

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 370/GT/2019**

**Coram:**

**Shri I. S. Jha, Member**

**Shri Arun Goyal, Member**

**Shri Pravas Kumar Singh, Member**

**Date of order: 31<sup>st</sup> March, 2023**

**IN THE MATTER OF**

Petition for revision of tariff of Kopili Hydroelectric Project (200 MW) for the period 2014-19, after truing-up exercise.

**AND**

**IN THE MATTER OF**

North Eastern Electric Power Corporation Limited  
Corporate Office: Brookland Compound  
Lower New Colony, Shillong – 793 003

**.... Petitioner**

Vs

1. Assam Power Distribution Company Limited  
“Bijulee Bhawan” Paltanbazar  
Guwahati-781 001, Assam
2. Meghalaya Power Distribution Corporation Limited  
Lumjinshai, Short Round Road  
Shillong-799 001, Meghalaya
3. Tripura State Electricity Corporation Limited  
Bidyut Bhavan, North Banamalipur  
Agartala-799 001, Tripura
4. Power & Electricity Department  
Government of Mizoram  
New Secretariat Complex  
Kawlpetha, Aizwal-796001
5. Manipur State Power Distribution Company Limited  
3<sup>rd</sup> Floor, New Directorate Building, Near 2<sup>nd</sup> M.R. Gate  
Imphal-Dimapur Road, Imphal-795 001, Manipur
6. Department of Power  
Vidyut Bhawan, Government of Arunachal Pradesh  
Itanagar-791 111



7. Department of Power  
Government of Nagaland  
Electricity House, AG Colony  
Kohima-797 001
8. North Eastern Regional Power Committee  
NERPC Complex, Dong Parmaw  
Lapalang, Shillong-793 006
9. North Eastern Regional Load Despatch Centre  
Dongtieh, Lower Nongrah  
Lapalang, Shillong-793 006

.... Respondents

**Parties Present:**

Shri Devapriya Choudhury, NEEPCO  
Shri Sushanta Deka, NEEPCO  
Shri Munin Choudhary, NEEPCO  
Shri Ripunjoy Bhuyan, NEEPCO  
Ms. Bornali Deori, NEEPCO  
Ms. Elizabeth Pyrbot, NEEPCO

**ORDER**

This petition has been filed by the Petitioner, North Eastern Electric Power Corporation Limited, for revision of tariff of Kopili Hydroelectric Project (4 x 50 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').

2. The generating station comprises of four units of 50 MW and the date of commercial operation (COD) of the units of the generating station are as under:

<b>Units</b>	<b>COD</b>
Unit-I	5.7.1988
Unit-II	22.6.1988
Unit-III	1.5.1997
Unit-IV /Generating station	12.7.1997

3. Petition No. 46/GT/2015 was filed by the Petitioner for approval of tariff of the generating station for the period 2014-19 and the Commission vide its order dated 13.1.2016 approved the capital cost and the annual fixed charges as under:



## Capital Cost

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	27835.74	28466.61	29026.05	29141.05	29288.05
Admitted additional capitalization	630.87	559.44	115.00	147.00	37.00
Closing Capital Cost	28466.61	29026.05	29141.05	29288.05	29325.05

## Annual Fixed Charges

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	2835.82	2873.09	2894.21	2902.41	2908.17
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	589.68	623.47	648.69	659.14	666.67
Interest on Working Capital	417.64	441.78	466.85	492.88	520.49
O&M Expenses	6132.72	6540.18	6974.71	7438.11	7932.30
<b>Total</b>	<b>9975.85</b>	<b>10478.52</b>	<b>10984.46</b>	<b>11492.54</b>	<b>12027.64</b>

4. The Respondent No.1, Assam Power Distribution Company Limited (APDCL) vide affidavit dated 3.8.2021 has filed its reply and the Petitioner vide affidavit dated 10.8.2021, has filed its rejoinder to the said reply. The Commission vide Record of the Proceedings (ROP) of the hearing dated 25.1.2022, directed the Petitioner to submit certain additional information and reserved order in the petition. In response, the Petitioner vide affidavit dated 25.2.2022 has filed the additional information after serving copies to the Respondents. Pursuant to order being reserved, after prudence check of the information, the Petitioner was directed to furnish clarification on the following: clarify the following:

- (a) *The Petitioner had claimed Design, Fabrication, Supply erection and Commissioning of spillway gates operation in 2018-19 in Petition No. 42/GT/2015 (for Khandong H.E.P) and the Commission vide order dated 13.1.2016 had allowed the same for Rs. 3040.95 lakh. However, the Petitioner has now claimed the above assets/works in the present Petition. The same needs to be clarified.*
- (b) *Reason for claiming Leasehold land – (Township in 2016-17).*
- (c) *It is noticed that the Petitioner has filed Petition No. 189/MP/2022 for R&M of the Kopili H.E.P. In this regard, a certificate to effect that these expenditures are not part of claims in the present Petitioner is required to be submitted by the Petitioner.*



5. In response, the Petitioner vide affidavit dated 27.2.2023, has furnished the clarification/information on the above, after serving copy to the Respondents. Taking into consideration the submissions of the parties and the documents available on record, we proceed for truing-up of tariff for the period 2014-19, after prudence check, as stated in the subsequent paragraphs.

### **Truing-up of tariff for the period 2014-19**

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

*“8. Truing up*

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

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

7. The Petitioner has filed the present petition for truing-up of tariff based on the actual capital expenditure incurred for the period 2014-19, as per audited accounts. Accordingly, the capital cost and the annual fixed charges claimed by the Petitioner are as under:

#### **Capital cost claimed**

	<i>(Rs. in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Capital Cost	27835.74	31621.31	32942.60	36191.39	36389.96
Add: Addition during the year/ period	3785.57	1321.29	3248.79	198.57	3228.05
<b>Closing Capital Cost</b>	<b>31621.31</b>	<b>32942.60</b>	<b>36191.39</b>	<b>36389.96</b>	<b>39618.01</b>
<b>Average Capital Cost</b>	<b>29728.53</b>	<b>32281.95</b>	<b>34566.99</b>	<b>36290.67</b>	<b>38003.99</b>

#### **Annual Fixed Charges claimed**

	<i>(Rs. in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	667.00	807.60	941.57	1044.19	1152.17
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	2934.65	3289.35	3253.34	3754.46	3478.73
Interest on Working Capital	421.69	455.60	481.86	521.36	544.80
O&M Expenses	6132.72	6540.18	6974.71	7438.11	7932.30
<b>Total</b>	<b>10156.06</b>	<b>11092.73</b>	<b>11651.48</b>	<b>12758.11</b>	<b>13108.00</b>



## **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*

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

*(4) The capital cost in case of existing/new hydro generating station shall also include:*

*(a) cost of approved rehabilitation and resettlement (R&R) plan of the project inconformity with National R&R Policy and R&R package as approved; and*

*(b) cost of the developer’s 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) project in the affected area.”*

9. The Commission vide its order dated 13.1.2016 in Petition No. 46/GT/2015 had approved the opening capital cost of Rs. 27835.74 lakh, as on 1.4.2014. Accordingly, the same capital cost of Rs. 27835.74 lakh, 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.

## **Additional Capital Expenditure**

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

11. The Commission vide its order dated 13.1.2016 in Petition No. 46/GT/2015 had allowed the year-wise, net projected additional capital expenditure, for the period 2014-19 as under:



<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
630.87	559.44	115.00	147.00	37.00

12. The Petitioner has submitted that there is variation between the additional capital expenditure allowed by order dated 13.1.2016 in Petition No. 46/GT/2015 and the actual capital expenditure incurred by the Petitioner for the period 2014-19. Accordingly, the detailed break-up of the additional capital expenditure claimed by the Petitioner, is as under:

<i>(Rs. in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Additions during the year (a)	4665.91	1643.33	3267.37	198.57	3314.72
Deletions during the year (b)	880.34	322.04	18.58	0.00	86.67
Discharges during the year (c)	0.00	0.00	0.00	0.00	0.00
Net additional capital expenditure claimed (d)=(a) - (b)+(c)	3785.57	1321.29	3248.79	198.57	3228.05

13. The Commission vide its ROP of hearing dated 25.1.2022, directed the Petitioner to furnish the details of year-wise additional capital expenditure in the specified formats in Form 9A, Form 9Bi along with relevant provisions of the regulation, under which additional capital expenditure has been claimed along with detailed justification for the same. The Petitioner, in response, has submitted details of the same, along with justification. However, it is noticed that despite the specific direction of the Commission, as above, the Petitioner has not furnished the relevant provisions of the Regulations, under which the additional capital expenditure has been claimed. Accordingly, based on the information available on record, we proceed for truing-up the tariff of the generating station, after prudence check, in terms of the provisions of the 2014 Tariff Regulations, as stated in the subsequent paragraphs.

14. The details of the additional capital expenditure claimed for the period 2014-19 are as under:



Sl. No	Regulations	Amount (Rs. in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	14(3)(viii)	621.33	385.63	1456.44	198.57	0.00
2	Claims without indicating the provisions of the Regulation	4044.58	1257.70	1810.93	0.00	3314.72
3	14(3) (De-capitalization)	880.34	322.04	18.58	0.00	86.67
	<b>Total as per Form-9A (Net)</b>	<b>3785.57</b>	<b>1321.29</b>	<b>3248.79</b>	<b>198.57</b>	<b>3228.05</b>

15. As regards the actual additional capital expenditure claimed, the Petitioner has submitted the following:

*“The additional capital expenditure claimed relates to certain works which were necessarily undertaken for efficient operation of the generating station or were part of the original scope of work. The capital expenditure on this account and justification for carrying out these works has been included in the claim.*

*There are certain expenditures of capital nature, which have been allowed by the Commission while determining AFC for Kopili Hydro Electric power Plant for the period of 2014-19 vide its order dated 13.01.2016 in Petition No. 46/GT/2015 but could not be completed by the petitioner within the stipulated period of 31.03.2019 due to various practical constraints. It is humble submission of NEEPCO before the Hon’ble Commission for allowing to carry on the remaining works relating to the aforesaid allowed expenditures during the subsequent years based on the application submitted before the CERC for the control period 2019-24.*

*The impact on AFC due to the capitalization is being claimed after excluding the amount incurred on minor items/ expenditures of O&M nature/spares etc., which are not allowable as additional capitalization for Tariff purpose as per provisions of Tariff Regulations, 2014.*

16. The Respondent, APDCL has submitted that the additional capital expenditure claimed by the Petitioner is required to be within the limit of additional capital expenditure allowed by order dated 13.1.2016 in Petition No. 46/GT/2015. It has also submitted that the Commission may look into the same and allow the additional capital expenditure, only after prudence check. The Petitioner, in its rejoinder has clarified that it has furnished detailed justification for the actual additional capital expenditure claimed, duly supported by auditor certificate, in terms of the 2014 Tariff Regulations.

