CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 145/GT/2020

Coram:

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

Date of Order: 30th November, 2022

IN THE MATTER OF

Petition for revision of tariff for the period 2014-19 and determination of tariff for the period 2019-24 in respect of Chamera-I Hydroelectric Power Station (540 MW).

AND

IN THE MATTER OF

NHPC Limited
NHPC Office Complex, Sector-33,
Faridabad (Haryana)- 121003 **….Petitioner**

Vs

1. Punjab State Power Corporation Limited,
   The Mall, Near Kali Badi Mandir,
   Patiala - 147 001 (Punjab)

2. Haryana Power Purchase Centre
   Shakti Bhawan, Sector - 6
   Panchkula-134 109 (Haryana).

3. BSES Rajdhani Power Limited,
   BSES Bhawan, Nehru Place,
   New Delhi-110 019.

4. BSES Yamuna Power Limited,
   Shakti Kiran Building, Karkardooma,
   Delhi-110 072.

5. Tata Power Delhi Distribution Limited,
   33 kV Sub-Station Building, Hudson Lane,
   Kingsway Camp, New Delhi-110 009.

6. Himachal Pradesh State Electricity Board,
   Vidyut Bhawan, Kumar House,

Shimla - 171 004 (Himachal Pradesh).

7. Uttar Pradesh Power Corporation Limited,
Shakti Bhavan, 14, Ashok Marg,
Lucknow - 226 001 (Uttar Pradesh).

8. Ajmer Vidyut Vitaran Nigam Limited,
Old Powerhouse, Hatthi Bhatta,
Jaipur Road, Ajmer - 305 001 (Rajasthan)

9. Jaipur Vidyut Vitaran Nigam Limited,
Vidyut Bhawan, Janpath, Jaipur - 302 005

10. Jodhpur Vidyut Vitaran Nigam Limited,
New Powerhouse, Industrial Area,
Jodhpur - 342 003 (Rajasthan).

11. Uttaranchal Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun – 248 001 (Uttarakhand).

12. Engineering Department,
1st floor, UT Secretariat, Sector 9-D, Chandigarh – 160 009.

13. Power Development Department,
New Secretariat, Jammu -180 001 (J&K) **….Respondents**

Parties Present:

Shri Rajiv Shankar Dwivedi, Advocate, NHPC
Shri S. P. Rathour, NHPC
Shri Piyush Kumar, NHPC
Shri R.B. Sharma, Advocate, BRPL
Ms. Megha Bajpeyi, BRPL
Shri Sachin Dubey, Advocate, BYPL
Shri Mohit Mudgal, Advocate, BYPL
Shri Abhishek Srivastava, BYPL
Shri Sameer Singh, BYPL

ORDER

The Petitioner, NHPC Limited has filed the petition for truing up of tariff of Chamera-I Hydroelectric Power Station, 540 MW (3 x 180 MW) (hereinafter referred to as "the generating station") for the 2014-19 tariff period in terms of Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short "the 2014 Tariff Regulations") and for determination of tariff of the generating station for the 2019-24 tariff period, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short 'the 2019 Tariff Regulations').

Background

2. The generating station with a total capacity of 540 MW comprises of three units of 180 MW each, which were all declared under commercial operation (COD) on 1.5.1994.

3. The Commission vide order dated 4.9.2015 in Petition No. 237/GT/2014 had revised the annual fixed charges of the generating station for the periods 2004-09 and 2009-14 and had also determined the tariff of the generating station for the 2014-19 tariff period, considering the directions contained in the judgment of the Appellate Tribunal for Electricity (APTEL) dated 5.2.2008 in Appeal No. 84/2007 and the Tariff Regulations. Thereafter, considering the impact of the revised debt-equity ratio on the annual fixed charges for the period 2009-12, the tariff of the generating station for the 2009-14 period was revised vide corrigendum order dated 4.12.2015 in Petition No. 237/GT/2014, as under:

(Rs. in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Return on Equity	14822.22	14673.86	14510.79	12462.63	13223.77
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	4137.08	4166.31	4176.82	4186.54	4200.73
Interest on Working Capital	840.24	863.22	8869.96	872.92	919.17
O&M Expenses	8898.02	9406.98	9945.06	10513.92	11115.31
Total	**28697.57**	**29110.37**	**29519.63**	**28036.02**	**29458.98**

4. It was also observed in the said order dated 4.12.2015, that the annual fixed charges determined for the generating station for the period 2014-19 by order dated 4.9.2015, shall be revised at the time of truing-up of tariff in terms of the provisions of the 2014 Tariff Regulations.

Present Petition

5. In terms of Regulation 8 of the 2014 Tariff Regulations, the Petitioner has filed the present petition for truing-up of tariff for the period 2014-19, based on the actual additional capital expenditure incurred for the 2014-19 tariff period. Accordingly, the capital cost and annual fixed charges claimed by the Petitioner in the present petition is as under:

Capital Cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	204415.75	204984.42	205475.48	205661.81	206305.11
Add: Addition during the year	395.14	551.47	246.84	645.40	2770.94
Less: De-capitalisation during the year	13.53	62.22	60.51	24.81	948.66
Less: Reversal during the year	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year	187.07	1.81	0.00	22.70	90.51
Closing capital cost	**204984.42**	**205475.48**	**205661.81**	**206305.11**	**208217.90**
Average capital cost	204700.09	205229.95	205568.65	205983.46	207261.50

Annual Fixed Charges claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	4222.52	4256.96	4283.19	4317.27	4422.52
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	13381.04	13447.01	13362.09	13478.20	13612.45
Interest on Working Capital	994.36	1035.82	1076.21	1124.18	1177.17
O&M Expenses	10664.95	11373.53	12129.19	12935.05	13794.46
Total annual Fixed Charges	**29262.87**	**30113.31**	**30850.68**	**31854.71**	**33006.61**

6. The matter was heard on 17.3.2021 and the Commission vide Record of Proceedings (ROP) had sought certain additional information and the Petitioner has filed the same and revised Form 9B(i) i.e., decapitalisation, after serving copy to the Respondents. The Respondent UPPCL vide affidavit dated 14.7.2020, Respondent BRPL vide affidavit dated 1.4.2021 and Respondent BYPL vide affidavit dated 9.7.2021 have filed their replies in the matter. The Petitioner has filed its rejoinder to

the aforesaid replies vide its affidavits dated 19.4.2021, 20.5.2021 and 5.8.2021 respectively. Thereafter, the petition was heard on 4.1.2022, through virtual conferencing and the Commission after hearing the parties, reserved its order in the petition. Taking into consideration the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner, in this petition, on prudence check, as stated in the subsequent paragraphs.

Capital Cost

7. 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."*

8. The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed the closing capital cost of Rs.204415.75 lakh as on 31.3.2014. The same has been considered as the opening capital cost as on 1.4.2014, in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

Additional Capital Expenditure

9. 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 undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;

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

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

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

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

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

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

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

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

10. The net additional capital expenditure claimed by the Petitioner for the period 2014-19 are as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19	Total
568.67	491.06	186.33	643.30	1912.79	3802.15

11. It is noticed that the Petitioner, in addition to the compliance made in terms of ROP, has furnished revised Form 9A, in respect of the additional capital expenditure claimed earlier along with revision of the de-capitalized items claimed. Based on this, the projected additional capital expenditure allowed for the period 2014-19, by order dated 4.9.2015 in Petition No. 237/GT/2014 and the actual additional capital expenditure claimed in the present petition, are summarized below:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Projected additional capital expenditure allowed vide order dated 4.9.2015 in Petition No. 237/GT/2014	581.62	4378.76	67.33	63.72	20.00	5111.43
Actual additional capital expenditure claimed	567.44	490.68	170.88	646.91	2683.55	4559.45

12. The Petitioner, has also submitted that in addition to the additional capital expenditure admitted by order dated 4.9.2015, certain additional capital expenditure which were not projected earlier, were incurred by the Petitioner, due to site specific requirements, for the successful and efficient operation of the generating station and the same has been included as a part of capital cost, for the purpose of tariff.

13. The Respondent, UPPCL has submitted that the additional capital expenditure claimed which are in the nature of O&M expenses may not be allowed and the items which have been allowed under schemes, shall be allowed in the year, when the said items were put to use and not when the same were procured. The respondent has stated that the Petitioner may be directed to specify the year of capitalization of the asset in the books of accounts, duly certified by auditor, and also submit documentary evidence in support of the claims. In response, the Petitioner has clarified that the decision as to whether an expenditure is of a capital nature or O

& M expenses, is decided in terms of the Accounting Standards and is also certified by statutory auditors, and not by any Company. It has also submitted that the assets / items have been installed in various locations in the same year of their purchase and has accordingly been capitalized in books of account. The Petitioner has also furnished the relevant documents, in support of, its claim towards additional capital expenditure. In view of this, the objections of the Respondent are not accepted.

14. The Respondents, BRPL and BYPL have submitted that the additional capital expenditure claimed under Regulation 14(3)(viii) of the 2014 Tariff Regulations, shall be admitted, only if, such a claim is on account of damage caused by natural calamities and due to geological reasons, accompanied with expenditure due to additional work necessary for successful and efficient plant operation. It has accordingly submitted that since the claim of the Petitioner is not referable to such reasons, the same are liable to be rejected. They have also stated that the Petitioner is required to de-capitalize all assets which are not in use and file the requisite information on affidavit. In response, the Petitioner has submitted that it has linked the expenditure incurred due to additional work which has become necessary for successful and efficient plant operation, on account of damages caused by natural calamities and due to geological reasons and claimed the same under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The Petitioner has further submitted that it has furnished all relevant information towards replacement of assets including the information/documents, which were inadvertently not submitted in the original petition, but submitted in compliance of ROP of hearing dated 17.3.2021.

15. We have examined the matter. In our view, Regulation 14(3)(viii) of the 2014 Tariff Regulations provides for additional capitalization of expenditure which has become necessary on account of damage caused by natural calamities and due to

any additional work and has become necessary for successful and efficient plant operation. Accordingly, based on the reconciliation, the year-wise admissibility of the additional capital expenditure under various heads is discussed in the subsequent paragraphs.

2014-15

(Rs. in lakh)

<table>
<tr><th>Sl. No.</th><th>Item</th><th>Regulation</th><th>Amount claimed</th><th>Justification</th><th>Reason for admissibility/ non-admissibility</th><th>Amount allowed</th></tr>
<tr><td colspan="7">Items allowed by the Commission in order dated 4.9.2015 in Petition No. 237/GT/2014</td></tr>
<tr><td>1</td><td>Security and Surveillance System</td><td>14(3)(iii)</td><td>27.19</td><td>The Commission had allowed projected additional capital expenditure towards Security and Surveillance System in phase manner as stated below:

(Rs. In lakh)
<table><tr><th>Year</th><th>Allowed</th></tr><tr><td>2014-15</td><td>10.00</td></tr><tr><td>2015-16</td><td>15.00</td></tr><tr><td>2016-17</td><td>15.00</td></tr><tr><td>2017-18</td><td>15.00</td></tr><tr><td>2018-19</td><td>15.00</td></tr><tr><td>Total</td><td>70.00</td></tr></table>

In year 2014-15 following items purchased:
Security: Hand Held Metal Detector (Rs.0.13 lakh), Dragon Light with Charger (Rs.0.36 lakh) Safety Belt (Full Body Harness)- Rs.0.17 lakh, Lifebuoy Circular (Approved by The Mercantile Marine Department)- Rs.0.83 lakh, Life Jacket for Adults (Approved by The Mercantile Marine Department)- Rs.0.24 lakh, Boundary wall of 20 B type quarters- Rs.13.7 lakh, Store room and toilets in guest house – Rs.3.7 lakh. Total cost of security- Rs.19.13 lakh.
Surveillance: Fixed Network Camera (Rs.5.62 lakh-4 no.) were installed in workshop, power house and as on date they are obsolete. They are replaced with new cameras purchased in the year 2020-21, PTZ Network Camera (Rs.3.7 lakh- 2 no.) were installed in workshop, power house and as on date they are obsolete. They are replaced with new cameras</td><td>The actual additional capital expenditure claimed by the Petitioner under this head, on cash basis, is as follows:

(Rs. In lakh)
<table><tr><th>Year</th><th>Claimed</th></tr><tr><td>2014-15</td><td>27.19</td></tr><tr><td>2015-16</td><td>7.50</td></tr><tr><td>2016-17</td><td>14.76</td></tr><tr><td>2017-18</td><td>48.55</td></tr><tr><td>2018-19</td><td>9.86</td></tr><tr><td>Total</td><td>107.86</td></tr></table>
(The claim on accrual basis in 2014 – 15 is Rs.29.00 lakh and the total claim on accrual basis during the period 2014-19 is Rs.109.67 lakh). It is noticed that the Petitioner has claimed Rs. 111.45 lakh towards security and surveillance during the period 2019-24 tariff period.

It is pertinent to mention that the Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed an amount of Rs. 70.00 lakh during the period 2014-19 towards installation of CCTV, water scanners, security devices such as HHMD, Dragon lights etc,

The Petitioner has claimed Rs.27.19 lakh, on cash basis, towards Security and Surveillance System in 2014–15 which includes Boundary Wall of 20, B-type quarters of Rs.11.89 lakh (accrual basis for Rs.13.70 lakh) and Store Room and Toilets in guest house for Rs. 3.70 lakh, which are new items and do not pertain to security and surveillance of the</td><td>2.28</td></tr>
</table>

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<tr><th>Sl. No.</th><th>Item</th><th>Regulation</th><th>Amount claimed</th><th>Justification</th><th>Reason for admissibility/ non-admissibility</th><th>Amount allowed</th></tr>
<tr><td></td><td></td><td></td><td></td><td>purchased in the year 2020-21 and Finger Print Based Attendance Recording System (Rs.0.27 lakh), Single Port midspan for power over ethernet- Rs.0.28 lakh. Total cost of Surveillance - Rs.9.87 lakh.

Majority of cost increased against admitted cost is on account of expenditure on above items. Power Station is situated at the border of Himachal Pradesh and Jammu & Kashmir, thus, there is always a threat perception to the Power Station, therefore, strengthening of the security and surveillance of the power station all the assets were required on urgent basis.</td><td>plant. The Petitioner has also not furnished any supporting documents to substantiate its claim under the Regulation 14(3)(iii) of 2014 Tariff Regulations. It is also observed that the Petitioner has claimed Rs.9.32 lakh towards cameras (fixed network camera - Rs.5.62 lakh and PTZ network camera - Rs. 3.7 lakh) purchased in the year 2020–21. Accordingly, the claim of Rs.24.91 lakh towards Boundary wall of 20 quarters, guest house related expenses and CCTV is not allowed.

Considering the above, an additional capital expenditure of Rs.2.28 lakh (Rs.27.19 lakh - Rs.11.89 lakh - Rs.3.70 lakh - Rs.9.32 lakh)- is only allowed towards Security & Surveillance in 2014–15. under Regulation 14(3) (iii) of the 2014 Tariff Regulations.</td><td></td></tr>
<tr><td>2</td><td>Purchase of Hospital Equipment</td><td>14(3)(viii)</td><td>1.39</td><td>The Commission had allowed projected additional capital expenditure towards Hospital Equipment in phase manner as stated below:

(Rs. In lakh)
<table><tr><th>S.No.</th><th>Year</th><th>Allowed</th></tr><tr><td>1</td><td>2014-15</td><td>2.00</td></tr><tr><td>2</td><td>2015-16</td><td>0.45</td></tr><tr><td>3</td><td>2016-17</td><td>0.00</td></tr><tr><td>4</td><td>2017-18</td><td>0.00</td></tr><tr><td>5</td><td>2018-19</td><td>0.00</td></tr><tr><td></td><td>Total</td><td>2.45</td></tr></table>
In Justification, the Petitioner has submitted that the generating station is located in very remote location (100 KM from Pathankot having requisite medical facility), no other health facility is available nearby. Therefore, all the items are essential and life saving for treatment of patients. The Petitioner has further submitted list of Hospital equipment. The Petitioner has submitted that all the mentioned assets are specific and not inter-dependent for its put-to-use/utilization.</td><td>The actual additional capital expenditure claimed by the Petitioner towards the said asset, on cash basis, is as under:

(Rs. In lakh)
<table><tr><th>Year</th><th>Claimed</th></tr><tr><td>2014-15</td><td>1.39</td></tr><tr><td>2015-16</td><td>4.23</td></tr><tr><td>2016-17</td><td>6.74</td></tr><tr><td>2017-18</td><td>6.21</td></tr><tr><td>Total</td><td>18.57</td></tr></table>
The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014, had allowed an amount of Rs.2.45 lakh (Rs. 2 lakh in 2014 – 15 and Rs.0.45 lakhs in 2015–16) during the period 2014–19 for the said asset for the benefit of employees working in the generating station, which in turn will ensure the efficient operation of the generating station. However, the Petitioner has claimed an amount of Rs.18.57 lakh during the period 2014–19. In addition to this, the Petitioner has claimed Rs.22.30 lakh, Rs.3.70 lakh and Rs.8.70 lakh during the period 2019–24 towards hospital</td><td>1.39</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Item</th><th>Regulation</th><th>Amount claimed</th><th>Justification</th><th>Reason for admissibility/ non-admissibility</th><th>Amount allowed</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>equipment’s, purchase of hospital equipment’s and replacement of hospital equipment’s, respectively.

It is observed that the list of equipment’s furnished by the Petitioner which pertaining to head “hospital equipment” which is already admitted by commission . Considering the above, the actual additional capital expenditure claimed by the Petitioner is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.</td><td></td></tr>
<tr><td>3</td><td>Replacement of Hospital Equipment</td><td>14(3)(viii)</td><td>0.99</td><td>The Commission had allowed projected additional capital expenditure towards capitalisation in respect of Hospital Equipment on replacement basis in phase manner as stated below:

(Rs. In lakh)
<table>
<tr><th>S. No.</th><th>Year</th><th>Allowed</th></tr>
<tr><td>1</td><td>2014-15</td><td>1.00</td></tr>
<tr><td>2</td><td>2015-16</td><td>1.55</td></tr>
<tr><td>3</td><td>2016-17</td><td>12.00</td></tr>
<tr><td>4</td><td>2017-18</td><td>16.00</td></tr>
<tr><td>5</td><td>2018-19</td><td>0.00</td></tr>
<tr><td></td><td>Total</td><td>30.55</td></tr>
</table>

In the year 2014-15, 6 channel ECG Machine was purchased on replacement basis.

All the mentioned assets are specific and not inter-dependent for its put-to-use/utilization. None of these assets came into the purview of implementation in phase manner. The Hospital equipment were purchased on replacement basis and new equipment were purchased for strengthening medical facility of hospital as power station is located in very remote location (100 KM from Pathankot having requisite medical facility) no other health facility is available nearby. All the items are essential and life saving for treatment of patients.

The assumed deletion of the same considered at S No. 1 in form 9B1.</td><td>The actual additional capital expenditure claimed by the Petitioner towards the said asset on cash basis is as follows:

(Rs. In lakh)
<table>
<tr><th>S. No.</th><th>Year</th><th>Claimed</th></tr>
<tr><td>1</td><td>2014-15</td><td>0.99</td></tr>
<tr><td>2</td><td>2015-16</td><td>2.90</td></tr>
<tr><td>3</td><td>2016-17</td><td>13.95</td></tr>
<tr><td>4</td><td>2017-18</td><td>1.10</td></tr>
<tr><td>5</td><td>2018-19</td><td>0.00</td></tr>
<tr><td></td><td>Total</td><td>18.94</td></tr>
</table>

(The claim on accrual basis in 2016– 17 is Rs.1.51 lakh and the total claim on accrual basis during the period 2014–19 is Rs.20.45 lakh).

The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed Rs.30.55 lakh during the period 2014–19 as the said asset is for the benefit of employees working in the generating station which in turn will ensure the efficient operation of the generating station, wherein, the Petitioner.

In addition to above, the Petitioner has claimed Rs.22.30 lakh, Rs.3.70 lakhs and Rs. 8.70 lakh during the period 2019–24 towards hospital equipment’s, purchase of hospital equipment’s and replacement of hospital equipment’s

Considering that the above items pertain to head “replacement of hospital equipment” head “hospital equipment” which is</td><td>0.99</td></tr>
</table>

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
					already admitted by commission, the actual additional capital expenditure claimed by the Petitioner is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. Further, the decapitalization of old assets as claimed by the Petitioner is considered under 'Decapitalization'.	
4	Replacement of 40 MT Hydraulic Crane	14(3)(viii)	158.77	1. The Commission allowed capitalisation vide its order dated 4.9.2015 in Petition no. 237/GT/2014. Projected amount was based on budgetary offer / executed work. However, actual amount is based on price discovered through tendering & hence justified. 2. The de-capitalization of the assets has been claimed under assume deletion at Sl. No. 2 in year 2014-15 in Form 9 B(i) in tariff petition. The O&M Gross Block of the de-capitalized crane is Rs.232724/- and date of put-to-use was 15th December 1986. 3. It is confirmed that replacement has been done due to exhausted life. The equipment is essential for smooth operation and maintenance of power station which is deployed for loading and unloading of Heavy equipment etc at Power House/dam. The de-capitalization of the assets has been claimed under assumed deletion at S. No. 2 in Form 9 B(i) of the year 2014-15.	The Commission had allowed Rs.177.00 lakh towards Replacement of 40MT Hydraulic Crane vide order dated 4.9.2015 in 2014-15. Considering the above and that the subject item / additional work is required for efficient and successful operation, the actual additional capital expenditure claimed by the Petitioner is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. Further, the decapitalization of old asset claimed by the Petitioner is considered under 'Decapitalization'.	158.77
5	Replacement of 1 MVA DG Set at Switchyard and addition of 500 kVA DG set for DAM	14(3)(viii)	166.26	1.The Commission had allowed additional capital expenditure vide its order dated 4.9.2015 in Petition No. 237/GT/2014. Projected amount was based on budgetary offer / executed work. However, actual amount is based on price discovered through tendering & hence justified. old equipment is in working condition but with less efficiency and also in service along with new equipment. 2. The mentioned asset is utilized / put-to-use in the	The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed Rs.160.00 lakh towards the Replacement of 1 MVA DG Set at Switchyard and addition of 500 kVA DG set for DAM in 2014-15. Considering the above and since the said work / item is required for the efficient and successful operation, of the generating station, the actual additional capital expenditure incurred by the Petitioner is **allowed** under	166.26

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				year of Capitalization. 3. The power house being underground, there is high dependency on DG set in case of power failure for its safe operation. Further, power station provides black start support to the grid and reliability of auxiliary power is essential. Also, auxiliary power facilitate timely start/stop of power station thereby avoiding generation loss. The existing DG set were installed prior to commissioning of the power station and their efficiency had reduced after continuous use. Hence the new DG set was purchased for switch yard and was put in service along with the existing DG set so that reliability of auxiliary power can be ensured. Further, in respect of 500 KVA DG set, it is to mention that feeders supplying power to dam through hilly terrain prone to land slide & tree falls. Any disruption in supply takes long time for restoration due to difficult terrain. At dam only one 320KVA DG set was available, in the event of failure of which there was no stand by DG set available which would pose threat in the operation of different component of dams. This situation would have been more acute during monsoon season when operation of spill way and under sluice gates take place. Therefore, an additional DG set was very much required. Assumed deletion of item is shown in 9B(i) at sl. no. 4	Regulation 14(3)(viii) of the 2014 Tariff Regulations. Though the Petitioner has submitted that the decapitalization of asset has been claimed in Form 9B(i), the same is not found/ available. Accordingly, the decapitalization of old assets has been determined under 'Assumed Deletion'.	
6	Replacement of 5 MVA Substation Transformer	14(3)(viii)	27.24	1. The Commission allowed capitalisation vide its order dated 4.9.2015 in Petition No.237/GT/2014. Projected amount was based on budgetary offer / executed work. However, actual amount is based on price discovered through tendering & hence justified. 2. The mentioned asset is utilized / put-to-use in the year of Capitalization. 3. The old transformer was	The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed Rs.28.00 lakh towards the Replacement of 5 MVA Substation Transformer in 2014-15. Considering the above and since the said work / item is required for the efficient and successful operation of the generating station, the actual additional capital	27.24

<table>
<tr><th>Sl. No.</th><th>Item</th><th>Regulation</th><th>Amount claimed</th><th>Justification</th><th>Reason for admissibility/ non-admissibility</th><th>Amount allowed</th></tr>
<tr><td></td><td></td><td></td><td></td><td>manufactured in 1977. There was one more transformer of similar age. In case failure of any transformer the total load was expected to be shared by other transformer. Therefore, replacement was done due to exhausted life of older transformer and also to increase the reliability of the system which was required to feed power supply to the Power House auxiliaries.
4. The assumed deletion of this item is shown in form 9B(i) 14-15 Sl. No.3.</td><td>expenditure claimed by the Petitioner is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. Further, the decapitalization of old asset claimed by the Petitioner is considered under ‘Decapitalization’.</td><td></td></tr>
<tr><td></td><td>Sub-Total (A)</td><td></td><td>381.84</td><td></td><td></td><td>356.93</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="7">Capitalization claimed against items admitted in 237/GT/2014</td></tr>
<tr><td>7</td><td>Addition of OFC Network and Wireless Connectivity of LAN at CPS-I</td><td>14(3)(viii)</td><td>2.73</td><td>The Commission had allowed projected additional capital expenditure towards addition of OFC Network and Wireless Connectivity of LAN at CPS-I in phase manner as stated below:
(Rs. In lakh)
<table>
<tr><th>S. No.</th><th>Year</th><th>Allowed</th></tr>
<tr><td>1</td><td>2014-15</td><td>0.00</td></tr>
<tr><td>2</td><td>2015-16</td><td>10.00</td></tr>
<tr><td>3</td><td>2016-17</td><td>0.00</td></tr>
<tr><td>4</td><td>2017-18</td><td>10.00</td></tr>
<tr><td>5</td><td>2018-19</td><td>0.00</td></tr>
<tr><td></td><td>Total</td><td>20.00</td></tr>
</table>
1. In order to strengthen the communication in the underground Power House Wireless Access Point installed with the additional FI Rs.2.73 Lacs in the year 2014-15. Also, to record the CCTV footage 16 TB NAS Installed additionally in year 2015-16.

