked mines, necessitated the increased procurement of coal from other sources through Railways and thus, the wagon tippler was required to unload the BOX-N wagons to minimize the unloading time (manual unloading takes 7-8 hours). Accordingly, the projected additional capital expenditure of Rs. 7019.76 lakh towards the Wagon tippler (exclusive of locos, augmentation of a railway siding, weigh bridge, etc,) was allowed vide order dated 23.5.2012. Subsequently, the Petitioner in Petition No. 271/GT/2014 had submitted that the Wagon tippler had been commissioned and capitalized in 2011-12 and accordingly claimed the additional capital expenditure of Rs. 5874.14 lakh, which was allowed vide order dated 27.7.2016. The Petitioner has submitted that the total projected cost allowed for the Wagon tippler package during the period 2009-14 is Rs. 9328.72 lakh, but the actual additional expenditure incurred for the same is Rs. 8353.33 lakh, and the liability, as on 31.3.2014, is Rs. 575.54 lakh. The Petitioner has now claimed additional capital expenditure for Rs. 102.54 lakh in 2017-18 towards Wagon tippler under Regulation 14(3)(iv) of the 2014 Tariff Regulations towards balance payment of work, including contract closing and tax liabilities. Considering the above submissions, the additional capital expenditure for Rs. 102.54 lakh in 2017-18 towards the Wagon tippler is allowed under Regulation 14(3)(iv) of the 2014 Tariff Regulations.

Land Plant Area

32. The Petitioner has claimed the total additional capital expenditure of Rs. 1674.79 lakh during the period 2014-19 (Rs. 1090.68 lakh in 2014-15, Rs. 262.68 lakh in 2015-



16, Rs. 120.31 lakh in 2016-17, Rs. 107.15 lakh in 2017-18 and Rs. 93.98 lakh in 2018-19) towards Land Plant area under Regulation 14(3)(i) of 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that various land oustees had filed cases in the various courts for payment of the enhanced land compensation, which are at different stages of hearing. It has also stated that some out-of-court settlements were done during the period 2009-14, and the said expenditure was approved vide order dated 27.7.2016, and similar out-of-court settlements to some other land claims were done and capitalized in 2014-19.

33. The Respondents, TANGEDCO, UPPCL, and GRIDCO submitted that the claim of the Petitioner, being an out-of-court settlement and not arising on account of any arbitration award or court order or decree, does not satisfy the criteria of Regulation 14(3)(i) of the 2014 Tariff Regulations. The Respondents, BYPL and BRPL, have submitted that the Petitioner has not provided any details of the parties that received the said settlement amount along with cogent documents substantiating the claim, and therefore, the additional capitalization amounts claimed by the Petitioner are mere numbers. In response, the Petitioner has submitted that various land oustees had filed around 1500 matters in the various courts for the payment of enhanced land compensation, which is presently at different stages of hearing, and in order to expedite these cases, the Petitioner is negotiating with the litigants for amicable out-of-court settlement. It has further stated that these claims were made during the period 2009-14, and the Commission had allowed the same. It has further stated that the record of the out-of-court settlements was also subsequently placed before the concerned Court, based on which suitable decrees were passed.

34. In response to the query of the Commission to furnish the auditor-certified detailed summary, matching with the amount claimed for enhanced Land compensation paid for out-of-court settlement during the period 2014-19, the Petitioner vide affidavit dated



13.2.2023, has submitted that the year-wise Land compensation claimed for the period 2014-19 appear in Note–2 of the audited balance sheet of the generating station for each financial year and the same is reproduced as under:

Asset ID	2014-15 (Rs.)	2015-16 (Rs.)	2016-17 (Rs.)	2017-18 (Rs.)	2018-19 (Rs.)	Total (Rs.)
Note 2 Figure	109068065	36015292	12030614	10714875	9397554	177335329
Land Not Claimed Hurra Mines included in Note-2		2041350				2041350
Amount claimed as asset		33973942				33973942
Liability Shown in Petition		7705942				7705942
As Per Petition (on cash basis)	109068065	26268000	12030614	10714875	9397554	167588037

35. As regards the year-wise amounts mentioned above, the Respondent GRIDCO has submitted that no information can be inferred for the enhanced land compensation from the above. As the claim made in the main petition, i.e., Rs. 1674.79 lakh is at variance with the claim submitted in an affidavit dated 13.2.2023, i.e., Rs. 1675.88 lakh, and also the document to substantiate out-of-court settlement with respect to three Land Oustees for Rs. 34,528/- in 2015-16, the Commission, vide ROP of the hearing dated 31.1.2024 directed the Petitioner to submit the Auditor certified year-wise, out-of-court settlement compensation paid to all the Land Oustees since the inception of the plant till 2014-19 and the apportionment of these expenses to Stages-I and II thereof. In response, the Petitioner, vide affidavit dated 29.2.2024 submitted that the out-of-court settlement compensation was first sought in 2009-14, and the Commission had allowed amounts for Rs. 2.08 lakh, Rs. 37.91 lakh, Rs. 286.23 lakh, and Rs. 61.09 lakh during the years 2009-10, 2011-12, 2012-13 and 2013-14, respectively. The Petitioner has further submitted that the aforesaid court cases pertain to land acquisition done for Kahalgaon Stage-I only. The Petitioner had also enclosed a list of Land Oustees, to whom the out-of-court settlement compensation was paid in 2014-19, and the copies of agreements made with various land oustees. The Petitioner also submitted the auditor-



certified year-wise compensation paid towards the out-of-court settlement compensation for the period 2014-19 as under:

Year	Amount Paid (Rs.)
2014-15	10,90,68,065.00
2015-16	2,62,68,000.00
2016-17	1,20,30,614.00
2017-18	1,07,14,875.00
2018-19	93,97,554.00
Total	16,74,79,108.00

36. The matter has been considered. It is noticed that the Petitioner has claimed additional capital expenditure of Rs. 1674.79 lakh during the period 2014-19 (Rs. 1090.68 lakh in 2014-15, Rs. 262.68 lakh in 2015-16, Rs. 120.31 lakh in 2016-17, Rs. 107.15 lakh in 2017-18 and Rs. 93.98 lakh in 2018-19) under Regulation 14(3)(i) of 2014 Tariff Regulations towards Out-of-court settlements of the land acquisition cases, which were placed before the concerned Court and suitable decrees were passed through orders of the Court. The Petitioner also annexed some court orders indicating the payment of compensation to the land oustees. It is observed that the Commission had already allowed amounts for Rs. 2.08 lakh, Rs. 37.91 lakh, Rs. 286.23 lakh and Rs. 61.09 lakh during the years 2009-10, 2011-12, 2012-13, and 2013-14 respectively, towards Land Plant area. Further, the Petitioner has submitted an auditor-certified copy of the claims in response to the queries sought, vide ROP of the hearing dated 31.1.2024. Against this background, the claim of the Petitioner is **allowed** under Regulation 14(3)(i) of the 2014 Tariff Regulations. Further, as regards the liabilities claimed and pending, if any, the Petitioner may claim the same during the period 2019-24, along with the relevant supporting documents substantiating the payments made to the land oustees.

132 kV Cable laying work, Upgrade of exist relay control system make up water pump, Air Compressor system of NTPC Kahalgaon, Stage-I and Steam and Water Analysis System

37. The Petitioner claimed the additional capital expenditure of Rs. 153.19 lakh in



2014-15 and Rs. 7.33 lakh in 2017-18 towards 132 kV cable laying works; Rs. 73.30 lakh in 2015-16 towards the upgrade of existing relay control system make up water pump; Rs. 255.75 lakh in 2017-18 and Rs. 17.58 lakh in 2018-19 towards Air compressor system of the generating station and Rs. 240.54 lakh in 2017-18 and Rs. 14.66 lakh in 2018-19 towards Steam and Water analysis system under Regulation 14(3)(iii) of the 2014 Tariff Regulations read with Regulation 54 (Power to Relax) of 2014 Tariff Regulations in the summary of Form 9A. However, the Petitioner has claimed these items under Regulation 14(3) of the 2014 Tariff Regulations read with Regulation 54 (Power to Relax) of 2014 Tariff Regulations, in the year-wise Form 9A. In justification for '132 kV Cable laying work', the Petitioner has submitted that as per the original scheme, the underground cable was laid for Station Transformer-II, which got damaged, and the system was kept under charged condition on a contingency basis. It has also been stated that in view of the ongoing bus splitting work, a 132-kV cable was laid to increase the reliability of the system. The Petitioner, in justification for the expenditure incurred towards the 'upgrade of existing relay control system make up water pump,' has submitted that these works were carried out to enhance the protection system and continuous monitoring of machine healthiness to avoid the unplanned downtime and for providing reliable power to customers. In justification for the 'Air Compressor system' of the generating station, the Petitioner has submitted that old Russian compressors have outlived their lives and, due to the non-availability of spares, the same were difficult to maintain, and, therefore in order to maintain the availability of the compressor air system, new compressors were procured and installed to increase the reliability of the system for providing reliable power to beneficiaries. Also, in justification for the 'Steam and Water Analysis System' the Petitioner has submitted that these works were carried out since the system was obsolete, and therefore, spares were not available to maintain the healthiness of the system, and for efficient working



of the generating station, a new system equipped with digital controlling was installed.

38. The Respondent, TANGEDCO, has submitted that the Petitioner may be directed to furnish the fault analysis report of the existing protection relay for makeup water along with the need and justification for the said upgrade. The Respondents, TANGEDCO and BSPHCL have submitted that these claims are in the nature of O&M expenses. The Respondents, TPDDL, and BSPHCL, have submitted that the Petitioner should have had advance knowledge that certain systems/equipment are likely to become obsolete during the period 2014-19, which require replacement, and the same should have been claimed in the main tariff petition filed in 2014. The Respondent, TPDDL further submitted that most of these items are related to Renovation & Modernization, and the same should be met from the O&M expenses and Compensation allowance allowed to the generating station. The Respondent, UPPCL, has pointed out that in the summary of Form 9A, these works were claimed under Regulation 14(3)(iii) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations, but in the year-wise forms, the same has been claimed under Regulation 14(3) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations. The Respondent further stated that the Petitioner is seeking the invocation of Regulation 54 and is admitting that these claims do not fall under Regulation 14(3) of the 2014 Tariff Regulations.

39. The Respondent, GRIDCO, in respect of the claim for 132 kV cable laying work, has submitted that Regulation 14 (3) (iii) of the 2014 Tariff Regulations is applicable only on account of the need for higher security and safety of the plant as advised by the appropriate government agencies or statutory authorities responsible for the national security/internal security. It has stated that since no such advisory is available and the claim is not connected to the higher safety and security of the plant, the same does not fall under Regulation 14 (3)(iii) of the 2014 Tariff Regulations. It has been submitted that



the same may be met out of the Compensation allowance or the O&M expenses allowed to the generating station. As regards the claim for 'upgrade of existing relay control system make up water pump', 'Air Compressor system of the generating station', and 'Steam and Water Analysis System', the Respondent submitted that since the Petitioner has claimed Compensation allowance, these claims neither qualify under any of the clauses of Regulation 14(3) of the 2014 Tariff Regulations nor is there any justification for application of Regulation 54 of the 2014 Tariff Regulations. The Respondents, BYPL and BRPL, submitted that the Petitioner has to submit complete details to substantiate the claim for 132 kV cable laying work but has not furnished any documents for the same. These Respondents have also stated that instead of giving the total amount claimed for subject work, the Petitioner may be directed to furnish the detailed documents, including invoices, and the same enables the beneficiaries to have access to details of such cost claimed. As regards the claim related to the 'upgrade of existing relay control system makeup water pump', the Respondents have submitted that Regulation 14(3)(ii) of the 2014 Tariff Regulations provides to allow additional capital expenditure after the cut-off date on account of the change in law or for compliance with the existing law, but, no such document/justification has been furnished by the Petitioner, and thus, the claim is a mere conjecture. As regards the claim for 'Air Compressor system of the generating station' and 'Steam and Water Analysis system', the Respondents have submitted that in the absence of the requisite information and documents for substantiating the claims made, the amount claimed is mere numbers. Therefore, they argued that the Petitioner may be directed to provide detailed reports regarding the cost incurred, which enables the beneficiaries to examine the claim, and the Commission may like to do a prudence check under Regulation 14 of the 2014 Tariff Regulations. The Respondents stated that the Petitioner shall meet such claims from the Compensation allowance or the Special allowance granted to the generating station.