17. The matter has been considered. It is observed that in Petition No. 46/GT/2015, the Petitioner had claimed projected additional capital expenditure in respect of certain assets/ works, which were projected to be capitalized during the period 2014-19, and the same was allowed by order dated 13.1.2016. However, in the present petition, the





Petitioner has also claimed actual additional capital expenditure in respect of some new assets/ works, which were not projected earlier and, hence, there is variation between the actual additional capital expenditure claimed as against the projected additional capital expenditure allowed by order dated 13.1.2016. It is further observed that the Petitioner has not indicated the specific provision of the regulation, in respect of its claim, which includes items/works such as Cooler tubes, major overhauling works, replacement of various components damaged due to acidic nature of water, etc., and some new expenditure pertaining to R&M of some major components. As regards the expenditure claimed under the head 'replacement of various components damaged due to acidic nature of water', the Commission vide its order dated 13.1.2016 in Petition No. 46/GT/2015 had observed the following:

*"13. It is evident from the above submission that though the petitioner had incurred expenditure on replacement of corroded components during 2009-14, major portion of the expenditure which are in the nature of O&M expenses could not be capitalized. The expenses towards replacement of worn out/ corroded components have been charged to O&M expenses by the petitioner for the period 2009-14 and the same has been considered in the normative O&M expenses allowed to the generating station under the 2014 Tariff Regulations applicable for the period 2014-19. Accordingly, the projected additional capital expenditure claimed by the petitioner during the period 2014-19 i.e expenditure on replacement of cooler tubes, small valves, annual overhauling of turbines etc., which are in the nature of O&M expenses have not been considered for capitalization for the purpose of tariff by this order."*

18. In view of the above, the aforesaid items/works, which were not allowed by order dated 13.1.2016, has not been considered/allowed, in this order. As regards other claims, such as R&M works, it is pointed out that the Petitioner has filed Petition No.189/MP/2022 before this Commission, for approval of R&M of the generating station. It is noticed that DPR for the same has been approved by CEA. However, considering the status of the project (under R&M stage) and considering the nature of the expenditure, such as R&M of governors, replacement of liners, etc. the same are examined and dealt with on merits in the following paragraphs. In view of this, these



expenditure/ works shall not form part of the R&M proposal in Petition No. 189/MP/2022 filed by the Petitioner before this Commission, for consideration.

19. Based on the above, the year-wise additional capital expenditure claimed claims by the Petitioner is examined below:

**2014-15**

			<i>(Rs. in lakh)</i>
Sl. No.	Clause		Amount <i>(Rs in lakh)</i>
(a)	14(3)(viii)	Additional works/expenditure which has become necessary for efficient and successful operation of plant	621.33
(b)	Claims containing no provisions of the Regulation		4044.58
<b>Total additional capital expenditure claimed</b>			<b>4665.91</b>

***(a) Claims under Regulation 14(3)(viii) of the 2014 Tariff Regulations***

Sl. No	Details of the claim	Amount claimed <i>(Rs. in lakh)</i>	Justification by the Petitioner	Remarks on admissibility	Amount Allowed <i>(Rs. in lakh)</i>
<b>Items allowed in order dated 13.1.2016 in Petition No. 46/GT/2015</b>					
1	Switchgear including Cable Connection. Deposit work construction of Bay for 5 MVA 132/33 Transformer at Kopili Switchyard.	163.94	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015 (projected item No. 4 of 2014-15).	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 163.93 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	163.94



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
2	Transformer Rating of 100 Amps & above, 1 No. winding limb consisting of HV, LV coil and tap for 20 MVA, 11/220 kV EMCO make generator Transformer.	102.40	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015 (projected item No. 14 of 2014-15). The Commission has approved amount of Rs. 234.81 lakh during 2014-15. Further the Petitioner has also submitted that these works have been approved in principle by CEA.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 234.81 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old replaced asset/work is considered under 'De-capitalization' in 2014-15.	102.40
3.	Supply and Delivery of cables to Kopili Hydro Electric Plant. (Unit-1 & 2)	25.48	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015 (projected item No. 13 of 2014-15).	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 14.23 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The old and replaced assets/works has been considered under 'Assumed Deletions'.	25.48
4.	Tools and plants (ordinary). BCH Make citation submersible pump starter with auto unit/ Crompton make &	1.18	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015 (projected item No. 18 of 2014-15) on account of submersible pump.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 1.18 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015.	1.18



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
	other submersible pumps.			Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> . The old and replaced assets/works is considered under 'Assumed Deletions'.	
<b>New Items</b>					
5.	Transformer Rating of 100 Amps & above. Oil Cooler Tubes for CGL make generator Transformer	5.85	In justification, the Petitioner submitted that considering the very unique operating condition of Acidic reservoir water, Commission and CEA has allowed the cost of changing coolers periodically, in several instances in the past, as there is no standard solution available to the problem. The Petitioner on the same principle, has requested to allow the expenditure on account of Transformer oil cooler tubes. It is further submitted that the Commission vide its Order dated 7.10.2015 in Petition No. 456/GT/2014 has allowed the expenditure on account of replacement of Gate valves, Cooler tube bundles and Runner cone under Regulation 9(2)(iv) of the 2014 Tariff Regulations considering the acidic nature of the water and the damage of underwater parts and the problem faced in keeping the plant in operation (Sl. No. 3,4 and 5 of 2012-13).	The Petitioner has submitted that Commission had allowed the said items for the period 2009-14. However, it is noticed that Commission had not allowed the said expenditure vide its order dated 13.1.2016 in Petition No. 46/GT/2015 on the ground that the same are in the nature of revenue expenditure and such expenditure already form part of the normative O&M expenses allowed to the generating station for the period 2014-19. as quoted under para 16 above. Accordingly, the claims of the Petitioner are <b>not allowed</b> .	0.00
6.	Transformer Rating of 100 Amps & above. Oil Cooler Tubes for CGL make generator Transformer	11.70		0.00	
7.	Transformer Rating of 100 Amps & above. Oil Cooler Tubes for CGL make generator Transformer	34.02		0.00	
8.	Auxiliary Spares for Generator VT Pump & shaft	8.19	The Petitioner submitted that the spares of VT pumps failed due to acidic water and the same had to be replaced to pump out	The additional capital expenditure claimed under this head, is in the nature of spares and has been claimed after the	0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			<p>the leakage water inside the PH for safe operation of the generating station.</p> <p>The Commission vide its Order dated 13.1.2016 in Petition No. 47/GT/2015 has allowed similar expenditure for Diesel pump and Submersible pump. The reason for allowing the said expenditure is as shown "Need based expenditure is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of the plant." (Sl. no. 17 and 18 of 2014-15). The Petitioner further submitted that as these assets are of similar nature, the instant cost may please be allowed.</p>	<p>cut-off date of the generating station. Hence, the claim for additional capitalization is <b>not allowed</b>. However, the spares are allowed as additional O&amp;M expenses on actual consumption. The corresponding decapitalization on account of the same is also <b>not allowed</b>.</p>	
9.	Major overhauling works in BHEL make hydro turbine unit # III (SS Top cover)	107.04	The Petitioner has submitted that due to acidification of reservoir water the Top Cover and Pivot ring got corroded and needed to be replaced for smooth and efficient operation of the unit. It is further stated that the Commission vide its Order dated 30.9.2011 in Petition No. 294/2009 has allowed similar expenditure on SS Top Cover and Pivot Ring under (a) Assets allowed towards replacement, repairs and new assets on account of acidic nature of water in 2011-12. Considering the very unique operating condition of Acidic reservoir water, and in the same principle the cost of SS Top Cover and Pivot Ring for Unit # 3 in the instant cost may please be allowed.	The Petitioner has submitted that the Commission had allowed the said items for the period 2009-14. It is however noticed that Commission had not allowed the said expenditure vide its order dated 13.1.2016 in Petition No. 46/GT/2015 on the ground that the same are in the nature of revenue expenditure and such expenditure already form part of the normative O&M expenses allowed to the generating station for the period 2014-19. as quoted under para 16 above. Accordingly, the claims of the Petitioner are <b>not allowed</b> .	0.00
10.	Pivot ring for Unit #III	58.45			0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
11.	Major overhauling works in BHEL make hydro turbine unit # III	54.54	The Petitioner has submitted that due to wear and tear of the turbine parts generation output was reduced. So, replacement of the parts was utmost necessary for smooth efficient operation of the unit and to get maximum output. It is further stated that the Commission vide its Order dated 30.9.2011 in Petition No. 294/2009 has allowed similar expenditure on repairs of eroded under water parts under (a) Assets allowed towards replacement, repairs and new assets on account of acidic nature of water for 2009-10, 2010-11, 2011-12 and 2012-13. Considering the very unique operating condition of Acidic reservoir water, and in the same principle the cost of overhauling of Unit III underwater parts may please be allowed.	The Petitioner has submitted that the Commission had allowed the said items for the period 2009-14. It is however noticed that Commission had not allowed the said expenditure vide its order dated 13.1.2016 in Petition No. 46/GT/2015 on the ground that the same are in the nature of revenue expenditure and such expenditure already form part of the normative O&M expenses allowed to the generating station for the period 2014-19. as quoted under para 16 above. Accordingly, the claims of the Petitioner are <b>not allowed</b> .	0.00
12.	Major overhauling works of Kopili Unit # III	11.94			0.00
13.	Major overhauling works in BHEL make Hydro Turbine Generator Unit # 3	32.44			0.00
14.	TGB Cooler Tubes for Turbine for Unit # III	4.16	In justification, the Petitioner submitted that considering the very unique operating condition of Acidic reservoir water, Commission and CEA has allowed the cost of changing coolers periodically, in several instances in the past, as there is no standard solution available to the problem. The Petitioner on the same principle, has requested to allow the expenditure on account of Transformer oil cooler tubes. It is further submitted that the Commission vide its Order dated 7.10.2015 in Petition No. 456/GT/2014 has allowed the	The Petitioner has submitted that the Commission had allowed the said items for the period 2009-14. It is however noticed that Commission had not allowed the said expenditure vide its order dated 13.1.2016 in Petition No. 46/GT/2015 on the ground that the same are in the nature of revenue expenditure and such expenditure already form part of the normative O&M expenses allowed to the generating station for the period 2014-19. as quoted under para 16 above. Accordingly, the	0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			expenditure on account of replacement of Gate valves, Cooler tube bundles and Runner cone under Regulation 9(2)(iv) of the 2014 Tariff Regulations considering the acidic nature of the water and the damage of underwater parts and the problem faced in keeping the plant in operation (Sl. No. 3,4 and 5 of 2012-13).	claims of the Petitioner are <b>not allowed</b> .	
<b>Claims containing no provisions of the Regulation</b>					
15.	Helicon Progressive cavity Grout Pump	6.72	In Justification the Petitioner has submitted that due to the acidic reservoir water, the turbine components get corroded leading to leakage inside the powerhouse. The pumps were used for grouting the civilities to arrest the leakage and flooding of the powerhouse. The Commission vide its Order dated 13.1.2016 in Petition No. 46/GT/2015 has allowed similar expenditure for Diesel pump and Submersible pump. The reason for allowing the said expenditure is as shown "Need based expenditure is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of the plant." (Sl. no.17 and 18 of 2014-15). In line with it, the cost of Helicon Progressive cavity Grout Pump for grouting of voids in underwater parts which was necessitated to arrest the leakage caused due to acidic water may please be allowed.	The additional capital expenditure claimed is in the nature of O&M expenses, and hence, the claim is <b>not allowed</b> .	0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
16.	Alfa Laval make oil purifier	8.64	Puncture of bearing cooler tubes due to acidic water led to mixing of water and oil in the bearing houses. The oil purifier was used for filtration of the water from the oil for avoid seizure of the bearing pads thereby leading to outage of the units. The Commission vide its order dated 13.1.2016 in Petition No. 46/GT/2015 has allowed similar expenditure for turbine oil filtration unit from M/s Alfa level (India) Ltd pump under (b) Assets allowed towards replacement, repairs and new assets other than due to acidic nature of water 2009-10. As the instant cost is of similar nature for turbine oil filtration unit from M/s Alfa level (India) Ltd pump, the same may please be allowed.	Considering the nature and requirement of asset and since the said asset will facilitate the efficient and successful operation of the generating station, the expenditure claimed is <b>allowed</b> .	8.64
17.	Capitalisation of Renovation & Modernisation of Kopili unit # I & II, Phase -1, under project code 0700 & Trial Balance of provisional project code-0703, 2014-15	4023.96	Although the works are part of R&M but to keep the machine in working condition because of acidic damage the Petitioner has requested the Commission to allow as additional capitalization and will be not include in the petition for R&M of the generating station.	It was observed that the said expenditure form part of the R&M expenses for which the Petitioner has filed a separate Petition i.e., Petition No. 189/MP/2022 before this Commission, for approval. Accordingly, the Petitioner was directed vide letter dated 31.1.2023, to submit a certificate to the effect that the expenditure claimed do not form part of the claims in Petition No. 189/MP/2022. In response, the Petitioner, has furnished the Auditor's Certificate in support of the same. Based on the submissions of the Petitioner and	4023.96
18.	R&M works of Kopili Unit-1 & 2. (Pole keys, socket head cap screw, timer, stopper plant & link pin)	5.27	The Respondent APDCL submitted that any correspondence regarding the work carried out with CEA are to be submitted by the Petitioner. In response the Petitioner has submitted that the Replacement / erection & Commissioning of material on account of acidification of reservoir water and technical obsolescence. These works have been in		5.27





Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			principle approved by CEA.	considering the nature of the expenditure on the assets / works, which will facilitate the successful and efficient operation of plant, the claim of the Petitioner is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization is also considered under 'Assumed Deletions'. However, the Petitioner shall ensure that the additional capital expenditure claimed and allowed, shall not form part of its claim in Petition No. 189/MP/2022, filed by the Petitioner and pending consideration of the Commission.	
	<b>Total amount claimed</b>	<b>4665.91</b>			
	<b>Total amount allowed</b>				<b>4330.86</b>

20. Based on the above, the total additional expenditure of Rs. 4330.86 lakh is allowed in 2014-15.

### **2015-16**

21. The details of the actual additional capital expenditure claimed by the Petitioner in 2015-16 under the various provisions of Regulation 14(3) of the 2014 Tariff Regulations are examined below:

Sl. No.	Regulation		Amount (Rs in lakh)
(a)	14(3)(viii)	Additional works/expenditure which has become necessary for efficient and successful operation of plant	385.63
(b)	Claims containing no		1257.70



Sl. No.	Regulation	Amount (Rs in lakh)
	provisions of the Regulation	
	<b>Total additional capital expenditure claimed</b>	<b>1643.33</b>

**(a) Claims under Regulation 14(3)(viii) of the 2014 Tariff Regulations**

Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
<b>Items allowed in order dated 13.1.2016 in Petition No. 46/GT/2015</b>					
1	Supply, installation, testing & commissioning of CGL make complete GT winding along with transformer accessories of Kopili P.S., KHEP, NEEPCO Ltd. (Unit 3 & 4)	77.19	The Petitioner submitted that this item was not claimed in the original Tariff petitions for the year 2014-15. However, Rs. 91.59 lakhs were allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, in Tariff order against petition number 46/GT/2015 dated 13.1.2016 as the asset will facilitate successful and efficient operation of the plant (Sl. No. 14 Of 2014-15). The failure of the transformer was due corrosion of the cooler tubes by acidic water. Similar expenditure has been allowed by CERC in 2014-15. Since the cause and cost are similar in nature, this expenditure may please be allowed.	It is observed from the submissions of the Petitioner that the Commission vide its order dated 13.1.2016 in Petition No. 46/GT/2015 had approved the works of supply including installation, testing and commissioning of 2 No. of spare winding limbs comprising of HV, LV & Tap Coil for 20 MVA, 11/220 kV EMCO make generator Transformer including installation, testing and Commissioning. However, the asset referred by the Commission is different from the current asset. However, considering the nature and requirement of asset, which is to facilitate the efficient and successful operation of the generating station, the claim of the Petitioner, is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old replaced asset/work has been considered under 'De-capitalization' in 2015-16.	77.19
2.	Installation & Commissioning of New Governing system suitable	273.33	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No.	The additional capital expenditure claimed under these heads were allowed on projected	273.33



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
	for implementing FGMO/RGMO in BHEL make hydro Turbine Generator Unit 3& 4 of Kopili PS.		46/GT/2015 (projected item No. 13 of 2014-15).	basis for Rs. 283.94 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the claim is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old replaced asset/work has been considered under 'De-capitalization' in 2015- 16.	
	<b>Oil cooler Tubes of 70:30CU:NI</b>	35.11	In justification, the Petitioner submitted that considering the very unique operating condition of Acidic reservoir water, Commission and CEA has allowed the cost of changing coolers periodically, in several instances in the past, as there is no standard solution available to the problem. The Petitioner on the same principle, has requested to allow the expenditure on account of Transformer oil cooler tubes. It is further submitted that the Commission vide its Order dated 7.10.2015 in Petition No. 456/GT/2014 has allowed the expenditure on account of replacement of Gate valves, Cooler tube bundles and Runner cone under Regulation 9(2)(iv) of the 2014 Tariff Regulations considering the acidic nature of the water and the damage of underwater parts and the problem faced in keeping	The Petitioner has submitted that the Commission had allowed the said items for the period 2009-14. It is however noticed that Commission had not allowed the said expenditure vide its order dated 13.1.2016 in Petition No. 46/GT/2015 on the ground that the same are in the nature of revenue expenditure and such expenditure already form part of the normative O&M expenses allowed to the generating station for the period 2014-19. as quoted under para 16 above. Accordingly, the claims of the Petitioner are <b>not allowed</b> .	0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			the plant in operation (Sl. No. 3,4 and 5 of 2012-13).		
<b>Claims containing no provisions of the Regulation</b>					
4	OFAF Cooler Assembly with blower unit	28.87	The Petitioner in justification has submitted that this modification is required due to acidification of reservoir water such that a permanent solution can be made to arrest the damage of transformer winding and implication of transformer oil. The Commission has allowed Rs. 80 Lakh (Sl. No. 11 of 2015-16), Rs 40 Lakh (Sl. No. 2 of 2016-17 and Rs 40 lakh (Sl. No. 1 of 2017-18)) under regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of the plant.	The additional capital expenditure claimed under these head was allowed on projected basis for Rs. 160.00 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	28.87
5.	Ultrasonic thickness gauge	0.14	The Petitioner in Justification has submitted that this item was not claimed in the original Tariff petitions for the year 2015-16. The ultrasonic thickness gauge was procured to monitor the thickness the of the underwater corroded parts caused by the acidic water for safe operation of the plant. It is further submitted that the Commission vide its Order dated 13.1.2016 in Petition No. 46/GT/2015 has allowed similar expenditure for Diesel pump and Submersible pump. The reason for allowing the said expenditure is as shown "Need based expenditure is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations, as	The additional capital expenditure claimed is minor in nature and hence <b>not allowed</b> , in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations.	0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			the asset will facilitate successful and efficient operation of the plant." (Sl. no.17 and 18 of 2014-15). In line with it, the cost of the ultrasonic gauge measurement may please be allowed.		
6.	Supply & delivery 101 pH meters	0.54	The Petitioner in Justification has submitted that this item was not claimed in the original Tariff petitions for the year 2015-16. The pH meter was procured to monitor the pH value of the acidic water of the reservoir so that precautionary measures could be taken to avoid corrosion of underwater parts of the unit and the penstock. It is further submitted that the Commission vide its Order dated 13.1.2016 in Petition No. 46/GT/2015 has allowed similar expenditure for Diesel pump and Submersible pump. The reason for allowing the said expenditure is as shown "Need based expenditure is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of the plant." (Sl. no.17 and 18 of 2014-15). In line with it, the cost of the pH meter may please be allowed.	The additional capital expenditure claimed is minor in nature and hence <b>not allowed</b> in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations.	0.00
7.	Open well submersible water pump	0.11	The Petitioner in justification submitted that this item was not claimed in the original Tariff petitions for the year 2015-16.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 4.00 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015.	0.11
8.	Kirloskar make 5HP at 1500 RPH water cooled diesel engine with base frame	0.64	It is further submitted that the Commission vide its Order dated 13.1.2016 in Petition No. 46/GT/2015	Considering the fact that	0.64