2. All the mentioned assets are specific and not inter-dependent for its put-to-use/utilization. None of these assets came into the purview of implementation in phase manner. All the mentioned assets are utilized / put-to-use in the year of Capitalization.</td><td>The actual additional capital expenditure claimed by the Petitioner during the period 2014 – 19 for the said asset on cash basis is as under:
(Rs. In lakh)
<table>
<tr><th>S. No.</th><th>Year</th><th>claimed</th></tr>
<tr><td>1</td><td>2014-15</td><td>2.73</td></tr>
<tr><td>2</td><td>2015-16</td><td>0.83</td></tr>
<tr><td>3</td><td>2016-17</td><td>10.54</td></tr>
<tr><td>4</td><td>2017-18</td><td>7.62</td></tr>
<tr><td>5</td><td>2018-19</td><td>0.00</td></tr>
<tr><td></td><td>Total</td><td>21.72</td></tr>
</table>
(The claim on accrual basis in 2017 – 18 is Rs. 9.53 lakh and the total claim on accrual basis during the period 2014–19 is Rs. 23.63 lakh).

The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed an amount of Rs. 20 lakh (Rs.10 lakh in 2015–16 and Rs.10 lakh in 2017– 18) during the period 2014–19 for the said asset.
Considering the above and since the said work is required for the efficient and successful operation of the generating station, the actual additional capital expenditure as claimed by the Petitioner is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.</td><td>2.73</td></tr>
<tr><td>8</td><td>Equipment for compliance of OHSAS and</td><td>14(3)(viii)</td><td>2.70</td><td>The Commission had allowed projected additional capital</td><td>The actual additional capital claimed by the Petitioner for the said asset</td><td>2.70</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Item</th><th>Regulation</th><th>Amount claimed</th><th>Justification</th><th>Reason for admissibility/ non-admissibility</th><th>Amount allowed</th></tr>
<tr><td></td><td>environment policy requirement</td><td></td><td></td><td>expenditure towards Equipment for compliance of OHSAS and environment policy requirement in phase manner as stated below:

(Rs. In lakh)
<table>
<tr><th>S.No.</th><th>Year</th><th>Allowed</th></tr>
<tr><td>1</td><td>2014-15</td><td>0.00</td></tr>
<tr><td>2</td><td>2015-16</td><td>12.00</td></tr>
<tr><td>3</td><td>2016-17</td><td>5.00</td></tr>
<tr><td>4</td><td>2017-18</td><td>5.00</td></tr>
<tr><td>5</td><td>2018-19</td><td>5.00</td></tr>
<tr><td></td><td>Total</td><td>27.00</td></tr>
</table>

In year 2014-15 following items purchased:
1.Ionic Air Purifier, Water Cooler 120 Ltr, Water Purifier RO Machine Aqua guard 50ltr Capacity.
2. Reason for increase in cost are strengthening of water supply system (mainly due to construction new duty room with storage of chemicals at main pump house captalised in the year 2015-16- Rs.5.6 lakh) purchase of water coolers-40/80 model-Rs.1.35 lakh, Storage water coolers purifier- Rs.1.82 lakh, and 500 LPH Automatic water filtration plant with UF etc-Rs.1.37 lakh) capitalised in 2018-19 for providing potable water in power station and replacement of old fire extinguishers and purchase of fire extinguishers as per requirement of safety audits of power station.
2. All the mentioned assets are specific and not inter-dependent for put-to-use/ utilization. None of these assets came into the purview of implementation in phase manner. All the mentioned assets are utilized / put-to-use in the year of capitalization.</td><td>on cash basis is as under:
(Rs. In lakh)
<table>
<tr><th>S. No.</th><th>Year</th><th>Claimed</th></tr>
<tr><td>1</td><td>2014-15</td><td>2.70</td></tr>
<tr><td>2</td><td>2015-16</td><td>19.49</td></tr>
<tr><td>3</td><td>2016-17</td><td>1.99</td></tr>
<tr><td>4</td><td>2017-18</td><td>3.24</td></tr>
<tr><td>5</td><td>2018-19</td><td>10.96</td></tr>
<tr><td></td><td>Total</td><td>38.37</td></tr>
</table>

(The claim on accrual basis in 2017 – 18 is Rs. 3.53 lakh and the total claim on accrual basis during the period 2014–19 is Rs. 38.67 lakh).

The Petitioner has claimed various equipment's under the subject head, but has not furnished the segregated cost items claimed under this head and some of items claimed are in the nature of replacement.

It is noticed that the Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed Rs.27.00 lakh (Rs.12 lakh in 2015–16, Rs.5.00 lakh in 2016– 17, Rs.5.00 lakh in 2017–18 and Rs.5.00 lakh 2018–19) during the period 2014–19 towards various equipment such as water purification system, waste water disposal and treatment, air / water / soil pollution control and mitigation equipment etc, Accordingly, the claim of the Petitioner is allowed.</td><td></td></tr>
<tr><td></td><td>Sub-Total (B)</td><td></td><td>5.43</td><td></td><td></td><td>5.43</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="7">Capitalization claimed in addition to items admitted in Petition No.237/GT/2014</td></tr>
<tr><td>9</td><td>Payment to Land oustees against Order or Decree of a Court of Law;</td><td>14(3)(i)</td><td>0.90</td><td>Payment made against order of D.C. Chamba in respect of enhancement of Land Compensation for acquired land as per order no. RRO/CBA/Cash File/CHEP-i/2014-7009 dated 27th October, 2014, according to the provisions</td><td>It is noticed that the Petitioner has submitted that in compliance to order of Collector and Land Acquisition, Chamba, a total amount of Rs.455.94 lakh was paid to the Land Oustees, as enhanced Land compensation for the</td><td>0.90</td></tr>
</table>

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				of R&R Scheme by the Govt. of HP for providing rehabilitation benefits to the affected/displaced families of Chamera Power Station-I. Detailed background note and Supporting document are enclosed at Appendix A/2.	period 2014–19 (Rs.0.90 lakhs in 2014-15, Rs.351.25 lakh in 2015–16, Rs.32.49 lakh in 2016–17, Rs.66.49 lakh in 2017–18 and Rs.4.81 lakh in 2018–19). Since the expenditure incurred is based on the orders of the District Administration, the claim of the Petitioner is **allowed** under Regulation 14(3)(i) of the 2014 Tariff Regulations.	
10	Dry Well Temperature Calibrator System	14(3)(viii)	6.97	1. Dry Well Temperature Calibrator System was used in power house for calibration of Temperature sensors in Thrust bearing, Guide bearings, TGB, TGB oils, UGB oils of Generating unit and in Transformers. Earlier the calibration was carried out with hot oil & thermometer which was not very efficient method of calibration. Latest technology with digital display gives better accuracy and result. 2.The calibrator is to be used for calibration of TSDs and RTDs installed for temperature sensing and signalling of various components of the generating units (bearings, transformers, cooling system etc.). Accurate and reliable sensing of the sensors not only helps in safe operation of the units but it is also required for protection of the components in case of faults which helps in avoiding outages, damages to the components and generation loss.	The additional capital expenditure claimed is minor in nature and therefore **not allowed** in terms of the first proviso of Regulation 14(3) of the 2014 Tariff Regulations.	0.00
	Sub-Total (C)		**7.87**			**0.90**
	Total amount claimed (A+B+C)		**395.14**			
	Total amount allowed					**363.26**

2015-16

(Rs. in lakh)

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
Items allowed by the Commission in order dated 4.9.2015 in Petition No. 237/GT/2014						
1	Security Fencing for	14(3)(viii)	84.17	The Commission allowed additional capital	The Commission vide its order dated 4.9.2015 in	84.17

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
	Switchyard			expenditure vide its order dated 4.9.2015 in Petition No.237/GT/2014. Projected amount was based on budgetary offer / executed work. However, actual amount is based on price discovered through tendering & hence justified.	Petition No.237/GT/2014 had allowed Rs.113.00 lakh towards Security Fencing for Switchyard in 2015-16. In view of this and considering the fact that the additional work is necessary for the efficient and successful operation of the plant, the actual additional capital expenditure claimed by the Petitioner is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	
2	Security and Surveillance System	14(3)(iii)	7.50	The details are provided at S. No.1 of the year 2014–15. In the year 2015-16 the following expenses incurred. **Surveillance** - Security Surveillance system Vivotek IP Camera & NRV -Rs 0.89 lacs were installed at police check post and as on date they are obsolete. They are replaced with new camera purchased in the year 2020-21, finger print based attendance recording system- Rs.0.48 lakh, COSEC GE Platform-Rs 0.42 lakh, Driver for ESS, COSEC-Rs 0.45 lacs VEGA FAX Biometric reader with Battery backup-Rs 3.62 lac used attendance and are in operation, Horizontal Double mounted Siren 3 phase audible range 16 KM and 10 HP-Rs 1.64 lacs. Total cost of Surveillance - Rs.7.5 lacs	The item has been dealt with in item no. 1 in 2014-15. It is observed that the Petitioner has claimed Rs. 0.89 lakh towards cameras purchased in 2020-21. Accordingly, an, expenditure of **Rs. 6.61 lakh (Rs 7.50-Rs 0.89) is allowed** towards Security and Surveillance in 2015 –16 under Regulation 14(3)(iii) of the 2014 Tariff Regulations.	6.61
3	Addition of OFC Network and Wireless Connectivity of LAN at CPS-I	14(3)(viii)	0.83	The details are provided at item no. 7 in the year 2014-15.	The item has been dealt with in item no. 7 in 2014-15. In this regard, it is noted that the expenditure claimed is for 16TB hard disk to store the recordings in CCTV. Accordingly, the expenditure claimed by the Petitioner is **allowed**.	0.83
4	Equipment for compliance of OHSAS and environment policy requirement	14(3)(viii)	19.49	The details are provided at item no. 8 in the year 2014-15. In year 2015-16 following items purchased: Fire Extinguisher, Centrifugal Water Pump Set, Air Cooled Diesel Engine, TDS Meter, Digital Ph Meter, Water Purifier, Pressure Water Booster Pump, Chlorine, Free Ultra High Range Portable Photometer, Mineral Ro	The item is already dealt at item no. 8 in the year 2014-15. Accordingly, the additional capital expenditure claimed in 2015-16 is **allowed.**	19.49

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				Water Purifier, Storage Water Cooler Cum Purifier with Uv Technology 1. The room for chemicals for pump house filtration plant for drinking water 2. Equipment Required for safe Drinking water to Colony and Non-residential Building. 3.Reason for increase in cost are strengthening of water supply system (mainly due to construction new duty room with storage of chemicals at main pump house capitalised in the year 2015-16- Rs.5.6 lacs) purchase of water coolers-40/80 model- Rs.1.35 lacs, Storage water coolers purifier- Rs.1.82 lacs, and 500 LPH Automatic water filtration plant with UF etc-Rs. 1.37 lacs) capitalised in 2018-19 for providing potable water in power station and replacement of old fire extinguishers and purchase of fire extinguishers as per requirement of safety audits of power station. 2. All the mentioned assets are specific and not inter-dependent for put-to-use/ utilization. None of these assets came into the purview of implementation in phase manner. All the mentioned assets are utilized / put-to-use in the year of capitalization.		
5	Purchase of Hospital Equipment	14(3)(viii)	4.23	The details are provided at item no. 2 in the year 2014-15.	The item has already been dealt with in item no. 2 in 2014-15. Accordingly, the expenditure claimed by the Petitioner is **allowed**.	4.23
6	Replacement of Hospital Equipment	14(3)(viii)	2.90	The details are provided at item no. 3 in the year 2014-15. In year 2015-16, Automatic Urine Analyser purchased and assumed deletion claimed in year 2015-16 (refer sl. no.1 of form 9B1), equipment actually decapitalized in year 2016-17 refer (sl. no. 8 of 9B1) as exclusion.	The item has already been dealt with in item no. 3 in 2014-15. Accordingly, the expenses claimed by the Petitioner is **allowed**. Further, the decapitalization of old asset claimed by the Petitioner is considered under 'Decapitalization'.	2.90
	Sub-Total (A)		**119.12**			**118.23**
Capitalization claimed against items admitted in Petition No. 237/GT/2014 during other years						
7	Supply and Installation of PLC based Data	14(3)(viii)	19.70	The Commission had allowed Supply and Installation of PLC based Data acquisition system of	The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed the projected	19.70

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
	acquisition system			vide its order dated 4.9.2015 in Petition No. 237/GT/2014. Actual Execution has been done in the year 2015-16. The installation and Commissioning of PLC based online real time monitoring and recording system was proposed by CPS-I in the year 2014-15 and supply order was placed on 20.9.2014. As per the Letter of Award, the work was to be completed on or before 7/4/2015 (In the year 2015-16). Due to problem in establishing the communication between the two panels (One at Power House and another at Switchyard) the commissioning was completed on 6.1.2016 i.e., in the year 2015-16. As the commissioning of the system was completed in FY 2015-16 therefore capitalised for Rs. 19.70 lakhs in the year 2015-16.	additional capital expenditure of Rs.25.00 lakh in 2014-15, and the Petitioner has capitalised the same asset in 2015-16 for Rs. 19.70 lakh. It is also noticed that the Petitioner has claimed Rs.940 lakh during the period 2019–24 towards the Replacement of Control Monitoring System with Supervisory Control and Data Acquisition (SCADA) System. Considering the fact that the said works were already allowed vide order dated 4.9.2015 and as the said assets are required for monitoring and recording of vital parameters for the purpose of grid security, the actual additional capital expenditure of Rs.19.70 lakh claimed by the Petitioner is allowed under Regulation 14(3) (viii) of the 2014 Tariff Regulations. Though the additional capital expenditure claimed is on account of replacement of the asset, the Petitioner has not furnished the de-capitalised value of the old asset. Hence, the same has been considered under 'Assumed Deletions'.	
8	Replacement of Portable DGA Instrument	14(3)(viii)	37.96	The Commission allowed capitalisation for the year 2014-15 vide its order dated 4.9.2015 in Petition No. 237/GT/2014. 1. Projected amount was based on budgetary offer / executed work. However, actual amount is based on price discovered through tendering & hence justified. Actual Execution has been done in the year 2015-16 to the tune of Rs. 3795624/-, the delay has been caused due to the normal tendering procedure. The purchase of portable DGA was proposed by CPS-I in FY 2014-15 and supply order was placed on 26.12.2014. The delivery period given to	The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed the projected additional capital expenditure of Rs.36.00 lakh along with assumed deletion of Rs.38.52 lakh in 2014-15. However, the Petitioner has capitalised the said asset in 2015-16. In view of this, the actual additional capital expenditure claimed by the Petitioner for this asset/work is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of the old asset as claimed by the	37.96

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				the supplier was 120 days hence the DGA has been capitalised in the year 2015-16. Therefore, being claimed in the year 2015-16. 2.The mentioned assets is utilized / put-to-use in the year of Capitalization. 3. DGA kit is required for testing of transformer oil. Regular testing of transformer oil is essential for ensuring their healthiness and is also a part of the routine O&M procedures. It also facilitates in planning of maintenance activity, if required thereby avoiding generation loss that may arise due to sudden breakdowns. Old DGA equipment developed some problem in calibration as well as in measurement. The Financial implication of the repair for DGA equipment was higher than the WDV of equipment. Hence repair of the equipment was not economical and new DGA equipment has been purchased. The assumed deletion of this item is shown in form 9(B)(i) 15-16 Sl. No.2.	Petitioner is considered under 'Decapitalization'.	
	Sub-Total (B)		**57.66**			**57.66**
Capitalization claimed in addition to items admitted in Petition No. 237/GT/2014						
9	Payment to Land oustees against Order or Decree of a Court of Law;	14(3)(i)	351.25	The details are provided at item no. 9 in the year 2014-15.	The item has already been dealt with in item no. 9 in 2014-15. Accordingly, the expenses claimed by the Petitioner is **allowed**.	351.25
10	Upgradation of Ventilation System including Installation Charges	14(3)(viii)	19.08	Ventilation System was installed during commissioning of power station and part of main generating equipment. it had degraded due to aging and the various parts of the system had become obsolete. So, the upgradation of the system was required for maintaining ambient temperature in the power house to achieve efficient operation of cooling water system and generator 2. Ventilation system was designed to draw fresh air in by means of 3 axial flow fans installed in Fan Room. Air passes through cooling	As the claimed expenditure is for upgradation of old ventilation system, which in turn would facilitate the successful and efficient operation of the plant, the same is **allowed**. Though the additional capital expenditure claimed is on account of upgradation by replacement of old assets, the Petitioner has not furnished any de-capitalised value of the old assets. Hence, the same is considered under 'Assumed Deletions'.	19.08

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				coils and discharges into P/H machine hall. Air then passes through grills into turbine hall. 3 axial fans are installed on turbine floor that discharges the air into inlet valve gallery and remaining air into equipment gallery. Air from inlet valve and equipment gallery then circulates back through grills into turbine floor. At the entrance of each Bus shaft, air is drawn off the turbine floor by fans. air is divided among the 3 bus shafts. Each bus shafts have 3 cooling coils and 2 fans; one coil and fan remain spare. The air from Bus shaft enters into Transformer gallery with the help of 3 nos. axial flow fans. The air from T.G. is then discharged through main access tunnel by means of 3 nos. exhaust fans. Two fans run continuously with 3rd fan as standby. This air is discharged out through main access portal. The earlier system was installed during commissioning of the power station and had degraded due to ageing and also many components of the system had become obsolete. Therefore, the system was rectified & upgraded by providing various components in the existing scheme. This upgradation includes providing various backdraft dampers in main fan room, bus shaft duct rooms, transformer gallery fan room, main exhaust TG access tunnel and axial flow blowers in battery bank room, turbine floor, runner removal floor, workshop area etc. 2. Efficiency of the earlier system was reduced due to frequent breakdowns and ageing of the various components. As the overall replacement cost of the ventilation system was large, it was decided to upgrade by modernizing and rectification of the system. These upgradation included providing various backdraft dampers in main		

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				fan room, bus shaft duct rooms, transformer gallery fan room, main exhaust TG access tunnel and axial flow blowers in battery bank room, turbine floor, runner removal floor, workshop area etc. Capability of generating unit depends on ventilation system also. As when the ambient temperatures rises, the overall temperatures of the stator unit also rises. These increased temperatures restricts the operating generation level which further reduces the generation capability of the generating unit. therefore, by modernizing and upgrading the system overall increase in generating unit capability has been achieved.		
11	HP Compressor with accessories	14(3)(viii)	4.35	Due to continuous operation of their capacity, efficiency & reliability of the old compressors installed at the time of commissioning has reduced. Therefore, to maintain the required capacity & reliability new HP compressor was installed. The Petitioner has submitted that initially HP compressors (2 Nos.) were installed for providing compressed air to governing system OPU, brake air receiver and HP compressors (2 Nos.) were installed for providing compressed air to MIV OPU. All these compressors are functioning since commissioning of plant. As per NHPC manual for disposal, the useful life of air compressor upto 300cfm is 10 years and in CPWD general specifications for electrical works, 2005, the useful life of air compressors upto 210 cfm is mentioned as 5 years. These compressors have worked for more than 24 years and due to continuous operation beyond their useful life there were instances of frequent breakdowns. These compressors provide compressed air to critical components of generating	The additional capital expenditure is minor in nature and therefore **not allowed** as per the first proviso of Regulation 14(3) of the 2014 Tariff Regulations.	0.00

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				units for uninterrupted power generation. As the overall frequency of operation of HP compressors employed in providing compressed air to governing system OPU, brake air receiver is greater, new HP compressor (1 No.) was purchased and put in tandem with the earlier installed air compressors (2 Nos.). The Petitioner has further submitted that HP compressors installed for providing compressed air to governing system OPU, brake air receiver of generating units and all of these compressors have completed their useful life long before. Therefore, by purchasing a new HP compressor (1 No.) in place of replacement of 2 new compressors and using it in tandem with earlier compressors the cost of new compressor (1 No.) has been saved and also with compressors (3 Nos.) available the overall efficiency & reliability of the system has been enhanced.		
	Sub-Total (c)		**374.68**			**370.33**
	Total amount claimed (A+B+C)		**551.47**			
	Total amount claimed					**546.23**

2016-17

(Rs. in lakh)

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
Items allowed by order dated 4.9.2015 in Petition No. 237/GT/2014						
1	Security and Surveillance System	14(3)(iii)	14.76	The details are provided at item no. 1 in the year 2014-15 and at item no. 2 in 2015 – 16. In the year 2016–17, the Petitioner submitted that Surveillance -Video Management system license for 48 cameras- Rs. 1.99 lacs, Fixed Network Camera Rs 12.77 lakh. (10 no.) were installed at switch yard, CISF line office, Dam site and as on date they are obsolete They are replaced with new cameras purchased in 2020-21, Total cost of	This item has already been dealt with in item no. 1 in 2014-15 and in item no. 2 in 2015 –16. In 2017 – 18. Since the claim of the Petitioner for Rs 14.76 lakh towards Camera, relate to the year 2020–21, the same is **not allowed**.	0.00