40. In response, the Petitioner has submitted that these expenses were claimed under Regulation 14(3) of the 2014 Tariff Regulations along with Regulation 54 of the 2014 Tariff Regulations as per the year-wise details, but in the summary sheet of additional capital expenditure, inadvertently, it was mentioned as Regulation 14(3)(iii) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations and the same may be read as Regulation 14 (3) of the 2014 Tariff Regulations along with Regulation 54 of the 2014 Tariff Regulations. The Petitioner has also submitted that a thermal power plant is a composite of large machinery made up of numerous types of machinery and practically, it is not possible to anticipate the likelihood of machinery going obsolete or requiring replacement. The Petitioner has also stated that these works were carried out to enhance the protection system and to avoid unplanned downtime of the station for providing reliable power to costumers, and because of the above circumstances, which were beyond the control of the Petitioner, it had to incur these one-time expenses. In addition, the Petitioner has submitted that the modernization of the system was done to replace the obsolete system with a new digitized Controlling system. As regards the claim for '132 kV Cable laying work', 'Air Compressor system of the generating station', and 'Steam and Water analysis system', the Petitioner has reiterated its submissions made earlier and has also prayed for invocation of Regulation 54 (Power to Relax) of the 2014 Tariff Regulations and allow the said claim.

41. In response to observations of the Commission that the sub-regulation for the additional capitalization claimed should be consistent and that detailed reasoning and justification should be given for claiming the expenditure, along with the supporting documents (advisory/direction from Government agencies/authorities) to substantiate the claims sought under Regulation 14(3)(iii) of 2014 Tariff Regulations, the Petitioner submitted that it has revised Form 9A and has also submitted the report of CRISIL Risk



& Infrastructure solutions, wherein, it has been mentioned that these items are 20 years old and the technology has become obsolete and therefore, the same needs to be replaced. The Petitioner has also stated that a financial feasibility assessment was carried out, and financially viable schemes, including the above claims, were undertaken. The Petitioner has further submitted that the Compensation allowance is on a normative basis, irrespective of the actual expenditure incurred and therefore, the same does not cover other necessary expenses imperative to run the plant efficiently and safely. In addition, the Petitioner has submitted that most of the claimed items are C&I items and electrical protection items, and with time, technological upgradation has rapidly taken place in these areas, and the Petitioner, with great difficulty, managed the system for more than 15 years and thereafter, as the situation was going beyond the control, these systems were upgraded, since these works could not have been avoided.

42. As regards the claim for 132 kV cable laying work, the Petitioner has submitted that three single core cables (400 Sqm, AL, XLPE) connecting Station Transformer-2 and its 132-kV bay were commissioned by the Russian OEM during the period 1994-96 and as the same was defective, it was connected through contingency arrangement i.e., 132 kV line connected with 132 kV transfer bus. It has, therefore, submitted that the transfer bus system (Transfer Bus sections-I & II) could not be made available for the balance feeders, during any other contingent requirement, resulting in the reduced reliability of the system. The Petitioner has clarified that this upgradation work restored the original scheme of the 132-kV switchyard of the generating station. As regards the claim for expenditure to 'upgrade the existing relay control system make up water pump,' the Petitioner has submitted that the existing relay-based control system for the Ganga make -up pump house was commissioned in the 1990s and the same has become obsolete since the spare support was no longer available. The said system was replaced by an upgraded state of art PLC system, which has multiple advantages.



As regards the claim towards 'Steam and Water analysis system', the Petitioner has submitted that the existing system was installed by Russian OEM and it became obsolete since the sampling devices (like sample coolers, pressure regulating walls, back pressure regulators, cation columns, filters, etc.), accessories (like piping, tubing, fittings, walls, and other sample conditioning wetted parts) and monitoring instruments (for temperature, pressure, flow & sample) could not be repaired due to lack of spares and technical support from the OEM. It has been added that the samples of online steam and water were thus not available, and the critical data of steam and water, such as pH, conductivity, silica, hydrogen, etc. led to the deterioration in turbine blades and boiler tubes, which were replaced. As regards the expenditure for the 'Air Compressor system' of the generating station, Stage-I, the Petitioner has submitted that the Air compressors are used for Plant air and instrument air system, which are vital for plant protection system and as these became obsolete and spare were also not available leading to technical issues such as air and oil mixing in the discharge of air, resulted in failure of C&I equipment. Accordingly, these were replaced with 4 screw air compressors.

43. The matter has been considered. It is noticed that the Petitioner, in the summary sheet of the additional capital expenditure, has claimed these expenses under Regulation 14(3)(iii) of the 2014 Tariff Regulations read with Regulation 54 (Power to Relax) of the 2014 Tariff Regulations. For the individual years, the Petitioner has claimed the same under Regulation 14(3) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations. However, based on a direction of the Commission to furnish consistent information, the Petitioner has claimed these expenses under Regulation 14(3)(iii) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations and also furnished the CRISIL report, as a supporting document. Considering the documents available on record, it is noticed that the claims made under Regulation 14(3)(iii) of the 2014 Tariff Regulations is not based on any



advice or direction by appropriate Government Agencies of the statutory authorities responsible for national security/internal security. We find no merit to allow the claim of the Petitioner in exercise our powers under Regulation 54 of the 2014 Tariff Regulations. Accordingly, the additional capital expenditure claimed by the Petitioner towards 132 kV Cable laying work, Upgrade of the Existing relay control system, Make-up water pump, Air Compressor system of the generating station and Steam & Water Analysis System are **not allowed**.

Continuous Emission Monitoring System, Effluent Quality Monitoring System and Real Time Environmental Data Transmission

44. The Petitioner has claimed additional capital expenditure of Rs. 246.16 lakh in 2015-16 towards Continuous Emission Monitoring system (CEMS), Rs. 33.19 lakh in 2016-17 and Rs. 0.45 lakh in 2018-19 towards Effluent Quality Monitoring System (EQMS) and Rs. 10.35 lakh in 2016-17 towards Real Time Environment Data Transmission (RTEDT) under Regulation 14(3)(iii) read with Regulation 54 (power to relax) of the 2014 Tariff Regulations in summary of Form 9A. However, the Petitioner has claimed these items under Regulation 14(3)(ii) of the 2014 Tariff Regulations, in the year-wise Form 9A submitted with the Petition. In justification for the same, the Petitioner has submitted that these items are necessitated in terms of the Central Pollution Control Board (CPCB) guidelines dated 5.2.2014 for continuous monitoring of stack emission and effluent quality.

45. The Respondent, GRIDCO has submitted that the Petitioner has not submitted the details of the competitive bidding including the number of bidders who participated, the number of bidder's techno-commercially qualified, the lowest bidder, lowest cost, benchmark cost, commercial operation certificate from the SPCB, performance report, life span etc. for prudence check. The Respondents, BYPL and BRPL submitted that though the claims have been made under change in law, no supporting documents



/justification have been furnished to substantiate the same and the claims are mere estimations. The Respondent, TPDDL has submitted that though the claims are based on CPCB's letter dated 5.2.2014, no reason has been furnished by the Petitioner why it has not projected these expenses at the time of tariff determination of the station for the period 2014-19. In response, the Petitioner submitted that being a CPSU, it follows guidelines laid down by the CPCB, in the award of contracts and is monitored by the CVC, CAG and other Governmental agencies. The Petitioner has further stated that CPCB's circular dated 5.2.2014 directs the Online installation of 942 CEMS systems and Online Effluent Quality Monitoring System at the outlet of Effluent Treatment Plant and to upload the Online emission data at SPCB's / PCC's and CPCB servers. The Petitioner has also submitted that it has inadvertently mentioned the claim under Regulation 14(3)(iii) of the 2014 Tariff Regulations for CEMS and EQMS and has prayed to read the same as claimed under Regulation 14(3)(ii) of 2014 Tariff Regulations. Subsequently, the Petitioner in revised Form 9A, has claimed the additional capitalization of these assets under Regulation 14(3)(ii) of the 2014 Tariff Regulations.

46. The matter has been considered. It is noticed that CPCB in its letter dated 5.2.2014 to the State Pollution Control Boards (SPCB) and Pollution Control Committees (PCC) has directed 17 categories of highly polluting industries, including the thermal power plants, to install Online Continuous Stack Emission Monitoring Systems (CSEMS) for measurement of the parameters, viz., Particulate Matter, Ammonia, SO₂ (Sulphur Dioxide), NO_x (Oxides of Nitrogen) etc; online Effluent Quality Monitoring System at the outlet of Effluent Treatment Plants for the measurement flow, pH, COD, BOD, TSS etc; and to connect and upload the Online emission and Effluent Monitoring data at SPCBs / PCCs and CPCB server, in a time bound manner, but not later than by 31.3.2015. Accordingly, an expenditure of Rs. 246.16 lakh in 2015-16 towards CEMS, Rs. 33.19 lakh in 2016-17 and Rs. 0.45 lakh in 2018-19 towards EQMS and Rs. 10.35 lakh in



2016-17 towards RTEDT, claimed by the Petitioner for compliance with the above directions of the CPCB is **allowed** under Regulation 14(3)(ii) of the 2014 Tariff Regulations. The Petitioner is, however, directed to upload the online data on servers' of CPCB, SPCB and PCC and also share such data with the beneficiaries.

Turbo Supervisory / Turbine Vibration Monitoring System

47. The Petitioner has claimed the total additional capital expenditure of Rs. 968.18 lakh during the period 2015-19 (Rs. 395.50 lakh in 2015-16, Rs. 569.94 lakh in 2016-17, Rs. 1.65 lakh in 2017-18 and Rs. 1.39 lakh in 2018-19) towards Turbo supervisory / Turbine Vibration Monitoring System under Regulation 14(3)(iii) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations, in summary of Form 9A. However, in the year-wise forms, the Petitioner has claimed the additional capital expenditure of Rs. 395.50 lakh in 2015-16, Rs. 1.65 lakh in 2017-18 and Rs. 1.39 lakh in 2018-19 for this asset/item under Regulation 14(3) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations along with the claim for Rs. 569.94 lakh in 2016-17 towards Vibration Monitoring System under Regulation 14(3)(i) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations. In justification for both these assets, the Petitioner has submitted that these works were carried out to enhance the protection system and continuous monitoring of machine healthiness to avoid unplanned downtime and to provide reliable power to consumers.

48. The Respondent, TANGEDCO submitted that since the commissioning of the units, the asset/item is one of the main and critical equipment provided for turbine protection. It has stated that the failure report analysis of the existing system and the need for enhancement of protection may be directed to be furnished. The Respondent, BHSPCL submitted that the item is in the nature of O&M expenses. The Respondent, GRIDCO has submitted that as the Petitioner is availing Compensation allowance, the above assets/items do not qualify under any of the provisions of Regulation 14(3) of the



2014 Tariff Regulations and there is also no justification for the invocation of the powers under Regulation 54 of the 2014 Tariff Regulations. The Respondents, BYPL and BRPL have submitted that the claim does not fall either under Regulation 14(3)(i) or Regulation 14(3)(ii) of the 2014 Tariff Regulations. In response, the Petitioner has submitted that the additional capital expenditure has been claimed under Regulation 14(3) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations or Regulation 14(3)(iii) of the 2014 Tariff Regulations. The Petitioner has submitted that as the system has become obsolete and spares were not available, it was modernized and protection was enhanced in terms of continuously monitoring the healthiness of the machine through the new monitoring system. Subsequently, the Petitioner, vide its additional submissions, has submitted that the existing system was old and did not have any analytical features, and as it became obsolete and spares were unavailable, etc., leading to tripping and damage to equipment, the old system was replaced with an upgraded system of ECIL. In compliance with the directions of the Commission, the Petitioner submitted that both 'the assets/items have been claimed under Regulation 14(3)(iii) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations.