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
9.	KSB make wk 65-multistage ,25 HP,2900 RPM pump motor set	1.68	has allowed similar expenditure for Diesel pump and Submersible pump. The reason for allowing the said expenditure is as shown "Need based expenditure is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of the plant." (Sl. no.17 and 18 of 2014-15).	the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization value of old and replaced assets/works has been considered under 'Assumed Deletions'.	1.68
10.	Plant & machinery In Generating Station (Kop)	6.53	The Petitioner in justification submitted that due to water leakage from turbine parts, the Powerhouse valve gallery floor gets flooded, and the Oil leakage unit tank gets submerged. This oil and water mixture along with sludge get pump to the Oil Pressure unit thereby mixing water and sludge with the oil in the OPU. This mixture of oil, water and sludge which is also used for governor functioning leads to malfunction of the governor. To filtrate the water from the mixture in the OPU tank, the oil filter machine was procured.	As the expenditure claimed is in the nature of O&M expenses, the same is not allowed. The corresponding decapitalization on account of the same is also <b>not allowed</b> .	0.00
11.	Supply of turbine oil filter machine	28.44			0.00
12.	Freight charges for turbine oil filter	0.58	The Commission vide Order dated 13.1.2016 in Petition No. 46/GT/2015 has allowed similar expenditure for turbine oil filtration unit from M/s Alfa level (India) Ltd pump under (b) Assets allowed towards replacement, repairs and new assets other than due to acidic nature of water 2009-10. As the instant cost is of similar nature for turbine oil filtration, the same may please be allowed.		0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
13.	Supply, installation, testing & commissioning of 2 nos. of Ingersoll Rand make HP Air Compressor (1 no. unit 1&2 side and other Unit-3&4 side)	5.86	The Petitioner in justification submitted that this item was not claimed in the original Tariff petitions for the year 2015-16. However, in the Petition No. 46/GT/2015 dated 13.1.2016, the Commission has allowed expenditure of Rs. 6.00 Lakh under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of the plant. (Sl. No. 19 of 2014-15)	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 6.00 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old replaced asset/work has been considered under 'De-capitalization' in 2015-16.	5.86
14.	Cooler tubes	3.51	In justification, the Petitioner submitted that considering the very unique operating condition of Acidic reservoir water, Commission and CEA has allowed the cost of changing coolers periodically, in several instances in the past, as there is no standard solution available to the problem. The Petitioner on the same principle, has requested to allow the expenditure on account of Transformer oil cooler tubes.	The Petitioner has submitted that the Commission had allowed the said items for the period 2009-14. It is however noticed that Commission had not allowed the said expenditure vide its order dated 13.1.2016 in Petition No. 46/GT/2015 on the ground that the same are in the nature of revenue expenditure and such expenditure already form part of the normative O&M expenses allowed to the generating station for the period 2014-19. as quoted under para 16 above. Accordingly, the claims of the Petitioner are <b>not allowed</b> .	0.00
15.	UGB oil coolers & TGB coolers for Unit 3 & 4.	13.10	It is further submitted that the Commission vide its Order dated 7.10.2015 in Petition No. 456/GT/2014 has allowed the expenditure on account of replacement of Gate valves, Cooler tube bundles and Runner cone under Regulation 9(2)(iv) of the 2014 Tariff Regulations considering		0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			the acidic nature of the water and the damage of underwater parts and the problem faced in keeping the plant in operation (Sl. No. 3,4 and 5 of 2012-13).		
16.	Piston Ring & bush for GV	5.22	The Petitioner in justification has submitted that the Kopili Power Station was commissioned in two phases: First two units in 1988, and next two units in 1997. Some components of the first two units i.e., Kopili Unit 1 & 2 were becoming obsolete in phases, and it was becoming increasingly difficult to get spares & services. Moreover, new regulations like ABT, RGMO etc. came up, for which the old control and monitoring system were not suitable. During 2006 it was also discovered that the reservoir water is becoming acidic leading to frequent failures of underwater parts. Therefore, it was essential to carry out R&M of Kopili Unit 1&2 to keep up reliability of generation. The matter was taken up with CEA and an expert team of CEA visited site July 2006 as per request of the Petitioner's Company for finalization of scope of work of proposed R&M of Kopili. CEA through their letter dated 25.7.2008 has technically cleared the scheme and intimated that CEA concurrence is not required as the estimated cost is lower than 500 crores. The issue was raised in 7 <sup>th</sup> NER Power Committee meeting held on 23rd and 24th February, 2009, and	It was observed that the said expenditure form part of the R&M expenses for which the Petitioner has filed a separate Petition i.e., Petition No. 189/MP/2022 before this Commission, for approval. Accordingly, the Petitioner was directed vide letter dated 31.1.2023, to submit a certificate to the effect that the expenditure claimed do not form part of the claims in Petition No. 189/MP/2022. In response, the Petitioner, has furnished the Auditor's Certificate in support of the same. Based on the submissions of the Petitioner and considering the nature of the expenditure on the assets / works, which will facilitate the successful and efficient operation of plant, the claim of the Petitioner is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old replaced asset/work has been considered under 'De-capitalization' in 2015-16. However, the Petitioner shall ensure that the additional capital expenditure claimed and allowed, do not form part of the claim in Petition No.	5.22
17.	Gate valve 250 NB & top cover drain system	14.78			14.78
18.	R& M of Kopili Unit I & II	108.04			108.04
19.	Stator winding & insulation materials and temperature measuring devices	404.80			404.80





Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			<p>deliberated in presence of the beneficiaries. NERPC meeting – constituents agreed. The matter was taken up with OEM of the plant, that is M/s BHEL. After series of discussion and communications, a meeting was held with M/s BHEL experts in Shelling on 5.11.2008 to finalize the scope of work of R&amp;M of these units.</p> <p>In the 149<sup>th</sup> Meeting of Board of Directors of NEEPCO approved the proposal of R&amp;M of Kopili at an estimated cost Rs. 2877.73 Lakhs directly through OEM. i.e., M/s BHEL as the first phase, which was later revised to Rs. 3521.30 lakhs. Another 15.01 Crores was approved by the BOD as the second phase of the R&amp;M works.</p> <p>Letter of Intent was placed to BHEL on 19.2.2011 after a series of discussions and negotiations with BHEL. All relevant documents have been enclosed herewith.</p> <p>From the above it can be seen that the expenditure against R&amp;M of Kopili Unit 1&amp;2 are technically justified and carried out observing all formalities, and therefore requested to be admitted as additional capital expenditure. The same amount shall not be claimed under R&amp;M works.</p>	189/MP/2022, which is pending consideration of the Commission.	
20	Spares for governor	14.76	Due to acidification of reservoir water, underwater parts of Turbine get corroded	The additional capital expenditure under this head are in the nature of spares and is claimed	0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
21	Turbine spares (self-lubricating lower bushes)	7.17	frequently which needs to be replaced/ repaired for smooth functioning of the units. Also, the puncture of cooler tubes of bearing houses leads to failure of the bearings which also necessitates replacement of the bearings. Considering the very unique operating condition of Acidic reservoir water, The Commission has allowed the cost of changing such items periodically in the past, as there is no standard solution available to the problem. In the same principle, the instant cost may please be allowed.	after the cut-off date. Hence, the, capitalization of the amounts are <b>not allowed</b> , after the cut-off date. However, the spares are allowed as additional O&M expenses on actual consumption. The corresponding decapitalization on account of the same is also <b>not allowed</b> .	0.00
22	Turbine spares such as Top cover SS, Pivot Ring, Guide vanes for Unit 3 & 4 - mismatch of top cover	172.91			0.00
23	Freight Charges against transportation of above materials	2.15			0.00
24.	Turbine and generator spares such as Valve assembly SS, Rotary com switch for Unit 3 & 4.	27.06			0.00
25.	Thrust bearing pads	43.35			0.00
26.	Turbine spares	63.03			0.00
27.	Turbine spares	27.70			0.00
28.	Cartridge for OPU Pump, Eye end valves & bolts	19.05			0.00
29.	safety release valves, non-return valves, fixed ring lower	24.03			0.00
30.	Turbine spares	13.38			0.00
31.	Rotor lead assembly, piston ring etc	37.18			0.00
32.	Spares for guide vanes	84.86			0.00
33.	Major overhauling works of Kopili Unit -IV	89.60			The Petitioner has submitted that due to wear and tear of the turbine parts generation output was reduced. So, replacement of the parts was utmost necessary for smooth efficient operation of the unit and to get maximum output.



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			It is further stated that the Commission vide its Order dated 30.9.2011 in Petition No. 294/2009 has allowed similar expenditure on repairs of eroded under water parts under (a) Assets allowed towards replacement, repairs and new assets on account of acidic nature of water for 2009-10, 2010-11,2011-12 and 2012-13. Considering the very unique operating condition of Acidic reservoir water, and in the same principle the cost of overhauling of Unit III underwater parts may please be allowed.	replacement of corroded components on account of acidification of reservoir water already form part of the normative O&M expenses allowed to the generating station for the period 2014-19. Accordingly, the claim of the Petitioner is <b>not allowed</b> .	
34.	Special Tools & Plant	8.63	The Petitioner in justification has submitted that this item was not claimed in the original Tariff petitions for the year 2015-16. The pump was procured to drain out the leakage water in the Umrong Dam Pump House. It is further submitted that the Commission vide its Order dated 13.1.2016 in Petition No. 46/GT/2015 has allowed similar expenditure for Diesel pump and Submersible pump. The reason for allowing the said expenditure is as shown "Need based expenditure is allowed under Regulation 14(3)(viii) of 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of the plant." (Sl. no.17 and 18 of 2014-15). In line with it, the cost of the pump may please be allowed.	The additional capital expenditure claimed is in the nature of tool and tackle and hence <b>not allowed</b> in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations. The corresponding decapitalization on account of the same is also <b>not allowed</b> .	0.00
	<b>Total amount claimed</b>	<b>1643.33</b>			



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
	<b>Total amount allowed</b>				<b>920.53</b>

22. Based on the above, the total additional expenditure of Rs. 920.53 lakh is allowed in 2015-16.

### **2016-17**

23. The details of the actual additional capital expenditure claimed by the Petitioner in 2016-17 under the various provisions of Regulation 14(3) of the 2014 Tariff Regulations are examined below:

Sl. No.	Regulation		Amount (Rs in lakh)
(a)	14(3)(viii)	Additional works/expenditure which has become necessary for efficient and successful operation of plant	1456.44
(b)	Claims containing no provisions of the Regulation		1810.93
	<b>Total additional capital expenditure claimed</b>		<b>3267.37</b>

### ***(a) Claims under Regulation 14(3)(viii) of the 2014 Tariff Regulations***

Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
<b>Items allowed in order dated 13.1.2016 in Petition No. 46/GT/2015</b>					
1	UMRONG DYKE Raising of Umrong dyke from EL 608.30 M to EL 612.60 M	4.64	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015. It is further submitted that the Raising of Umrong Dyke Height Form EL 608.30M TO EL 612.60M. Increased storage capacity will increase generation capacity of Kopili and to support the 1st stage ext. and stage-II.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 4.64 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	4.64



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
2.	TUNNEL: Supply, Fabrication and Erection of Stainless Steel liner over the existing steel liner of Umrong Tunnel at the tunnel outlet near Kopili Valve House, KHEP, Umrong, Assam	492.75	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015. Due to severe acidity problem in the reservoir water it was necessary to replace all the items with stainless steel.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 163.68 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The old and replaced assets/works has been considered under 'Assumed Deletions'.	492.75
3.	Jyoti make HS pump to Kopili PS unit 3 & 4 Supply, installation, testing & commissioning of 3 Nos of Cooling Water Pump for Unit-3 & 4 side.	7.74	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015. Old pump sets are commissioned in the year 1996 and now these pump sets are giving frequent trouble which sometimes leads to forced outage of the unit.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 60.00 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The old and replaced assets/works has been considered under 'Assumed Deletions'.	7.74
4.	Supply & Commissioning of Numerical Protection system for Unit-3 & 4 (Generator and Unit Control Panel) including LBB protection	118.36	These assets/works claimed were admitted vide order dated 13.1.2016 in Petition No. 46/GT/2015.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 150.00 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that	118.36