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				Surveillance -Rs.14.76 lakh.		
2	Equipment for compliance of OHSAS and environment policy requirement	14(3)(viii)	1.99	The details are provided at item no. 8 in the year 2014-15 and at item no. 4 in 2015 – 16. In year 2016-17 following items purchased: Storage Water Cooler Cum Purifier 1. Reason for increase in cost are strengthening of water supply system (mainly due to construction new duty room with storage of chemicals at main pump house capitalised in the year 2015-16- Rs.5.6 lacs) purchase of water coolers- 40/80 model- Rs.1.35 lacs, Storage water coolers purifier- Rs.1.82 lacs, and 500 LPH Automatic water filtration plant with UF etc-Rs.1.37 lacs) capitalised in 2018-19 for providing potable water in power station and replacement of old fire extinguishers and purchase of fire extinguishers as per requirement of safety audits of power station. 2. All the mentioned assets are specific and not inter-dependent for put-to-use / utilization. None of these assets came into the purview of implementation in phase manner. All the mentioned assets are utilized / put-to-use in the year of Capitalization.	The item has already been dealt with in Item no. 8 in 2014-15 and in Item no. 4 in 2015 – 16. Accordingly, the additional capital expenditure claimed by the Petitioner in 2016 - 17 is **allowed.**	1.99
3	Replacement of Hospital Equipment	14(3)(viii)	13.95	The details are provided in at item no. 3 in the years 2014-15 and at item no. 6 I 2015 -16. In year 2016-17 following items purchased on replacement basis: Fully Automated Biochemistry Analyser, Automated Haematology Analyzer, and assumed deletion claim in year 2016-17 (refer sl. no.1 and 2 of form 9B1),	The item has already been dealt with in Item no. 3 in 2014-15 and in Item no. 6 in 2015 – 16. Accordingly, the expenses claimed by the Petitioner is **allowed**. The decapitalization of old assets claimed by the Petitioner is considered under 'Decapitalization'.	13.95
	Sub-Total (A)		**30.70**			**15.94**
Capitalization claimed against items admitted in Petition No.237/GT/2014 during other years						
4	Purchase of High Mast Lighting	14(3)(viii)	11.75	The Commission has allowed amount Rs 11.00 lakh for purchase of High	It is noticed that the Commission vide its order dated 4.9.2015 in Petition	11.75

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				Mast Light during the year 2014-15 its order dated 4.9.2015 in Petition No. 237/GT/2014. NIT was issued on 26.9.2014 for purchase of High Mast Light, due to some technical reason the tender was cancelled on 31.1.2015 and fresh case was initiated. Second time the case was initiated on 13.2.2015 with NIT date on 19.2.2015 and finally the case was awarded on 8.9.2015. The item was installed and capitalized during the year 2016-17. Projected amount was based on budgetary offer / executed work. However, actual amount is based on price discovered through tendering & hence justified. Actual Execution of has been done in the year 2016-17 to the tune of Rs. 1175232/-	No. 237/GT/2014 had allowed Rs.11.00 lakh for this asset/item in 2014 -15. However, the Petitioner has claimed Rs. 11.75 lakh for this work in 2016 -17. In view of the fact that said asset/work is for the safe operation of the plant, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	
5	Addition of OFC Network and Wireless Connectivity of LAN at CPS-1	14(3)(viii)	10.54	The details of item are provided at item no. 7 in the year 2014-15 and at item no. 3 in the year 2015 – 16. In the year 2016 – 17 the following items were purchased: Antenna, 1000 Base Lx/Lh Sfp Transceiver,8 Port POE Switch,16 Port POE Switch, Cisco Access Point, 24 Port Rack Mountable Ipdslam	The item has already been dealt with in item no. 7 in 2014-15 and in item no. 3 in 2015 – 16. Accordingly, the expenditure claimed is **allowed.**	10.54
6	Purchase of Hospital Equipment	14(3)(viii)	6.74	The details of item provided at item no. 2 in the year 2014-15.	The item has already been dealt with in item no. 2 in 2014-15 and in item no. 5 in 2015 – 16. Accordingly, the expenditure claimed is **allowed.**	6.74
7	Replacement of Distribution Transformers	14(3)(viii)	29.33	The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed amount Rs.15.00 lakh for replacement of Distribution Projected amount was based on budgetary offer / executed work. However, actual amount is based on price discovered through tendering & hence justified. supply order for purchase of transformer has been place in the June 2016	It is noticed that the Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed Rs. 15.00 lakh for the said asset/work in 2014 -15. However, the Petitioner has claimed Rs. 29.33 lakh (Rs. 31.65 lakh on accrual basis) for this work in 2016 -17. It is also noticed that the Petitioner, in addition to already allowed items, has claimed Rs. 0.58 lakh towards 25 kVA transformer, and the same, being minor in	28.75

<table>
<tr><th>S.No.</th><th>Item</th><th>Regulation</th><th>Amount claimed</th><th>Justification</th><th>Reason for admissibility/ non-admissibility</th><th>Amount allowed</th></tr>
<tr><td></td><td></td><td></td><td></td><td>and same has been purchased & capitalised for Rs. during the year 2016-17.
2. The purchase case was initiated after collecting the budgetary offer and subsequent to completion of tendering process. Supply order was accordingly placed in June 2016 and capitalized in the year 2016-17 after receipt of material in accordance with delivery clause of supply order.
3. The mentioned asset is utilized / put-to-use in the year of Capitalization.
4. It is confirmed that the replacement was done due to exhausted life.
5. Two no. 500 KVA transformers and 2 no. 250 KVA transformers were purchased with total cost of Rs 29.63 Lakh. Also, one no. 25 KVA distribution transformer of Rs 57750 was purchased.
6.one 500 KVA transformer was installed at dam site for dam operation, one 500 KVA transformer was installed for security personnel (CISF) deployed for power house & dam, one 250 KVA transformer was installed at Sajpoi Store (watch and ward of power house spares), one 250 KVA transformer was installed at the outlet of Tail race Tunnel (Gate operation & siren operation). This asset was purchased on replacement basis. Assumed Deletion of this item is shown in form 9B(i) 16-17 Sl. No.3 and 4, out of 3 Nos. of Transformers one no. of transformer for 250KVA has been decapitalised in year 2013-14</td><td>nature, is not allowed under the first proviso of Regulation 14(3) of 2014, Tariff Regulations.

Considering the above, the additional capital expenditure of Rs.28.75 lakh (29.33-0.58) only is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of old assets claimed by the Petitioner is considered under ‘Decapitalization’.</td><td></td></tr>
<tr><td>8</td><td>Purchase, Erection, Testing and commissioning of 420 kV GIS Busbar extension Bay</td><td>14(3)(viii)</td><td>14.00</td><td>The Commission had allowed Rs.3874.00 lakh during 2015-16 towards the said assets vide its order dated 4.9.2015 in Petition No. 237/GT/2014.
(Rs. In lakh)</td><td>The Petitioner has claimed additional capital expenditure for the said asset, on cash basis, as follows:
(Rs. In lakh)<table><tr><th>S.No.</th><th>Year</th><th>Claimed</th></tr><tr><td>1</td><td>2014-15</td><td>0.00</td></tr><tr><td>2</td><td>2015-16</td><td>0.00</td></tr></table></td><td>14.00</td></tr>
</table>

<table>
<tr><th>S.No.</th><th>Item</th><th>Regulation</th><th>Amount claimed</th><th>Justification</th><th>Reason for admissibility/ non-admissibility</th><th>Amount allowed</th></tr>
<tr><td></td><td></td><td></td><td></td>
<td><table>
<tr><th>S.No.</th><th>Year</th><th>Allowed</th></tr>
<tr><td>1</td><td>2014-15</td><td>0.00</td></tr>
<tr><td>2</td><td>2015-16</td><td>3874.00</td></tr>
<tr><td>3</td><td>2016-17</td><td>0.00</td></tr>
<tr><td>4</td><td>2017-18</td><td>0.00</td></tr>
<tr><td>5</td><td>2018-19</td><td>0.00</td></tr>
<tr><td></td><td>Total</td><td>3874.00</td></tr>
</table>

Supply, erection, testing & commissioning of 400 kV GIS extension bay, Bus Reactor and Civil Works for the installation of Bus Reactor were proposed by CPS-I in FY 2015-16. Work was awarded in April, 2015 with a timeline of 12 months for supply and additional 6 months for installation.
Due to delay in supply, commissioning of 420 kV GIS Busbar extension Bay, Bus Reactor and Civil Works for the installation of Bus Reactor and Civil Works for the installation of Bus Reactor completed the year 2018-19.

1. Delay in capitalization was due to delay in Supply, erection, testing & commissioning and civil work in Bus Reactor and GIS Extension Bay by the contractor.
2. Supporting documents are attached herewith (Appendix- A/5)
3. Recommendation as per 14th meeting of TCC and 15th meeting of NRPC MoM No. NRPC/SE(C)/15-RPC/09 dtd 15/01/2010. Relevant page of MOM attached herewith (Appendix-A/6)
4. All the mentioned assets are specific and not inter-dependent for its put-to-use/utilization.
None of these assets came into the purview of implementation in phase manner. All the mentioned assets are utilized / put-to-use in the year of Capitalization.
5. LA was purchase and installed in the year 2016-17. The same may be considered 'put to use' in 2018-19 alongwith commissioning of extension bay</td>
<td><table>
<tr><td>3</td><td>2016-17</td><td>14.00</td></tr>
<tr><td>4</td><td>2017-18</td><td>0.00</td></tr>
<tr><td>5</td><td>2018-19</td><td>2398.31</td></tr>
<tr><td></td><td>Total</td><td>2412.31</td></tr>
</table>

(The claim on accrual basis in 2018–19 is Rs. 2520.20 lakh and the total claim on accrual basis in 2014–19 is Rs. 2534.20 lakh).
In this regard, it is noticed that the Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed Rs. 3874.00 lakhs towards the Purchase, Erection, Testing and Commissioning of 420 kV GIS Busbar extension Bay, Purchase Erection, Testing and Commissioning of Three nos. of 42 MVAR Single Phase Bus Reactor and Civil Works for the installation of Bus Reactor. However, in addition to these works / items, the Petitioner has also claimed Rs.14.00 lakh towards 10 kVA lightning arrester (which was claimed to put to use in the year 2018 - 19) for building under this head.

Considering the nature of the above works and the submissions of the Petitioner, the claim for Rs. 14.00 lakh towards Lightning Arrestor is allowed. The decapitalization of old assets claimed by the Petitioner is considered under 'Decapitalization'.</td>
<td></td></tr>
</table>

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
	Sub-Total (B)		**72.36**			**71.78**
Capitalization claimed in addition to items admitted in Petition No.237/GT/2014						
9	40T Crane Load Indicator with Wireless Display Unit for EOT Crane 190/30/10 T	14(3)(viii)	4.07	The EOT crane 190/30/10T was installed in 1994 and the Crane load indicator was purchased to measure weight of underwater parts of generating units before maintenance & post maintenance so that the efficient maintenance can be ensured. Additional features load display added in existing EOT crane.	The claimed expenditure which is minor in nature, is **not allowed** in terms of the first proviso of Regulation 14(3) of the 2014 Tariff Regulations.	0.00
10	Land - Payment to Land oustees against enhanced compensation along with Interest	14(3)(i)	32.49	The details of item are provided at item no. 9 in the year 2014-15.	The item has already been dealt with in item no. 9 in 2014-15 and in item no. 9 in 2016 – 17. Accordingly, the claim of the Petitioner under this head is **allowed**.	32.49
11	Transformer Oil Filtration Plant	14(3)(viii)	34.26	Transformer oil filtration plant is required for filtration of oil in transformers. Old plant was purchased in FY 2000-01 and had become faulty, it was not repairable / obsolete, hence Old unit has been replaced with new Unit. The transformer oil filtration plant was purchased on replacement basis. Decapitalization of the old equipment claim in year 2016-17 (please refer sl. no. 1 of 9B1)	Considering the fact that the additional capital expenditure is required for the successful operation of the generating station, the claim of the Petitioner is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. Further, the decapitalization of old assets claimed by the Petitioner is considered under 'Decapitalization'.	34.26
12	XY Co-ordinator (Auto Pendulum Read Out Unit)	14(3)(viii)	32.20	1. Earlier, to monitor information about dam stability through Pendulum readout system, readings were taken manually. Dam Safety Review Panel headed by Ex-Chairman CWC pointed out to review the functioning of system installed at Dam. Accordingly, in order to improve the data accuracy of readings by obviating manual interface, the automatic pendulum readout systems (XY Coordinator) were installed at Normal & Inverted Plumb line of Dam Gallery. item Purchased in phase manner in the year 2016-	It is observed that the Petitioner has submitted the Dam safety review panel report and has claimed total amount of Rs. 32.20 lakh (Rs. 48.12 lakh on accrual basis) in 2016 – 17 and Rs. 46.14 lakh in 2018–19) and total of Rs. 78.34 lakh (Rs. 94.26 on accrual basis) during the period 2014–19. Considering the fact that the actual additional capital expenditure claimed is for automation and will facilitate the efficient and successful operation of the plant, the claim of the Petitioner is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	32.20

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				17 (Rs.48.12 lakhs) & 2018-19 (Rs.46.14 lakhs). 2. In order to improve the data accuracy of reading by obviating manual interface, the automatic pendulum readout system (XY Co-ordinate) was installed at Normal Plumb line & Inverted Plumb line of Dam Gallery during 2016-17 and 2018-19 respectively. Automatic pendulum readout system was installed at Normal Plumb line of Dam Gallery during the year 2016-17 and accordingly capitalized in book of account. Thereafter Automatic pendulum readout system was installed at Inverter Plumb line of Dam Gallery during the year 2018-19 and accordingly capitalized in books of account. Dam safety review panel report is enclosed at Appendix-A/7.		
13	10KVA Online UPS	14(3)(viii)	8.56	1. Earlier emergency backup power for Control & protection panels, was provided by individual back up system. 10KVA Online UPS was purchased and installed for centralized emergency backup power for all the Control & protection panels, and newly installed Reactor Panel, RTU panels, ULDC & PMU panels etc. in switchyard area. 2. All the mentioned assets are specific and not inter-dependent for its put-to-use/utilization. None of these assets came into the purview of implementation in phase manner. All the mentioned assets are utilized / put-to-use in the year of Capitalization. 3. Individual backup supplies for different system and panels (i.e., low capacity conventional UPS with mother plant) were earlier in use. With continuous over the time these systems became	The additional capital expenditure claimed being minor in nature, is **not allowed,** in terms of the first proviso of Regulation14(3) of 2014 Tariff Regulations.	0.00

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				unreliable and unserviceable. Hence, they were replaced with a common centralized emergency backup power. 4.The earlier installed individual backup supplies had become unreliable and unserviceable due to continuous use. Further, some more elements like firefighting system for Bus Reactor, PMU Panel etc. were added the system. Hence centralized emergency backup power was required for enhancing the reliability and safety of the system. 5. One UPS purchased and installed in switchyard in the year 2016-17 and Other UPS purchased and installed in 2017-18 for Dam.		
14	2 HP Submersible Pump Set	14(3)(viii)	0.26	The Petitioner has purchased Pump set on replacement basis as old assets were not working and hence decapitalized in books. The decapitalization of asset is claimed in the year 2016-17 (refer sl. No. 8 of 9B1).	Considering the fact that the said asset is on account of the replacement of old asset and will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of old assets claimed by the Petitioner is considered under 'Decapitalization'.	0.26
15	GPS based time synchronizatio n equipment	14(3)(viii)	3.95	GPS based time synchronization equipment was installed during commissioning of power station and had become faulty, it was not repairable/obsolete. Hence, old equipment has been replaced with new equipment. GPS based time synchronization equipment on replacement basis from mother plant. Decapitalisation value is claim as deletion Form-9(B)(i) (refer item no 5) in the year 2016-17.	The additional capital expenditure claimed being minor in nature, is **not allowed,** in terms of the first proviso of Regulation14(3) of 2014 Tariff Regulations.	0.00
16	5 HP self-priming non-clog pump-motor set	14(3)(viii)	0.82	5 HP self-priming non-clog pump-motor set is used for dewatering of turbine pit. It was installed during commissioning of power	Considering the fact that the said asset is on account of the replacement of old asset and will facilitate the successful and efficient operation of	0.82

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				station and had become faulty, it was not repairable/obsolete, hence old equipment has been replaced with new equipment. Equipment actually decapitalized in year 2014-15 refer (sl. No.10 of 9B1).	plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of old assets claimed by the Petitioner is considered under 'Decapitalization'.	
17	Temperature recorder & monitoring system	14(3)(viii)	7.18	The temperature recorder & monitoring system used for monitoring and recording oil and air temperature data of TGB, UGB, thrust bearing, air coolers, transformers etc. The old temperature recorder & monitoring system which was installed at the time of commissioning. The system was become faulty and giving erroneous data. Therefore, these were replaced with new updated system. Decapitalisation value is shown in assume deletion Form-9(B)(i) (refer item no 5) in the year 2016-17 from Mother Plant.		7.18
18	48V DC Battery Bank	14(3)(viii)	5.17	48V DC Battery Bank is part of DC System/ Battery Systems is used for DC supply for control, monitoring and protection system in plant. Due to installation of ULDC & PMU panels by POWERGRID in 400 kV Switchyard, load on existing DC system has increased. As such additional battery bank along with charger installed to meet the additional load & maintain redundancy.	The additional capital expenditure claimed is on account of installation of ULDC and PMU panels in switchyard, which would facilitate better monitoring and operation grid. Accordingly, the claim of the Petitioner is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	5.17
19	Submersible Pump 50 HP	14(3)(viii)	14.82	1. The Submersible Pump 50 HP is part of Drainage and dewatering system. This is replacement of old 50 HP pump used for dewatering system of power house. 2. In the existing scheme of Power House dewatering system, there are 07 Nos. 50 HP submersible pumps and 05 Nos. 27 HP submersible pumps are employed at various	Considering the fact that the said asset is on account of the replacement of old asset and will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of old assets claimed by the Petitioner is considered under 'Decapitalization'. .	14.82

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				sumps in the Power House. The 50 HP Submersible Pump decapitalised in the year 2016-17 and 27 HP and 50 HP Submersible Pump decapitalised in 2018-19 were purchased as replacement of the pumps and utilized in existing drainage and dewatering scheme of Power House. As these submersible pumps operate regularly and in continuous mode, these pumps suffers from considerable wear & tear which further leads to breakdown. These pumps had completed their useful life period and aslo due to considerable wear the overall repair cost of these pumps had surpassed the repair provision as per the NHPC disposal policy. 3. The replaced pumps has been decapitalised due to exhausted life and for overall efficiency improvement. The schedule useful life of these pumps has been provided as 12 years in CPWD General specifications for electrical works,2013 (Appendix-A/8) and in NHPC disposal policy (Appendix-A/3). The parts of the old, repaired pump got weared upto such extent that even after repairing of pump service provided was very poor leading to increase in consumption of spares. Chamera Power house is a underground power house and the water collected needs to be pumped out on regular base for prevention of any occurrence of power house flooding. Therefore, the service efficiency of these pumps needs to be good so that they can provide safety to the power house. The old pump has been decapitalised in the year		

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				2016-17 (refer sl. no. 2 of Form-9B1).		
	Sub-Total (c)		**143.78**			**127.20**
	Total amount claimed (A+B+C)		**246.84**			
	Total amount allowed					**214.92**

2017-18

(Rs. in lakh)

Sl. No.	Item	Regulation	Amount claimed	Justification by Petitioner	Reason for admissibility/ non-admissibility	Amount allowed
Items allowed by the Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014						
1	Security and Surveillance System	14(3)(iii)	48.55	The item is already dealt at item no. 1 in 2014-15. In the year 2017-18, the expenses under Security, claimed Rs. 48.55 lakh. The details are as follows: microprocessor based addressable fire alarm system – Rs 12.9 lacs, spike road block with microprocessor based control panel - Rs 4.18 lacs, CISF Barrack and check post and boundary wall around CISF Dam-Rs. 16.45 lacs, Construction of security hut and pressure shafts adits- Rs 15.3 lacs.	The item has already been dealt with in item no. 1 in 2014 – 15, in item no. 2 in 2015 - 16 and in Item No. 1 in 2016 – 17. As the expenditure claimed is for Surveillance, the same is **allowed**.	48.55
2	Addition of OFC Network and Wireless Connectivity of LAN at CPS-I	14(3)(viii)	7.62	The details of item are provided at item no. 7 in 2014-15, at item no. 3 in 2015 – 16 and at item no. 5 in 2016 - 17. In 2017 – 18 following items purchased: 28 Port POE Switch, Access Point and 48 Port Switch.	The item has already been dealt with in item no. 7 in 2014-15, in item no. 3 in 2015 – 16 and in item no. 5 in 2016-17. Accordingly, the additional capital expenditure claimed is **allowed**.	7.62
3	Equipment for compliance of OHSAS and environment policy requirement	14(3)(viii)	3.24	The details of item are provided at item no. 8 in the years 2014-15, at item no. 4 in 2015 – 16 and item no. 2 in 2016 - 17. In 2017 – 18 following items purchased: Fire Extinguisher 4.5 Kg, Fire Extinguisher 9 Kg and Water Purifier Cap. 8 Ltr.	The item has already been dealt with in item no. 8 in 2014-15, in item no. 4 in 2015 – 16 and in item no. 2 in 2016 - 17. Accordingly, the additional capital expenditure claimed is **allowed. Though the** expenditure claimed is in the nature of replacement, the Petitioner has not furnished any details of the decapitalization of old assets. Hence, the same is considered under decapitalization.	3.24
4	Replacement of Hospital Equipment	14(3)(viii)	1.10	The details of the item are provided at item no. 3 in 2014-15. The details of decapitalized in year	The item has already been dealt with in item no. 3 in 2014-15 and in item no. 6 in 2015 – 16. Accordingly, the expenditure claimed is **allowed.** Though the	1.10

Sl. No.	Item	Regulation	Amount claimed	Justification by Petitioner	Reason for admissibility/ non-admissibility	Amount allowed
				2016-17 is at sl. no. 10 of 9B1.	Petitioner has submitted that the decapitalization of asset has been claimed in Form 9B(i), it has not furnished the same. Hence, the decapitalization of old assets has been considered under 'Assumed Deletion'.	
	Sub-Total (A)		**60.51**			**60.51**
Capitalization claimed against items admitted in Petition No.237/GT/2014 during other years						
5	Replacement of Wheel Dozer	14(3)(viii)	93.70	The Commission had allowed capitalisation in respect of purchase of Wheel Dozer in the year 2014-15 but keeping in view the current requirement, the proposal for Purchase of Wheel Dozer has been reviewed and in place of Wheel dozer, Wheel Loader (1 No.) amounting to Rs. 121.50 lakh has been purchased during the year 2017-18 and 2018-19. The Petitioner has submitted the capitalisation details as stated below: ***(Rs. In lakh)*** **S. No.** | **Year** | **Allowed** 1 | 2014-15 | 232.00 2 | 2015-16 | 0.00 3 | 2016-17 | 0.00 4 | 2017-18 | 0.00 5 | 2018-19 | 0.00 | **Total** | **232.00** 2. The mentioned asset is utilized / put-to-use in the year of Capitalization. . 3. It is confirmed that replacement has been done due to exhausted life. Wheel loader is essential for smooth operation and maintenance of power station. It is only wheel loader available with power station which is deployed for removing rock debris and landslides blocking approach roads during monsoon season / rainy days and other civil works of power station. Utilization amount was decreased due to change in equipment.	It is noticed that the Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed Rs. 232.00 lakh towards the Replacement of Wheel Dozer in 2014-15 under Regulations 14(3)(viii) of the 2014 Tariff Regulations. However, the Petitioner has claimed additional capital expenditure of Rs. 94.70 lakh, on cash basis, for the period 2014–19 (Rs. 93.70 lakh in 2017 – 18 and Rs. 1.00 lakh in 2018-19) towards wheel loader. Also, the Commission vide the said order had allowed Rs. 40.00 lakh in 2016 – 17 towards Replacement of Wheel Loader with Backhoe Excavator - Loader Machine and the Petitioner claimed Rs. 22.83 lakhs on cash basis in 2018 – 19 for this asset. In view of this, the additional capital expenditure of Rs. 93.70 lakh claimed in 2017-18 is **allowed.** The de-capitalization of asset claimed by the Petitioner is considered under 'Decapitalization'.	93.70