49. The matter has been considered. As the subject item is critical equipment for plant operation, without any fault analysis report and recommendation of the third party for replacement, the contention of the Petitioner that the same was replaced to avoid unplanned downtime and provide reliable power to customers is not acceptable. It is noticed from the information available on record that the certificate submitted was on 9.2.2022, i.e., post facto certificate, after the completion of works, and the same was issued by ECIL, i.e., the company that implemented the upgrade. Hence, the same cannot be considered as advice or direction of the appropriate Government agencies or Statutory authorities responsible for national security/internal security under Regulation



14(3)(iii) of the 2014 Tariff Regulations. In view of this, we find no reason to exercise the powers under Regulation 54 of the 2014 Tariff Regulations to allow the said claims under this head. Accordingly, the claim of the Petitioner on this head, is **not allowed**.

DDCMIS Renovation Modernization

50. The Petitioner has claimed the additional capital expenditure of Rs. 4865.49 lakh during the period 2016-19 (Rs. 1332.40 lakh in 2016-17, Rs. 2299.65 lakh in 2017-18 and Rs. 1233.44 lakh in 2018-19) towards DDCMIS Renovation & Modernization under Regulation 14(3)(iii) read with Regulation 54 of the 2014 Tariff Regulations, in the summary of Form 9A. The Petitioner has claimed the same assets under Regulation 14(3)(i) read with Regulation 54 of the 2014 Tariff Regulations in 2016-17 and under Regulation 14(3) read with Regulation 54 of the 2014 Tariff Regulations in 2017-18 and 2018-19. In justification for the same, the Petitioner has submitted that these works were carried out on account of obsolescence and unavailability of spares, and the Renovation & Modernization of the system has been done to reduce the unplanned outage of the generating station with a new digitized controlling system for reliable power to beneficiaries.

51. The Respondent, TANGEDCO has submitted that the expenses claimed are in the nature of O & M expenses. The Respondent, TPDDL, has submitted that the claim is towards R&M and as the plant is about to complete its useful life, the same may not be allowed. The Respondent, GRIDCO, has submitted that the useful life of the plant is to be completed in July 2021, and the Petitioner has not furnished any proposal for the life extension of the project. Moreover, since the claim is for Renovation & Modernization, in terms of the third proviso to Regulation 14(3) of the 2014 Tariff Regulations, the same cannot be considered under any of the provisions of Regulation 14 (3) of the 2014 Tariff Regulations, and there is also no justification for the invocation of Regulation 54 of the 2014 Tariff Regulations to allow the said claim. The Respondents BYPL and BRPL have



submitted that the claim does not fall under Regulation 14(3)(i) of the 2014 Tariff Regulations, and the Petitioner may be directed to provide the relevant documents or invoices towards the cost incurred to the beneficiaries and the Commission, for prudence check. In response, the Petitioner has submitted that the expenditure has been claimed under Regulation 14(3) of the 2014 Tariff Regulations read with Regulation 54 of the 2014 Tariff Regulations since the existing auto control system, UPS, FSSS, and data acquisition system (DAS) have become obsolete and spares were also unavailable. Hence, it has been submitted that the historical storage, retrieval of data for analysis purposes, online diagnostic/calculation etc, were getting impacted. In addition, the Petitioner has stated that the turbine protection system and control system of the soot blower, which were relay-based, became highly unreliable, and therefore, the system was modernized with a new digital control system for reliable power. Accordingly, the Petitioner has submitted that the additional capital expenditure incurred for the installation of the state-of-the-art technology DDCMIS system, based on the report of CRISIL, has been claimed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.

52. The matter has been considered. It is noticed that the Petitioner has claimed the additional capitalisation of the asset/item under Regulation 14(3)(iii) of the 2014 Tariff Regulations, and to substantiate the same, it has furnished a report of CRISIL, which is not an advice or direction of the Government agencies or statutory authorities responsible for national security / internal security. However, considering the nature of the works and their necessity, the claim of the Petitioner is **allowed** in the exercise of the powers under Regulation 54 (Power to Relax) of the 2014 Tariff Regulations. As the decapitalized value of the old asset has not been provided by the Petitioner, the same has been considered under 'Assumed Deletions.'



Replacement of MoCB with SF₆ breaker

53. The Petitioner has claimed the additional capital expenditure of Rs. 221.31 lakh in 2018-19 towards the Replacement of MoCB with SF₆ breaker, under Regulation 14(3)(iii) read with Regulation 54 of the 2014 Tariff Regulations, in summary of Form 9A. The Petitioner has also claimed the same under Regulation 14(3), read with Regulation 54 of the 2014 Tariff Regulations in 2017-18. In justification for the same, the Petitioner has submitted that the existing electromechanical relay-based breaker became obsolete and its spares were not available, therefore, the breaker is being installed now with numerical relays, which is efficient in fault detection and trace, thereby resulting in an efficient protection system.

54. The Respondents, TANGEDCO and BSPHCL, have submitted that the expenses claimed are in the nature of O&M expenses. The Respondent, GRIDCO, has submitted that the claim does not qualify under any of the clauses of Regulation 14 (3) of the 2014 Tariff Regulations, and as the Petitioner is claiming compensation, there is no justification for the invocation of Regulation 54 of the 2014 Tariff Regulations. In response, the Petitioner has submitted that the expenditure incurred under the circumstances was beyond its control, and therefore, it has approached the Commission for the replacement of MOCB and SF₆ breaker. Subsequently, the Petitioner, vide its affidavit dated 10.5.2022, has submitted that the existing MOCBs, with electromechanical relay systems for the control and protection systems in various critical areas, were commissioned during the period 1994-96, and over the period of time their response was found to be sluggish during critical operations, and there is neither any support from the OEM for servicing nor any spares available and therefore, these have become obsolete. Accordingly, the Petitioner has submitted that the above circuit breakers were replaced by upgraded technology, i.e., Vacuum Based Circuit



Breaker (VCB) and numerical relays. In response to the direction of the Commission, the Petitioner vide affidavit dated 13.2.2023 has submitted that the claim has been made under Regulation 14(3)(ix) read with Regulation 54 of the 2014 Tariff Regulations, and due to the accumulation of generation projects in Eastern Region and the evolution of regional grid over the years, the sub-stations in the region were witnessing an increase in the short-circuit levels at their 400-kV bus. The Petitioner has also submitted that this issue was discussed in the 11th meeting of the Standing Committee on power system planning in the Eastern Region on 20.9.2010, and it was noted that SCL at various 400 kV sub stations, including the generating station, was exceeding the permissible limit of 40 kA. Accordingly, bus splitting of 400 kV bus at the generating station switchyard was decided, and the same was allowed by the Commission. Even though MOCBs and VCBs are used for auxiliaries (low voltage) of the generating station, as the justification provided was being high fault level at 400 kV, and a claim has been made under Regulation 14(3)(ix) of the 2014 Tariff Regulations, which is applicable for transmission system (high voltage), the Commission vide ROP of the hearing dated 31.1.2024, sought details of the voltage level, number of breakers, associated equipment etc. In response, the Petitioner vide affidavit dated 29.2.2024 submitted that the amount of Rs. 233.39 lakh claimed pertains to only one unit of the generating station and is for replacement of a total of 63 Circuit Breakers along with numerical relays catering to the various critical drives of Main Plant (6.6 KV voltage level) such as Mills, CW Pumps, ID Fans, etc., and the balance work for the remaining three units, is under progress and shall be capitalized during the period 2019-24. The Petitioner further submitted that the existing electromechanical relay-based Circuit Breakers have become obsolete, and over a period of time, their response was sluggish during critical operations, and there was a requirement for robust protection and control system and fast isolation during fault conditions. Further, these new items having features of continuous data and trends



facilitate smooth integration & communication with SCADA / DCS system and post-fault analysis for taking precautions thereof. Further, the above upgradation of these equipment was very essential for the safety of the Plant & equipment, and there was a reduction in fault current in the grid, especially in view of the increased fault current in the Eastern Grid.

55. The matter has been considered. It is noticed that the Petitioner has claimed the said expenditure towards the Replacement of MOCB with SF6 breakers, with the justification that the breakers have been replaced with VCB. Further, though the items claimed are associated with various auxiliaries (low voltage) of the generating station, the claim has been made under Regulation 14(3)(ix) of the 2014 Tariff Regulations, which is applicable for transmission system (high voltage) and in support of the same, submitted that fault level in eastern region at 400 kV has been increased. However, as the claimed items are of 6.6 kV level circuit breakers, the submission made that the fault level at various substations in the eastern region has been increased, and the generating station 400 kV bus splitting was agreed to reduce fault level does not have any relevance and the claim cannot be considered under Regulation 14 (3)(ix) of the 2014 Tariff Regulations. As the items claimed are in the nature of O & M expenses, we find no reason to allow the claim of the Petitioner in the exercise of the powers under Regulation 54 of the 2014 Tariff Regulations. Accordingly, the claim of the Petitioner is **not allowed**.

Wagon (10 numbers)

56. The Petitioner, vide its additional submissions dated 10.5.2022, has revised Form 9A, and has included the claim for additional capital expenditure of Rs. 454.49 lakh in 2014-15 towards ten Wagons under Regulation 14(3)(x) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that earlier, the expenditure was claimed under exclusion as the same was not allowed by the Commission in an



order dated 30.7.2016, and a similar claim was also not allowed by the Commission for in Petition No. 150/2009 (Farakka STPS) for the period 2004-09. Subsequently, the Petitioner filed an Appeal No. 86/2012 before the APTEL, wherein the decision of the Commission was upheld by order dated 26.3.2014. Thereafter, the Petitioner filed Civil Appeal No. 5990 of 2014 before the Hon'ble Supreme Court of India, wherein the Apex Court vide its judgment dated 9.11.2017, set aside the APTEL order dated 26.3.2014 and observed that all the aspects had not been taken into consideration. Accordingly, the Petitioner has claimed the additional expenditure for capitalization of Wagons in the present Petition.

57. The matter has been considered. It is noticed that the Petitioner, in Petition No. 279/GT/2014, had claimed the additional capitalisation of Rs. 2610 lakh towards 58 No. of wagons under Regulation 14(3)(x) of the 2014 Tariff Regulations, and the Commission vide its order dated 30.7.2016, had disallowed the said claim as under:

“18. We are not convinced with the submissions of the petitioner that the said expenditure is on account of modifications in fuel receipt system. The provisions of the 2014 Tariff Regulations do not provide for the capitalization of the expenditure towards procurement of wagons against replacement of old wagons after the cut-off date. The generating station is entitled for compensation allowance under Regulations 17 of the 2014 Tariff Regulations in order to meet the expenses on new assets of capital nature including in the nature of minor assets. Accordingly, the petitioner shall be able to meet the expenditure on this asset. Hence, capitalization of the expenditure claimed by the petitioner is not allowed. The capitalization of the expenditure claimed for these assets can be met from the compensation allowance admissible to the generating station.”

58. However, the Petitioner, based on the observations of the Hon'ble Supreme Court, has sought to claim the additional capitalization on this count. The Hon'ble Supreme Court, vide its judgment dated 9.11.2017, had set aside the judgment of APTEL on this issue and remanded the matter to APTEL to decide the issue afresh as under:

“10. We make it clear that we have not made any observation on merits of the case. The APTEL is free to reach decision unfettered by any observation made in this Order”

59. Though the above order of the Hon'ble Supreme Court is related to the case of Farakka STPS (and not this generating station), considering the fact that the issue of



procurement of wagons (similar to this case) is pending consideration of the APTEL, the claim of the Petitioner in the present Petition has not been considered, at this stage. However, the Petitioner is at liberty to approach this Commission based on the final decision of APTEL in the aforesaid remand matter relating to Farakka STPS.

De-capitalisation of Spares (Part of capital cost)

60. The Petitioner has claimed the de-capitalization of spares, which are part of the capital cost under Regulation 14(4) of the 2014 Tariff Regulations, and in justification for the same, the Petitioner has submitted that these spares were part of the capital cost and have become unserviceable. The year-wise decapitalization of spares claimed by the Petitioner are as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
313.16	355.49	460.76	2850.31	1155.88

61. The Respondents BYPL and BRPL have submitted that the decapitalization of spares should be on an actual basis but not on an accrual basis, and the Petitioner should submit the actual date of decapitalization. In response, the Petitioner has submitted that the information is submitted in terms of Regulation 29(2) of the 2014 Tariff Regulations.