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
				the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The old and replaced assets/works has been considered under 'Assumed deletions.	
<b>New Items</b>					
5	Leasehold Land - Township	1614.91	The Petitioner in justification of the same has not furnished any justification / documents for claiming the same and the Petitioner has not even stated the Regulation under which the same is claimed.	It is noticed that the Petitioner, in justification of the claim has not furnished any justification / documents. It has also not indicated the provision of the relevant regulation, under which the amounts are claimed, despite specific directions. Accordingly, the Petitioner was directed, vide letter dated 31.1.2023, to submit justification for the said claim. In response, the Petitioner has submitted that on adoption of Ind-AS by the Petitioner's Company during 2016-17, the said value of Rs. 1614.91 lakh was reclassified under the heads "non-current assets" and "Current assets" as "Prepayments (Leasehold land)" in books of Accounts, which was earlier classified under the head "Fixed Assets" under I-GAAP. The Commission has considered the submission of the Petitioner and is of the	0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
				view that in the accounts of the Petitioner's Company, the entry of Rs. 1614.91 lakh was reclassified under the head non-current and current assets as prepayment (Leasehold Land) which was earlier classified under the Fixed Asset I-GAAP. Considering the fact that the said amount is due to reclassification of the asset from one head to another head, and since the Petitioner has claimed the expenditure on the approved asset, the claim of the Petitioner is <b>not allowed</b> .	
6	Transformer having a rating of 100 kV and above Supply including installation, testing & commissioning of 2(two) No. of Spare Winding Limbs comprising of HV. LV & Tap Coil for 20 MVA, 11/220 KV EMCO make Generator Transformer including installation, testing & Commissioning of Kopili P.S., KHEP. (Unit-1 & 2)	126.40	The Petitioner in justification has submitted that due to acidification of reservoir water, cooler tubes are getting punctured, and water is getting mixed up with transformer oil. As a result, existing transformer winding got damaged and hence replacement is required. The Petitioner further submitted that this item was not claimed in the original Tariff petitions for the year 2015-16. However, Rs. 234.81 lakhs was allowed under regulation 14(3)(viii) of the 2014 Tariff Regulations in Tariff order against petition No. 46/GT/2015 dated 13.1.2016 as the asset will facilitate successful and efficient operation of the plant (Sl. No. 14 Of 2014-15). The failure of the transformer was due corrosion of the cooler tubes by acidic water. Similar expenditure has	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 234.81 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old replaced asset/work has been considered under 'De-capitalization' in 2016- 17.	126.40



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			been allowed by the Commission in 2014-15. Since the cause and cost are similar in nature, this expenditure may please be allowed.		
7	Implementation of RGMO/FGMO enable governing system unit-1&2	123.23	The Petitioner has submitted that the item is required under Regulation 5.2(f) of the CERC (Indian Electricity Grid Code) Regulations,2010. It is further submitted that the Commission vide its Order dated 13.1.2016 in Petition No. 46/GT/2015 has allowed Rs. 283.94 lakh under Regulation 14(3)(viii) of the 2014 Tariff Regulations, as the asset will facilitate successful and efficient operation of the plant. (Sl. No.2 of 2015-16) for 3 & 4.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 283.94 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	123.23
8	Capitalised spares in the form of PPE	103.32	The Petitioner has submitted that the Petitioner has capitalized the spares as per the decision of the Competent Authority in the Form of PPE	The Petitioner has not furnished any information/details regarding the competent authority, based on whose' direction, the spares are capitalised. Since capitalisation of spares after the cut-off date is not permissible under the 2014 Tariff Regulations, the claim is <b>not allowed</b> .	0.00
9	Supply & manufacturing of twin tube type oil forced heat exchanger for Transformer for Unit 1 & 2	233.99	The Petition in justification has submitted that this modification is required due to acidification of reservoir water such that a permanent solution can be made to arrest the damage of transformer winding and implication of transformer oil. The Commission has allowed Rs. 80 Lakh (Sl. No. 11 of 2015-16), Rs 40 Lakh (Sl. No. 2 of 2016-17 and Rs 40 lakh (Sl. No. 1 of 2017-18)) under regulation 14(3)(viii) of the 2014 Tariff	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 160.00 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation	233.99





Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			Regulations, as the asset will facilitate successful and efficient operation of the plant.	14(3)(viii) of the 2014 Tariff Regulations.	
10	Procurement of Field coils for replacement	53.76	As the Khandong hydro units were commissioned in 1984 the field coils of the units have already completed the normal service period. Conditions of four numbers of coils are found to be deteriorating during testing which needs replacement.	It is observed that the Petitioner in justification of its claim has submitted/admitted that these assets are related to the Khandong Power station (another project of the Petitioner). In view of this, the claim is <b>not allowed</b> /considered for this generating station.	0.00
11	Re-active of assets for which decapitalization was done in the year 2014-15 & 2015-16	192.24	The Petitioner has furnished that the same is decided by the Competent Authority.	Since the additional capital expenditure claimed under this head, is in the nature of capital spares, and is claimed after the cut-off date, the same is <b>not allowed</b> . The corresponding decapitalization on account of the same is also <b>not allowed</b> .	0.00
<b>Claims containing no provisions of the Regulation</b>					
12	Surveillance equipment	2.26	Surveillance equipment enabling to predict sudden downstream impact due to increased water level. The expenditure was related to dam monitoring instruments in order to monitor the movement of Dam Blocks. Expenditure was essential for safety of the Dam.	Since the expenditure is for the safety and security of the generating station the same is <b>allowed</b> under Regulation 14(3)(iii) of the 2014 Tariff Regulations.	2.26
13	Spare of Governor & Stator Coil	193.77	Being the capitalisation entry as decided by the competent authority	Since the additional capital expenditure claimed under this head is in the nature of capital spares, and is claimed after the cut-off date, the same is <b>not allowed</b> . The corresponding decapitalization on account of the same is also <b>not allowed</b> .	0.00
	<b>Total amount claimed</b>	<b>3267.37</b>			
	<b>Total amount allowed</b>				<b>1109.38</b>



24. Based on the above, the total additional expenditure of Rs. 1109.38 lakh in 2016-17 is allowed.

**2017-18**

25. The details of the actual additional capital expenditure claimed by the Petitioner in 2017-18 under the various provisions of Regulation 14(3) of the 2014 Tariff Regulations are examined below:

Sl. No.	Regulation		Amount (Rs in lakh)
(a)	14(3)(viii)	Additional works/expenditure which has become necessary for efficient and successful operation of plant	73.52
(b)	New Items		<b>125.05</b>
	<b>Total additional capital expenditure claimed</b>		<b>198.57</b>

**(a) Claims under Regulation 14(3)(viii) of the 2014 Tariff Regulations**

Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
<b>Items allowed in order dated 13.1.2016 in Petition No. 46/GT/2015</b>					
1.	Testing & Commissioning of 24V,150AH PLANTE TYPE LEAD ACID battery bank with stand at Kopili Power Station.	2.91	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015. As the useful life of the existing 220 V Battery bank and 24 V battery bank was over, the same was replaced with a new set.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 7.5 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The old and replaced assets/works has been considered under 'Assumed Deletions'.	2.91
2.	220V,425AH Battery consisting of 11 ono cells Incl. Supply, Testing & Commissioning.	49.79	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015.		49.79
3.	Supply, installation, testing & commissioning of New Battery Charger	10.44	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 10.00 lakh vide order dated	10.44



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
				13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The old and replaced assets/works has been considered under 'Assumed Deletions'.	
4.	Supply, installation, testing & commissioning of New DC Distribution Board due to technical obsolescence	10.38	These assets/works claimed were admitted vide Tariff order dated 13.1.2016 in Petition No. 46/GT/2015.	The additional capital expenditure claimed under these heads were allowed on projected basis for Rs. 10.00 lakh vide order dated 13.1.2016 in Petition No. 46/GT/2015. Considering the fact that the additional capital expenditure incurred will facilitate the efficient and successful operation of the generating station, the same is <b>allowed</b> under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The old and replaced assets/works has been considered under 'Assumed deletions.	10.38
<b>New Items</b>					
5.	Supply, installation testing and commissioning of dissolved gas analyser	<b>34.03</b>	The Petitioner has submitted that the Dissolve Gas Analyser was procured as new asset for condition monitoring of the transformers.	The additional capital expenditure claimed is in the nature of tool and tackle and hence <b>not allowed</b> in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations. The corresponding decapitalization on account of the same is also <b>not allowed</b> .	0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
6.	High value spares (components) for KHEP: MDL DC - DC PWRSUP220V DC.O/P 5V TO 24V ENQLT: UNO664AV.	6.07	All there are high value, long lead time, irregular and vital spares, failure of which can lead to outage of generation. These items were procured and capitalized as Insurance Spare as per provisions of AS2 Valuation of Inventories and AS10 - Accounting of fixed assets, issued by Ministry of Corporate Affairs - Govt. of India.	The additional capital expenditure claimed under this head are in the nature of capital spares and is claimed after the cut-off date. Hence, the claims are <b>not allowed</b> . The corresponding decapitalization on account of the same is also <b>not allowed</b> .	0.00
7.	High value spares (components) for KHEP: RELAY NUMERIC ROTOR E/F (STAGE1 & 2)	6.12			0.00
8.	MDL69203LMUA A, LOAD MONITORING UNIT.	31.39			0.00
9.	Cartridges for Toshiko make pump, model no.7352/54ANTS XPS2RNBALX.	5.27			0.00
10.	MDL692031A2AA (DVAR)3-PHASE FILTER MDL DINRAIL MOUNTED	5.41			0.00
11.	Interior Communication Equipment-Plant/Office	3.30	The intercommunication system was procured for better communication between the different divisions as no reliable wired or mobile network is available in the project. The cost may be considered as need based requirement	The additional capital expenditure claimed are minor in nature and hence <b>not allowed</b> in terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations. The corresponding decapitalization on account of the same is also <b>not allowed</b> .	0.00
12.	Water supply & drains - plant	1.37	The expenditure was essential to provide safe drinking water to the operation team of the Plant & efficient draining off of storm water around the Plant area. The old water treatment plant and storm water drainage system were badly damaged beyond repair due to ageing and corrosion. These items may please		0.00



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
			be allowed on ground of obsolescence.		
13.	Switchgear including cable connection (Khandong)	31.49	To establish successful real time data telemetry with NERLDC, Shillong as per requirement of IEGC 2010 and statutory norms the RTU panels were procured and installed.	It is observed that the Petitioner in justification of its claim has submitted/admitted that these assets are related to the Khandong Power station (another project of the Petitioner). In view of this, the claim is <b>not allowed</b> /considered for this generating station.	0.00
14.	Inverter-based Welding Rectifier	0.60	Due to acidic water, the underwater parts get corroded frequently. To repair by weld build-up of the corroded parts the welding rectifier machine was procured. As need based requirement the cost may kindly be considered.	The expenditure claimed is in the nature of O&M expenses, and hence, the claim is <b>not allowed</b> .	0.00
	<b>Total amount claimed</b>	<b>198.57</b>			
	<b>Total amount allowed</b>				<b>73.52</b>

26. Based on the above, the total additional expenditure of Rs. 73.52 lakh in 2017-18 is allowed.

### **2018-19**

27. The details of the actual additional capital expenditure claimed by the Petitioner are examined below:

Sl. No.	Regulation	(Rs. In lakh) 2018-19
(a)	Claims containing no provisions of the Regulation	3314.72
	<b>Total additional capital expenditure claimed</b>	<b>3314.72</b>