<table>
<tr><th>Sl. No.</th><th>Item</th><th>Regulation</th><th>Amount claimed</th><th>Justification by Petitioner</th><th>Reason for admissibility/ non-admissibility</th><th>Amount allowed</th></tr>
<tr><td></td><td></td><td></td><td></td><td>The assumed deletion of this item claimed in form 9B(i) 17-18 Sl. No.1</td><td></td><td></td></tr>
<tr><td>6</td><td>Construction of executive field hostel / transit camp</td><td>14(3)(viii)</td><td>291.82</td><td>The Commission had allowed projected additional capital expenditure towards Construction of executive field hostel/ transit camp in phase manner as stated below:
(Rs. in lakh)
<table>
<tr><th>S.No.</th><th>Year</th><th>Allowed</th></tr>
<tr><td>1</td><td>2014-15</td><td>0.00</td></tr>
<tr><td>2</td><td>2015-16</td><td>300.00</td></tr>
<tr><td>3</td><td>2016-17</td><td>0.00</td></tr>
<tr><td>4</td><td>2017-18</td><td>0.00</td></tr>
<tr><td>5</td><td>2018-19</td><td>0.00</td></tr>
<tr><td></td><td>Total</td><td>300.00</td></tr>
</table>
The proposal for construction of Executive Field Hostel and STP were different. Accordingly, executive field hostel was completed during the FY 2017-18 and same was put to use in the same year. Prior to completion of STP, the mode of disposal is through Septic Tank which is a part of Executive Field Hostel. Therefore, the cost of Rs.314.22 lacs of main building have been capitalized in the books of account during FY 2017-18 and same has also been certified by the statutory auditor. Subsequently, the construction of STP has been completed in the FY 2018-19 and the same has been capitalized during 2018-19</td><td>The actual additional capital claimed by the Petitioner towards the said asset on cash basis is as under:
(Rs. In lakh)
<table>
<tr><th>S.No.</th><th>Year</th><th>Claimed</th></tr>
<tr><td>1</td><td>2014-15</td><td>0.00</td></tr>
<tr><td>2</td><td>2015-16</td><td>0.00</td></tr>
<tr><td>3</td><td>2016-17</td><td>0.00</td></tr>
<tr><td>4</td><td>2017-18</td><td>291.82</td></tr>
<tr><td>5</td><td>2018-19</td><td>4.46</td></tr>
<tr><td></td><td>Total</td><td>296.28</td></tr>
</table>
(The claim on accrual basis in 2017 – 18 and 2018 – 19 is Rs. 314.22 lakh and 6.80 lakh, respectively and the total claim on accrual basis for 2014–19 tariff period is of Rs. 321.02 lakh).
It is noticed that out of the total amount of 296.28 lakh, the Petitioner has claimed Rs. 291.82 lakh towards the Construction of field hostel and Rs.4.46 towards Septic Tank.
It is also noticed that the Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed Rs. 300 lakhs towards the said assets/ works. In addition to this, the Petitioner has claimed Rs. 246.00 lakh in 2019 – 24 towards the ‘Construction of field hostel, Barrack along with boundary wall for CISF near Power House’. Considering the above, the actual additional capital expenditure claimed by the Petitioner is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.</td><td>291.82</td></tr>
<tr><td>7</td><td>Purchase of Hospital Equipment</td><td>14(3)(viii)</td><td>6.21</td><td>The details of item are provided at item no. 2 in 2014-15.</td><td>The item is already dealt at item no. 2 in the years 2014-15 and at item no. 5 in 2015 – 16. Accordingly, the expenditure claimed is allowed.</td><td>6.21</td></tr>
<tr><td></td><td>Sub-Total (B)</td><td></td><td>391.73</td><td></td><td></td><td>391.73</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="7">Capitalization claimed in addition to items admitted in Petition No. 237/GT/2014</td></tr>
<tr><td>8</td><td>Payment to Land oustees against Order or Decree of a Court of Law;</td><td>14(3)(i)</td><td>66.49</td><td>The details are provided at item no. 9 in 2014-15.</td><td>The item has already been dealt with in item no. 9 in 2014-15, in item no. 9 in 2015 -16 and in item no. 10 in 2016- 17. Accordingly, the expenditure claimed is allowed.</td><td>66.49</td></tr>
<tr><td>9</td><td>Sequential</td><td>14(3)(viii)</td><td>52.91</td><td>Old Sequential Event</td><td>Considering the fact that</td><td>0.00</td></tr>
</table>

Sl. No.	Item	Regulation	Amount claimed	Justification by Petitioner	Reason for admissibility/ non-admissibility	Amount allowed
	Event Recorder			Recorder was installed during commissioning of power station and had become faulty. As the equipment was not repairable/obsolete, the same has been replaced with new Sequential Event Recorder. Assume deletion claim in year 2017-18 (refer sl. no.2 of form 9B1).	the expenditure incurred is in the nature of tools and tackles, the claim is **not allowed** under first proviso of Regulation 14(3) of the 2014 Tariff Regulations.	
10	Solar PV Grid	14(3)(viii)	64.45	1.As per Govt. Of India, Ministry of Power initiative vide letter no.16/78/2014-Admin-III, 12.4.2016, to achieve India's target of 40,000 MW Solar roof top under National Solar Mission. No grant has been received from MNRE for installation of Roof Top Solar PV Grid Connected Power Plant. The date of Commissioning of plant is 20.1.2018 and the total Energy generated – 266614. 2. Installed with the object to reduce the energy consumption As per Govt. Of India, Ministry of Power initiative vide letter no.16/78/2014-Admin-III, 12.04.2016, to achieve India's target of 40,000 MW Solar roof top under National Solar Mission. 2. Capacity - 105 kW, Units generated - 266614, Date of commissioning - 20.1.2018, No grant/subsidy received from MNRE for funding the scheme. 3.The Petitioner has installed Solar PV Grid under National Solar Mission and the entire energy generated by Solar PV is used for self-consumption and electricity expenses payable to HPSEB (Himachal Pradesh) has been reduced, which in turn has resulted in the reduction of O&M Expenses. As O&M Expenses are fixed as per actual O&M Expenses, therefore, the benefit of reduced O&M expenses is pass through to beneficiaries till useful life (i.e. 25 years) of	It is noticed that the letter dated 14.4.2016 has set the targets for establishing solar power in the country. This however cannot be construed as a direction upon the Petitioner for considering the expenditure. Further, the provisions of the 2014 Tariff Regulations do not provide for the additional capitalisation of the expenditure claimed by the Petitioner. In our view, such major investments should be duly supported by DPR, the beneficiaries' consent, the cost benefit analysis, etc., As no such information has been furnished by the Petitioner, the additional capital expenditure claimed is **not allowed**.	0.00

Sl. No.	Item	Regulation	Amount claimed	Justification by Petitioner	Reason for admissibility/ non-admissibility	Amount allowed
				Rooftop Solar.		
11	10 KVA UPS with Batteries	14(3)(viii)	1.86	Earlier emergency backup power for Control & protection panels, was provided by individual back up system. 10KVA Online UPS was purchased and installed for centralized emergency backup power for all the Control & protection panels, and newly installed Reactor Panel, RTU panels, ULDC & PMU panels etc. in switchyard area. Individual backup supplies for different system and panels (i.e. low capacity conventional UPS with mother plant) were earlier in use. With continuous over the time these systems became unreliable and unserviceable. Hence, they were replaced with a common centralized emergency backup power. The earlier installed individual backup supplies had become unreliable and unserviceable due to continuous use. Further, some more elements like firefighting system for Bus Reactor, PMU Panel etc. were added the system. Hence centralized emergency backup power was required for enhancing the reliability and safety of the system.	Considering the fact that the claimed expenditure are tools and tackles in nature, the additional capital expenditure claimed is **not allowed** under first proviso of Regulation 14(3) of the 2014 Tariff Regulations.	0.00
12	Karl Fischer Coulometer	14(3)(viii)	4.81	The equipment is used for measurement and monitor of water content in transformers oil. As, the old equipment had become faulty, it was not repairable and obsolete, the same has been replaced with new equipment. The equipment actually de-capitalized and claimed in 2017-18 refer (sl. no.4 of 9B1).	Considering the fact that the expenditure incurred is in the nature of tools & tackles, the additional capital expenditure claimed is **not allowed** under the first proviso to Regulation 14(3) of the 2014 Tariff Regulations.	0.00
13	Digital Panel Monitoring System	14(3)(viii)	2.64	The equipment was purchased on replacement basis from mother plant in phase manner. This equipment is used as display unit of control room for showing	It is noticed that the Petitioner has claimed Rs. 2.64 on cash basis (Rs. 3.17 on accrual basis) towards the said asset/ item. As the additional capital expenditure claimed	2.64

Sl. No.	Item	Regulation	Amount claimed	Justification by Petitioner	Reason for admissibility/ non-admissibility	Amount allowed
				various parameters viz. MW, frequency, voltage etc. of Generating Units. Assumed deletion claimed in 2017-18 (refer sl. no.3 of form 9B1), equipment actually decapitalized in year 2018-19 refer (sl. no.14 of 9B1) as exclusion.	is for replacement of old assets, which in turn will facilitate the successful and efficient operation of the plant, the same is **allowed**. The decapitalization of old assets claimed by the Petitioner is considered under Decapitalization'.	
	Sub-Total (C)		**193.16**			**69.13**
	Total amount claimed (A+B+C)		**645.40**			
	Total amount allowed					**521.37**

2018-19

(Rs. in lakh)

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
Items allowed by the Commission in order dated 4.9.2015 in Petition No. 237/GT/2014						
1	Security and Surveillance System	14(3)(iii)	9.86	The details of the item are provided at item no. 1 in 2014-15 at item no. 2 in 2015 – 16, at no. 1 in 2016 – 17 and at item no. 1 in 2017 – 18. In 2018-19, Rs. 3.45 towards Surveillance (PTZ Cameras - Rs. 3.45 lacs (3 no.) and are stand by cameras) and Rs. 6.41 lakh towards Security (Construction of pacca path and providing chain link fencing along path of Thadi 1 to Thadi 2).	The item has already been dealt with in item no. 1 in 2014 – 15, in item no. 2 in 2015 – 16, in Item no. 1 in 2016 – 17 and in item no. 1 in 2017 – 18. It is however noticed that out of the total claim for Rs 9.86 lakh, an amount of Rs. 3.45 lakh is towards Stand-by cameras, which are yet to be put to use. Accordingly, an amount of Rs. 6.41 lakh (9.86-3.45) is **allowed** towards Security and Surveillance system.	6.41
2	Equipment for compliance of OHSAS and environment policy requirement	14(3)(viii)	10.96	The details of item are provided at item no. 8 in 2014-15, at item no. 4 in 2015 – 16, at item no. 2 in 2016 – 17 and at item no. 3 in 2017 – 18. In 2018 – 19, following items were purchased: PTZ Camera, Fire Extinguisher, Water Cooler, Storage Water Cooler Cum Purifier, Automatic Water FP, GSM base siren 3.25 KM Range. 1.Reason for increase in cost are strenghtening of water supply system (mainly due to contruction new duty room with stirage of chemicals at main pump house capitalised in 2015-16-Rs 5.6 lacs) purchase of water coolers- 40/80 model- Rs. 1.35 lacs, Storage	The item has already been dealt with in item no. 8 in 2014-15, in item no. 4 in 2015 – 16, in item no. 2 in 2016 – 17 and in item no. 3 in 2017 – 18. Accordingly, the additional capital expenditure claimed by the Petitioner is **allowed.**	10.96

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				water coolers purifier-Rs 1.82 lacs, and 500 LPH Automatic water filtration plant with UF etc-Rs. 1.37 lacs) capitalised in 2018-19 for providing potable water in power station and replacement of old fire extinguishers and purchase of fire extinguishers as per requirement of safety audits of power station. 2. All the mentioned assets are specific and not inter-dependent for its put-to-use/utilization. None of these assets came into the purview of implementation in phase manner. All the mentioned assets are utilized / put-to-use in the year of capitalization.		
	Sub-Total (A)		**20.82**			**17.37**
Capitalization claimed against items admitted in 237/GT/2014 during other years						
3	Replacement of Wheel Dozer	14(3)(viii)	1.00	The details of item are provided at item no. 5 in 2017-18. The assumed deletion of this item claimed in form 9B(i) 17-18 Sl. No.1	The item has already been dealt with in item no. 5 in 2017-18. Accordingly, the claim of the Petitioner is **allowed**. The decapitalization of the asset claimed by the Petitioner is considered under 'Decapitalization'.	1.00
4	Replacement of Elevator at PH and Dam	14(3)(viii)	94.16	The case was initiated in July 2015 and was approved by the competent authority on August 2015. Accordingly, the Tender was floated on first week of November 2015. The tender was extended thrice and finally was opened on first week of March 2016. The confirmation of experience was sought from the qualifying firm which also took some considerable time and after that approval of drawing, design and other similar formalities takes more time. Finally, the price bid was opened on First week of July 2016. The order was placed in Jan, 2017 and Supply and Installation was completed in year 2018-	The Commission vide order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed the projected additional capital expenditure of Rs. 81.00 lakh in 2015-16 for the said asset/ works. However, the Petitioner has claimed an expenditure of Rs. 94.16 lakhs (Rs. 107.68 lakh on accrual basis) in 2018- 19 on cash basis. Considering the fact that the said work is required for the successful operation of the generating station, the actual additional capital expenditure claimed by the Petitioner is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. However, the decapitalization of the old asset is considered under 'decapitalization'.	94.16

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				19 for Rs.107.68 Lakhs. However, actual amount is based on price discovered through tendering & hence justified. 2.The mentioned asset is utilized / put-to-use in the year of Capitalization. 3. Elevator (OTIS make) was commissioned during 1992-93. Elevator became non-functional and had completed its useful life. Power house is a multi-storey structure and various components of generating units and office space for personnel is present at different elevation levels. For the movement of resources and manpower various ladders has also been provided. The lift operates between elevation of EL 590.85 m to EL 547.90m. As the overall difference is 47 metres approx. considerable time is lost during movement through these ladders. The presence of elevator lessens the overall time required for movement of manpower and material which further increase the overall efficiency of the various works being carried out It is confirmed that replacement was done due to exhausted life. 4. De-capitalization of old elevators mentioned in year 2018-19 (Refer S. No 1 of form 9 B1)		
5	Purchase, Erection, Testing and commissioning of 420 kV GIS Busbar extension Bay Purchase Erection, Testing and Commissioning of Three nos. of 42 MVAR Single Phase Bus	14(3)(viii)	2398.31	The details of the item are mentioned at item no. 8 in the year 2016-17.	The item has already been dealt with in Item no. 8 in 2016 – 17. It is noticed that the Petitioner has claimed expenditure for 2398.31 lakh (Rs. 2520.20 lakh on accrual basis) towards the said assets/works, which were allowed by order 4.9.2015 in Petition No. 237/GT/2014. It is also noticed that the Petitioner has claimed Rs.87.50 lakh during the period 2019–24 towards the said works w.r.t	2398.31

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
	Reactor Civil Works for the installation of Bus Reactor				Bus II. In view of the above and considering the fact that the said works include bus extension and the installation of bus reactor, which in turn lead to control the high voltage conditions in the Northern Region grid, and is based on the recommendations of NRPC, the additional capital expenditure claimed is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	
6	Replacement of Dux Dumber with Heavy Duty Tipper	14(3)(viii)	14.11	The Commission had allowed capitalisation vide its order dated 4.9.2015 in Petition No. 237/GT/2014. Projected amount was based on budgetary offer. Case file has been delayed due to termination of tender on ground of non-fulfilling of eligibility criteria and NIT was extended two times due to poor response. The supply order placed on 30.3.2018 & capitalised in 2018-19. Projected amount was based on estimation basis. So actual amount is based on price discovered through tendering & hence justified. The said equipment purchased on replacement basis. The assumed deletion of this item is shown in form 9B(i) 18-19 Sl. No.1	The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed the projected additional capital expenditure of Rs. 23.00 lakh in 2015-16 for the said asset/work and the Petitioner has claimed of Rs. 14.11 lakhs in 2018-19. Considering the fact that the said asset is required for the efficient and successful operation of the plant, the claim of the Petitioner is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of the old asset is considered under 'Decapitalization'.	14.11
7	Replacement of Wheel Loader with Backhoe Excavator - Loader Machine	14(3)(viii)	22.83	The expenditure has already been allowed by the Commission during the year 2016-17 vide its order dated 4.9.2015 in Petition No. 237/GT/2014. Projected amount was based on estimation basis. So actual amount is based on price discovered through tendering & hence justified. The said equipment purchased on replacement basis. The assumed deletion of this item is shown in form 9B(i) 18-19 Sl. No.2	The Commission vide its order dated 4.9.2015 in Petition No. 237/GT/2014 had allowed the projected additional capital expenditure of Rs.40.00 lakh in 2016–17 for the said asset. However, the Petitioner has claimed Rs.22.83 lakh on cash basis (Rs.25.07 lakh on accrual basis) in 2018-19 for this asset. It is noticed that the Petitioner has claimed amount of Rs.94.70 lakh (Rs. 121.50 lakh on accrual basis) towards Wheel Loader during the period 2014–19 and the same has already been allowed. In view of the above, the additional capital	0.00

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
					expenditure claimed for this asset, is **not allowed.**	
8	Construction of executive field hostel / transit camp	14(3)(viii)	4.46	The details of item are provided at item no. 6 in the year 2017-18.	The item has already been dealt with in item no. 6 in 2017-18. It is noticed that the additional capital expenditure claimed is Rs. 4.46 lakh on cash basis (Rs. 6.80 on accrual basis) towards the Construction of Septic Tank (STP) for field hostel, which is a new claim and is over and above the amount of Rs. 321.02 lakh allowed towards the construction of executive filed hostel / transit camp. Accordingly, the claim of the Petitioner is **not allowed**.	0.00
	Sub-Total (B)		**2534.87**			**2507.58**
Capitalization claimed in addition to items admitted in Petition No.237/GT/2014						
9	Land -Payment to Land oustees against Compensation	14(3)(i)	4.81	The details of item are provided at item no. 9 in 2014-15.	The item has already been dealt with in item no. 9 in 2014-15, in item no. 9 in 2015 – 16, in item no. 10 in 2016 – 17 and in item no. 8 in 2017 – 18. Accordingly, the additional capital expenditure claimed is **allowed**.	4.81
10	Digital Excitation System	14(3)(viii)	95.51	1. The existing excitation system was installed in year 1994 at the time of commissioning. The system had been phased out and its spares was not available from OEM. Keeping in view of criticality of the system and non-availability of the spares from the OEM, faults in the excitation system shall lead to prolonged generation loss. Hence, old system was replaced with new digital excitation system 2 Head of Account 410701 denotes main generating equipment and excitation system is part of main generating equipment. Whereas Head of Account 410714 denotes capital spares and excitation system is not a spares item. 3. Earlier GE make Silcomatic IV excitation system was installed in the units and was in use since 1994. This system	It is noticed that the excitation system of the plant was old and the said works are for upgradation of the same. The Petitioner has claimed amount of Rs.95.51 lakh on cash basis (Rs.526.77 lakh on accrual basis) towards the said works. It is also noticed that the Petitioner has claimed amount of Rs. 30.42 lakh towards the replacement of excitation system for Unit- 3 during the period 2019-24. Considering the nature works, the actual additional capital expenditure claimed is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of old asset claimed by the Petitioner is considered under 'decapitalization'.	95.51

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				had gone obsolete and the power station was facing difficulties in procurement of spares and services for the system. 4.The new excitation system is a highly reliable control, protection and monitoring system. Its flexible architecture, modern networks, and versatile software suite simplify operations and integration with plant equipment. Advanced algorithms and the latest controls technology to deliver the performance needed in today's power generation industry. The above technical features facilitate enhanced reliability and safe operation of the units with reduced fault/ outage time thereby reducing generation losses. 5. Digital Excitation system pertains to HOA 410701, the same was inadvertently written as 410714. Kindly read the same as 410701 instead of 410714. The decapitalisation value is shown in assume deletion Form-9(B)(i) (refer item no 3) in year 2018-19 from Mother Plant.		
11	XY Co-ordinator (Automatic Pendulum Read Out Unit)	14(3)(viii)	46.14	The details of item are provided at item no. 12 in 2016-17.	The item has already been dealt with in item no. 12 in 2016-17. Accordingly, the claim of the Petitioner is **allowed**.	46.14
12	27 HP and 50 HP Submersible Pump	14(3)(viii)	30.08	1. These pumps purchased on replacement basis, old assets were not working and decapitalized in books. 2. In the existing scheme of Power House dewatering system, there are 07 Nos. 50 HP submersible pumps and 05 Nos. 27 HP submersible pumps are employed at various sumps in the Power House. The 50 HP Submersible Pump decapitalised in 2016-17 and 27 HP and 50 HP	Considering the fact that the asset / work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of old assets claimed by the Petitioner is considered under 'decapitalization'.	30.08

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				Submersible Pump decapitalised in 2018-19 were purchased as replacement of the pumps and utilized in existing drainage and dewatering scheme of Power House. As these submersible pumps operate regularly and in continuous mode, these pumps suffer from considerable wear & tear which further leads to breakdown. These pumps had completed their useful life period and also due to considerable wear the overall repair cost of these pumps had surpassed the repair provision as per the NHPC disposal policy. 3. The replaced pumps has been decapitalised due to exhausted life and for overall efficiency improvement. The schedule useful life of these pumps has been provided as 12 years in CPWD General specifications for electrical works, 2013 (Appendix-A/8) and in NHPC disposal policy (Appendix-A/3). The parts of the old repaired pump got weared upto such extent that even after repairing of pump service provided was very poor leading to increase in consumption of spares. Chamera Power house is a underground power house and the water collected needs to be pumped out on regular base for prevention of any occurrence of power house flooding. Therefore, the service efficiency of these pumps needs to be good so that they can provide safety to the power house. The old assets actually de-capitalized in year 2016-17 (refer sl. No. 9 of 9B1) and 2018-19 (refer sl no. 10)		
13	DGPS for	14(3)(viii)	8.97	System is used for	The additional capital	0.00

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
	Hydrographic Survey with Software			Hydrographic Survey based on eco sounder. Software up-dation was required for better efficiency and accuracy.	expenditure claimed is minor in nature and hence **not allowed** in terms of the first proviso of Regulation 14(3) of the 2014 Tariff Regulations.	
14	Digital Water Level Monitoring System	14(3)(viii)	11.52	Digital Water Level Sensor with Monitoring Software was installed for level monitoring at Dam and TRL outlet. Continuous on-line monitoring of dam water level and TRT level is essential for efficient operation of power plant. Earlier the level was monitored manually through scale marking on dam and TRT outlet.	As the additional capital expenditure claimed is for automation of Water level at DAM and TRT and to facilitate online monitoring, the same is **allowed**.	11.52
15	LP Compressor	14(3)(viii)	7.08	The LP compressed air system is for the air requirement for generator brakes, fire protection system of transformers, various instrumentations and station service requirement on various floors of powerhouse. The compressors were installed at the time of commissioning with mother plant. The one compressor had become faulty, it was not repairable and obsolete, hence old Compressor has been replaced with new Compressor. Decapitalisation value of old LP Compressor is indicated in Form-9(B)(i) (refer item no 6) in year 2018-19	The additional capital expenditure claimed is minor in nature and hence **not allowed** in terms of the first proviso of Regulation 14(3) of the 2014 Tariff Regulations.	0.00
16	400KV Numerical Line Distance Protection Relay	14(3)(viii)	7.26	3 Nos. of 400 kV transmission lines emanating from Chamera-I power station, and in each line 1 No. of ABB make MiCOM relays were installed for protection of lines. These has become obsolete and not repairable hence old Relays has been replaced with new version of numerical relays. Decapitalisation value is shown in assume deletion Form-9(B)(i) (refer item no 4) in year 2018-19"	Considering the fact that the additional capital expenditure incurred is necessary for the successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of old asset claimed by the Petitioner is considered under 'decapitalization'.	7.26
17	Water Distillation	14(3)(viii)	2.12	There was no water	Considering the fact that the	0.00