62. The matter has been considered, and the decapitalization of spares, which is part of the capital cost, as claimed by the Petitioner, is allowed.

Discharge of liabilities

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

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
64.21	163.64	42.37	10.77	0.00

64. The discharge of liabilities allowed as part of the admitted additional capital expenditure are as under:



<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
64.21	97.69	0.79	10.98	0.00

65. Further, the flow of un-discharged liability, corresponding to the allowed assets/works, during the period 2014-19, are as under:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Un-discharged liabilities (A)	914.43	747.07	738.22	747.22	736.24
Additions during the period 2014-19 (corresponding to allowed additional capital expenditure) (B)	0.00	88.84	9.79	0.00	0.00
Discharges during the period 2014-19 (corresponding to allowed additional capital expenditure) (C)	64.21	97.69	0.79	10.98	0.00
Reversal of Liabilities out of liabilities added during the period 2014-19 (corresponding to allowed additional capital expenditure) (D)	103.15	0.00	0.00	0.00	0.00
Closing Un-discharged liabilities (E) = (A+B-C-D)	747.07	738.22	747.22	736.24	736.24

Assumed Deletions

66. As per the consistent methodology adopted by the Commission, the expenditure on the 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 a 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 the absence of the gross value of the asset being de-capitalized, the same is calculated by de-escalating the gross value of the new asset @ 5% per annum till the year of capitalization of the old asset. Further, in the absence of information regarding the year of capitalization of the old asset, the COD of the station is considered as the



capitalization year of the old asset.

67. It is observed that the Petitioner, while claiming additional capital expenditure towards DDCMIS on account of obsolescence, has not furnished the decapitalized value of the old asset. Accordingly, based on the 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
DDCMIS	Additional capitalization allowed	-	-	1332.40	2299.65	1233.44
	Assumed Deletion considered for Decapitalisation	-	-	502.17	825.44	421.65

Exclusions

68. The Petitioner in the original petition, has claimed certain exclusions from books of accounts under different heads for the purpose of tariff. Subsequently, the same was revised on account of wagons, as under:

(Rs. in lakh)

Sl. No.	Head of Work / Equipment	Additional Capital Expenditure claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B1	Reversal of Liability	(-)103.15	-	-	-	-
B2	Capitalization of MBOA	-	-	-	115.48	20.09
	Furniture and Fixture	-	-	-	0.48	20.09
	Other office equipment	-	-	-	105.24	
	EDP, WP Machines & SATCOM equipment	-	-	-	1.20	
	Hospital Equipment	-	-	-	8.57	
B3	Capitalization of Spares	1331.75	1037.07	1472.64	2713.17	1334.52
B4	Inter Unit Transfer	-	-	(-)1103.66	7.65	(-)20.00
	Diesel LOCO	-	-	1103.30	-	-
	MBOA	-	-	(-)0.36	7.65	(-)20.00
B5	Decapitalization - Part of Tariff	-	(-)180.86	(-)43.08	(-)0.50	(-)87.09
1	De-capitalization of MBOA	-	(-)24.66	(-)14.40	(-)0.50	(-)87.09
2	Wagon	-	-	(-)28.68	-	-
3	400 KV Shunt Reactor Pkg Supply	-	(-)156.20	-	-	-
B6	De-capitalization - Not Part of Tariff	(-)13.35	(-)3071.98	(-)17.29	(-)29.29	-
1	De-capitalization of spares	(-)13.35	(-)35.03	(-)17.29	(-)29.29	-



Sl. No.	Head of Work / Equipment	Additional Capital Expenditure claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
2	Electrification of 5 Km Area Around NTPC Kahalgaon	-	(-)3036.94	-	-	-
	Total Exclusions	1215.25	(-)2215.77	308.60	2806.52	1247.51

Exclusion of Positive entries

69. The Petitioner has sought the positive exclusion of Rs. 8032.37 lakh for the period 2014-19. In justification for the same, the Petitioner has submitted these expenditures are considered under exclusions, considering that these items are either not allowed or not claimed by the Petitioner and, thus, do not form part of the capital cost, as detailed below:

(Rs. in lakh)

Sl. No.	Head of Work / Equipment	Additional Capital Expenditure Claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B2	Capitalization of MBOA	0.00	0.00	0.00	115.48	20.09
	Furniture and Fixture	0.00	0.00	0.00	0.48	20.09
	Other office equipment	0.00	0.00	0.00	105.24	
	EDP, WP Machines & SATCOM equipment	0.00	0.00	0.00	1.20	
	Hospital Equipment	0.00	0.00	0.00	8.57	
B3	Capitalization of Spares	1331.75	1037.07	1472.64	2713.17	1334.52
B4	IUT MBOA	0.00	0.00	0.00	7.65	0.00
	Total Exclusions	1331.75	1037.07	1472.64	2836.31	1354.61

70. The matter has been considered. The exclusion of positive entries claimed have been found in order and are accordingly allowed.

Exclusion of Negative entries

71. The Petitioner has sought the total negative exclusion of (-) Rs 4670.25 lakh for the period 2014-19. In justification for the same, the Petitioner has submitted that de-capitalisation of these items is considered under exclusions, considering the fact that the Commission is not allowing capitalization of Wagons, spares, and MBOA after the cut-off date. The details are as under:



(Rs. in lakh)

Sl. No.	Head of Work / Equipment	Additional Capital Expenditure claimed under Exclusion				
		2014-15	2015-16	2016-17	2017-18	2018-19
B1	Reversal of Liability	(-)103.15	0.00	0.00	0.00	0.00
B4	Inter Unit Transfer	0.00	0.00	(-)1103.66	0.00	(-)20.00
	Diesel LOCO	0.00	0.00	1103.30	0.00	0.00
	MBOA	0.00	0.00	(-)0.36	0.00	(-)20.00
B5	Decapitalization - Part of Tariff	0.00	(-)180.86	(-)43.08	(-)0.50	(-)87.09
1	De-capitalization of MBOA	0.00	(-)24.66	(-)14.40	(-)0.50	(-)87.09
2	Wagon	0.00	0.00	(-)28.68	0.00	0.00
3	400 KV Shunt Reactor Pkg Supply	0.00	(-)156.20	0.00	0.00	0.00
B6	Decapitalization - Not Part of Tariff	(-)13.35	(-)3071.98	(-)17.29	(-)29.29	0.00
1	De-capitalization of spares	(-)13.35	(-)35.03	(-)17.29	(-)29.29	0.00
2	Electrification of 5 km area around generating station	0.00	(-)3036.94	0.00	0.00	0.00
	Total Exclusions	(-)116.49	(-)3252.84	(-)1164.03	(-)29.79	(-)107.10

72. The Respondents, BYPL, and BRPL have submitted that the de-capitalization of capital spares have been submitted on an accrual basis and not on an actual basis, i.e. corresponding financial year and date should be furnished by the Petitioner. The Respondents further submitted that the asset electrification of a 5 km area is being transferred to the beneficiaries, which has to be decapitalized in the same year. They further submitted that in terms of Regulation 9(6)(b) of the 2014 Tariff Regulations, the capital cost of decapitalized asset for Rs. 2194.45 lakh should be excluded from the capital cost and Rs. 4044.56 lakh only may be allowed after prudence check. The Respondents have also stated that there is no concept of exclusion category in the 2014 Tariff Regulations.

73. The matter has been considered. As regards the de-capitalisation of items forming part of the capital cost under exclusion, we are of the view that since these assets form part of the capital cost, the exclusion for de-capitalization of these items for the said amounts cannot be allowed. The amounts claimed under an exclusion for decapitalisation of items, i.e., Spares and Electrification of a 5 km area around the generating station, but not forming part of capital cost, is allowed after prudence check.



As regards the exclusion claimed under Inter Unit Transfer (IUT), the Petitioner submitted that as per the followed practice, temporary transfers are excluded for the purpose of tariff, and therefore, these are kept under an exclusion. This claim has been examined, and it is noticed that the claim includes MBOA and Diesel Loco, wherein inconsistency has been noticed in regard to exclusion claimed in relevant form with respect to loco in 2016-17 i.e., Rs.1103.30 lakh and (-) Rs. 0.36 lakh has been claimed towards Loco and MBOA, respectively, but the sum of the total has been claimed as (-) Rs.1103.36 lakh. However, on assessing the information furnished in annexures, it is noticed that Diesel Loco of Rs. 1103.30 lakh was received from Darlipali TPS in 2016-17. Thus, the same is a positive exclusion under IUT but not a negative entry under the exclusion. Accordingly, the exclusion of the same as a negative entry was not allowed. However, the claim is under IUT but not a decapitalization; the same will not have any impact on capital cost. The exclusion of reversal of liability is allowed as per consistent methodology adopted by the Commission.

74. Based on the above discussion, the summary of exclusions allowed / not allowed for the purpose of the tariff is as under:

(Rs in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Exclusions Claimed (A)	1215.25	(-)2215.77	308.60	2806.52	1247.51
Exclusions Allowed (B)	1215.25	(-)2034.91	1454.98	2807.02	1334.61
Exclusions not considered (C)	-	-	1103.30	-	-
Exclusion not allowed (A-B+C)	0.00	(-)180.86	(-)43.08	(-)0.50	(-)87.09

75. Accordingly, the item-wise and year-wise additional capital expenditure allowed for the period 2014-19 is summarized below:

(Rs. in lakh)

S. No.	Item	2014-15	2015-16	2016-17	2017-18	2018-19	Total
1	Ash Dyke Lagoon-II	-	1566.89	6.94	-	1490.11	3063.94
2	Fire Detection & Protection System for cable gallery	-	-	-	508.67	-	508.67



S. No.	Item	2014-15	2015-16	2016-17	2017-18	2018-19	Total
3	Wagon Tippler	-	-	-	102.54	-	102.54
4	Land Plant-Area	1090.68	262.68	120.31	107.15	93.98	1674.79
5	132 KV CABLE laying work	-	-	-	-	-	-
6	Continuous Emission Monitoring System	-	246.16	-	-	-	246.16
7	Turbo supervisory / turbine vibration monitoring system	-	-	-	-	-	-
8	Upgrade of exist relay control system make up water pump	-	-	-	-	-	-
9	DDCMIS Renovation Modernization	-	-	1332.40	2299.65	1233.44	4865.49
10	Effluent Quality Monitoring System (EQMS)	-	-	33.19	-	0.45	33.63
11	Real time Environmental data Transmission	-	-	10.35	-	-	10.35
12	Air Compressor system of NTPC Kahalgaon, Stage-I	-	-	-	-	-	-
13	Steam and Water Analysis System	-	-	-	-	-	-
14	Replacement of MoCB with SF6 breaker.	-	-	-	-	-	-
15	Wagon (10 numbers)	-	-	-	-	-	-
16	Sub Total (1 to 15)	1090.68	2075.73	1503.18	3018.00	2817.97	10505.57
17	Assumed Deletion	-	-	(-)502.17	(-)825.44	(-)421.65	(-)1749.26
18	Decap of Spares (part of capital cost)	(-)313.16	(-)355.49	(-)460.76	(-)2850.31	(-)1155.88	(-)5135.60
19	Exclusions not allowed	-	(-)180.86	(-)43.08	(-)0.50	(-)87.09	(-)311.53
20	Discharge of Liabilities	64.21	97.69	0.79	10.98	0.00	173.68
21	Subtotal (17 to 20)	(-) 248.94	(-) 438.67	(-) 1005.21	(-) 3665.27	(-) 1664.62	(-) 7022.72
Total Additional capitalization allowed (16 + 21)		841.74	1637.06	497.97	(-) 647.27	1153.35	3482.85



Capital cost allowed for the period 2014-19

76. Accordingly, the capital cost allowed for the period 2014-19 is as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (A)	214862.50	215704.24	217341.30	217839.27	217192.00
Add: Addition during the year / period (B)	1090.68	2075.73	1503.18	3018.00	2817.97
Less: De-capitalization during the year /period (C)	313.16	536.35	1006.01	3676.25	1664.62
Add: Discharges during the year /period (D)	64.21	97.69	0.79	10.98	0.00
Closing Gross Block (E) = (A+B-C+D)	215704.24	217341.30	217839.27	217192.00	218345.35
Average Gross Block (F) = (A+E)/2	215283.37	216522.77	217590.29	217515.64	217768.68

Debt-Equity Ratio

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

“19.(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 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.”