**(a) Claims containing no provisions of the Regulation**

<b>Sl. No</b>	<b>Details of the claim</b>	<b>Amount claimed (Rs. in lakh)</b>	<b>Justification submitted by the Petitioner</b>	<b>Remarks on admissibility</b>	<b>Amount Allowed (Rs. in lakh)</b>
<b>New Items</b>					
1	Design, Fabrication, Supply Erection and Commissioning of spillway gates operation	2965.66	Installation of gates over spillway of Khandong Dam, increased the Live Storage of the reservoir from 100.061 MCM (FRL at EL719.33m-without gates) to 179.600 MCM (FRL at EL725m-with gates).	It is observed that the assets/works was claimed in Petition No. 42/GT/2015 (for determination of tariff of Khandong HEP of the Petitioner for the period 2014-19) and the Commission vide its order dated 13.1.2016 had allowed the capitalisation of Rs. 3040.95 lakh. It is however noticed that the above assets/works have not been claimed in Petition No. 371/GT/2019 (truing up of tariff or Khangdong HEP for the period 2014-19). However, the Petitioner has claimed the said asset in the present Petition.	2965.66
2.	Supply, Fabrication, cutting, removal and replacement of old and damaged steel plates of both the penstock of khandong water conductor system with new BQ plates	313.04	Steel Liner of the penstock of Khandong Hydro Power Station (2 x 25MW) was badly corroded due to highly acidic nature of reservoir water. Replacement of damaged steel plates with new BQ Plates was essential to enhance the service life of the water conductor system of the Plant.	The Petitioner was directed vide letter dated 31.1.2023 to justify the reasons for claiming the above assets/works in the present Petition and not in Petition No. 371/GT/2019. In response, the Petitioner has submitted that Kopili Hydro Electric Plant (4 X 50 MW), Khandong Hydroelectric Plant (2 X 25 MW) and Kopili-II Hydro Power plant (1x25 MW) comes under one complex, i.e., Kopili Hydroelectric Project. It has also submitted Khandong powerhouse feeds the reservoir for Kopili Power house and the reservoir created by Khandong dam runs the Khandong power station	313.04



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
				<p>and then released to Umrong reservoir which runs Kopili power station. The Petitioner has stated that since Kopili machines are of high head, the discharge of two 25 MW units of Khandong Power station can run 4 numbers of 50 MW units of Kopili Power station. It has further submitted that the prime source of water for Kopili Power Station is discharge of Khandong only, as the catchment area for the reservoir for Kopili is very small. The Petitioner has added that considering the above-mentioned reasons and since the impact on commissioning of the spillway gates, ultimately benefits the operation of Kopili Power station, in addition to the Khandong Power Station, the expenditure incurred for the said asset was recognized in the books of Kopili Hydro Electric Plant.</p> <p>It is noticed that the expenditure claimed had been allowed earlier. In view of the above submissions of the Petitioner and since Khandong and Kopili Hydro projects of the Petitioner, do have a common complex and the water from Khandong Dam/Kopili Reservoir is used for generating power from both the stations, and</p>	



Sl. No	Details of the claim	Amount claimed (Rs. in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed (Rs. in lakh)
				since the expenditure claimed is for items already allowed, the claim of the Petitioner, is <b>allowed</b> . The corresponding decapitalization of old replaced item (no. 2) on account of the same is also <b>allowed</b> .	
3.	Refrigeration, air coolers etc. For cooling system in the powerhouse	36.02	The old electro-mechanical control and relay panels, Governor panel and DVR panel were replaced in phased manner by Numerical relay. For smooth functioning of the relays and cards installed in these panel AC cubicles were provided in all the panels. At high ambient temperature there was malfunction and failure of cards. The cost may be included as new asset on need-based requirement.	The expenditure claimed by the Petitioner is minor in nature and the same can be met from the O&M expenses allowed to the Petitioner. Hence, the claim of the Petitioner is <b>not allowed</b> . The corresponding decapitalization on account of the same is also <b>not allowed</b> .	0.00
	<b>Total amount claimed</b>	<b>3314.72</b>			
	<b>Total amount allowed</b>				<b>3278.70</b>

28. Based on the above, additional capital expenditure of Rs. 3278.70 lakh is allowed in 2018-19.

### Discharge of liabilities

29. No discharge of liabilities has been claimed by the Petitioner for the generating station.

### De-capitalization

30. The Petitioner has claimed the de-capitalization of amounts (as per Form 9Bi) during the period 2014-19 as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
880.34	322.04	18.58	0.00	86.67





31. The de-capitalization claimed by the Petitioner has been dealt with in the relevant paragraphs relating to the additional capital expenditure claims, which have been considered and allowed for the respective years of the period 2014-19, in terms of the provisions of Regulation 14(3) of the 2014 Tariff Regulations. Further, the decapitalization of assets against which additional capitalization has not been allowed, have not been considered. Accordingly, the de-capitalization, in case of assets like spares during the period 2014-19, which has not been considered for the purpose of tariff are as under:

	<i>(Rs. In lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
De-capitalization claimed by the Petitioner	880.34	322.04	18.58	0.00	86.67
De-capitalization allowed	21.13	166.51	18.58	0.00	86.67

### **Assumed Deletions**

32. As per consistent methodology adopted by the Commission, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff, provided that the capitalization of the said asset is followed by de-capitalization of the original value of the old asset. However, in certain cases where de-capitalization is affected in books during the following years, to the year of capitalization of new asset, the de-capitalization of the old asset for the purpose of tariff is shifted to the very same year in which the capitalization of the new asset is allowed. Such decapitalization 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 new asset @ 5% per annum till the year of capitalization of the old asset.

33. It is observed that the Petitioner has claimed the asset/work such as Spares, Transformer rating, etc., on replacement basis. However, the Petitioner, in this petition



has provided the de-capitalization value of the old asset/works, which have been replaced, which appear to be on lower side, for some assets. If the assumed deletion amount calculated by methodology adopted by the Commission, is more than the claim of the Petitioner, the amount calculated by the Commission (being on higher side) is considered for the purpose of the tariff. Accordingly, based on the above methodology, the assumed deletion considered for these assets/works is as under:

<i>(Rs. in lakh)</i>				
SI No.	Details	Additions claimed for new asset on replacement	De-capitalizati on value of old asset claimed	Assumed Deletions for old asset allowed
<b>2014-15</b>				
1	Supply and Delivery of cables to Kopili Hydro Electric Plant. (Unit-1 & 2)	25.48	0.00	11.12
2	Tools and plants (ordinary). BCH Make citation submersible pump starter with auto unit/ Crompton make & other submersible pumps.	1.18	0.00	0.51
3	Capitalisation of Renovation & Modernisation of Kopili unit # I & II, Phase # 1, under project code 0700 & Trial Balance of provisional project code # 0703, KHEP, 2014-15	4023.96	0.00	1755.64
4	R&M works of Kopili Unit-1 & 2.(Pole keys, socket head cap screw, timer, stopper plant & link pin)	5.27	0.00	2.30
	<b>Total</b>	<b>4055.88</b>	<b>0.00</b>	<b>1769.57</b>
<b>2015-16</b>				
1	KSB make wk 65- multistage, 25 HP,2900 RPM pump motor set	2.43	0.00	1.01
	<b>Total</b>	<b>2.43</b>	<b>0.00</b>	<b>1.01</b>
<b>2016-17</b>				
1	TUNNEL: Supply, Fabrication and Erection of Stainless-Steel liner over the existing steel liner of Umrong Tunnel at the tunnel outlet near Kopili Valve House, KHEP, Umrong, Assam.	492.75	0.00	195.00
2	Jyoti make HS pump to Kopili PS unit 3 & 4 Supply, installation, testing & commissioning of 3 Nos of	7.74	0.00	3.06



SI No.	Details	Additions claimed for new asset on replacement	De-capitalizati on value of old asset claimed	Assumed Deletions for old asset allowed
	Cooling Water Pump for Unit-3 & 4 side.			
3	Supply & Commissioning of Numerical Protection system for Unit-3 & 4 (Generator and Unit Control Panel) including LBB protection	118.36	0.00	46.84
	<b>Total</b>	<b>618.86</b>	<b>0.00</b>	<b>244.90</b>
<b>2017-18</b>				
1	Testing & Commissioning of 24V,150AH PLANTE TYPE LEAD ACID battery bank with stand at Kopili Power Station.	2.91	0.00	1.10
2	220V,425AH Battery consisting of 11 ono cells INCL. Supply, Testing & Commissioning.	49.79	0.00	18.76
3	Supply, installation, testing & commissioning of New Battery Charger	10.44	0.00	3.93
4	Supply, installation, testing & commissioning of New DC Distribution Board due to technical obsolescence	10.38	0.00	3.91
	<b>Total</b>	<b>73.51</b>	<b>0.00</b>	<b>27.71</b>
<b>2018-19</b>				
1	Supply, Fabrication, cutting, removal and replacement of old and damaged steel plates of both the penstock of khandong water conductor system with new BQ plates	313.04	0.00	112.36
		<b>313.04</b>	<b>0.00</b>	<b>112.36</b>

**Exclusions** [capitalized in books but not to be claimed for purpose of tariff]

34. The following are the year-wise expenditure incurred by the Petitioner towards the replacement of minor assets, purchase of capital spares, residential building, plant & machinery, electrical & auxiliaries, ancillary services, purchase of miscellaneous assets etc:

<i>(Rs in Lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
62.31	177.38	137.45	72.79	158.94



35. The above expenditure incurred towards the procurement/replacement of minor assets and capital spares are not allowed for the purpose of tariff, after the cut-off date, in terms of the provisions of the 2014 Tariff Regulations. Accordingly, the Petitioner has put these additions under exclusion category. The aforesaid exclusion of positive entries, as effected by the Petitioner, are allowed for the purpose of tariff.