Sl. No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
	Plant			distillation plant available for battery water. Keeping in view battery bank of 220V, 48V & 24V used for protection system and DG Sets, it has essential to purchase distillation water plant for power house and switchyard.	expenditure claimed is in the nature of O&M expenses, the claim is **not allowed**.	
18	Submersible Pump 10 HP and 30 HP	14(3)(viii)	1.76	Pumps purchased on replacement basis, old assets were not working and decapitalized in books in year 2014-15 and claim in year 2014-15 (refer sl. No.12 and 13 of 9B1) of 10 HP and 30 HP. Assets actually de-capitalized in year 2014-15 (refer sl. No. 13 and 14 of 9B1)	Considering the fact that the asset/work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The decapitalization of old asset claimed by the Petitioner is considered under 'decapitalization'.	1.76
	Sub-Total (C)		**215.26**			**197.09**
	Total amount claimed (A+B+C)		**2770.94**			
	Total amount allowed					**2722.03**

De-capitalization

16. A s regards de-capitalization, Regulation 14(4) of the 2014 Tariff Regulations, provides as under:

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

17. The Petitioner has submitted audited Form 9B(i), which includes the list of various items decapitalized during the 2014–19 tariff period and these items have been segregated in three categories i.e., Assumed Deletions, Actual Deletion Claimed and Actual Deletion as Exclusions. Subsequently, the Petitioner in compliance to ROP of the hearing has revised Form 9B(i), wherein, the nature of decapitalization for few items has been changed i.e., from exclusion to claimed and vice versa, even though the total decapitalization has been same, However, the same has not been audited. Accordingly, the information furnished in Audited Form

9B(i) has been considered along with the relevant changes made in the revised Form 9B(i), on a case-to-case basis, on prudence check. Accordingly, the gist of the decapitalization claimed by the Petitioner is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Decapitalization claimed (A)	9.24	22.95	46.46	11.33	827.00	916.98
Decapitalization claimed as exclusion (B)	539.25	46.20	1925.14	772.94	64.25	3347.77
Total decapitalization as per books (A +B)	**548.48**	**69.15**	**1971.60**	**784.28**	**891.24**	**4264.75**
Assumed Deletions claimed (C)	4.30	39.26	14.05	13.47	121.67	192.75
Total deletions claimed (A+C)	**13.53**	**62.22**	**60.51**	**24.81**	**948.66**	**1109.73**

18. It is observed, that the items claimed under actual deletion include assets / works such as Automatic weather system, Siemens 800 Amp air circuit breaker, Siemens 1000 Amp air circuit breaker, Maruti Gypsy HP, Tata Sumo, Truck, Normal Portable type high vacuum transformer oil filtration plant, FLYGT make submersible pump, Incinerator single chamber, submersible excavator for submersible pump, remote unit for GPS based time, Internal Distribution line - DPH Gandhiar, Siren 3 Phase 440V 10 HP Audible range 16 km, Electrically operated pump with accessories, BMC steel body 100 ton hydraulic pressure, air conditioners, jack hammers, outside micrometer, Digital tubular inside micrometer, Electric siren range 8 Km, Lab Equipment with accessories, Mettler DL-36 karlfisher conlometer with accessories, drilling equipment, dial gauge, digimatic micrometer, single phase energy meter, Elevator at PH and Dam, Power tunnels and pipelines, tailrace tunnels, Governing System, Complete Shutdown Solenoid Valve, LP Compressor, insulated cable, Insulators conductor & hardware items – Gandhiar, Mounting structure for 33/11KV Sub station for CTS/PTS for Gandihar etc., during the 2014-19 tariff period. Subsequently, the Petitioner vide revised form 9B(i) sought exclusion of some of the above items such as BMC steel body 100-ton hydraulic pressure, air

conditioners, jack hammers, outside micrometer, drilling equipment, dial gauge, digimatic micrometer, single phase energy meter, Power tunnels and pipelines, tailrace tunnels etc., during the years 2017 – 19.

19. We have examined the claim of the Petitioner. After prudence check and considering the nature of items, the exclusion of BMC steel body 100 ton hydraulic pressure, air conditioners, jack hammers, outside micrometer, drilling equipment, dial gauge, digimatic micrometer and single phase energy meter, as claimed by the Petitioner, as per revised Form 9 B(i) are allowed. However, Petitioner has claimed the exclusion of decapitalization of 'Power tunnels and Pipelines' and 'tailrace tunnels' under reversal of liabilities. Further, the decapitalization of assets pertaining to additional capital expenditure, which were not allowed, has also been excluded. Accordingly, year wise decapitalization of assets, allowed is as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
9.24	22.95	45.61	8.46	56.74

<u>Assumed Deletions</u>

20. As per consistent methodology adopted by the Commission in its orders, 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 gross value of the old asset. However, in certain cases, where the de-capitalization is proposed to be affected during the future years to the year of capitalization of the new asset, the de-capitalization of the old asset for the purpose of tariff, is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed Deletion".

21. The methodology of arriving at the fair value of the de-capitalized asset, i.e., de -escalation rate of 5% per annum from the year in which new asset has been claimed to COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. In the instant petition, COD year of the generating station is 1994-95. We have considered the value of asset under consideration as on COD as 100 and escalated it @5% till the year during which additional capital expenditure is claimed against replacement of the same. The amount claimed for additional capital expenditure against this asset is multiplied by the derived ratio from above two values i.e. value in COD year divided by value in additional capitalized year to work out the de-capitalization amount.

22. It is noticed that the Petitioner has claimed decapitalization of certain assets under Assumed Deletions, which includes ECG machines with accessories, crane, power transformer, Automatic Urine Analyzer, Portable DGA Instrument, Multiple Blood Analyzer, Automatic Cell Counter, 1000 kVA transformer, 250 kVA transformer, self-priming pump, temperature recorder & monitoring system, wheel dozer, sequential event recorder, digital panel monitoring system, dux dumper, cat wheel & loader, digital excitation system, submersible pump, numerical line distance protection, sinkobloc pumps etc., during the 2014 -19 tariff period. Subsequently, the Petitioner in revised Form 9B(i), has excluded some items such as self-priming pump, ECG machine, submersible pump, sinkobloc pumps etc., and the details are as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
De-capitalization claimed under assumed deletions	4.30	39.26	14.05	13.47	121.67

23. We have examined, the decapitalization of assets claimed under assumed deletions. It is observed that the Petitioner has claimed decapitalization of few assets

/ items in lieu of claimed additional capital. After prudence check, the decapitalization of assets associated with additional capital expenditure which were not allowed, are excluded. It is observed that the Petitioner has claimed several additional capital expenditure, on replacement basis, but decapitalization value of old assets was not furnished. For instance, the 'Replacement of 1 MVA DG Set at Switchyard and addition of 500 kVA DG set for DAM' in 2014-15. It is also observed that the Petitioner has not furnished the appropriate value for decapitalization of few old assets, under assumed deletions. In this regard, the decapitalized value of old asset is considered, based on on record (wherever available) or the same has been determined as per the abovesaid methodology. The Petitioner has also claimed segregated decapitalization of few assets, but the segregated value of additional capital expenditure has not been provided i.e. for Multiple blood Analyser & Automatic cell counter, 1000 kVA 11000/433 volts transformer & Transformer 250 KVA/11000/433 Volts Cycle Double bond etc., Therefore, the value of additional capital expenditure in case of above mentioned items has been computed, on pro-rata basis with respect to the original value of the above mentioned assets, as submitted by the Petitioner, in Form 9(B) of respective years. The decapitalization of few items claimed as exclusions (revised form) has also been allowed, as the actual decapitalization is either claimed in the previous years or is in the nature of tools & tackles or minor assets. It is noticed that as per order dated 4.9.2015 in Petition No. 237/GT/2014, the original value of Dux dumper (old asset) was Rs.32.16 lakh, However, the Petitioner has claimed Rs. 1.61 lakh under assumed deletions. Therefore, the original value of the asset, as per the said order has been considered. It is also noticed that for some of the new assets, which were claimed in various years and un-dischargeable liabilities were created, decapitalization is to be considered. Thus, the assumed deletions have been considered on the additional capitalization allowed on cash basis. The Petitioner is however, directed to submit assumed deletion values, as and when the liabilities against the assets are discharged. Accordingly, the decapitalization value of old assets considered under Assumed Deletions are as follows:

(Rs. in lakh)

Sl. No.	Name of the Asset	2014-15	2015-16	2016-17	2017-18	2018-19
1.	ECG machine with accessories 1469 - BPL	0.72	-	-	-	-
2.	Crane 910-109, capacity 40/36 ton, S. No. 45096 coles husky	40.50	-	-	-	-
3.	Power Transformer 33/11 KVA	13.76		-	-	-
4.	Replacement of 1 MVA DG Set at Switchyard and addition of 500 kVA DG set for DAM	62.66	-	-	-	-
5.	Automatic Urine Analyser	-	0.74	-	-	-
6.	Portable DGA Instrument TFGA-P- 200 analyzer with accessories Set	--	38.52	-	-	-
7.	Supply and Installation of PLC based data Acquisition System	-	7.07	-	-	-
8.	Upgradation of Ventilation System including Installation Charges	-	6.85	-	-	-
9.	Multiple blood Analyser	-	-	5.72	-	-
10.	Automatic cell counter			3.90		
11.	1000KVa 11000/433 volts transformer	-	-	3.84	-	-
12.	Transformer 250 KVA/11000/433 Volts Cycle Double bond	-	-	2.95	-	-
13.	Temperature Recorder & Monitoring System	-	-	2.45	--	
14.	Wheel Loader (Wheel Dozer 824-B, Model No - 35 G 1132, Engine No (DS-205) 1610-103 - 1 No)	--	--	-	20.65	0.22
15.	Digital Panel Monitoring System	-	-	-	0.86	-
16.	Equipment for compliance of OHSAS and environment policy requirement	-	-	-	1.05	-
17.	Replacement of Hospital Equipment	-	-	-	0.36	-

Sl. No.	Name of the Asset	2014-15	2015-16	2016-17	2017-18	2018-19
18.	Dux Dumper Tag No. 620-013 (30 Tons), S.No. 570	-	-	-	-	32.16
19.	Digital Excitation System	-	-	-	-	163.33
20.	400KV Numerical Line Distance Protection Relay	-	-	-	-	2.25
21.	**Total**	**117.64**	**53.19**	**18.87**	**22.92**	**197.97**

Exclusions

24. The following exclusions have been claimed by the Petitioner:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Exclusions in Additions	1998.82	89.66	37.19	106.81	82.87
Exclusions in Deletions	539.25	46.20	1925.14	772.94	64.25
Net Exclusions claimed	**1459.58**	**43.46**	**(-) 1887.95**	**(-) 666.14**	**18.62**

Positive entries in Exclusions (capitalized in books but not to be considered for tariff purpose)

25. The Petitioner has submitted that the expenditure as stated in above has been incurred towards the procurement / replacement of minor assets, which were not allowed for the purpose of tariff, after the cut-off date of the generating station, in terms of the 2014 Tariff Regulations. The Petitioner has, accordingly, put these additions under exclusion category, by including the positive entries arising due to Inter-head adjustments. As such, the positive entries in exclusions claimed by Petitioner has no impact on the tariff. The same is in order and is allowed.

Negative entries in Exclusions (de-capitalized in books but not to be considered for tariff purpose)

26. Initially, the Petitioner has de-capitalized above amounts in books of accounts pertaining to various items which include capital spares, computers, office equipment, furniture, ladders, pumps, etc., as these are not in use on account of their becoming unserviceable / obsolete and also deletion on account of inter-unit transfer of minor assets. Subsequently, vide revised form 9B(i), few exclusions such as Self-priming pump, Sinkobloc pumps, Squirrel cage motor, Submersible pump,

ECG machine with accessories, LT line, pumps, Air compressors, Security fencing surrounding switchyard, main generating equipment etc., have been modified as claimed. On prudence check, out of these, the decapitalization of claimed w.r.t. assets which were not allowed, was excluded. Further, it is noted that the Petitioner has sought exclusion of decapitalization of few assets, which were allowed. On prudence check, the exclusion of decapitalization of assets which were allowed was not admitted. It is also noted that the Petitioner has claimed addition and deletions of IUT as exclusion, including decapitalized IUT. In this regard, the Petitioner is directed to submit the details of decapitalization of IUT in the respective Petitions. Accordingly, the exclusion of decapitalization of assets not allowed is as follows:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Decapitalization claimed as exclusions – not allowed	1.62	3.08	17.08	0.00	10.43

27. Based on the above, summary of decapitalization is as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Decapitalization claimed - allowed	9.24	22.95	45.61	8.46	56.74
Decapitalization – Assumed Deletion	117.64	53.19	18.87	22.92	197.97
Decapitalization claimed as Exclusion – not allowed	1.62	3.08	17.08	0.00	10.43
Total decapitalization	**128.50**	**79.22**	**81.56**	**31.38**	**265.14**

<u>Discharge of liabilities</u>

28. The Petitioner has claimed the following discharge of liabilities:

(Rs. in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
187.07	1.81	0.00	22.70	90.51

29. The Petitioner has furnished Form-16 (Liability flow statement) in the present petition. It is observed that the Petitioner has included undischarged liabilities for Rs.4310.08 lakh, which was disallowed by order dated 11.11.2013 in Petition No. 125/GT/2013. The relevant extract of the said order is quoted below:

> *"28. In terms of the provisions of the 2009 Tariff Regulations, the above said un-discharged liabilities are required to be deducted in order to arrive at the admissible*

additional capital expenditure, on cash basis, provided that these un-discharged liabilities are in respect of the approved assets/works. Accordingly, un-discharged liabilities amounting to `4310.08 lakh in respect of the claim of the Petitioner during 2010-11 towards provision for arbitration case has been ignored as the said amount has been disallowed. As the balance un-discharged liabilities are in respect of the approved assets/works as discussed earlier, the following amounts of un-discharged liabilities have been deducted from the additional capital expenditure allowed"

30. It is further observed that the Petitioner has submitted that the arbitration cases of M/s HCC, M/s CCL and M/s GEMIL have been settled and liabilities amounting to Rs.186.30 lakh in respect of M/s HCC has been discharged during in 2014-15, Rs.38.00 lakh in respect of M/s GEMIL has been discharged in 2018-19 and Rs.159.52 lakh, Rs.18.75 lakh in respect of M/s CCL has been discharged during the year 2019-20 and has reversed Rs.520.70 lakh in 2014-15, Rs.651.23 lakh in 2017-18 and Rs.768.72 lakh in 2018-19 and has also submitted documentary evidence in support of the same. The provisions created for liabilities of Rs.1966.85 lakh (out of total of Rs.4310.08 lakh) against the work for which the arbitration cases have not yet got settled, has not been allowed, as there is no cash expenditure incurred under this head, and the provisions made under AS-29 towards contingent liability for liability which may arise due to arbitration cases has not been allowed. Further, the discharge of Rs.1.81 lakh in 2015-16 in respect of the additional capital expenditure for Security & Surveillance system (which was disallowed) has been disallowed. Accordingly, on prudence check, the un-discharged liabilities, corresponding to the assets/works allowed, has been considered along with their respective discharges made by the Petitioner. Accordingly, the discharge of liabilities allowed are as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening liabilities corresponding to allowed capital cost	2343.93	1636.23	1636.23	1658.93	1036.93
Add: Liability additions corresponding to allowed capital cost	0.00	0.00	22.70	51.93	568.12
Less: Discharges of liabilities	187.00	0.00	0.00	22.70	89.40

	2014-15	2015-16	2016-17	2017-18	2018-19
corresponding to allowed capital cost					
Less: Reversal of liabilities corresponding to allowed capital cost	520.70	0.00	0.00	651.23	768.72
Closing liabilities corresponding to allowed capital cost	**1636.23**	**1636.23**	**1658.93**	**1036.93**	**746.93**

Additional capital expenditure allowed (Net) for the 2014-19 period

31. In view of above, the net additional capital expenditure allowed for the purpose of tariff for the period 2014-19 is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Total additional capital expenditure allowed	363.26	546.23	214.92	521.37	2722.03	4367.81
Less: De-capitalization allowed	9.24	22.95	45.61	8.46	56.74	143.00
Less: Assumed deletions	117.64	53.19	18.87	22.92	197.97	410.58
Less: Exclusions not allowed	1.62	3.08	17.08	0.00	10.43	32.22
Add: Liabilities discharged	187.00	0.00	0.00	22.70	89.40	299.10
Additional capital expenditure allowed (Net)	**421.76**	**467.00**	**133.36**	**512.69**	**2546.30**	**4081.12**

Capital cost allowed for the period 2014-19

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost (A)	204415.75	204837.51	205304.51	205437.88	205950.57
Add: Admitted Additional capital expenditure (B)	421.76	467.00	133.36	512.69	2546.30
Closing Gross Block (C) = (A+B)	**204837.51**	**205304.51**	**205437.88**	**205950.57**	**208496.86**
Average Gross Block (D) = (A+B)/2	204626.63	205071.01	205371.20	205694.22	207223.71

Debt Equity Ratio

33. 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."

34. The gross loan and equity of Rs.141050.71 lakh and Rs.63365.04 lakh respectively, as on 31.3.2014, as allowed by corrigendum order dated 4.12.2015 in Petition No. 237/GT/2014 has been retained as on 1.4.2014. The Petitioner has claimed the debt-equity ratio of 70:30 for additional capital expenditure during the period 2014-19. Accordingly, in terms of Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio for additional capital expenditure has been considered as 70:30. Further, for the assets de-capitalized during the 2014-19 tariff period, the relevant original debt-equity ratio considered during capitalization in the relevant tariff petitions has been considered for de-capitalization. The details of

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

(*Rs. in lakh)*

	Capital cost upto COD / 1.4.2014		Additional Capital Expenditure		Decapitalization		Capital cost as on 31.3.2019	
	Amount	**(%)**	**Amount**	**(%)**	**Amount**	**%**	**Amount**	**(%)**
Debt (A)	141050.71	69.00%	3266.84	70.00%	408.03	69.65%	143909.52	69.02%
Equity (B)	63365.04	31.00%	1400.07	30.00%	177.77	30.35%	64587.35	30.98%
Total (C) =(A)+(B)	**204415.75**		**4666.91**		**585.80**		**208496.86**	

Return on Equity

35. 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."

36. 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."

37. Accordingly, the base rate of Return on Equity (ROE) has been grossed up based on the actual tax paid for the 2014-19 period. Accordingly, in terms of the above regulations, ROE has been computed as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Normative Equity-Opening (A)	63365.04	63491.13	63630.95	63670.70	63824.39
Addition of Equity due to additional capital expenditure (B)	126.09	139.82	39.76	153.69	762.95
Normative Equity-Closing (C) = (A) + (B)	63491.13	63630.95	63670.70	63824.39	64587.35
Average Normative Equity (D) = (A+C)/2	63428.09	63561.04	63650.83	63747.55	64205.87
Return on Equity (Base Rate) (E)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax Rate for respective years (F)	20.961%	21.342%	21.342%	21.342%	21.549%
Rate of Return on Equity (Pre-Tax) (G) = (E)/(1-F)	20.876%	20.977%	20.977%	20.977%	21.032%
Return on Equity (Pre-Tax) annualized (H) = (D)*(G)	**13241.25**	**13333.20**	**13352.03**	**13372.32**	**13503.78**

Interest on Loan

38. 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."

39. The normative loan for the project has already been repaid. The normative loan, on account of the admitted additional capital expenditure during the respective years of the tariff period, have also been considered as fully paid, as the admitted depreciation is more than the amount of normative loan in these years. As such, Interest on loan during the 2014-19 tariff period is worked out as "Nil".

Depreciation

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

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

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

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

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

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

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

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

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets.
(7) The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension.

The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

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

41. The COD of the generating station is 1.5.1994. Since, the generating station has completed 12 years of operation as on 30.4.2006, the remaining depreciable value has been spread over the balance useful life of the assets. As per the prevailing practice, the amount of cumulative depreciation allowed in tariff against those de-capitalized assets has been calculated on pro-rata basis. The same has been adjusted from the cumulative depreciation of the year of de-capitalization. Accordingly, depreciation has been computed as follows:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Average Capital Cost (A)	204626.63	205071.01	205371.20	205694.22	207223.71
Value of freehold land included in average capital cost (B)	3910.57	3910.57	3910.57	3910.57	3910.57
Land under reservoir & land lease hold (C)	1405.72	1405.72	1405.72	1405.72	1405.72
Aggregated Depreciable Value (D)= (A-B+C) *90%	181909.60	182309.55	182579.71	182870.43	184246.98
Remaining aggregate depreciable value at the beginning of the year (E) = (D) - (M)	63623.85	59881.22	55947.57	52013.18	49105.47
No. of completed years at the beginning of the year (F)	19.92	20.92	21.92	22.92	23.92
Balance useful life at the beginning of the year (G) = 35 - (F)	15.08	14.08	13.08	12.08	11.08
Combined Depreciation during the year/ period (H) = (E)/(G)	**4218.16**	**4251.92**	**4276.25**	**4304.54**	**4430.57**
Cumulative depreciation at the end of the year (before adjustment for de-capitalization) (I) = (H) + (Cumulative Depreciation (shown at M), at the end of the previous year) *****	122503.90	126680.24	130908.38	135161.79	139572.07
Less: Depreciation adjustment on account of de-capitalization (L)	75.58	48.11	51.13	20.29	175.63

	2014-15	2015-16	2016-17	2017-18	2018-19
Cumulative depreciation at the end of the year (M) = (K) - (L)	**122428.32**	**126632.14**	**130857.26**	**135141.50**	**139396.44**

**Cumulative Depreciation as on 31.3.2014 is Rs.118285.75 lakh.*

Operation & Maintenance Expenses

42. The Petitioner has claimed O&M expenses as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
10664.95	11373.53	12129.19	12935.05	13794.46

43. Sub-section (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations, provides the year-wise O&M expense norms for the generating station 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:*

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
10664.95	11373.53	12129.19	12935.05	13794.46

44. In terms of the above Regulations, the generating station is in operation for three years or more, as on 1.4.2014. Since, the Petitioner has claimed O&M expenses in accordance with Regulation 29(3)(a) of the 2014 Tariff Regulations, the aforesaid claim of the Petitioner is allowed:

Additional O&M expenses

Goods & Services Tax

45. The Petitioner, has also claimed reimbursement of additional tax paid due to implementation of GST in respect of generating station as additional O&M expenses and for this purpose, it has requested for relaxation of the provisions of Regulation 29(3) in exercise of the powers vested under Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. Further, it submitted that the implementation of GST is a "Change in law" event and the impact of the same should be passed-through in tariff. As such, the tax paid in O&M expenditure of plants (service portion) is claimed over

and above the O&M expenses of the respective power stations. The Petitioner has submitted that it had filed Petition No. 133/MP/2019, which was disposed of by the Commission vide its order dated 22.8.2019, granting liberty to the Petitioner to raise the claim for reimbursement of additional tax on O&M expenses due to implementation of GST Act, 2017 along with the truing up petition for the 2014-19 tariff period. The additional impact of GST in 2017-18 (1.7.2017 to 31.3.2018) and 2018-19 as submitted by the Petitioner, duly certified by statutory auditors, are as under:

(Rs. in lakh)

Additional Impact of GST on O&M Expenses			
2017-18	**2018-19 (1.4.2018 to 31.12.2018)**	**2018-19 (1.1.2019 to 31.3.2019)**	**Total**
78.29	82.48	32.06	192.83

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

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

47. Further, the escalation rates considered in the O&M expense norms under the 2014 Tariff Regulations is only after accounting for the variations during the past five years of the 2014-19 tariff period, which in our view, takes care of any variation in taxes also. It is pertinent to mention that in case of reduction of taxes or duties, no reimbursement is ordered. In this background, we find no reason to allow the prayer for grant of additional O&M expenses towards payment of GST.