78. The gross loan and equity of Rs.109862.87 lakh and Rs. 104999.64 lakh, respectively, as on 1.4.2014, as allowed in order dated 30.7.2016 in Petition No. 279/GT/2014, have been retained as on 1.4.2014. Further, the additional capital expenditure approved as above has been allocated to debt and equity in the ratio of 70:30. Accordingly, the details of the debt-equity ratio in respect of the generating station as on 1.4.2014 and as on 31.3.2019, is as under:

	Capital cost upto COD / 1.4.2014		Additional capitalization		Capital cost as on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	109862.87	51.13%	2438.00	70.00%	112300.86	51.43%
Equity	104999.64	48.87%	1044.86	30.00%	106044.49	48.57%
Total	214862.50	100.00%	3482.85	100.00%	218345.35	100.00%

Return on Equity

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

“24. Return on Equity:

(1) Return on equity shall be computed in rupee terms on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations transmission system including communication system and run of 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 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 requirement 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 kilometres.”



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

“25. Tax on Return on Equity:

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

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

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

Illustration.

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

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

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

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

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

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

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

81. The Petitioner is entitled to Return on Equity (ROE) in terms of Regulation 24 and Regulation 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed the following effective tax rates for the period 2014-19:



Year	Claimed effective tax rate (in %)	Grossed up ROE (Base Rate/1-t) (in %)
2014-15	20.961	19.610
2015-16	21.342	19.705
2016-17	21.342	19.705
2017-18	21.342	19.705
2018-19	21.549	19.758

82. The matter has been considered. The Petitioner has claimed ROE for the period 2014-19 after grossing up the base rate of 15.50% with Effective Tax rates (based on MAT rates) for respective years, in terms of Regulation 25 of the 2014 Tariff Regulations and hence the same has been considered. Accordingly, ROE has been worked out as under:

		<i>(Rs. in lakh)</i>					
		2014-15	2015-16	2016-17	2017-18	2018-19	
Normative Equity-Opening	A	104999.64	105252.16	105743.27	105892.67	105698.49	
Addition of Equity due to additional capital expenditure	B	252.52	491.12	149.39	-194.18	346.00	
Normative Equity-Closing	C=A+B	105252.16	105743.27	105892.67	105698.49	106044.49	
Average Normative Equity	D=Average (A,C)	105125.90	105497.72	105817.97	105795.58	105871.49	
Return on Equity (Base Rate)	E	15.500%	15.500%	15.500%	15.500%	15.500%	
Tax Rate for the year	F	20.961%	21.342%	21.342%	21.342%	21.549%	
Rate of Return on Equity (Pre-Tax)	G=E/(1-F)	19.610%	19.705%	19.705%	19.705%	19.758%	
Return on Equity (Pre-Tax) annualized	H=D*G	20615.19	20788.32	20851.43	20847.02	20918.09	

Interest on Loan

83. The Petitioner has not claimed 'Interest on loan' for the period 2014-19.

Depreciation

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

"27. Depreciation:

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



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

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

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

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

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

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

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

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

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

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

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

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

85. The cumulative depreciation amounting to Rs.152799.27 lakh as on 1.4.2014, as considered in an order dated 30.7.2016 in Petition No. 279/GT/2014 read with the order dated 21.2.2016 in Petition No. 45/RP/2016, has been retained as on 1.4.2014.

Accordingly, depreciation has been worked out and allowed as under:



(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
Average Capital Cost	A	215283.37	216522.77	217590.29	217515.64	217768.68
Value of freehold land	B	3741.94	4418.62	4610.11	4723.84	4824.40
Aggregated Depreciable Value	C= (A-B)*90%	190387.28	190893.73	191682.15	191512.62	191649.85
Remaining Aggregate Depreciable value at the beginning of the year	D=C- (Cumulative Depreciation of Previous year)	37588.01	33337.85	29429.14	24717.55	22292.11
No. of completed years at the beginning of the year	E	17.45	18.45	19.45	20.45	21.45
Balance useful life at the beginning of the year	F=25- E	7.55	6.55	5.55	4.55	3.55
Rate of depreciation	G	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Depreciation (annualized)	H=D/F	4978.55	5089.75	5302.55	5432.43	6279.47
Add: Cumulative Depreciation adjustment of discharges / reversals corresponding to un-discharged liabilities deducted as on 01.04.2009	I	0.00	0.00	0.00	0.00	0.00
Less: Cumulative depreciation adjustment on account of de-capitalization	J	221.93	392.62	760.49	2869.76	1344.23
Cumulative depreciation (at the end of the period)	K=(Cumulative Depreciation of Previous year) + I- J	157555.88	162253.01	166795.07	169357.73	174292.97

Compensation Allowance

86. Regulation 17 of 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 useful life.*

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

87. The Petitioner has claimed compensation allowance (unit-wise) to meet the



expenses on new assets of a capital nature, including in the nature of minor assets as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
420.00	630.00	735.00	840.00	840.00

88. Considering the COD of units of the generating station, the compensation allowance is worked out and allowed as under:

(Rs. in lakh)

Unit(s)/ Block(s) Parameters	Unit- 1	Unit- 2	Unit- 3	Unit- 4	Total
Installed Capacity (IC) (MW)	210	210	210	210	
Date of Commercial Operation (COD)	1- Jan- 95	1- Apr- 95	1- Feb- 96	1- Aug- 96	
Life (years) as on 01.04.2014	19.26	19.01	18.18	17.68	
Compensation Allowance	105.00	105.00	105.00	105.00	420.00
Life (years) as on 01.04.2015	20.26	20.01	19.18	18.68	
Compensation Allowance	210.00	210.00	105.00	105.00	630.00
Life (years) as on 01.04.2016	21.26	21.02	20.18	19.68	
Compensation Allowance	210.00	210.00	210.00	105.00	735.00
Life (years) as on 01.04.2017	22.26	22.02	21.18	20.68	
Compensation Allowance	210.00	210.00	210.00	210.00	840.00
Life (years) as on 01.04.2018	23.26	23.02	22.18	21.68	
Compensation Allowance	210.00	210.00	210.00	210.00	840.00

Operation & Maintenance Expenses

89. The year-wise normative O&M expenses claimed by Petitioner are as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
20076.00	21336.00	22680.00	24108.00	25628.40

90. Regulation 29(1)(a) of the 2014 Tariff Regulations provide the year-wise O&M expense norms for the generating station as under:

(Rs. In lakh/MW)

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

91. As the normative O&M expenses claimed by the Petitioner are in line with Regulation 29(1)(a) of the 2014 Tariff Regulations, the claim is allowed.

Capital spares.

92. The last proviso to 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:

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.”

93. The Petitioner has submitted that in order to meet the customer’s demand and to maintain high machine availability at all times, units/equipment are taken for overhaul/ maintenance and inspected regularly for wear and tear. It has also been stated that during such works, the spare parts of equipment which became damaged/unserviceable are replaced/consumed so that the machine continues to perform at expected efficiency on a sustained basis. The Petitioner has submitted the year-wise details of the capital spares consumed by the generating station during the period 2014-19, in terms of the last proviso to Regulation 29(2) of 2014 Tariff Regulations, in Form 17, as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
326.51	390.53	478.05	2879.60	1155.88

94. The Respondents, BYPL, and BRPL have submitted that the Petitioner may be directed to furnish the details in terms of Regulation 29(2) of the 2014 Tariff Regulations. The Respondent, GRIDCO, has submitted that in terms of Regulation 29 (2) of 2014 Tariff Regulations, the Petitioner may be directed to furnish the list of items met out from the compensation allowance, O&M, and stores and spares. In response, the Petitioner has submitted that the capital spares allowed are in terms of Regulation 29(2) of the 2014 Tariff Regulations. It has further stated that in terms of para 8 of Ind-AS 16, there is no difference in the erstwhile capital spares and the spares capitalized out of inventory, as on the IND-AS transition date. The Petitioner has also stated that under the IND-AS regime all the spares meeting the definition of Para 8 of IND-AS 16 have been capitalized under the same head.

95. Considering the list of items and the amount claimed thereof, the Commission had



directed the Petitioner to confirm that the capital spares (not part of the capital cost) are not funded through compensation allowance and to submit detailed justification for each of line item claiming certain items, which are other than capital spares in nature, such as Battery Bank, DC voltmeter, 80 MB Hard Disc, C&I Equipment erection, Erection Testing and commissioning, Russian Relay, Workstation, removal of coupling, DDCMIS, economizer coils, 400 kV CT PKG, DC Ammeter, Data Acquisition System, Erection & Commissioning of Values, Electrification, lightning, Network Processing Module, Supply of Equipment, Fabrication and Erection, etc, and few items having general names such as relay, coupling, module etc, In addition, the Commission had also directed the Petitioner to submit the quantity against each item, reasons for claiming few items more than once and variance in cost thereof. In response, the Petitioner has submitted that capital spares are generally defined as pieces of equipment, or a spare part, that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt. Based on the vast experience in the thermal power plant, the Petitioner has developed comprehensive systems and guidelines which classify various spares to be capitalised, and the same is followed by each station of the Petitioner. It has been submitted that the items 80MB Hard Disc, C&I Equipment erection, Erection Testing and commissioning, Russian Relay, Work station, DDCMIS, Data Acquisition System, etc., are various C&I items; the items Battery Bank, DC voltmeter, 400 kV CT PKG, Electrification, Lighting, etc. are the various electrical items; and balance items fall under the mechanical category of spares. The Petitioner has also submitted that the capital spares do not pertain to O & M expenses and have not been funded through compensation allowance and furnished quantity and justification against each of the capital spares claimed. Further, considering the information furnished by the petitioner, the Commission vide ROP of the hearing dated 31.1.2024 had directed the Petitioner to submit the auditor-certified quantity with read



to each of the capital spares claimed. In response, the Petitioner vide affidavit dated 10.5.2022 has submitted the auditor-certified capital spares as follows:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
326.49	390.53	478.05	2879.60	1155.88

96. We have examined the list of the capital spares claimed by the Petitioner. It is noticed that the quantity provided vide affidavit dated 10.5.2022 against certain capital spares does not match with that of the auditor-certified quantity of spares submitted vide affidavit dated 29.2.2024. Also, for a few items, though the amount has been claimed, the quantity shown is zero, but the Petitioner has not furnished any reasons for these inconsistencies. Further, it is also noticed that certain services, such as erection, commissioning, testing, fabrication, electrification, etc, were claimed as capital spares. However, the same is not accepted. It is also observed that the capital spares comprise (i) spares that form part of the capital cost and (ii) spares which do not form part of the capital cost of the project. In respect of capital spares which form part of the capital cost of the project, the Petitioner has been recovering tariff since their procurement and, therefore, the same cannot be allowed as part of the additional O&M expenses. Accordingly, only those capital spares that do not form part of the capital cost of the project are being considered. Accordingly, the capital spares forming part of capital cost and not part of capital cost are summarized as under:

<i>(Rs. in lakh)</i>					
	2014- 15	2015- 16	2016- 17	2017- 18	2018- 19
Total Capital spares	325.76	390.53	478.05	2879.60	1155.88
Capital spares forming part of capital cost	313.16	355.49	460.76	2850.31	1155.88
Capital spares not part of capital cost	12.60	35.03	17.29	29.29	0.00

97. 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 standardised practices in respect of earmarking and treatment of capital spares, the value of capital spare exceeding Rs. 1 (one) 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. We are also of the view that spares of value less than Rs. one lakh would normally form part of normal repair and maintenance expenses. Based on this, the details of the allowed capital spares considered for the period 2014- 19 is summarized as under:

	<i>(Rs in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Capital spares not part of capital cost claimed	12.60	35.03	17.29	29.29	0.00
Value of spares below Rs 1(one) lakh disallowed on individual basis	4.96	1.98	0.00	21.76	0.00
Net total value of capital spares considered	7.64	33.05	17.29	7.53	0.00

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

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Net total value of capital spares considered	7.64	33.05	17.29	7.53	0.00
Less: Salvage value @ 10%	0.76	3.31	1.73	0.75	0.00
Net cost of Capital spares allowed	6.88	29.75	15.56	6.78	0.00

Water Charges

99. The Petitioner has not claimed water charges during the period 2014-19 stating



that the concerned authority is yet to bill the same. The submissions of the Petitioner are taken on record and liberty is granted to claim the said charges, if billed, and the same will be considered in accordance with law.