### **Net additional capital expenditure allowed**

36. In view of above, the net additional capital expenditure allowed for the generating station for the period 2014-19 is summarized below:

	<i>(Rs. in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Additions allowed during the year (a)	4330.86	920.53	1109.38	73.52	3278.70
Discharge of liabilities (b)	0.00	0.00	0.00	0.00	0.00
Deletions considered during the year ie.De-capitalisation plus assumed deletions (c)	1790.70	167.52	263.48	27.71	199.03
Exclusions in Deletions not allowed (to be considered in deletion)	0.00	0.00	0.00	0.00	0.00
<b>Net additional capital expenditure (c)=(a)+(b)-(c)-(d)</b>	<b>2540.16</b>	<b>753.01</b>	<b>845.90</b>	<b>45.82</b>	<b>3079.67</b>

### **Capital cost**

37. Accordingly, the capital cost allowed for the purpose of tariff for the generating station, is as under:

	<i>(Rs. in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening capital cost	27835.74	30375.90	31128.91	3,974.81	32020.63
Net additional capital expenditure allowed	2540.16	753.01	845.90	45.82	3079.67
<b>Closing Capital Cost</b>	<b>30375.90</b>	<b>31128.91</b>	<b>31974.81</b>	<b>32020.63</b>	<b>35100.29</b>
Average Capital Cost	29105.82	30752.41	31551.86	31997.72	33560.46

### **Debt-Equity Ratio**

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

*“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the*



*equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

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

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

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

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

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

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

*(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.*

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

39. Gross normative loan and equity amounting to Rs.14346.04 lakh and Rs.13489.70 lakh, respectively, as on 31.3.2014 as considered in order dated 13.1.2016 in Petition No. 46/GT/2015 has been considered as normative loan and equity as on 1.4.2014. The normative debt equity ratio of 70:30 has been considered for the admitted additional capital expenditure and de-capitalization has been considered in the debt equity ratio of 50:50. The opening and closing debt and equity is as under:



Asset	As on 1.4.2014		Net Additional Capitalization during 2014-19				As on 31.3.2019	
			Additional Capital Expenditure		De-capitalization			
	Amount	%	Amount	%	Amount	%	Amount	%
Debt	14,346.04	51.54	6,799.09	70.00	1224.22	50.00	19,920.91	56.75
Equity	13,489.70	48.46	2,913.90	30.00	1224.22	50.00	15,179.38	43.25
<b>Total</b>	<b>27,835.74</b>	<b>100.00</b>	<b>9,712.99</b>	<b>100.00</b>	<b>2448.44</b>	<b>100.00</b>	<b>35,100.29</b>	<b>100.00</b>

### Return on Equity

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

*“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*

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

*Provided that:*

*i. in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*

*ii. the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:*

*iii. additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:*

*iv. the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:*

*v. as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:*

*vi. additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.”*

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

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



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

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

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

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

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

42. In term of Regulation 25(3) of the 2014 Tariff Regulations, 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 period from 2014-15 to 2018-19, on actual gross income of any financial year. The base rate of return on equity is to be grossed up with the effective tax rate of the respective financial years.

43. The Commission in its order dated 7.6.2021 in Petition No. 273/GT/2019 (truing-up of tariff of Ranagandi HEP for the period 2014-19), had considered the tax rates for the generating station of the Petitioner as under:

Year	Effective Tax Rate (%)
2014-15	20.2521
2015-16	25.9099



Year	Effective Tax Rate (%)
2016-17	34.6080
2017-18	27.3764
2018-19	21.5488

44. Since the effective tax rate is 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, the tax rate as worked out and allowed in the said order dated 7.6.2021, has been considered for the computation of ROE for this generating station, as below:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity (a)	13489.70	13893.61	14086.01	14287.08	14295.28
Addition due to Capitalization (b)	403.91	192.40	201.07	8.20	884.09
Closing Equity (c)=(a)+(b)	13893.61	14086.01	14287.08	1295.28	15179.38
Average Equity (d)=(a+c)/2	13691.65	13989.81	1186.54	14291.18	14737.33
Base Rate (%) (e)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax Rate (%) (f)	20.252%	25.910%	34.608%	27.376%	21.549%
Effective ROE Rate (%) (g)	20.690%	22.270%	25.232%	22.720%	21.032%
<b>Return on Equity (h)=(g)*(d)</b>	<b>2832.80</b>	<b>3115.53</b>	<b>3579.55</b>	<b>3246.96</b>	<b>3099.56</b>

### **Interest on Loan**

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

*“26. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

*(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of Decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalization of such asset*

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

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





for interest capitalized Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered: Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered

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

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

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

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

46. Accordingly, the repayment for the 2014-19 tariff period has been considered equal to the depreciation allowed for the respective years and Interest on loan has been calculated on the normative average loan of the year by applying the last available weighted average rate of interest as the loans are already repaid. Accordingly, Interest on loan is worked out as under:

	<b>(Rs. in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan (A)	14,346.04	16,482.29	17,042.91	17,687.73	17,725.34
Cumulative repayment of loan up to previous year (B)	14,346.04	14,018.24	14,634.90	15,252.86	16,026.55
Net Loan Opening (C)=(A)-(B)	-	2,464.05	2,408.00	2,434.86	1,698.79
Net Addition due to additional capital expenditure (D)	2,136.25	560.61	644.82	37.61	2,195.57
Repayment of loan during the period (E)	565.42	702.87	752.36	787.41	886.86
Cumulative repayment adjustment on a/c of de-capitalization (F)	893.22	86.21	134.40	13.73	133.65
Net Repayment of loan during the period(G) = (E)-	(327.80)	616.66	617.96	773.68	753.22



	2014-15	2015-16	2016-17	2017-18	2018-19
(F)					
Net Loan Closing (H)= (C+D-G)	2,464.05	2,408.00	2,434.86	1,698.79	3,141.15
Average Loan(I)=(C+H)/2	1,232.02	2,436.03	2,421.43	2,066.83	2,419.97
Weighted Average Rate of Interest of loan (J)	7.94%	7.94%	7.94%	7.94%	7.94%
<b>Interest on Loan (K=I*J)</b>	<b>97.82</b>	<b>193.42</b>	<b>192.26</b>	<b>164.11</b>	<b>192.15</b>

## Depreciation

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

48. The COD of the generating station is 12.7.1997. Since the project has completed 12 years of commercial operation as on 13.7.2009, the remaining depreciable value has been spread over the balance useful life of the project in 2014-19 tariff period. Accordingly, depreciation has been worked out as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (a)	27,835.74	30,375.90	31,128.91	31,974.81	32,020.63
Closing Capital Cost(b)	30,375.90	31,128.91	31,974.81	32,020.63	35,100.29
Average Capital Cost (c)=(a+b)/2	29,105.82	30,752.41	31,551.86	31,997.72	33,560.46
Land Value (d)	1,440.07	1,440.07	1,440.07	1,440.07	1,440.07
Depreciable value(e)=(c-d)*0.9	24,899.17	26,381.10	27,100.61	27,501.88	28,908.35
Balance life(f)	18.28	17.28	16.28	15.28	14.28
Remaining Depreciable Value(g)	10,336.24	12,145.97	12,248.82	12,032.13	12,664.91
<b>Depreciation during the period(h)=(g)/(f)</b>	<b>565.42</b>	<b>702.87</b>	<b>752.36</b>	<b>787.41</b>	<b>886.86</b>
Cumulative depreciation at the end of the year (before adjustment for de-capitalization) (I) = (H) + (Cumulative Depreciation (shown at K), at the end of the previous year) *	15,128.35	14,938.00	15,604.15	16,257.17	17,130.30
Less: Adjustment on account of de-capitalisation (j)	893.22	86.21	134.40	13.73	133.65
<b>Net Cumulative Depreciation (k)=(i)-(j)</b>	<b>14,235.13</b>	<b>14,851.79</b>	<b>15,469.76</b>	<b>16,243.44</b>	<b>16,996.66</b>

\*Cumulative Depreciation as on 31.3.2014 is Rs. 14562.93 lakh

### **Operation & Maintenance Expenses**

49. Regulation 29 (3) (a) of the 2014 Tariff Regulations, provides as under:



“29(3)(a) Following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 1.4.2014:

<i>(Rs. in Lakh)</i>					
<i>Kopili</i>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
	6132.72	6540.18	6974.71	7438.11	7932.30

50. The Petitioner, in Petition No. 46/GT/2015, had claimed O&M expenses for the period 2014-19 in terms of Regulation 29(3)(a) of the 2014 Tariff Regulations and the same was allowed vide order dated 13.1.2016. In the present petition, the Petitioner has claimed O&M expenses in terms of the above Regulation. In addition, the Petitioner has also claimed the impact of wage revision. Considering the fact that the generating station is in operation for three or more years as on 1.4.2014, the normative O&M expenses as allowed by the Commission vide order dated 13.1.2016 in Petition No. 46/GT/2015, in terms of the above regulation, has been allowed. As regard the impact of wage revision, the same is examined below:

**Additional O&M Expenditure on account of impact of Pay revision**

51. The Petitioner has claimed total expenditure of Rs.1231.08 lakhs as additional O&M expenses, on account of impact of wage revision of its employees and for Meghalaya Home Guards for the period from 1.1.2017 to 31.3.2019. The Petitioner has prayed that the additional O&M expenses may be allowed to be recovered from the Respondents, as a one-time payment in exercise of the powers under Regulation 54 (Powers to Relax) and Regulation 55 (Powers to Remove Difficulties) of the 2014 Tariff Regulations. The Petitioner has also submitted audited statements showing the details of the impact of wage revision. The audited statements, showing the details of the impact of wage revision as submitted by the Petitioner, are as under:

<i>(Rs in lakh)</i>									
	<b>2016-17</b>			<b>2017-18</b>			<b>2018-19</b>		
	<b>Pre-Revised</b>	<b>Post Revised</b>	<b>Wage Revision Impact</b>	<b>Pre-Revised</b>	<b>Post Revised</b>	<b>Wage Revision Impact</b>	<b>Pre-Revised</b>	<b>Post Revised</b>	<b>Wage Revision Impact</b>
1.1 Basic Pay	198.59	317.59	119.00	742.51	1020.58	278.07	732.47	1062.05	329.58



	2016-17			2017-18			2018-19		
	Pre-Revised	Post Revised	Wage Revision Impact	Pre-Revised	Post Revised	Wage Revision Impact	Pre-Revised	Post Revised	Wage Revision Impact
1.2 Dearness Allowance	238.49	253.47	14.98	905.99	959.44	53.45	841.72	573.02	(-)-268.70
1.3 HRA	1.13	1.19	0.06	39.29	41.25	1.96	78.10	100.03	21.93
1.4 Allowances Perquisites	129.06	137.16	8.10	498.39	527.79	29.40	472.26	565.68	93.41
1.5 PRP/Ex Gratia	19.16	20.36	1.20	128.95	136.43	7.48	0.00	0.00	0.00
2.1 Super Annulation benefits	52.76	60.63	7.87	283.57	320.28	36.81	188.43	196.67	8.24
2.2 Gratuity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.3 Leave Encashment	19.54	66.55	47.01	742.48	944.44	201.96	209.80	432.86	233.06
<b>Total</b>	<b>658.72</b>	<b>856.95</b>	<b>198.23</b>	<b>3341.19</b>	<b>3950.31</b>	<b>609.12</b>	<b>2522.78</b>	<b>2930.30</b>	<b>407.53</b>
Net Employee Cost	658.72	856.95	198.23	3341.19	3950.31	609.12	2522.78	2930.30	407.53
Meghalaya Home Guard Employees	15.31	18.07	2.76	61.97	75.41	13.44	87.25	87.25	0.00
<b>Total Claim</b>	<b>674.04</b>	<b>875.02</b>	<b>200.98</b>	<b>3403.15</b>	<b>4025.72</b>	<b>622.57</b>	<b>2610.03</b>	<b>3017.56</b>	<b>407.53</b>

52. The Respondent, APDCL has submitted that the claim of the Petitioner for reimbursement of wage revision of employees and for Home Guards under Regulations 54 and 55 of the 2014 Tariff Regulations cannot be allowed and the Petitioner should file a separate petition with legal grounds to claim the same. The Petitioner in its rejoinder has clarified that the amount claimed is in accordance with the Commission's order dated 13.1.2016 in Petition No. 46/GT/2015.