Wage revision

48. Since the Petitioner had filed Petition No. 235/MP/2019 claiming the recovery of impact of wage revision of its employees and deputed employees of Kendriya Vidyalaya (KV) / Dayanand Anglo Vedic (DAV) & Central Industrial Security Force (CISF) in respect of this generating station for the period from 1.1.2016 to 31.3.2019 and the same had been disposed of by the Commission vide order dated 22.11.2021, the same has not been considered in this order.

Capital Spares

49. The Petitioner has claimed various capital spares such as 220 V lead acid battery, fire and smoke detector and installation thereof, float charger, thermometer, butterfly valve etc., in the year 2014-15; Online vibration monitor, 48 V battery bank, panel mounted industrial computer etc., in 2015-16 and thermometers in 2016-17. The summary of capital spares claimed by the Petitioner are as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
104.16	40.59	6.81	0.00	0.00

50. We have examined the list of spares furnished by the Petitioner. It is pertinent to mention that the term 'capital spares' has not been defined in the 2014 Tariff Regulations. The term capital spares, in our view, is a piece of equipment, or a spare part, of significant cost that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt. Keeping in view the principle of materiality and to ensure standardized practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs.1.00 lakh, on prudence check of the details furnished by the Petitioner in the Petition, has been considered for the purpose of tariff. Based on this, the details of capital spares consumption allowed for the 2014-19 tariff period is summarized as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Total capital spares consumed claimed	104.16	40.59	6.81	0.00	0.00
Less: Value of capital spares below Rs.1.00 lakh disallowed on individual basis	5.38	0.00	6.81	0.00	0.00
Net total value of capital spares considered (Capital spares > 1 lakh)	**98.78**	**40.59**	**0.00**	**0.00**	**0.00**

51. Further, we are of the view that spares do have salvage value. Accordingly, in line with the practice of considering salvage value, presumed to be recovered by the Petitioner on sale of capital assets, on becoming unserviceable, the salvage value of 10% has been deducted from the cost of capital spares considered above for 2014-19 tariff period. Therefore, on prudence check of the information furnished by the Petitioner and on applying the said ceiling limit along with deduction of the salvage value @10%, the net capital spares allowed as additional O & M expenses as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Net total value of capital spares considered	98.78	40.59	0.00	0.00	0.00
Less: Salvage value @ 10%	9.88	4.06	0.00	0.00	0.00
Net capital spares allowed	**88.90**	**36.53**	**0.00**	**0.00**	**0.00**

Interest charges on account of arbitration

52. The additional capitalization on account of arbitration cases with respect to works associated with M/s HCC has been dealt under discharge of liabilities. It is observed, that the Petitioner, has claimed principal amount of Rs.186.30 lakh plus interest amount of Rs.301.90 lakh in 2014-15 vide affidavit dated 21.06.2021 as additional capitalization along with documentary evidence.

53. We have considered the matter. Regulation 14(3)(i) of the 2014 Tariff Regulations provides the additional capital expenditure incurred for existing

generating station in respect of "Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law". In this case, the principal amount of Rs.186.30 lakh has been allowed as additional capitalization. However, the Commission is of the view that the interest amount of Rs.301.90 lakh, instead of being capitalized, shall be allowed as a onetime reimbursement as additional O&M expenses. Further, the interest amount of Rs.301.90 lakh allowed as above, shall not be made part of the annual fixed charges determined in this order.

Interest on Working Capital

54. Sub-section (c) of Clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

> *"28. Interest on Working Capital: (1) The working capital shall cover*
>
> *(c) Hydro generating station including pumped storage Hydro Electric 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

55. Accordingly, the Receivable component of working capital has been worked out on the basis of two months of fixed cost as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
4868.20	5005.05	5138.88	5288.89	5483.94

Working capital for Maintenance Spares

56. Maintenance spares @15% of O&M expenses are worked out and allowed as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1613.08	1711.51	1819.38	1940.26	2069.17

Working capital for O&M Expenses

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
896.15	950.84	1010.77	1077.92	1149.54

Rate of Interest on Working Capital

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

> *"Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later."*

59. Accordingly, Interest on working capital is worked out and allowed as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital towards O&M expenses - 1 month	896.15	950.84	1010.77	1077.92	1149.54
Working Capital towards Maintenance Spares - 15% of O&M expenses	1613.08	1711.51	1819.38	1940.26	2069.17
Working Capital towards Receivables - 2 months	4868.20	5005.05	5138.88	5288.89	5483.94
Total working capital	**7377.43**	**7667.39**	**7969.03**	**8307.07**	**8702.65**
Rate of Working Capital (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	**995.95**	**1035.10**	**1075.82**	**1121.45**	**1174.86**

Annual Fixed Charges

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	4218.16	4251.92	4276.25	4304.54	4430.57
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	13241.25	13333.20	13352.03	13372.32	13503.78
Interest on Working Capital	995.95	1035.10	1075.82	1121.45	1174.86
O&M Expenses	10753.85	11410.06	12129.19	12935.05	13794.46
Total	**29209.21**	**30030.28**	**30833.29**	**31733.37**	**32903.67**

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.

Normative Annual Plant Availability Factor (NAPAF)

61. The NAPAF of 90% claimed by the Petitioner is in accordance with Regulation 37(4) of the 2014 Tariff Regulations and hence the same is considered.

Design Energy (DE)

62. The Commission vide its order dated 4.9.2015 in Petition No.237/GT/2014 had approved the annual Design Energy (DE) of 1664.55 MUs for the period 2014-19 in respect of this generating station. This DE has been considered for this generating station for the period 2014-19 as per month-wise details as under:

Months	Design Energy (MU)
April	99.02
May	184.54
June	183.46
July	279.62
August	340.25
September	168.17
October	96.93
November	65.91
December	59.93
January	64.45
February	58.13
March	64.15
Total	1664.55

Summary

63. The annual fixed charges claimed by the Petitioner and allowed for the 2014-19 tariff period is summarized below:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Annual fixed charges claimed	29262.87	30113.31	30850.68	31854.71	33006.61
Annual fixed charges allowed	**29209.21**	**30030.28**	**30833.29**	**31733.37**	**32903.67**
Additional one time O&M expenses allowed on account of Interest on arbitration award	**301.90**				

64. The difference between the annual fixed charges recovered by the Petitioner, in terms of order dated 4.9.2015/4.12.2015 in Petition No. 237/GT/2014 and the annual fixed charges determined by this order shall be adjusted in terms of the provisions of Regulation 8(13) of the 2014 Tariff Regulations.

DETERMINATION OF TARIFF FOR THE 2019-24 TARIFF PERIOD

65. The Petitioner has filed the present petition also for determination of tariff of the generating station for the 2019-24 tariff period, in terms of the provisions of the 2019 Tariff Regulations. The annual fixed charges claimed by the Petitioner for the 2019-24 tariff period are as under:

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	3084.71	3167.95	3262.35	3326.97	3357.98
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	12925.28	13001.75	13071.85	13104.55	13119.85
O&M Expenses	868.29	900.45	934.11	968.22	1003.10
Interest on WC	13355.12	13991.76	14658.74	15357.52	16089.60
Total	**30233.40**	**31061.91**	**31927.04**	**32757.25**	**33570.52**

Capital Cost

66. Clause (1) of Regulation 19 of the 2019 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects. Further, capital cost for an existing project is governed as per clause (3) of Regulation 19 of the 2019 Tariff Regulations, which provides as under:

"The Capital cost of an existing project shall include the following:

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernization as admitted by this Commission in accordance with these regulations;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries…."

67. The Petitioner vide Form-1(I) of the petition has claimed capital cost as follows:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	208217.90	209188.13	210802.65	211896.84	212433.50
Add: Addition during the year / Period	232.32	1637.87	1161.28	560.30	207.15
Less: De-capitalisation during the year/period	13.59	23.35	67.09	23.64	17.62
Add: Discharges during the period	751.51	0.00	0.00	0.00	0.00
Closing Capital Cost	209188.13	210802.65	211896.84	212433.50	212623.03

68. The Commission, in paragraph 32 of this order, has allowed the closing capital cost of Rs.208496.86 lakh, as on 31.3.2019. Accordingly, in terms of Regulation 19(1) of the 2019 Tariff Regulations, the capital cost of Rs.208496.86 lakh, as on 31.3.2019 has been considered as the opening capital cost as on 1.4.2019, for the purpose of determination of tariff for the 2019-24 tariff period.

Additional Capital Expenditure

69. Clause (2) of Regulation 9 of the 2019 Tariff Regulations provide that the application for determination of tariff shall be on admitted capital cost including additional capital expenditure already allowed and incurred up to 31.3.2019 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the 2019-24 tariff period along with the true up for the 2014-19 tariff period in accordance with the 2014 Tariff Regulations.

70. Regulation 25 of the 2019 Tariff Regulations provides as under:

"25. Additional Capitalization within the original scope and after the cut-off date:

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

(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;

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

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

(d) Liability for works executed prior to the cut-off date;

(e) Force Majeure events;

(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and

(g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.

71. Regulation 26 of the 2019 Tariff Regulations provides as under:

26. Additional Capitalization beyond the original scope

(1) 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 beyond the original scope, may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;

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

(c) Force Majeure events;

(d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;

(e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis:

Provided also that if any expenditure has been claimed under Renovation and Modernization (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;

(f) Usage of water from sewage treatment plant in thermal generating station.

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

72. The Petitioner has claimed projected additional capital expenditure under the various provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations, and some of the admitted capital works have been spilled over from the period 2014-19. Accordingly, the details of additional capital expenditure claimed by the Petitioner under the provisions of Regulations 25 and Regulation 26 are as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Regulation 25 (2)(a)	34.00	88.70	287.00	124.30	97.70
Regulation 25(2)(c)	82.92	1055.50	99.50	60.00	44.00
Regulation 26(1)(d)	27.90	39.67	247.08	666.00	144.15
Regulation 26(1)(f)	0.00	0.00	87.50	41.00	0.00
Total projected additional capital expenditure	**144.82**	**1183.87**	**721.08**	**891.30**	**285.85**

73. We examine the additional capital expenditure claimed by the Petitioner, on prudence check, as stated in the subsequent paragraphs.

<u>2019-20</u>

74. The Petitioner has claimed total projected additional capital expenditure of Rs.144.82 lakh in 2019-20 and the same are discussed below:

(Rs. in lakh)

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
1	Replacement of Air admission valve	25(2)(a)	26.00	1. One no. air admission valve is installed in each of the 3 units for breaking vacuum during part load operation through air injection. These are part of mother plant. Due to prolonged use, various components of air admission valve have worn out. Now, these valves are not giving desired performance and often failed during operation of Units leading to outages of Units. So, these are to be replaced with new one in phased manner. 2. 01 No. air admission	It is noticed that the Petitioner has claimed Rs.88.00 lakh during the 2019–24 tariff period (Rs.26.00 lakh in 2019-20 and Rs.62.00 lakh in 2021 - 22) towards the subject item. In this regard, it is also noticed that in response to the query of the Commission as to how the said item qualify for additional capital expenditure, the Petitioner has clarified that the new accounting policy IND–AS provides for additional capital expenditure, and not as spares and thus, the	0.00

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				valve is installed in each unit for the suction of air and breaking of vacuum during part load operation of the generating unit. This valve is a part of mother plant was installed during the commissioning of the generating unit. It consists of various parts some of which are stationery as well as rotating. The parts of this valve have various sealing surfaces which prevents entry of water into the generating unit for its safe operation. As this valve is in operation since commissioning its sealing surfaces has considerably weared out and there has been multiple instances where water has ingresses into the generating unit during the operation of unit. It is also to be mentioned here that during monsoon period i.e. peak generation time, the overall pressure on this valve increases and during most of the times the sealing surfaces failed to prevent water from ingression in the generating unit leading to outage of generating units and loss of generation. There is no separate document available depicting its useful life. Therefore, its usefulness can only be ascertained from the very specific purpose it has to perform during the operation of generating unit. 3. Deletion claimed in FY 2019-20 form 9B(i) at sl. no. 1"	said item has been claimed as and when the asset was put to use. It is noticed that the item claimed is in the nature of capital spares and cannot be considered for additional capital expenditure. In view of this, the claim of the Petitioner is **not allowed**. However, the Petitioner is permitted to claim the same as capital spares, on consumption basis, at the time of truing up of tariff.	
2	Replacement of Bypass valve with actuator	25(2)(a)	8.00	1. 01 No. hydraulic actuator operated butterfly valve is installed in each Unit for pressure equalization on both sides of MIV. These are very old and due to prolonged use, these valves have suffered extensive wearing of body, bearings, sealing surface etc leading to leakage. Actuator is not able to provide full torque due to wearing of cylinder-piston and wearing of gear teeth. These are beyond economical repair, so these are to be replaced with new one. Therefore,	It is noticed that the Petitioner has claimed Rs.26.00 lakh during the period 2019-24 (Rs.8.00 lakhs in 2019–20 and Rs.18.00 lakh in 2021-22) for the said asset/works. It is further noticed that that in response to the query of the Commission as to how the said item qualify for additional capital expenditure, the Petitioner has clarified that the new accounting policy IND–AS provides for additional capital expenditure, and not as spares and thus, the	0.00

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				03 no. bypass valves with actuator are to be replaced with new one in phased manner. 2. The bypass valve with actuator is installed at the bypass line of the main inlet valve for pressure equalising during operation of MIV. These bypass valves operate frequently with the operation of the generating unit. The available valves are very old and are installed during commissioning of the Power Plant. These has been repaired many times but the overall efficiency of these valves has considerably reduced due to constant wearing of sealing surfaces. These valves are subjected to pressure range upto 20kg/cm2 and as these valves are the first to operate during the generating unit start sequence and stop sequence, their overall frequency of operation is very high. The leakages through these valves leads to loss of water wearing of internal surface of downstream pipes. It leads to reduction in overall thickness of the pipe. These pipes have to sustain pressure ranges of 20 Kg/cm2 and pressure fluctuations during Unit generation. In case of excessive wearing these may fail under pressure and there is imminent danger of flooding in the Power House. The hydraulic actuator is the medium by which these valves operate. These hydraulic actuators are also very old and they have also suffered considerable wear of various operating components including gear mechanism, piston cylinder seals and bypass valve seating key slot. Considering the condition of valve with actuator, they are beyond economical repair and needs to be replaced with new one's for the prevention of water leakages through them.	said item has been claimed as and when the asset was put to use. It is noticed that the item claimed is in the nature of capital spares and cannot be considered for additional capital expenditure. In view of this, the claim of the Petitioner is **not allowed**. However, the Petitioner is permitted to claim the same as capital spares, on consumption basis, at the time of truing up of tariff.	

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				These bypass valves with actuator will be replaced in phases. Deletion claimed in the year 2019-20 in form 9B(i) at sl. no. 2"		
3	Modernisation / Upgradation of EOT Crane for Dam	25(2)(c)	52.50	1. Existing EOT crane is in continuous use for last 25 years for inspection, maintenance and repair work of sluice gates. At present, spares of the EOT crane are not easily available in the market for which difficulties arise in operation and maintenance of crane. Dam Safety team during inspection has also suggested to replace the control panels, electrical installations and cables. In view of above, modernization & renovation of the EOT crane is proposed. 2. EOT Crane is used for maintenance of sluice gates which is a critical & time bound activity carried out during lean season every year. Safe & reliable operation of EOT Crane is required for this work. The old EOT Crane was installed since commissioning and was giving trouble thus hampering the maintenance works. So, the EOT Crane was upgraded / modernised. The new scheme offers following features/advantages. 1) In the old scheme MS angle bus-bars were used for supply of electrical power to the EOT crane which were rusted due to high humidity in the sluice chamber and their surface had become rough. When the current collector moved on these bus bar spark would generate. These bus-bars have been replaced with smooth shrouded type copper bus bar and current collectors for smooth and spark free operation. 2) Old slip ring motors have been replaced with new crane duty induction motors coupled with VVVF drives for all the motions of	In view of the submission of the Petitioner that the claim for this item is towards Modernisation/Up-gradation of EOT crane and is necessary for the efficient functioning of plant, the additional capital expenditure claimed is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. It is observed that the Petitioner has not furnished the value of decapitalised asset / items / spare parts. Accordingly, the decapitalized value of old asset has been determined under Assumed Deletions. The Petitioner is however, directed to submit the value of decapitalised asset / items / spare parts along with relevant documents in support of the obsolesce of technology at the time of truing up of tariff for 2019 – 24.	52.50

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				the EOT crane for smooth, precise and efficient operation of crane. 3) A pendent controller has been included in the new scheme for operation of the EOT crane from ground level. With above features, proper maintenance of sluice gate will facilitate effective & timely flushing of reservoir. Thus, increasing the life & efficiency of generating units.		
4	Replacement of Excitation System for unit #3	25(2)(c)	30.42	1. The excitation system was installed since commissioning & its retrofitting / modification is essentially required due to product obsolescence & to avoid unit outage / generation loss due to lack of spares / ageing of electronic components of the existing excitation system. Retrofitting of digital excitation system in Unit # 1 was completed in 2015. Materials for retrofitting of digital excitation system in Unit # 2 & 3 have already been supplied. New excitation system installed & commissioned in Unit#2 in Mar'19, and same will be installed in Unit #3 in Dec 2019 during annual maintenance period. 2. Earlier GE make Silcomatic IV excitation system was installed in the units and was in use since 1994. This system had gone obsolete and the power station was facing difficulties in procurement of spares and services for the system. Hence the existing system was replaced with new excitation system i.e. GE make EX2100e having advanced technical features which are enlisted below: A) Because of its Warm Back-Up Quality, it has 100% redundancy on control as well as power circuits which offer higher reliability and low spares requirements. B) The new system monitors dual OEL (Over Excitation Limits) for offline	It is noticed that the Petitioner has already claimed Rs. 95.51 lakh (Rs. 526.77 lakh on accrual basis), in 2018 – 19 towards 'Digital Excitation System' and the same has been allowed. However, the projected claim is over and above the amount already allowed. Considering the above and the nature of works, the projected additional capital expenditure is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. The decapitalization of old asset as claimed by the Petitioner is considered under 'decapitalization'. The Petitioner is however, directed to submit the total expenditure associated with said works, already claimed during the period 2014-19 and those allowed, expenditure envisaged during the period 2019-24, along with complete decapitalization etc, at the time of truing up of tariff for 2019-24 tariff period.	30.42

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				& online operations, which protects rotor from overheating & over fluxing. C) Remote Diagnostics. D) New system has detailed block diagrams with live display of all data values, and real time X-Y plots which simplify visualization of system operation. E) Provision of necessary contacts and/or ports for integration with operating system. The EX2100e is a highly reliable control, protection and monitoring system. Its flexible architecture, modern networks, and versatile software suite simplify operations and integration with plant equipment. Advanced algorithms and the latest controls technology to deliver the performance needed in today's power generation industry. The above technical features facilitate enhanced reliability and safe operation of the units with reduced fault/ outage time thereby reducing generation losses. Deletion claimed in FY 2019-20 in form 9B(i) at sl. no. 3"		
5	Construction of Boundary Wall at CISF Complex (KCT Camp) at Khairi	26(1)(d)	19.00	Chamera Power Station-1 is on the border of Himachal Pradesh and Jammu & Kashmir, there is always threat perception. At present, fencing of barbed wire has been done around CISF (KCT Camp) Complex, Khairi. As per requirement of CISF to comply security norms, it is proposed to construct boundary wall at KCT Camp, Khairi. Copy of approval / recommendation enclosed at Appendix- B/1.	It is evident from the submissions of the Petitioner that the proposed expenditure pertains to CISF complex. However, the document submitted in support of the claim is only an internal noting, which does not satisfy the requirements under Regulation 26(1)(d) of 2019 Tariff Regulations. However, as the expenditure is related to the security and safety, the same is **allowed** under Regulation 26(1)(d) of 2019, Tariff Regulations**.** The Petitioner is directed to submit relevant supporting documents including IB report etc, substantiating the said claim, at the time of truing-up of tariff.	19.00
6	Construction of roof top Morcha for CISF at Dam	26(1)(d)	3.00	As per IB recommendations, roof top morchas may be provided on both ends of Dam to replace the existing make shift morchas of sand bags in view of security aspects. Copy of approval / recommendation enclosed at Appendix B/2.		3.00
7	Security Hut for newly built executive field hostel	26(1)(d)	4.70	A new field hostel has been built near TRT and it has no security post. It is proposed to build security	The proposed expenditure pertains to security hut for executive field hostel. However, the documents	0.00

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				post for the executive field hostel. Copy of approval / recommendation enclosed at **Appendix B/3.**	submitted in support of the claim is only an internal noting, which does not satisfy the requirements under Regulation 26(1)(d) of 2019 Tariff Regulations. Hence, the claim of the Petitioner is **not allowed**.	
8	Automated Boom Barrier / Steel Gate at Power house portal	26(1)(d)	1.20	At present, no steel gate/ automatic boom barriers is installed at inlet portal of Power House. It is proposed to install the same keeping the security of Power house in consideration. Copy of approval / recommendation enclosed at Appendix B/4.	It is noticed that the Petitioner has claimed Rs.3.20 lakh during the period 2019-14 (Rs. 1.20 lakh in 2019 – 20 and Rs. 2.00 lakh in 2020-21) for the said asset/work. Considering the fact that the projected expenditure is based on the recommendations of CISF which is for the safety and security of the plant, the claim is **allowed** under Regulation 26(1)(d) of 2019 Tariff Regulations.	1.20
	Total amount claimed		**144.82**			
	Total amount allowed					**106.12**
	Additional capital expenditure eligible for ROE at normal rate		116.92			82.92
	Additional capital expenditure eligible for ROE at weighted Average Rate of Interest		27.90			23.20

2020-21

75. The Petitioner has claimed projected additional capital expenditure of Rs.1183.87 lakh in 2020-21 which are examined below:

(Rs. in lakh)

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
1	Replacement of Driers for Compressed Air system	25(2)(a)	17.00	1. HP (05 nos) and LP (03 nos) compressors are installed in the Power House to provide compressed air to various equipment's. The drier installed with mother plant are old, imported in nature and have become obsolete with advancement in technology and they suffer frequent breakdown . Supply	It is observed that the Petitioner has claimed Rs. 45.50 lakh during the period 2019-24 (Rs.17.00 lakh in 2020-21 and Rs.28.50 lakh in 2022-23) for he said asset/works. As the asset/items claimed are in the nature of capital spares, the claim is **not**	0.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				of dry air is very much essential for brake system, OPU and for service air. So driers for LP (3 nos) and HP (4 nos) are to be purchased and replaced. It is proposed to replace driers for LP air and HP air compressors. 2. There are 05 nos. HP compressors and 03 Nos. LP compressors installed in the power house. These compressors provide compressed air to various critical systems of power house. There are driers which have also been installed with these compressors. But these driers are the part of mother plant and have become very old. These driers are refrigerated type and as per the CPWD General specifications for electrical works,2013 Appendix B/5) the useful life of packaged type air conditioning units with air cooled condensers is 08 year. Also, these driers are imported and have become obsolete with the advent of technology. Their spares and repairing facility is not available in india. As such there is no option but to replace them. These drier helps in dehumidifying compressed air from the compressors. The quality of dry compressed air also helps in keeping the healthiness of various auxiliaries of generating unit. The compressed air is stored in different capacity pressure vessels/ air receivers. If the moisture content of compressed air is high then it can lead to rusting of pressure vessels/ receivers which can cause serious incidents due to thinning of wall thickness. This compressed air is also used in governor breaking circuit for air braking of generating unit during start and stop of Unit. If the moisture content is high it can lead to malfunction of the braking function of governor. Considering the importance of drier for safety of power plant and generating unit these will be replaced with	**allowed**. However, the Petitioner is permitted claim the same under capital spares, on consumption basis, at the time of truing up of tariff.	