100. Based on the above, the total annualized O&M expenses allowed for the period 2014- 19 are summarized as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses under Regulation 29(1)	20076.00	21336.00	22680.00	24108.00	25628.40
Capital spares allowed	6.88	29.75	15.56	6.78	0.00
Water Charges	0.00	0.00	0.00	0.00	0.00
Total	20082.88	21365.75	22695.56	24114.78	25628.40

Impact of Wage Revision

101. The Petitioner has claimed an amount of Rs. 10340.55 lakh (Rs. 29.68 lakh in 2015-16, Rs. 2818.97 lakh in 2016-17, Rs. 3502.04 lakh in 2017-18 and Rs. 3989.86 lakh in 2018-19) for the generating station, as the impact of wage revision of employees of CISF and Kendriya Vidyalaya Staff from 1.1.2016 and the 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 employee's consequent upon wage revision.

102. The Petitioner, vide affidavit dated 30.6.2021, has submitted the following information:

- (a) Comparative table indicating the actual O&M expenses incurred at this generating station versus the normative O&M expenses allowed for the period 2014- 19 for the whole generating station (i.e., all Stages of Kahalgaon Super Thermal Power Station);
- (b) Actual impact of pay revision duly certified by Auditor, Expenses after comparing salaries wages before and after pay revision; and
- (c) Detailed break- up of the actual O&M expenses booked by the Petitioner on gross basis

103. The Respondents, UPPCL and TANGEDCO, have submitted that in terms of Statement of Objects and Reasons (SOR) to the 2014 Tariff Regulations, the O&M



expenses incurred should be compared with the norms, and the deficit/incremental changes only should be allowed. However, they have submitted that the Petitioner has not placed any fact/numbers to substantiate its claim that the O&M expense norms provided in the Regulations are inadequate/insufficient after factoring in the pay revision. The Respondent, TANGEDCO, has also submitted that the pay revision claimed includes pay revision for KV school staff, and as the same is not associated with the O&M of the main plant, the claim may not be allowed. The Respondent, TPDDL, has submitted that the DPE O.M dated 3.8.2017 mentions that the pay revision shall be borne by the CPSU and no budgetary support will be provided, therefore, the impact should be compared with the norms specified in the 2019 Tariff Regulations. The Respondent, GRIDCO, has submitted that in terms of SOR, the O&M expenses are controllable, and therefore, the Petitioner may be directed to furnish the measures taken to reduce the O&M cost. The Respondent has further submitted that since the Petitioner had made a huge profit, the wage revision impact should not be allowed. The Respondent, BSPHCL, has submitted that the Petitioner has not furnished details such as basic pay, the number of executives and the number of non-executives for considering such impact. The Respondents, BYPL and BRPL, have also submitted that the O&M expenses are controllable and normative' the loss or gain should not be adjusted. They have added that even though quarters are being provided, the claim includes HRA and gratuity, which may be allowed on an actuarial basis.

104. In response to the above, the Petitioner has furnished a comparative table indicating the actual O&M expenses versus normative O&M expenses recovered in tariff for Kahalgaon STPS (all Stages combined) (2340 MW) for the period 2014- 19 as under:



(Rs. in lakh)

F.Y.	Actual O&M expenditure (excluding water charges & Capital Spares) (A)	Normative O&M allowed (excluding water charges & Capital Spares) by Hon'ble Commission (B)	Under Recovery of O&M expenses at Kahalgaon Station (B)- (A)
2014- 15	51031.12	43276.00	(-) 7755.12
2015- 16	60221.22	46000.50	(-) 14220.72
2016- 17	60617.71	48896,00	(-) 11721.71
2017- 18	63398.37	51977,00	(-) 11421.37
2018- 19	65773.26	55251.90	(-) 10521.36
Total	301041.68	245401.40	(-) 55640.28

105. The Petitioner has submitted that the above information clearly reflects that there is an under-recovery of O&M expenses during the period 2014-19, and with respect to the generating station units, the repair and maintenance cost is relatively high; accordingly, the additional cost incurred due to pay revision may be permitted. The Petitioner has also submitted that the O&M expense norms for the 2014 Tariff Regulations were decided on actual O&M expenses from 2008-09 to 2012-13. However, the 3rd Pay Revision Committee for CPSUs was not in existence when the 2014 Tariff Regulations were formulated by the Commission. The Petitioner has further submitted that the implementation of recommendations of the 7th Pay Commission and Office Memorandum of DPE were communicated in 2016/2017. whereas the 2014 Tariff Regulations were notified much prior to 3.8.2017. Accordingly, the Petitioner has prayed that the impact thereof, ought to be made pass through in terms of Regulation 54 (Power to Relax) and Regulation 55 (Power to Remove Difficulty) of the 2014 Tariff Regulations.

106. The matter has been considered. The Petitioner has furnished the detailed break- up of the actual O&M expenses incurred during the period 2014-19 for combined stages of the generating station (2340 MW). It is noticed that the total O&M expenses incurred are more than the normative O&M expenses recovered during each year of the period 2014-19. The impact of the wage revision could not be factored by the Commission while framing the O&M expenses norms under the 2014-19 Tariff



Regulations since the pay/wage revision came into effect from 1.1.2016 (CISF & KV employees) and 1.1.2017 (employees of the Petitioner) respectively.

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

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

*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.***

108. It is observed that the above methodology, as indicated in SOR, suggests a comparison of normative O&M expenses with actual O&M expenses on a year-to-year basis. However, in this respect, the following facts need consideration:

- a) The norms are framed based on the averaging of the actual O&M expenses of the past five years to capture the year- on- year variations in sub- heads of O&M expenses;



- b) Certain cyclic expenditures 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 generators find that their actual expenditure has gone beyond the normative O&M expenses in a particular year, they put departmental restrictions and try to bring the expenditure for the next year below the norms.

109. In consideration of the above facts, the Commission finds 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 whether the O&M expense norms provided under the 2014 Tariff Regulations are inadequate/insufficient to cover all justifiable O&M expenses, including employee expenses, the comparison of the normative O&M expenses and the actual O&M expenses incurred shall be made for four years, i.e., 2015-19, on a combined basis which is commensurate with the wage revision claim being spread over these four years. As such, in terms of relevant provisions of SOR of the 2014 Tariff Regulations, the approach followed for arriving at the allowable impact of pay revision is given in the subsequent paragraphs.

110. The first step is to compare the normative O&M expenses with the actual O&M expenses for the period from 2015-16 to 2018-19, commensurate to the period for which wage revision impact has been claimed. For like-to-like comparison, the components of O&M expenses like productivity linked incentive, water charges, filing fees, ex- gratia, loss of provisions, prior period expenses, community development, store expenses, ash utilization expenses, RLDC fee & charges, and others (without breakup/details) which were not considered while framing the O&M expenses norms for the period 2014-19, have been excluded from the yearly actual O&M expenses of the generating station as well as corporate centre. Having brought the normative O&M expenses and actual O&M expenses to same level, if normative O&M expenses for the period 2015-19 are higher than actual O&M expenses (normalized) for the same period, the impact of wage



revision (excluding PRP and ex- gratia) as claimed for the period is not admissible/ allowed as the impact of pay revision gets accommodated within the normative O&M expenses. However, if the normative O&M expenses for the period 2015- 19 are less than the actual O&M expenses (normalized) for the same period, the wage revision impact (excluding PRP and ex- gratia) to the extent of under-recovery or wage revision impact (excluding PRP and ex- gratia), whichever is lower, is required to be allowed as wage revision impact for the period 2015- 19.

111. As such, as per the consistent methodology adopted by the Commission of excluding PRP/ex- gratia from actual O&M expenses of past data for finalization of O&M norms for various tariff settings, the additional PRP/ ex- gratia paid, as a result of wage revision impact, has been excluded from the wage revision impact claimed by the Petitioner in the present case. Accordingly, the claim of the Petitioner in respect of wage revision impact stands reduced to Rs. 9136.42 lakh with the following year- wise break-up:

(Rs. in lakh)

	2015-16	2016-17	2017-18	2018-19	Total
Wage revision impact claimed excluding PRP/exgratia	29.68	2818.97	3253.37	3034.40	9136.42

112. As stated, for a like-to-like comparison of the actual O&M expenses and normative O&M expenses, the expenditure against O&M expenses sub-heads, as discussed above, has been excluded from the actual O&M expenses to arrive at the actual O&M expenses (normalized) for the combined all stages of the generating station (2340 MW). Accordingly, the following table portrays the comparison of 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 Stage-I (840 MW) for the period 2015-19 commensurate with the wage revision claim being spread over these four years:



(Rs. in lakh)

	2015-16	2016-17	2017-18	2018-19	Total
Actual O&M expenditure for Kahalgaon STPS excluding water charges and capital spares (Combined for stage- I and stage- II) (a)	60221.22	60617.71	63398.37	65773.26	250010.56
Actual O&M expenditure (normalized) for Kahalgaon STPS (Combined for stage- I and stage- II) (b)	50018.97	55988.45	58180.55	60151.94	224339.91
Actual O&M expenditure (normalized) for Kahalgaon STPS Stage- I prorated based on capacity (c)	17955.53	20098.42	20885.33	21593.00	80532.28
Normative O&M Expenses as per regulation 29 (1) for Kahalgaon STPS Stage- I (d)	21336.00	22680.00	24108.00	25628.40	93752.40
Under- recovery (c)- (d)	(-)3380.47	(-)2581.58	(-)3222.67	(-)4035.40	(-)13220.12
Wage revision impact excluding PRP / ex-gratia	29.68	2818.97	3253.37	3034.40	9136.42

113. Considering the above, it is observed that during the period 2015-19, the normative O&M expenses are more than the actual O&M expenses (normalised) and in excess of Rs. 13220.12 lakh. As such, in terms of the methodology described above, the wage revision impact (excluding PRP/ex-gratia) is not allowed.

Impact of Goods and Service Tax (GST)

114. The Petitioner has claimed the impact of GST as a change in law under Regulation 3(9) of 2014 Tariff Regulations read with Regulation 14(3) of 2014 Tariff Regulations. The Petitioner stated that the impact of the increase in the rate of indirect tax from 15% to 18% has been calculated on all taxable services and being claimed for the period 1.7.2017 to 31.3.2019. The Petitioner has claimed Rs. 416.50 lakh towards the impact of GST for the period 1.7.2017 to 31.3.2019.

115. The Respondents UPPCL, GRIDCO, TANGEDCO, TPDDL, BSPHCL, BYPL and BRPL have submitted that though the Petitioner has claimed Rs.172.11 lakh for 2017-18 and Rs. 244.39 lakh for 2018-19 towards 'Goods and Services Tax' under change in law on the ground that the impact of increase is due to increase in Rate of Indirect Tax from 15% to 18% on all Taxable Services. On this, the Respondents have submitted that the Petitioner has not furnished any documents, including invoices, detailed



computation, etc, in support of the said claim, and therefore, this is on presumption but not on actuals. Further, allowing any additional O&M over and above norms without proving the inadequacy of norms will be unreasonable and against section 61 of the Electricity Act, 2003. In response, the Petitioner has clarified that it has already furnished a detailed Auditor Certificate with respect to the impact of GST on O&M expenses. It is also submitted by the Petitioner that O&M expenses comprises Employee Wages and Generation Administration and Other expenses (Renamed as “Other Expenses” in the books of the company after the introduction of IND AS) these inter alia, include Repair and Maintenance and other overheads of the station. The Petitioner has further stated that it has bifurcated the Generation Administration and Other expenses into Material consumed, Taxable services, and Exempt Services, and the amount claimed is only on account of differential in the rate of tax for Taxable services (i.e., Under Erstwhile Service Tax 15% and in GST 18%). Furthermore, the Petitioner has given the details pertaining to the claim of 172.11 lakh in 2017-18 and Rs. 244.29 lakh in 2018-19 as under:

Nature		<i>(Rs. in lakh)</i>	
		2017-18 (Q2-Q4) Post GST period Claimable	2018-19 GST Claimable
Material	A	7216.16	9885.09
Services- Taxable	B	18858.58	26778.05
Services- Exempt	C	19055.46	25503.91
Total General Administration Expenses	D=A+B+C	45130.19	61967.05
Impact of 3% additional tax on Taxable Services due to GST	$E=B*0.03/1.18$	479.46	680.80
Equated Capacity of KSTPS- I Station	F	840	840
Equated Capacity of KSTPS	G	2340	2340
Amount claimed	E*G/F	172.11	244.39

116. We have considered the submissions of parties. While framing the 2014 Tariff Regulations, the variation in taxes and duties have been captured in the normative O&M



expenses allowed, and any change in taxes is not admissible separately. Further, the 2014 Tariff Regulations have not specifically mentioned any consideration for allowing taxes separately. The escalation rates considered in the normative O&M expenses are only after consideration of the variations during the last five years, which also takes care of variations in taxes . It may be noted that in case of reduction of taxes or duties, the Petitioner is not required to reimburse taxes in tariff. Therefore, for any increase in taxes and duties, the Petitioner is not entitled to claim any additional expenses. As such, additional O&M expenses on account of GST are not admissible separately.