53. As regards the claim of the Petitioner for additional O&M expenses of Rs.1231.08 lakhs on account of impact of wage revision from 1.1.2017 to 31.3.2019, the Commission vide ROP of the hearing dated 25.1.2022, directed the Petitioner to submit the following details:

*“(i) PRP/Incentive included in the wage revision impact claimed (year wise details duly certified by the Auditor);*

*“(ii) Comparative statement of the normative O&M expenses allowed to the station versus the actual audited O&M expenses for the period from 2014-15 to 2018-19;”*

54. In response, the Petitioner vide affidavit dated 14.8.2020, has submitted the details of actual O&M expenses as shown under:



(Rs. in lakh)

	Normative O&M expenses	Actual audited O&M expenses including Corporate Expenses
2014-15	6132.72	8609.04
2015-16	6540.18	9528.82
2016-17	6974.71	9254.98
2017-18	7438.11	12099.13
2018-19	7932.30	10405.31

55. Further, it is observed that in addition to ex-gratia charges and Performance Related Pay (PRP), filing fee, community development expense and RLDC Fees and Charges have also been included under O&M expenses for the 2014-19 tariff period as tabulated below:

(Rs in lakh)

Heads	2014-15	2015-16	2016-17	2017-18	2018-19
Ex-gratia	0.00	0.00	0.00	0.00	0.00
Performance Related Pay (PRP)/Performance Linked Incentive	188.00	179.00	77.00	115.00	12.00
Filing Fees	9.00	11.00	11.00	9.00	9.00
Community Development Expense	90.00	17.00	43.00	32.00	68.00
RLDC Fees and Charges	309.00	96.00	135.00	76.00	85.00
Interest on Income Tax of Earlier year	0.00	0.00	0.00	0.00	54.71
<b>Total</b>	<b>596.00</b>	<b>303.00</b>	<b>266.00</b>	<b>232.00</b>	<b>228.71</b>

56. As regards recovery of the impact of wage revision, the Statement of Objects and Reasons (SOR) to the 2014 Tariff Regulations provides 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.”*

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

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

58. First step is to compare the normative O&M expenses with the actual O&M expenses for the period from 2014-15 to 2018-19, commensurate to the period for which pay revision impact has been claimed. For like to like comparison, the components of O&M expenses like Productivity linked incentive, Performance Related Payment (PRP), Ex-gratia, Community development expenses, Filing Fees (separately recoverable) etc. which were not considered while framing the O&M expenses norms for the 2014-19 tariff period, have been excluded from the yearly actual audited O&M expenses. Having brought the normative O&M expenses and actual O&M expenses at same level, if normative O&M expenses for the period 2014-19 are higher than actual O&M expenses (normalized) for the same period, the impact due to pay revision (excluding PRP and ex-gratia) as claimed for the period is not admissible/ allowed as



the impact due to enhanced pay revision gets accommodated within the normative O&M expenses. However, if the normative O&M expenses for the period 2014-19 are less than the actual O&M expenses (normalized) for the same period, the pay revision impact (excluding PRP and ex-gratia) to the extent of under recovery or the pay revision impact (excluding PRP and ex-gratia), whichever is lower, is required to be allowed.

59. 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 which the pay revision impact has been claimed in this petition.

60. The following tables portray the comparison of normative O&M expenses vis a vis the actual O&M expenses (normalized) for the tariff period 2014-19 (on combined basis) commensurate with the impact of pay revision:-

*(Rs.in lakh)*

Year	Normative O&M expenses as per Regulation (A)	Audited actual O&M Expenses (B)	Exclusions (C)	Normalized Actual O&M Expenses (D) = (B)-(C)	Difference (E) = (D)- (A)
2014-15	6132.72	8609.04	596.00	8013.04	1880.32
2015-16	6540.18	9528.82	303.00	9225.82	2685.64
2016-17	6974.71	9254.98	266.00	8988.98	2014.27
2017-18	7438.11	12099.13	232.00	11867.13	4429.02
2018-19	7932.30	10405.31	228.71	10176.6	2244.30
<b>Total</b>	<b>35018.02</b>	<b>49897.28</b>	<b>1625.71</b>	<b>48271.57</b>	<b>13253.55</b>

61. From the above table, it is clear that the total normalized actual O&M expenses incurred by the Petitioner are more than the normative O&M expenses allowed for the period 2014-19. Further, from paragraph 54 above, it is observed that the Petitioner, has also claimed Performance Related Pay (PRP)/Ex-gratia, in its computation of





impact of wage revision. As per consistent stand adopted by the Commission, while working out and allowing the impact of pay revision, PRP/Ex-gratia is not to be considered. Therefore, the total amount of Rs.1.20 lakh in 2016-17 and Rs.7.48 lakh in 2017-18 has not been considered and the impact of wage revision of Rs.1222.40 lakhs (Rs.1231.08 lakh – Rs.1.20 lakh – Rs.7.48 lakh) has only been considered.

62. From the submission of the Petitioner, it is observed that the actual normalized O&M expenses, which also includes wage revision impact of Rs. 1222.40 lakh, is more than the normative O&M expenses allowed during the period 2014-19. Accordingly, considering the fact that the normative O&M expenses allowed to the generating station in terms of the 2014 Tariff Regulations for the period 2014-19, is lesser than the actual normalized O&M expenses, the impact of the wage revision amounting to Rs. 1222.40 lakh, as claimed by the Petitioner, excluding PRP, is allowed.

63. Accordingly, we, in exercise of the Power under Regulation 54 of the 2014 Tariff Regulations, Power to relax, allow the reimbursement of the impact of wage revision amounting to Rs. 1222.40 lakh, as additional O&M expenses, for the period 2016-19. The arrear payments on account of the wage revision impact is payable by the beneficiaries in twelve equal monthly installments, starting from the next bill, after issue of this order. Keeping in view the consumer interest, we as a special case, direct that no interest shall be charged by the Petitioner on the arrear payments on the wage revision impact allowed in this order. This arrangement, in our view, will balance the interest of both the Petitioner and the Respondents. Also, considering the fact that the impact of wage revision is being allowed in exercise of the power to relax, the expenses allowed are not made part of the O&M expenses and the consequent annual fixed charges determined in this order.



### **Interest on Working Capital**

64. Regulation 28(1)(c) of the 2014 Tariff Regulations provides as under:

*28. Interest on Working Capital:*

*(1) The working capital shall cover*

*(c) Hydro generating station including pumped storage hydroelectric generating station and transmission system including communication system:*

*(i) Receivables equivalent to two months of fixed cost;*

*(ii) Maintenance spares @ 15% of operation and maintenance expense specified in regulation 29; and*

*(iii) Operation and maintenance expenses for one month.”*

### ***Working Capital for Receivables***

65. Working Capital for Receivables equivalent to two months of capacity charges has been worked as under:

<i>(Rs.in lakh)</i>				
<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
1,674.67	1,834.27	1,998.05	2,024.02	2,107.54

### ***Working Capital for Maintenance Spares***

66. Working capital for Maintenance spares @ 15% of O&M expenses are worked out and allowed as under:

<i>(Rs.in lakh)</i>				
<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
919.91	981.03	1,046.21	1,115.72	1,189.85

### ***Working Capital for O&M Expenses***

67. Working capital for O&M expenses for 1 month for the purpose of working capital are as under:

<i>(Rs.in lakh)</i>				
<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
511.06	545.02	581.23	619.84	661.03

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

*“(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 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.”*



### ***Rate of Interest on Working Capital***

69. Interest on Working Capital has been calculated in terms of the above regulations. Also, in terms of Regulation 28(3) of the 2014 Tariff Regulations, the Bank Rate of 13.50% (Base Rate + 350 Basis Points) as on 1.4.2014 as claimed by the Petitioner, has been considered in calculation of tariff. Accordingly, Interest on Working Capital is worked out and allowed as under:

	<i>(Rs.in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Working Capital for O&M expenses (One month of O&M expenses)	511.06	545.02	581.23	619.84	661.03
Working Capital for Maintenance Spares (15% of O&M Expenses)	919.91	981.03	1,046.21	1,115.72	1,189.85
Working Capital for Receivables (2 months of annual fixed cost)	1,674.67	1,834.27	1,998.05	2,024.02	2,107.54
<b>Total Working Capital</b>	<b>3,105.64</b>	<b>3,360.32</b>	<b>3,625.49</b>	<b>3,759.58</b>	<b>3,958.41</b>
Rate of interest on working capital (%)	13.500%	13.500%	13.500%	13.500%	13.500%
<b>Interest on Working Capital</b>	<b>419.26</b>	<b>453.64</b>	<b>489.44</b>	<b>507.54</b>	<b>534.39</b>

### **Annual Fixed Charges**

70. Based on the above, the annual fixed charges allowed for the generating station for the period 2014-19 is summarized as under:

	<i>(Rs.in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	565.42	702.87	752.36	787.41	886.86
Interest on Loan	97.82	193.42	192.26	164.11	192.15
Return on Equity	2,832.80	3,115.53	3,579.55	3,246.96	3,099.56
Interest on Working Capital	419.26	453.64	489.44	507.54	534.39
O&M Expenses	6,132.72	6,540.18	6,974.71	7,438.11	7,932.30
<b>Total</b>	<b>10,048.03</b>	<b>11,005.64</b>	<b>11,988.32</b>	<b>12,144.13</b>	<b>12,645.25</b>

*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, in the order.*

### **Normative Annual Plant Availability Factor (NAPAF)**

71. Clause (4) of Regulation 37 of the 2014 Tariff Regulations provides for the Normative Annual Plant Availability Factor (NAPAF) for hydro generating stations



already in operation. Accordingly, the NAPAF of 79% has been considered for this generating station for the period 2014-19.

### **Design Energy**

72. The Commission in its order dated 13.1.2016 in Petition No. 46/GT/2015 had considered the annual Design Energy (DE) of 1186.14 million units for this generating station. This DE has been considered for this generating station for the period 2014-19 as per month-wise details below:

<b>Months</b>	<b>Design Energy (MU)</b>
April	58.03
May	148.80
June	144.00
July	148.80
August	148.80
September	144.00
October	118.30
November	54.72
December	56.54
January	56.54
February	51.07
March	56.54
<b>Total</b>	<b>1186.14</b>

73. The difference between the annual fixed charges determined by this order and the annual fixed charges recovered by the Petitioner in terms of the Commission's order dated 13.1.2013 in Petition No. 46/GT/2015, shall be adjusted in terms of Regulation 8 (13) of the 2014 Tariff Regulations.

### **Summary**

74. The summary of the annual fixed charges and the impact of wage revision allowed after truing up of tariff for the period 2014-19 is as under:

	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Fixed Charges	10048.03	11005.64	11988.32	12144.13	12645.25
Impact of Wage Revision			199.78	615.09	407.53

*(Rs.in lakh)*



75. Petition No. 370/GT/2020 is disposed in terms of the above.

**Sd/-**  
**(Pravas Kumar Singh)**  
**Member**

**Sd/-**  
**(Arun Goyal)**  
**Member**

**Sd/-**  
**(I.S. Jha)**  
**Member**