Operational Norms

Normative Annual Plant Availability Factor

117. The Petitioner has claimed Normative Annual Plant Availability Factor (NAPAF) of 83% for 2014-15 to 2016-17 and 85% for 2017-18 and 2018-19. As the Petitioner's claim is in accordance with Regulation 36(A) of the 2014 Tariff Regulations, the claim is allowed.

Auxiliary Energy Consumption

118. The Petitioner has claimed Auxiliary Energy Consumption (AEC) of 9.00%. As per the information furnished in Form 2, the generating station has induced draft cooling towers. Accordingly, the claim of the Petitioner is in terms of Regulation 36(E)(a) of the 2014 Tariff Regulations and hence allowed.

Station Heat Rate

119. The Gross Station Heat Rate of 2450 Kcal/kWh claimed by the Petitioner is in accordance with Regulation 36(C)(a) of the 2014 Tariff Regulations, and hence the claim is allowed.

Specific Oil consumption

120. The Secondary fuel oil consumption of 0.50 ml/kWh claimed by the Petitioner is



in accordance with Regulation 36(D)(a) of the 2014 Tariff Regulations, and hence the claim is allowed.

Interest on Working Capital

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

“28. Interest on Working Capital:

(1) The working capital shall cover:

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

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

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

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

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

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

(vi) Operation and maintenance expenses for one month.

(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.”

122. The Petitioner has submitted that in line with the directions contained in the order dated 30.7.2016 in Petition No. 279/GT/2014, wherein IWC was determined provisionally, and order dated 28.8.2019 in Petition No. 115/MP/2016, the month-wise GCV was furnished. Further, CEA vide letter dated 17.10.2017 opined for 85–100 kCal/kg and 105–120 kcal/kg as a GCV loss from ‘as received’ to ‘as fired’ for pit head



and non-pit head stations, respectively. Accordingly, in the main Petition, the Petitioner has considered the weighted average price of coal and secondary oil as Rs. 2693.52/MT and Rs. 54826.82/kl, respectively, and the weighted average GCV of coal and secondary oil as 3040.57 kCal/kg and 9718.67 kCal/lt, respectively, and ex-bus energy charge rate (ECR) as 241.038 paise/kWh and interest on working capital as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal for Stock	5436.61	5436.61	5436.61	5567.12	5567.12
Cost of Coal for Generation	10873.22	10873.22	10873.22	11135.23	11135.23
Cost of Main Secondary Fuel Oil	278.91	279.67	278.91	285.63	285.63
O & M expenses	1700.21	1813.02	2164.75	2555.15	2584.88
Maintenance Spares	4080.50	4351.24	5195.40	6132.35	6203.71
Receivables	31201.22	31567.04	32336.29	33793.60	34036.09
Total Working Capital	53570.67	54320.81	56285.19	59469.56	59813.15
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	7232.04	7333.31	7598.50	8028.39	8074.77

Fuel Cost and Energy Charges for Working Capital Calculations

123. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of the cost of fuel as a part of Working Capital 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 and no fuel price escalation shall be provided during the tariff period. Regulation 30 (6) of the 2014 Tariff Regulations provides as under:

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

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

(a) For coal based and lignite fired stations

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

(b) xxxxx

Where,

AUX = Normative auxiliary energy consumption in percentage.



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

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

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

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

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

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

LC = Normative limestone consumption in kg per kWh.

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

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

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

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

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

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.”

125. The issue of 'as received' GCV, specified in Regulation 30 of the 2014 Tariff Regulations for computation of energy charges, was challenged by the Petitioner and other generating companies through various writ petitions filed before the Hon'ble High Court of Delhi (*W.P. No.1641/2014- NTPC v CERC*). The Hon'ble Court directed the Commission to decide the place from where the sample of coal should be taken for measurement of GCV of coal on an '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 period 2014-19), 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.”

126. The Petitioner has filed a Review Petition No.11/RP/2016 against the aforesaid order dated 25.1.2016 in Petition No. 283/GT/2014, which 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 the 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 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 an appeal before the APTEL in Appeal Nos. 291/2018 (*GRIDCO v NTPC & ors*), and the same is pending adjudication.

127. In spite of the above, in Petition No. 279/GT/2014 filed by the Petitioner for the determination of tariff of this generating station for the period 2014-19, it had not furnished GCV of coal on an ‘as received’ basis for the preceding 3 months i.e., for January 2014, February 2014 and March 2014 which were required for determination of Interest on Working Capital (IWC). Therefore, the Commission vide order dated 30.7.2016 in Petition No. 279/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.

128. The Petitioner, in this petition, has furnished Form-15 for the preceding three months of the tariff determination, i.e., January 2014 to March 2014. In addition, the Petitioner has also furnished the average GCV of coal as 3140.57 kCal/kg on an “as received” basis for the period from October 2016 to March 2019. 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. 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 the computation of the working capital of the generating station. In addition, the price of coal, the price of secondary fuel and GCV of secondary fuel are considered as Rs. 2693.52/MT, 54826.82/kL, and 9718.67 kCal/Lt, respectively, and ex-bus ECR as 241.038 paise/kWh. The cost of fuel component in the working capital of the generating station claimed by the Petitioner is as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (15 days)	5436.61	5436.61	5436.61	5567.12	5567.12
Cost of Coal towards Generation (30 days)	10873.22	10873.22	10873.22	11135.23	11135.23
Cost of Secondary fuel oil 2 months	278.91	279.67	278.91	285.63	285.63

129. The Petitioner vide affidavit dated 28.6.2021 has submitted that the 2009 Tariff Regulations notified on 19.1.2009, specify for GCV of coal on an ‘as fired basis’. Subsequently, vide amendment dated 31.12.2012, the 2009 Tariff Regulations, changed the determination of GCV to an ‘as received’ basis, and the same has been considered in the 2014 Tariff Regulations. Thus, GCV on an ‘as received’ basis was effective from 1.4.2014. Further, as IWC is being based on the preceding three months



to the determination of tariff, i.e., January 2014 to March 2014, the 2014 Tariff Regulations provides for computation of energy charge on an 'as received' basis. However, the IWC shall be an 'as fired' basis. However, in compliance with the direction of the Commission, the GCV on an 'as received' basis was submitted for January 2014 to March 2014. The details of GCV submitted by Petitioner are as under:

	Weighted Average GCV of Coal received (EM / AD basis) (kCal/kg)	Weighted Average Total Moisture (TM) (%)	Weighted Average Equilibrated Moisture (EM / AD) (%)	Weighted Average GCV of Coal received (TM basis) (kCal/kg)
Jan, 2014	3057	14.50	8.15	2846
Feb, 2014	2990	14.45	7.97	2780
Mar, 2014	2948	13.86	7.72	2752
Average	2999			2793

130. The Respondent, UPPCL, has submitted that as the generating station is a pit head station, the transportation charges, over and above the MGR charges, should not be allowed, and the reasons for the import of coal should be furnished. It has further stated that the landed cost of imported coal is very high, and therefore, the energy charge rate has increased substantially. It has further stated that in terms of Regulation 23 of the 2014 Tariff Regulations, the landed cost of coal from January 2014 to March 2014 should be considered, but the Petitioner has considered the same for 2018-19 and has also claimed other charges for both domestic and imported coal, which need to be examined in terms of Regulation 30(8) of the 2014 Tariff Regulations.

131. The Respondents, TPPDL, and BSPHCL have submitted that the GCV should be considered in compliance with Regulation 29(2) of the 2014 Tariff Regulations. The Respondents have further stated that the Petitioner has considered the landed cost of fuel for January 2014 to March 2014, but the GCV of fuel considered is for the months of October 2016 to March 2019, along with a margin of 100 kcal/kg, even though this margin is mentioned by CEA in 2017, but not under the 2014 Tariff Regulations. The Respondents have further submitted that the Petitioner may be directed to furnish the



invoices to justify the higher landed cost, and the claim may be allowed only after a prudence check.

132. The Respondent, GRIDCO, has submitted that as per Commission's order dated 3.3.2017 in Petition No. 279/GT/2014 (tariff of KSTPS Stage II in 2014-19), (i) sample for measurement of GCV of coal on 'as received' basis shall be collected from loaded wagons at the generating station but not after the crusher set up inside the generating station (ii) the Petitioner could not submit GCV determined at the unloading point of the generating station and has claimed cost for fuel components in working capital based on "as fired GCV" basis (iii) In absence of 'as received' GCV at the unloading point, the Commission arrived at the same by adjusting moisture to the GCV billed. (iv) The petitioner has neither objected nor challenged this moisture correction formula considered in this order. (vii) Even though the heat energy of coal per kg varies from the point of mining to the point of receiving at the generating station, the total heat content of coal consignment at the receiving end would be the same mining end, i.e. the 'GCV on 'as received' shall be same as 'GCV as Billed' barring minor transit loss. Further, the IS: 1350 (Part I) and (Part II) specify the determination of GCV as received after adjusting moisture to the GCV on an EM basis, whereas the GCV on an EM basis is the same at the mine end as well as the receiving end. (ix) The 'GCV on as received' on Total Moisture at mine end needs to be adopted for calculation of Energy Charge billing. Thus, the formulae adopted by the Commission are fully justified.

133. Further, the Respondent GRIDCO has submitted that it has filed Appeal No. 238 of 2017 before APTEL challenging the order dated 25.1.2016 with the prayer to consider 'As received' GCV at mine end for billing. It has further submitted that instead of furnishing 'As received GCV' for January 2014, February 2014, and March 2014, the Petitioner has submitted the data for the period from October 2016 to March 2019 and had also claimed a loss of 120 kCal/kg, which is not in terms of the 2014 Tariff



Regulations. The Respondent has also submitted that CEA vide letter dated 20.3.2018 has recommended the GCV compensation of 70-80 kCal/kg due to improper sampling, 15 kCal/kg due to storage for 30 days, and 2-3 kCal/kg towards handling inside the plant. It has further stated that the MoM dated 21.9.2017 among CIMFR, CPRI, and CEA acknowledges that due to time constraints, practically it is not possible to draw samples (as per IS) up to the bottom of the wagon, so samples are drawn from the top and wagon top sample generally doesn't represent a whole lot, i.e., improper sampling and the same was acknowledged by CIL in a meeting held on 11.10.2017. The Respondent has pointed out that as this improper sampling is providing an advantage to MCL, the Petitioner shall ensure proper sampling as per IS, as it is a party to joint sampling as FSA as well as guidelines for 3rd party sampling. It has stated that as per notification of the Coal Controller, mechanical sampling/auto sampling is preferable, and as per new provision in modification arising out of migration from UHV-based grading to GCV system, "Samples of Coal shall be collected jointly either manually or through any suitable mechanical sampling arrangement including Augur Sampling method during each of the shifts and at each of the Delivery points for determining the quality of Coal." Thus, the Respondent has submitted that the controllable loss of 70–80 kCal/kg cannot be passed on. It has added that in terms of the 2009 Tariff Regulations, the Petitioner shall determine 'GCV as Received' from 1.1.2013, and in terms of the 2014 Tariff Regulations, the Petitioner may be directed to submit the GCV on as received data for January 2014 to March 2014, instead of the data provided for the period from October 2016 to March 2019. Considering this, the formulae adopted by the Commission in determining the 'GCV as received,' after adjusting the moisture to 'GCV as billed,' shall prevail, and the Petitioner is directed to furnish the billed GCV along with the Total Moisture and Equilibrated Moisture/Inherent Moisture from April 2014 to September 2014 with the revised ECR calculations and energy bills thereof, as per the



above formulae.

134. The Respondents, BRPL and BYPL, have submitted that at the time of the determination of the tariff, the Petitioner had failed to submit the GCV data in terms of relevant regulations and is now submitting GCV data for October 2016 to March 2019 along with a margin of 100 kCal/kg, and therefore in terms of Regulation 8 of 2014 Tariff Regulation, in true up petition, such revision of GCV and LPPF may not be considered. They have further submitted that the margin of 100 kCal/kg, as suggested by CEA, is a subject matter of Petition No. 244/MP/2016, filed by the Petitioner, and Petition No. 64/MP/2016 filed by the Respondent, BYPL. In response, the Petitioner has submitted that Form-15 submitted is auditor certified, and as MGR alone cannot meet the fuel requirement for NAPAF, coal is procured through Railway siding, and therefore, the transportation charges claimed, include railway charges. It has also been submitted that since the coal from a domestic source is not sufficient to meet the requirement, coal was procured from other sources, and other charges were allowed in Petition No. 93/MP/ 2017. The Petitioner has further submitted that though the computation of energy charges moved from an 'as fired' basis to an 'as received' basis, with effect from 1.4.2014, in terms of Regulation 30(6) of the 2014 Tariff Regulations, however, for calculation of IWC under Regulation 28(2) of the 2014 Tariff Regulations, GCV shall be as per 'actuals' for the three months preceding the first month for which tariff is to be determined. The Petitioner has also stated that for the period 2014-19, Regulation 28(2) of the 2014 Tariff Regulations unequivocally provides 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. In addition, the Petitioner has clarified that it has provided the monthly GCV on an as received basis from October 2016 to March 2019 in the petition, and the average of the same, after applying margin for GCV



loss due to storage, etc., has been used for IOWC purpose. It has further submitted that GCV on an as received basis for the months of January 2014 to March 2014, has also been provided. The Petitioner has clarified that it has claimed GCV margin in accordance with the Central Electricity Authority (CEA) letter dated 17.10.2017.

135. The Commission had sought the information with regard to 'GCV as received' for MGR, Railways, and imported coal along with the normative Total Moisture (TM) and Equilibrated Moisture (EM) for the period from January 2014 to March 2014 and discrepancy in GCV considered for secondary fuel. In response, the Petitioner has submitted that there are no such norms for total moisture and equilibrated moisture, and the average GCV of oil was inadvertently considered as 9718.67 kCal/kWhr, which had been corrected and ex-bus ECR as 241.017 paise/kWh claimed along with revised interest on working capital, as detailed below:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal for Stock	5436.13	5436.13	5436.13	5567.12	5567.12
Cost of Coal for Generation	10872.26	10872.26	10872.26	11134.25	11134.25
Cost of Main Secondary Fuel Oil	278.91	279.67	278.91	285.63	285.63
O & M expenses	1700.21	1813.02	2164.75	2555.15	2584.88
Maintenance Spares	4080.50	4351.24	5195.40	6132.35	6203.71
Receivables	31206.09	31579.54	32410.58	33869.33	34111.83
Total Working Capital	53574.10	54331.86	56358.04	59543.82	59887.41
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	7232.50	7334.80	7608.34	8038.42	8084.80

136. Subsequently, the Commission had sought the details of the Equilibrated Moisture and Total Moisture for domestic and imported coal and the penalty/adjustment for grade slippage, and the Petitioner has submitted that the landed cost furnished in Form-15 is inclusive of penalty/adjustment for GCV, if any, and EM and TM for domestic and imported coal as under:

Month	Coal Source	Total Moisture	Equilibrated Moisture
January, 2014	Domestic	13.68	7.41
	Imported	20.52	13.63
	Weighted Average	14.50	8.15
February, 2014	Domestic	13.67	7.42



Month	Coal Source	Total Moisture	Equilibrated Moisture
	Imported	21.32	12.85
	Weighted Average	14.45	7.97
March, 2014	Domestic	13.46	7.45
	Imported	20.83	12.40
	Weighted Average	13.86	7.72

137. The matter has been considered. As stated above, the Petitioner in Form-13 F, has considered the average GCV of coal on an “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 period 2014-19. 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.

138. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of the 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, the calculation of IWC for the period 2014-19 is to be based on such values for the months of January 2014, February 2014, and March 2014. The Petitioner has not been able to furnish these values at the time of determination of tariff for the period 2014-19 in Petition No. 279/GT/2014. In the instant truing up petition, the Petitioner has proposed that instead of GCV for January 2014, February 2014, and March 2014, the Commission should consider the average values for the 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) an 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.

139. 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 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 period 2009-14 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 the 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."

140. Accordingly, in terms of the above amendment to the 2009 Tariff Regulations, the details regarding the weighted average GCV of the fuels on an 'as received' basis



were also required to be furnished by the Petitioner along with bills of the respective month, including January 2014 to March 2014. Also, bills detailing the parameters of GCV and the price of fuel were to be displayed by the Petitioner on its website, on a monthly basis.

141. 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 period 2014-19 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 a 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 the 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 period 2014-19. This, according to us, defeats the very purpose of moving from 'as fired' GCV to 'as received' GCV in the 2014 Tariff Regulations. Against 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 an 'as received' basis and the



same shall be considered for 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.

142. The Petitioner has furnished GCV on 'as received (TM basis)' as 2793 kCal/kg which represents the simple average of GCV of the preceding three months (January 2014 to March 2014). As regards the margin of 100 kcal/kg considered on the average GCV of coal for the period from October 2016 to March 2019 for the purpose of computation of the IWC of the generating station, the same is not considered since the provisions of the 2014 Tariff Regulations, do not provide for the same. In this regard, it is observed that the Petitioner has procured coal from domestic sources and imported and further, domestic coal was procured through MGR as well as Railways. However, it did not furnish any segregation of coal transported through MGR and Railways. In view of the above and the generating station is a pit head station, in terms of Regulation 30(8) of 2014 Tariff Regulations, transit handling losses were restricted to 0.2 %. Accordingly, the weighted average GCV of coal for three months is determined as 2790.62 kcal/kg, and the weighted average cost of coal is Rs. 2689.50/MT. Similarly, the weighted average GCV of oil for three months is determined as 10151.72 kcal/lit and the weighted average cost of oil is Rs. 54826.82/ kl. Accordingly, the parameters considered for the calculation of working capital are as under:

	Unit	2014-19
Capacity	MW	840
Gross Station Heat Rate	kCal/kWh	2450
Aux. Energy Consumption	%	9.00
Weighted average GCV of oil	kCal / lit	10151.72
Weighted Average GCV of Coal	kCal / kg	2790.62
Weighted average price of oil	Rs. / kL	54826.82
Weighted average price of Coal	Rs. / MT	2689.50
NAPAF	2014-17	83 %
	2017-19	85 %



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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Coal towards stock (15 days) w.r.t. NAPAF	5914.20	5914.20	5914.20	6056.71	6056.71
Cost of Coal towards generation (30 days) w.r.t. NAPAF	11828.40	11828.40	11828.40	12113.43	12113.43
Cost of Secondary fuel oil 2 months w.r.t. NAPAF	279.04	279.81	279.04	285.77	285.77

Energy Charge Rate (ECR) for calculating working capital

144. Regulation 30(6)(a) of the 2014 Tariff Regulations provides for the computation and payment of Energy Charge for thermal generating stations. The Petitioner has claimed ECR ex- bus of 241.017 Paise/kWh for the generating station based on the landed cost of coal during the preceding three months, GCV of coal (on an ‘as received’ basis for an average of 30 months) along with the storage loss of 100 kCal/kg & GCV and price of Oil procured and burnt for the preceding three months of 2014-19 for the generating station. Since these claims have not been considered as stated above, considering the operational norms and GCV as well as the cost of coal and oil as allowed above, the ex- bus ECR was determined as Rs. 2.619 / kWh. Energy Charges for 2 months for the purpose of working capital have been calculated based on the following basis:

- a) ECR of Rs. 2.619/kWh as calculated above (rounded off to three places as per Regulation 30(6) of the 2014 Tariff Regulations).
- b) Two months of ex- bus energy corresponding to an installed capacity of 840 MW, normative availability of 83% for 2014- 15 to 2016- 17 and 85% for 2017- 18 and 2018- 19, along with AEC of 9%.

145. The Energy Charges for two months for the purpose of working capital have been worked out as under:

(Rs. in lakh)

2014- 15	2015- 16	2016- 17	2017- 18	2018- 19
24259.79	24326.26	24259.79	24844.37	24844.37



Working Capital for Maintenance Spares

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
4080.50	4351.24	5195.40	6132.35	6203.71

147. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the O&M expenses. In terms of Regulation 29(2) of the 2014 Tariff Regulations, the cost of maintenance spares @20% of the O&M expenses including water charges and cost of capital spares consumed, allowed are as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
4016.58	4273.15	4539.11	4822.96	5125.68

Working Capital for Receivables

148. Receivables equivalent to two months of capacity charge and energy charge have been worked out duly taking into account the mode of operation of the generating station on secondary fuel, as under:

(Rs.in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - for two months (A)	24259.79	24326.26	24259.79	24844.37	24844.37
Fixed Charges – for two months (B)	8892.20	9169.33	9450.24	9746.32	10170.81
Total (C) = (A+B)	33152.00	33495.59	33710.03	34590.69	35015.17

Working Capital for O & M Expenses (1 month)

149. O&M expenses for 1 month claimed by the Petitioner in Form-13 for the purpose of working capital are as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1700.21	1813.02	2164.75	2555.15	2584.88

150. Regulation 28(a)(vi) of the 2014 Tariff Regulations provides for O&M expenses for one month for coal-based generating stations as a part of working capital. The one-month O&M expenses allowed are as under:



(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1673.57	1780.48	1891.30	2009.56	2135.70

Rate of interest on working capital

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

(Rs. in lakh)

	2014- 15	2015- 16	2016- 17	2017- 18	2018- 19
Cost of coal for 15 days for stock	5914.20	5914.20	5914.20	6056.71	6056.71
Cost of coal for 1 month for generation	11828.40	11828.40	11828.40	12113.43	12113.43
Cost of oil for 2 months	279.04	279.81	279.04	285.77	285.77
O & M expenses	1673.57	1780.48	1891.30	2009.56	2135.70
Maintenance Spares	4016.58	4273.15	4539.11	4822.96	5125.68
Receivables	33152.00	33495.59	33710.03	34590.69	35015.17
Total Working Capital	56863.80	57571.64	58162.09	59879.11	60732.46
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on Working capital	7676.61	7772.17	7851.88	8083.68	8198.88

Annual Fixed Charges for the period 2014-19

152. Based on the above, the annual fixed charges approved for the generating station for the period 2014-19 are summarised below:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	4978.55	5089.75	5302.55	5432.43	6279.47
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	20615.19	20788.32	20851.43	20847.02	20918.09
O&M Expenses	20082.88	21365.75	22695.56	24114.78	25628.40
Interest on Working Capital	7676.61	7772.17	7851.88	8083.68	8198.88
Compensation Allowance	420.00	630.00	735.00	840.00	840.00
Annual Fixed Charges	53353.22	55015.99	56701.42	58477.90	61024.84
Annual Fixed Charges allowed by order dated 30.7.2016 in Petition No. 279/GT/2014	52520.41	54357.11	56214.00	58308.06	60363.09

Note: (1) All figures are on annualized basis. (2) All figures under each head have been rounded. The figure in total column in each year is also rounded. As such the sum of individual items may not be equal to the arithmetic total of the column.

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



154. Petition No. 294/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(Jishnu Barua)
Chairperson