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				new ones. Deletion claimed in 2020-21 in form 9B(i) at sl. no. 1"		
2	Replacement of 1600 A and 1000A Air circuit Breakers and its retrofitting	25(2)(a)	31.00	1. ACBs installed at power house has completed their useful life and at present no spares is available in the market as the existing model has become obsolete. Frequent problems i.e. Mechanism stocking, rack in-out problem are occurring in the system. To maintain the healthiness of LT distribution system in power house, it is proposed to replace these breakers. 2. Old ACBs (Make-Siemens, Model-3WE) were installed since commissioning. These breakers have been discontinued by the manufacturer since Year 2000 and at present no spares of the same are available in the market. Appendix B/6.Deletion claimed in FY 2020-21 in form 9B(i) at sl. no. 2	As the asset/items claimed are in the nature of capital spares, the claim is **not allowed**. However, the Petitioner is permitted claim the same under capital spares, on consumption basis, at the time of truing up of tariff.	0.00
3	Replacement of Drainage / Dewatering pump (04 Nos)	25(2)(a)	18.00	1. 07 nos 50 HP and 5 nos 27 HP submersible pumps are installed at Power House of CPS-1 for Drainage / dewatering system of Power house. These are very old and various component like impeller, rotor shaft, diffusor, oil housing, body etc have been worn out resulting into frequent failures and enhanced repair expenditure. A reliable drainage /dewatering system is required to be maintained to avoid disastrous failures. So, 04 nos pumps are proposed to be replaced with new pumps of suitable specifications. 2. There are 07 nos 50 HP and 5 nos 27 HP submersible pumps installed at Power House of CPS-1 for Drainage / dewatering system of Power house. Chamera power house is an underground power house and there is continuous seepage water that needs to be pumped out for preventing it to be flooded. the available submersible pumps have become very old and have completed their useful operating life. The	It is noticed that the Petitioner has claimed Rs. 82.00 lakh during the period 2019-24 (Rs. 18.00 lakh in 2020-21, Rs. 41.00 lakh in 2022-23 and Rs. 23.00 lakh in 2023-24) for the said assets / works. It is evident from the Petitioner's submission that the expenditure claimed is for the replacement of original scope of works and is required for the operation of the plant. In view of this, the additional capital expenditure claimed by the Petitioner is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The decapitalization of old asset as claimed by the Petitioner is allowed under 'decapitalization'.	18.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				schedule useful life of these pumps has been provided as 12 years in CPWD General specifications for electrical works,2013 (Appendix-B/5.) and in NHPC disposal policy (Appendix-A/3.) and also because of the excessive wearing of parts overall repair cost of these pumps have become so high that the repairs has become uneconomical. Due to the excessive wear of components even after repair the operation efficiency of these pumps has been considerably reduced leading to less operating time and increased outages. In order to maintain a healthy dewatering system these pumps need to be replaced with new one's for preventing any danger of Power house flooding. Deletion claimed in FY 2020-21 in form 9B(i) at sl. no. 3"		
4	Replacement of Spiral case valve (1 no.), Penstock valve 2 no), Draft tube valves (2 no)	25(2)(a)	14.00	1. These Class 300 valves with sizes larger than 10"" are connected in line with the main components of power plant and being used for drainage/ dewatering purpose. These valves were installed at the time of Project commissioning. These are very old and have eroded/ corroded with time. Body thickness have reduced due to erosion / corrosion resulting into reduced pressure rating. So, these valves are to be replaced with new one. 2. For the purpose of draining spiral casing, Penstock & draft tube sections of water conductor system Class 300 type gate valves have been provided. These valves are in operation since commissioning of the Power Station and are very old. The sealing surfaces and various other parts of these valves has considerably weared. These valves have provided their services for more than 24 years and many problems during operation of these valves are now being faced. As these valves are employed at very critical locations, failure of any of	In response to the query of the Commission as to how the said asset/ item qualify for additional capital expenditure, the Petitioner has clarified that the new accounting policy IND–AS provides for additional capital expenditure and not as spares and therefore claimed as additional capital expenditure as and when they were put to use. As the asset/items claimed are in the nature of capital spares, the claim is **not allowed**. However, the Petitioner is permitted claim the same under capital spares, on consumption basis, at the time of truing up of tariff.	0.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				them could create disastrous results including flooding of Power house. Therefore, these valves needs to be replaced with new ones. It was part of mother plant, there is no separate document available depicting its useful life. Deletion claimed in FY 2020-21 in form 9B(i) at sl. no. 4.		
5	Modernisation / Upgradation of Gantry crane at Dam	25(2)(c)	83.50	1. Existing Gantry is in continuous use for last 25 years for inspection, maintenance and repair work of radial gates. At present, spares of gantry crane are not easily available in the market for which difficulties arise in operation and maintenance of crane. Dam Safety team during inspection has also suggested to replace the control panels, electrical installations and cables. In view of above, modernization & renovation of the EOT crane is proposed. 2. Gantry Crane is used for maintenance of radial gates which is a critical & time bound activity carried out during lean season every year. Safe & reliable operation of Gantry Crane is required for this work. The old Gantry Crane was installed since commissioning and was giving trouble thus hampering the maintenance works. So, the Gantry Crane was upgraded / modernised. The new scheme offers following features/advantages. 1) The main hoist motor of the Gantry Crane is DC type which is an old technology, the spares of the panel of which were not available in the market. This DC motor is being replaced with new crane duty induction motor coupled with VVVF Drive. Motors of all the motions of the crane are being replaced with new induction motors fed by VVVF drives for smooth and efficient operations. 2) The gantry crane is 30 years old due to which the CRD cable, festoon cables, control cables, power cables	It is evident from the Petitioner's submission that the expenditure claimed is for Modernisation / Up-gradation of equipment, which form part of the original scope of work and is necessary for the efficient functioning of plant. In view of this, the additional capital expenditure claimed by the Petitioner is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. However, it is observed that the Petitioner has not furnished the value of decapitalised asset / items / spare parts. Accordingly, the decapitalized value has been determined under Assumed Deletion. The Petitioner is permitted to submit the value of decapitalised asset / items / spare parts at the time of truing up of tariff for the period 2019-24.	83.50

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				have developed crackes due to exposure to changes in temperature, sun and rain which needed to be replaced with new one. With above features, proper maintenance of radial gate will facilitate timely & trouble free operation without leakages, which will enable optimum utilization of water.		
6	Construction of security hut post at Adit-I	26(1)(d)	3.00	Existing structure is old and of CGI sheet. It is proposed to replace it with pucca structure for security of HRT Adit-I. Existing structure is old and of CGI sheet. It is proposed to replace it with pucca structure for security of HRT Adit-I. Copy of approval /recommendation is encloesd at Appendix-B/7.	It is noticed that the Petitioner has claimed Rs. 15.30 lakh towards the construction of Security hut and Pressure shaft adits in 2017 – 18 and the same was allowed. Thus, the projected claim is over and above the amount allowed. However, the and documents enclosed by the Petitioner in support of the claim is only an internal noting of NHPC and does not met the requirements in terms of Regulation 26(1)(d) of the 2019 Tarff Regulations. Accordingly, the proposed expenditure is **not allowed**. The Petitioner is however, directed to submit the relevant documents, audited statements, total expenditure envisaged, already incurred, to be incurred etc., at the time of truing of tariff.	0.00
7	Replacement of Hospital Equipment	25(2)(a)	8.70	1. Since the commissioning of the project hospital, several medical equipment's were purchased for betterment of medical facility. Due to continuous R&D and application of information technology to clinical purpose, new instruments are available which have intelligent functions and are more accurate. The existing dental chair was purchased in 1999 (20 yrs ago) and spare parts are not readily available as model has become obsolete. The ECG machine was purchased in 2014-15 and after 5 years, it will be 10 years old. Oxygen cylinder and auto clave were purchased in 1990-91 and in 2003-04 respectively. 2. Further, the Crash cart,	It is noticed that the Petitioner has claimed Rs. 8.70 lakh in 2020-21 for replacement of hospital equipment, and Rs. 3.70 lakh in 2023 – 24 towards purchase of hospital equipment. It is also noticed that the Petitioner has claimed total Rs. 39.02 lakh (Rs. 18.57 lakh towards purchase of hospital equipment and Rs. 18.94 lakhs (Rs. 20.45 lakh on accrual basis) towards the replacement of hospital equipment) for various equipment of hospital during the period 2014 – 19 and the same was allowed by the Commission.	0.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				BMI calculator, digital video auto clave, Computerised Radio Graphy (CR) system, automated external Defibrillator, centrifuge and digital haemoglobin, ambulance auto loader emergency stretcher drawers & cabinets examination couch, physiotherapy Laser Therapy unit, IFT (Interferential Therapy) Tens lead, Mortuary I body with stainless steel chamber for medical purpose, CPR Manikan with AED trainer etc are also required for upgradation of hospital. It is therefore, proposed to purchase this equipment. 3. Assets is old and obsolete now (Appendix-B/8) 4. All the mentioned assets are specific and not inter-dependent for put-to use/utilization. None of these assets came into the purview of implementation in phase manner. All the mentioned assets are utilized / put-to-use in the year of Capitalization. 5. Old assets are not being used and case of survey off has not been initiated yet Deletion claimed in FY 2020-21 in form 9B(i) at sl. no. 5"	The projected claim iof the Petitioner is over and above the amount already allowed for Rs. 39.02 lakh in 2014-19 and the Petitioner has also not substantiated the said claim with supporting documents. In view of this, the projected claim of the Petitioner is **not allowed**. However, the Petitioner is granted liberty to claim the same at the time of truing up of tariff along with supporting documents, total expenditure envisaged, already claimed in 2014 – 19 tariff period, allowed by the Commission, to be claimed, decapitalization etc, at the time of truing up of tariff.	
8	Networking devices / servers	25(2)(C)	32.00	For cyber and general security of Power Station old generation networking devices and servers are a threat. So, all the 5 years or more old networking devices and servers are to be replaced in a phased manner. In year 2020-21, 3 No. servers and 6 No. networking Core / Distribution Switch are proposed to be purchased. In the year 2021-22, 3 nos. servers and 6 nos networking core/distribution switch are proposed to be purchased. Further, in the year 2022-23, 6 nos networking distribution / access switches are proposed to be purchased and in the year 2023-24, 2 nos servers, 6 nos networking access switches and 6 nos networking POE switches are proposed to be purchased. 1. In Year 2020-21 one no	It is noticed that the Petitioner has claimed Rs. 124.00 lakh during the 2019– 24 tariff period (Rs. 32.00 lakh in 2020-21, Rs. 33.00 lakh in 2021–22, Rs.15.00 lakh in 2022-23 and Rs. 44.00 lakh in 2023-24) towards the said works. Since the additional capital expenditure claimed is for upgradation of the equipment, which form part of the original scope of work, the claim of the Petitioner is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. The Petitioner is directed to submit the relevant supporting documents to substantiate the obsolesce of technology at the time of truing up tariff. The decapitalization of old asset as claimed	32.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				server and 6 no core / distribution switch are purchased. 2. Detailed note is enclosed at Appendix-B/9. Deletion claimed in FY 2020-21 in form 9B(i)at sl. no 6&7."	by the Petitioner is considered under 'decapitalization'.	
9	Replacement of Control Monitoring System with Supervisory Control and Data Acquisition (SCADA) System	25(2)(c)	940.00	Chamera Power Station-1 was commissioned in April 1994. Presently, the Power Station is operating with manual control system. For better and efficient operation in present grid norms and regulations, installation of SCADA is required. 1. Presently, the Power Station is operating with manual control system which has higher human interference and lesser reliability besides requiring extensive manning of various locations. Present day stricter grid norms require reliable and safe operation of the power station. For this SCADA is required to install which shall offer increased reliability, efficiency and safety with lesser human interference. Besides providing real time supervision and control, the facility of the data backup/ histories available in the SCADA enable faster tracing, rectification and analysis of various faults that may occur in the system thereby reducing system outage and generation losses. 2. The present manual control system is part of the original mother plant and does its various sub components do not have separate identification/ value. After installation of the SCADA, the material retrieved from the older system shall be de-capitalized on actual basis. 3. Work has been awarded and cost will be Rs 940 lacs and same needs to be reviewed in respect of claim made by power station. Deletion claimed in FY 2020-21 in form 9B(i) at sl. no 8.	As the proposed expenditure is in the nature of towards replacement/upgradation, the claim is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. The decapitalization of old asset as claimed by the Petitioner is considered under 'decapitalization'.	940.00
10	Security & surveillance	26(1)(d)	34.67	1. As the Power Station is on the border of Himachal Pradesh and Jammu & Kashmir, there is always a	It is noticed that the Petitioner has claimed Rs. 111.45 lakh during the period 2019-24 (Rs.	0.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
				threat perception to the Power Station. Therefore, security and surveillance system required to be updated to match with current technology in the field. Hence, it is proposed to install CCTV Cameras at various places and to update the existing system. It is also proposed to establish a centralised monitoring system to be placed at Admin Building with adequate manpower to mitigate any untoward incident related to surveillance system. In Year 2020-21, 33 nos CCTV Cameras and NVR are proposed to be purchased. In year 2021-22, monitoring stations with 6 No. Wide screen TV (at least 80 Inch size) and adequate Power backup (20 KVA Redundant power supply) and 18 nos cameras are proposed to be purchased. In year 2023-24, 36 no. cameras are proposed to be purchased. 2. The Required documents attached Appendix-B/10. 3. Items procured/ work undertaken during the 2014-19 tariff period are allowed by the Commission in the 2014-19 tariff period has allowed by THE COMMISSION. In Year 2020-21, 33 nos CCTV Cameras and NVR are purchased and are installed at locations (Appendix-B/11). Out of 33 no. cameras, 17 cameras were replaced with cameras which were installed during the 2014-19 tariff period. and 16 cameras installed at various location Deletion claimed in the year 2020-21 in form 9B(i)at sl. no 9 to 12."	34.67 lakh in 2020-21, Rs.31.63 lakh in 2021–22, Rs. 20 lakh in 2022–23 and Rs. 25.15 in 2023-24). In addition, the Petitioner also claimed Rs. 23.80 lakh during the period 2019-24 (Rs. 4.80 lakh in 2021-22 and Rs. 19.00 lakh in 2023-24) towards various equipment's such as night vision camera, bullet proof jacket, anti-riot shield etc. The Petitioner had already claimed Rs. 109.67 lakh during the period 2014-19 towards Security and Surveillance. Considering the above and since the justification of the Petitioner is not being clear, the claim of the Petitioner is **not allowed**. However, the Petitioner is granted liberty to claim the same at the time of truing of tariff along with the all relevant documents substantiating that the claim is over and above already allowed amount during the period 2014-19 and the same rae necessary for the safe and secure operation of the plant. The Petitioner is also directed to submit the completed details of scope of works, already claimed, allowed, to be claimed along with audited documents w.r.t. the said claim at the time of truing-up of tariff.	
11	Automated Boom Barrier / Steel Gate at Power house portal	26(1)(d)	2.00	The item is already dealt at item no. 8 in the year 2019-20.	The item has already been dealt with in item no. 8 in 2019-20. Accordingly, the claim of the Petitioner is **allowed**.	2.00
	Total amount claimed		**1183.87**			
	Total amount allowed					**1075.50**
	Additional capital expenditure eligible for		1144.20			1073.50

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non-admissibility	Amount allowed
	ROE at normal rate					
	Additional capital expenditure eligible for ROE at weighted Average Rate of Interest		39.67			2.00

2021-22

76. The Petitioner has claimed projected additional capital expenditure of Rs.721.08 lakh in 2021-22 and the same is examined below:

(Rs. in lakh)

Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
1	Replacement of Air admission valve	25(2)(a)	62.00	The details of item are provided at item no. 1 in 2019-20. Deletion claimed in FY 2021-22 in form 9B(i) at sl. no. 1	The item has already been dealt with in item no. 1 in 2019-20. Accordingly, the claim of the Petitioner is **not allowed**. However, the Petitioner is granted liberty to claim the subject item as a capital spare on consumption basis at the time of truing up of tariff.	0.00
2	Replacement of Booster Pump Set	25(2)(a)	44.00	6 Nos pumps (2 nos in each unit) are installed in Power House to lift water from common header and supply it to Generating Transformers for cooling purpose. These are part of mother plant. Due to prolonged use, various components like motors, casing, impellers, shafts etc have been worn out for which pumps suffer frequent breakdown. 04 nos pumps are to be replaced with new one in phased manner. 2. 06 Nos. centrifugal type booster pump sets are installed in power house to lift cooling water for transformer cooling. These pumps operate regularly with the units and charge a common header for maintaining adequate header pressure for cooling purpose of generating unit transformers. These pumps are very old and were initially installed during the commissioning of the Power Station. The useful	It is noted that the Petitioner has claimed Rs. 93.00 lakh during the period 2019-24 Rs. 44.00 lakh in 2021-22 and Rs. 49.00 lakh in 2022-23). However, it is evident from the Petitioner's submission that the claim is for replacement of equipment as considered necessary for the operation of plant. In view of this, the additional capital expenditure claimed by the Petitioner is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The decapitalization of old asset claimed by the Petitioner is considered under Decapitalization.	44.00

Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
				life of these pumps is mentioned as 10 years in CPWD General specifications for electrical works,2013 (Appendix-A/8.) whereas these pumps have provided their services for more than 24 years. These pumps are imported and their spares are very costly w.r.t. indian counterparts. The overall operational efficiency of these pumps is very important in keeping the required generation through generating unit. Various parts of these pumps have been considerably weared which has reduced the overall operational efficiency and frequent breakdowns of these booster pumps and also cause higher auxiliary consumption. These pumps are to be replaced in a phased manner as stated below:- ***(Rs. In lakh)*** **S.No.** | **Year** | **Proposed** 1 | 2021-22 | 44.00 2 | 2022-23 | 49.00 | **Total** | **93.00** These pumps are to be replaced in a phased manner. Deletion claimed in 2021-22 in form 9B(i) at sl. no. 2".		
3	Replacement of Bypass valve with actuator	25(2)(a)	18.00	The details of item are provided at item no. 2 in 2019-20. Deletion claimed in FY 2021-22 in form 9B(i) at sl. no. 3	The item has already been dealt with in item no. 1 in 2019-20. Accordingly, the claim of the Petitioner is **not allowed**. However, the Petitioner is granted liberty to claim the subject item as a capital spare on consumption basis at the time of truing up of tariff.	0.00
4	Replacement of main cooling water vertical turbine pump (2 Nos)	25(2)(a)	63.50	1. 06 Nos. Vertical turbine pumps are installed in Power House for providing cooling water to different component of Generating Units through a common header. These are part of mother plant. Various components of VT pumps like suction bell, Bowl, shafts have worn out resulting into frequent breakdown and reduced efficiency. So, these are to be replaced in phased manner as such it is	It is noticed that the Petitioner has claimed Rs. 134.50 lakh during the period in 2019-24 (Rs. 63.50 lakh in 2021-22 and Rs. 71.00 lakh in 2023-24). It is evident from the Petitioner's submission that the claim is for replacement of equipment as considered necessary for the operation of plant. Therefore, additional capital expenditure as claimed by the Petitioner is **allowed** under Regulation 25(2)(a)	63.50

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<tr><th>Sl.No.</th><th>Item</th><th>Regulation</th><th>Amount claimed</th><th>Justification by Petitioner</th><th>Remarks for Admissibility / non-admissibility</th><th>Amount allowed</th></tr>
<tr><td></td><td></td><td></td><td></td><td>proposed to replace 02 nos VT pumps.
2. There are 06 Nos. vertical type turbine pumps installed in the Power House for providing water to a cooling water header for maintaining adequate header pressure. This header serves water for the cooling of various bearings of the generating unit and helps in
keeping their temperatures within the safe operating limits. These pumps were installed during commissioning of the Power plant and most of the parts of these pumps have considerably weared out including the suction bell, bowl, and shafts resulting into frequent breakdowns and lower operational efficiency. These pumps are imported and their spares are very costly w.r.t. Indian counterparts which increases the R&M cost. The useful life of similar kind of pumps is mentioned as 12 years in CPWD General specifications for electrical works,2013 (Appendix-A/8) whereas these pumps have provided their services for more than 24 years. Reduced operational efficiency of these pumps also causes higher auxiliary consumption.These pumps are to be replaced in a phased manner as stated below:
(Rs. In lakh)<table><tr><th>S. No.</th><th>Year</th><th>Proposed</th></tr><tr><td>1</td><td>2021-22</td><td>63.50</td></tr><tr><td>2</td><td>2023-24</td><td>71.00</td></tr><tr><td></td><td>Total</td><td>134.50</td></tr></table>Deletion claimed in FY 2021-22 in form 9B(i) at sl. no. 4</td><td>of the 2019 Tariff Regulations. The decapitalization of old asset claimed by the Petitioner is considered under Decapitalization.</td><td></td></tr>
<tr><td>5</td><td>Replacement of motor control panel of Booster pump, 40 HP (06 Nos)</td><td>25(2)(c)</td><td>23.00</td><td>Motor starting method for existing panels is Direct on-line (DOL). In this method motor draws very high inrush current which leads to mechanical stresses on winding and bearings. The existing panels are proposed to replace with the panels having provision</td><td>It is evident from the Petitioner’s submission that the expenditure claimed is towards energy conservation during the start of booster pump but not on account of obsolesce. Accordingly, the claim of the Petitioner is</td><td>0.00</td></tr>
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Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
				of soft/ VFD starting method. The soft/VFD starting of motors will reduce the inrush current by 1/3rd and also reduce the mechanical stress. The body of existing panels has also been worn out due to their installations in high humidity zone. The replacement of the panels will reduce the O&M expenditure on pumps. Deletion claimed in FY 2021-22 in form 9B(i) at sl. no. 5	**not allowed**.	
6	Replacement of motor control panel of Drainage pump,50 HP (4 Nos), 27 HP (4 Nos) and 01 Nos 120 HP	25(2)(c)	43.50	Motor starting method for existing panels is Direct on-line (DOL). In this method motor draws very high inrush current which leads to mechanical stresses on winding and bearings. The existing panels are proposed to replace with the panels having provision of soft/ VFD starting method. The soft/VFD starting of motors will reduce the inrush current by 1/3rd and also reduce the mechanical stress. The body of existing panels has also been worn out due to their installations in high humidity zone. The replacement of the panels will reduce the O&M expenditure on pumps. The detailed note describing the difference in technology of installed DOL starter and proposed Soft Starters is as follows: a) The direct on-line starter (DOL) is a type of motor starter that directly connects the motor to the full line voltage. In DOL method, the voltage at motor start-up is not reduced and hence results to high inrush current. The huge current draws causes voltage dips in the system that could potentially damage other electronics / electrical equipment as well as the motor itself (due to high current). It also reduces the mechanical life due to the sudden jerk at start-up. b) The soft starter/VFD is a semiconductor-based motor starter that uses		0.00

Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
				thyristors to regulate the voltage supply to the motor. The voltage at start-up is reduced to reduce the inrush current. The voltage is gradually increased until the motor attains its rated speed. This starter causes no impact on the other system as well as motor/pump. As mentioned above, the high inrush current reduces the mechanical life of motor/pump and the voltage dip in the system potentially damages the other electronics/electrical equipment's. Replacement of existing DOL starter with Soft/VFD starters will reduces the O&M expenditure on the Pump, motor and associated accessories. The reduced R&M cost in repair of motors/pumps will result in lower AFC & will be beneficial to beneficiary. Deletion claimed in FY 2021-22 in form 9B(i) at sl. no. 6"		
7	Replacement of Stator air coolers (4 Nos)	25(2)(a)	68.00	1. 08 Nos. Stator Air coolers are installed in each Generating Unit for cooling of stator. These were installed at time of commissioning of project. Heat transfer capacity of coolers have deteriorated with passage of time due to deposition of minerals in tubes and deposition of oil sludge between plate type fins. So, it is proposed to replace 04 nos stator air coolers in phased manner. 2. There are 08 nos. stator air coolers provided in each generating unit for cooling purpose of stator windings and stator. These stator coolers were installed during commissioning of the project. These coolers are provided with finned tubes to dissipate the heat generated during power generation. the cold water flows from these finned tubes and reject it to the TRT. By the passage of time due to continuous erosion of tube material, coolers developed leaks and such tubes were	As the expenditure claimed by the Petitioner is in the nature of capital spares, the same is **not allowed.** The Petitioner is however permitted to claim the same under capital spares on consumption basis at the time of truing up of tariff.	0.00

Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
				plugged to put these coolers back into service. Maximum 10 percent plugging of tubes are allowed to rectify such leakage. 10 percent tubes of these coolers are plugged which has resulted into reduced efficiency and lowering of their overall heat dissipation capacity. The river water which flows inside the finned tubes forms a layer of minerals in the form of scales that act as a barrier to effective heat transfer. Furthermore, along with airflow carbon, brake dust and oil mist have deposited on fins surface which is increasing with passage of time and resulting into reduced efficiency of heat transfer. As these coolers were installed during commissioning of unit, these have provided their services for more than 24 years. There is no document other than the operational observations that can indicate the operational efficiency and the overall effectiveness. As these coolers are one of the critical components of generating unit, their operational efficiency has direct impact on generating capability of the Unit. These coolers need to be replaced in phase manner. Deletion claimed in FY 2021-22 in form 9B(i) at sl. no. 7.		
8	Replacement of 1 MVA Transformer for DG Set at Switchyard	25(2)(a)	15.00	1. Two number DG sets of 1000 KVA have been installed since commissioning of power station to meet emergency power for Power House and Switchyard. These DG sets are installed with one 1 MVA step-up transformer. Due to ageing of gaskets and welded port, there is leakage of oil from few points of transformers. The transformer got repaired time to time at project level and now it become unserviceable. This transformers have already completed its useful life (now 33 years) and now, it	It is noticed that the Petitioner has claimed Rs. 166.26 lakh towards Replacement of 1 MVA DG Set at Switchyard and addition of 500 kVA DG set for DAM during the period 2014-19. The Petitioner has now projected additional expenditure towards the replacement of 1 MVA transformer for DG set at switchyard. It is evident from the Petitioner's submission that the claim is for replacement of equipment as considered necessary for the operation of plant as the old asset has worn out. Therefore,	15.00

Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
				has been fully depreciated. For reliable operation and to meet emergency power requirement, replacement of this transformer is required. Therefore, it is proposed to purchase one 1 MVA step up Transformer. 2. Expected life is based on the commission notification dated 07/03/2019, Chapter-1, Clause-3 "Definitions", Point-73 "Useful life". Deletion claimed in FY 2021-22 in form 9B(i) at sl. no. 8	the additional capital expenditure of Rs. 15.00 lakh in 2021-22 is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The decapitalization of old asset claimed by the Petitioner is considered under Decapitalization.	
9	Hospital Equipment	25(2)(a)	16.50	1. Since the commissioning of the project hospital, several medical equipment's were purchased for betterment of medical facility. Due to continuous R&D and application of information technology to clinical purpose, new instruments are available which have intelligent functions and are more accurate. The ECG machine was purchased in 2014-15 and after 5 years, it will be 10 years old. Oxygen cylinder and auto clave were purchased in 1990-91 and in 2003-04 respectively. Further, the Crash cart, BMI calculator, digital video auto clave, Computerised Radio Graph (CR) system, automated external Defibrillator, centrifuge and digital haemoglobin, ambulance auto loader emergency stretcher drawers & cabinets examination couch, physiotherapy Laser Therapy unit, IFT (Interferential Therapy) Tens lead, Mortuary I body with stainless steel chamber for medical purpose, CPR Manikan with AED trainer etc are also required for upgradation of hospital. It is therefore, proposed to purchase this equipment. 2. Assets are old and obsolete now 3. All the mentioned assets are specific and not inter-dependent for its put-to use/utilization. None of	It is noticed that the Petitioner has claimed Rs. 8.70 lakh in 2020-21 towards the replacement of hospital equipment, Rs. 22.30 lakh during the period 2019-24 towards hospital equipment (Rs. 16.50 lakh in 2021– 22 and Rs. 5.80 lakh in 2022 - 23) and Rs. 3.70 lakh in 2023-24 towards purchase of hospital equipment. It is observed that during the period 2014-19, the Petitioner had claimed total amount of Rs. 39.02 lakh (Rs. 18.57 lakh towards purchase of hospital equipment and Rs. 18.94 lakh (Rs. 20.45 lakh on accrual basis) towards the replacement of hospital equipment's and for various equipment's of hospital and the same were allowed by the Commission. The projected claim of the Petitioner is over and above the amount of Rs. 39.02 lakh already allowed during the period 2014-19 and is in addition to claim for replacement of hospital equipment's during the period 2019-24. The Petitioner has also not substantiated the need for the said expenditure with supporting documents. In view of this, the claim of the Petitioner is **not allowed**.	0.00

Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
				these assets came into the purview of implementation in phase manner. All the mentioned assets shall be utilized / put-to-use in the year of capitalization. Deletion claimed in 2021-22 in form 9B(i) at sl. no. 9"		
10	Networking devices / servers	25(2)(c)	33.00	The details of item are provided at item no. 8 in 2020-21. 1. In the year 2022-23, 6 nos networking distribution / access switches are proposed to be purchased and in the year 2023-24, 2 nos servers, 6 nos networking acess switches and 6 nos networking POE switches are proposed to be purchased. 2. In the year 2021-22, 3 nos. servers and 6 nos networking core/distribution switch are proposed to be purchased.	The item has already been dealt with in item no. 8 in 2020-21. Accordingly, the projected claim of the Petitioner is **allowed** under 25(2)(c) of the 2019, Tariff Regulations. However, the Petitioner is directed to submit the relevant/ supporting documents to substantiate the obsolesce of technology at the time of truing up tariff. Also, the said asset/work is replacement in nature and the Petitioner has not furnished any information regarding the decapitalization of the old asset. Accordingly, the decapitalized value of old asset is considered under 'Assumed Deletions'.	33.00
11	Security & surveillance	26(1)(d)	31.63	The details of item are provided at item no. 10 in 2020-21.	The item has already been dealt with in item no. 10 in 2020-21. Accordingly, the claim of the Petitioner is **not allowed**. However, the Petitioner is granted liberty to claim the same at the time of truing of tariff along with the all relevant documents substantiating that the claim made is over and above the amount already allowed during the period 2014-19 and that the same is necessary for the safe and secure operation of the plant, along with the completed details of scope of works, already claimed and allowed, and to be claimed with audited documents.	0.00
11 A	Security & surveillance	26(1)(d)	4.80	The generating station is on the border of Himachal Pradesh and Jammu & Kashmir and there is always threat perception to power station. Therefore, Security & surveillance system is required to be updated to match with latest technology. Therefore, new security	It is noticed that the Petitioner has claimed Rs. 111.45 lakh during the period 2019-24 and in addition, has also claimed Rs. 23.80 lakh during the period 2019-24. It is also noticed that the Petitioner had already claimed Rs. 109.67 lakh during the period 2014-19 towards	0.00

Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
				devices like Night vision glasses, binoculars, bullet proof jacket, Anti-riot shield, anti-riot helmet, CCTV cameras, DFMD, TV, HF radio sets, are required by CISF. It is therefore proposed to purchase these items.	Security and Surveillance, Accordingly, the claim of the Petitioner is **not allowed**. However, the Petitioner is granted liberty to claim the same along with the all relevant documents substantiating that the claim is over and above the amounts allowed during the period 2014-19 at the time of truing of tariff.	
12	Modification / Upgradation in existing TRT Gate and replacement of hoisting arrangement with rope drum hoist	26(1)(d)	210.65	Presently TRT Gate consists of 04 nos independent gate segments. A mobile crane is used to place these segments in gate groove in sequential order to close the gate. This procedure takes long time. Arrangement for emergency closing of TRT is to be provided by the Power Station in compliance to guidelines of Govt. of India. So, existing TRT gate shall be integrated as one unit and a wire rope hoist is to be installed in place of existing arrangement of using mobile crane. 1. The proposed modification / Upgradation in existing TRT Gate and replacement of hoisting arrangement with rope drum hoist is in compliance to the CEA guidelines of Flood protection of the Power House and as suggested by dam safety team Appendix-B/12. to save precious time during disastrous flood conditions. 2. 01 no. TRT gate is provided for closure of TRT to prevent back inflow of water or silt during high silt period. The TRT gate is made up of 04 segments and is operated by mobile crane which operates these gates in sequential order during closure. All of this system was provided since commissioning of the project. This procedure of putting gate segments one by one consumes a lot of time and during emergency such delays can prove to be determinantal to the safety of operation of	Considering the fact that the additional capital expenditure claimed is on account of higher safety and security of the generating station, the claim is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations. As the said works are towards replacement / upgradation and the Petitioner has also not furnished any information regarding the decapitalization of old asset, the decapitalized value of old asset is considered under 'Assumed Deletion'.	210.65

Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
				Power Station. The proposed installation of an integrated rope drum hoist at TRT was in compliance to the CEA guidelines of Flood protection of the Power House as suggested by dam safety team to save precious time during disastrous flood conditions (copy enclosed at Appendix-B/12).		
13	Erection, Testing and Commissioning of 400 KV GIS Extension Bay.	25(1)(f)	87.50	Item already allowed by the Commission in 2014-19. Material has already been supplied and commissioning of bus reactors through Bus-I has already been done. The interconnection of GIS Extension Bay with Bus II is to be carried out in 2019-20. Further, there are total six oil water soak pits i.e. two for each bus reactor to drain oil leakage (if any), rain water, water discharge from firefighting system. The oil/water from these soak pits accumulated in main oil water sump through interconnected pipe line. From this main sump, oil/water is required to be discharge in main drainage line of switchyard for which 2 nos submersible pumps are to be installed. 2. The actual date of 'put-to-use' is 25/08/2018. The system was charged through in August 2018 through Bus-I. Interconnection through Bus-II is to be carried out in FY 2021-22. 3. The balance work interconnection of GIS Extension Bay with Bus II and other work related to installation of pump were delayed to Covid. Expected to be carried out in 2021-22 and accordingly shall be claimed.	The Commission vide its order dated 4.9.2015 in 237/GT/2014 had allowed Rs. 2317 lakh during the period 2014-19. The Petitioner has claimed Rs. 2534.20 lakh towards these works and the same was allowed. As the said claim is towards the balance scope of works (already approved by the Commission), the same is **allowed** under Regulation 25(1)(f) of the 2019 Tariff Regulations.	87.50
	Total amount claimed		**721.08**			
	Total amount allowed					**453.65**
	Additional capital expenditure eligible for ROE at normal rate		474.00			243.00
	Additional capital		247.08			210.65

Sl.No.	Item	Regulation	Amount claimed	Justification by Petitioner	Remarks for Admissibility / non-admissibility	Amount allowed
	expenditure eligible for ROE at weighted Average Rate of Interest					

2022-23

77. The Petitioner has claimed projected additional capital expenditure of Rs. 891.30 lakh in 2022-23 and the same is examined below:

(Rs. in lakh)

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
1	Replacement of Booster Pump Set	25(2)(a)	49.00	The details of item are provided at item no. 2 in 2021-22. Deletion claimed in FY 2022-23 in form 9B(i) at sl. no. 1.	The item has already been dealt with in item no. 2 in 2021-22. Accordingly, the claim of the Petitioner is **allowed** under Regulation 25(2)(a) of the 2019, Tariff Regulations. The decapitalization of THE old asset as claimed by the Petitioner is considered under Decapitalization.	49.00
2	Replacement of Driers for Compressed Air system	25(2)(a)	28.50	The details of item are provided at item no.1 in the year 2020-21. Deletion claimed in the year 2022-23 in form 9B(i) at sl. no. 2.	The item has already been dealt with in item no.1 in 2020-21. Accordingly, the claim of the Petitioner is **not allowed** as additional capital expenditure**.** However, the Petitioner may claim the same under the capital spares at the time of truing up of tariff, along with supporting documents	0.00
3	Replacement of motor control panel of Main cooling water pump, 100 HP (6 Nos)	25(2)(c)	45.00	Motor starting method for existing panels is Direct on-line (DOL). In this method motor draws very high inrush current which leads to mechanical stresses on winding and bearings. The existing panels are proposed to replace with the panels having provision of soft/ VFD starting method. The soft/VFD starting of motors will reduce the inrush current by 1/3rd and also reduce the mechanical stress. The body of existing panels has also worn out due to their installations in high humidity zone. The replacement of the panels will reduce the O&M expenditure on pumps.	It is evident from the Petitioner's submission that the claim is for energy conservation during starting of booster pump and not on account of obsolescence. Moreover, the claim of the Petitioner is almost after 25 years of operation of the plant and the claim would not yield much benefit. In view of this, the claim of the Petitioner is **not allowed**.	0.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				The detailed note describing the difference in technology of installed DOL starter and proposed Soft Starters is as follows: The direct on-line starter (DOL) is a type of motor starter that directly connects the motor to the full line voltage. In DOL method, the voltage at motor start-up is not reduced and hence results to high inrush current. The huge current draws causes voltage dips in the system that could potentially damage other electronics/electrical equipment's as well as the motor itself (due to high current). It also reduces the mechanical life due to the sudden jerk at start-up. The soft starter/VFD is a semiconductor-based motor starter that uses thyristors to regulate the voltage supply to the motor. The voltage at start-up is reduced to reduce the inrush current. The voltage is gradually increased until the motor attains its rated speed. This starter causes no impact on the other system as well as motor/pump. As mentioned above, the high inrush current reduces the mechanical life of motor/pump and the voltage dip in the system potentially damages the other electronics/ electrical equipment's. Replacement of existing DOL starter with Soft/VFD starters will reduces the O&M expenditure on the Pump, motor and associated accessories. The reduced R&M cost in repair of motors/pumps will result in lower AFC & will be beneficial to beneficiary. Deletion claimed in the year 2022-23 in form 9B(i) at sl. no. 3.		
4	Replacement of	25(2)(a)	41.00	The details of item are	The item has already been	41.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
	Drainage / Dewatering pump (4 Nos)			provided at item no. 3 in 2020-21.Deletion claimed in the year 2022-23 in form 9B(i) at sl. no. 4	dealt with in item no. 3 in the year 2020-21. Accordingly, the claim of the Petitioner is **allowed** under Regulation 25(2)(a) of the 2019, Tariff Regulations. The decapitalization of old asset as claimed by the Petitioner is considered under Decapitalization.	
5	Hospital Equipment	25(2)(a)	5.80	The details of item are provided at item no. 9 in the year 2021-22.	The item has already been dealt with in item no. 9 in the year 2021-22. Accordingly, the proposed claim is **not allowed**.	0.00
6	Networking devices / servers	25(2)©	15.00	The details of item are provided at item no. 8 in the year 2020-21. In the year 2022-23, 6 nos new networking distribution/access switches are proposed to be purchased.	The item has already been dealt with in item no. 8 in the year 2020-21. Accordingly, the claim of the Petitioner is **allowed** under Regulation 25(2)(c) of the 2019, Tariff Regulations. However, the Petitioner is granted liberty to submit the relevant supporting documents to substantiate the obsolesce of technology at the time of truing up tariff. As the said works are in the nature of replacement and the Petitioner has not furnished any information regarding the decapitalization of old asset. Accordingly, the decapitalized value of old asset is considered under 'Assumed Deletions'.	15.00
7	Security & surveillance	26(1)(d)	20.00	The details of item are provided at item no. 10 in 2020-21. Deletion claimed in the year 2022-23 in form 9B(i) at s.no 5 to 8.	The item has already been dealt with in item no. 10 in 2020-21 and item no. 11 in 2021 – 22. Accordingly, the proposed claim is **not allowed**. However, the Petitioner is granted liberty to claim the same at the time of truing of tariff along with the all-relevant documents substantiating that the claim is over and above the amounts already allowed during the period 2014-19 and is necessary for the safe and secure operation of the plant, along with the completed details of scope of works, already claimed, allowed, to be claimed along with audited documents	0.00
8	Construction of field hostel, Barrack along with boundary wall for	26(1)(d)	146.00	CISF vide letter no. PR-13013/CISF/CPS-1/Inspection/2019-1312 dated 13.4.2019 has	It is noticed that the Petitioner has claimed Rs. 246 lakh in 2019-24 (Rs. 146 lakh in 2022-23 and	146.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
	CISF near Power House			asked for construction of Gazette Officers' Hostel, Recreation Hall and boundary for CISF Unit at CPS-I. Administrative approval is yet to be obtained from competent authority. Work is proposed to be taken up during 2022-23.	Rs. 100 lakh in 2023-24) for the said assets/works. It is also noticed that the Petitioner has claimed Rs. 296.28 lakh during the period 2014-19 toward the construction of executive field hostel / transit camp and the same was allowed. It is observed that the projected expenditure is over and above the amounts already allowed and the Petitioner has also not submitted any documentary evidence in support of the said claim. However, considering the nature of works, the additional capital expenditure claimed by the Petitioner is **allowed** under regulation 26(1)(d) of the 2019 Tariff Regulations**.** The Petitioner is directed to submit the detailed information regarding the subject claim including the amount claimed in 2014-19 19 and 2019-24 and allowed by the Commission and the expenditure envisaged in future with relevant documents at the time of truing up tariff.	
9	Installation of scheme for flood control & Disaster management.	26(1)(d)	500.00	Presently, no disaster management scheme is installed in Power House of CPS-1 to meet any accidental water leakage due to bursting of penstock / pipe line / failure of joints etc. The installation of scheme for flood control & disaster management was envisaged as per the CEA guidelines for "Technical Standards for Construction of Electrical Plants and Electric Lines, 2010. In this regulation there are guidelines for maintaining high capacity flood dewatering pumps under the conditions of heavy water leakages from bursting of penstock/pipe line/ failure of joints etc. and different provisions regarding maintaining their control panels. This scheme of flood control & Disaster management is comprehensive in nature	It is noticed that the projected expenditure claimed is after many years of plant operation and the Commission had already allowed various equipment's, such as dewatering pumps separately and the claim is overlapping with many other claims. Further, the outcome of the proposed expenditure is not clear from the submissions of the Petitioner. Accordingly, the claim of the Petitioner is **not allowed**. However, the Petitioner is granted liberty to claim the same at the time of truing up of tariff along with the supporting documents.	0.00

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				covering different aspects like installation of pumps, their electrical control panels, laying of pipeline for removal of flood water and provision of the power supply of these pumps at safe location. Presently the case file is in tendering stage and it is estimated that this work will be awarded during this financial year i.e. 2021-22 and the whole system flood control & Disaster management will be put to use during 2022-23.		
10	Fire tender	25(1)(f)	41.00	Power Station has two fire tenders. One of the fire tender was purchased in 1986 and has outlived more than 32 years. The said fire tender is beyond economical repair and therefore, it is proposed to be replaced with new fire tender. Item was already allowed by the Commission in 2014-19 tariff period but due to delay in tendering process, the item could not be purchased in the 2014-19 tariff period. 2. At present, power station has two fire tender (HP47 1694-Model 1986 & HP 47 4953-Model-2014-15). As per CEP order dated 22.1.2018 (Appendix-B/13), Fire tender (HP47 1694) is to be retained. However, this Fire tender is old and obsolete, and it can be purchased after approval of CEP and accordingly case will be initiated. 3. Power station has written a letter to CEP Division, CO for seeking consent for purchase of new fire tender in place of old fire tender. Fire tender may be purchased in 2022-23 after clearance from CEP Division. Deletion claimed in 2022-23 in form 9B(i) at sl. no. 9	It is noticed that the Commission vide its order dated 4.9.2015 in Petition No.237/GT/2014 had allowed an amount of Rs.36 lakh towards the replacement of Fire Tender. However, the Petitioner has proposed to capitalize the same in the year 2022-23. Considering the above, the claim of the Petitioner is **allowed** under Regulation 25(2)(d) of the 2019 Tariff Regulations. The decapitalization of old asset as claimed by the Petitioner is considered under Decapitalization.	41.00
	Total amount claimed		**891.30**			
	Total amount allowed					**292.00**

Sl.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
	Additional capital expenditure eligible for ROE at normal rate		225.30			146.00
	Additional capital expenditure eligible for ROE at weighted Average Rate of Interest		666.00			146.00

2023-24

78. The Petitioner has claimed projected additional capital expenditure of Rs.285.85 lakh in 2023-24 and the same is examined below:

(Rs. in lakh)

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
1	Replacement of main cooling water vertical turbine pump (02 Nos)	25(2)(a)	71.00	The details of item are provided at item no. 4 in the year 2021-22. Deletion claimed in the year 2023-24 in form 9B(i) at sl. no. 1.	The item has already been dealt with in item no. 4 in 2021-22. Accordingly, the claim of the Petitioner is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The decapitalization of old asset as claimed by the Petitioner is considered under Decapitalization.	71.00
2	Replacement of Drainage / Dewatering pump (04 Nos)	25(2)(a)	23.00	The details of item are provided at item no. 3 in the year 2020-21. Deletion claimed in the year 2023-24 in form 9B(i) at sl. no. 2	The item has already been dealt with in item no. 3 in 2020-21. Accordingly, the claim of the Petitioner is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The decapitalization of old asset as claimed by the Petitioner is considered under Decapitalization.	23.00
3	Purchase of Hospital Equipment	25(2)(a)	3.70	1.Since the commissioning of the project hospital, several medical equipments were purchased for betterment of medical facility.Due to continuous R&D and application of information technology to clinical purpose, new instruments are available which have intelligent functions and are more accurate. The existing dental chair was purchased in 1999 (20 yrs. ago) and spare parts are not readily available as model has become obsolete. The ECG machine was purchased in 2014-15 and after 5 years, it will be 10 years old. Oxygen cylinder and	It is noticed that the Petitioner has claimed Rs. 8.70 lakh in 2020-21 towards the replacement of hospital equipment, Rs. 22.30 lakh during the period 2019-24 towards hospital equipment and Rs. 3.70 lakhs in 2023-24 towards purchase of hospital equipment. It is observed that during the period 2014-19, the Petitioner had claimed total Rs. 39.02 lakh (Rs. 18.57 lakhs towards purchase of hospital equipment and Rs. 18.94 lakhs (Rs. 20.45 lakh on accrual basis) towards the replacement of hospital equipment) for various equipment of hospital and the same were allowed by	0.00

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				auto clave were purchased in 1990-91 and in 2003-04 respectively. Further, the Crash cart, BMI calculator, digital video auto clave, Computerised Radio Graphy (CR) system, automated external Defibrillator, centrifuge and digital haemoglobin, ambulance auto loader emergency stretcher drawers & cabinets examination couch, physiotherapy Laser Theapy unit, IFT (Interferential Therapy) Tens lead, Mortuary I body with stainless steel chamber for medical purpose, CPR Manikan with AED trainer etc are also required for upgradation of hospital. It is therefore, proposed to purchase this equipment. 2. Assets are old and obsolete now 3. All the mentioned assets are specific and not inter-dependent for its put-to use/utilization. None of these assets came into the purview of implementation in phase manner. All the mentioned assets shall be utilized / put-to-use in the year of capitalization.	the Commission. The projected claim of the Petitioner is over and above the already allowed amount of Rs. 39.02 lakh during the period 2014-19 and is in addition to the claim for replacement of hospital equipment during the period 201-24. The Petitioner has also not substantiated the said claim along any with any supporting documents. In view of these, the claim is **not allowed**.	
4	Networking devices / servers	25(2)(C)	44.00	The details of item are provided at item no. 8 in 2020-21. In the year 2023-24, 2 nos servers, 6 nos networking access switches and 6 nos networking POE switches are proposed to be purchased.	The item has already been dealt with in item no. 8 in 2020-21. Accordingly, the claim of the Petitioner is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. The Petitioner is however directed to submit the relevant supporting documents to substantiate the obsolesce of technology at the time of truing up tariff. The said works are replacement in nature and the Petitioner has also not furnished any information regarding the decapitalization of old asset. Accordingly, the decapitalized value of old asset is considered under 'Assumed Deletions'.	44.00
5	Security & surveillance	26(1)(d)	25.15	The details of item are provided at item no. 10 in	The item has already been dealt with in item no. 10 in	0.00

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
				2020-21.In year 2023-24, 36 no. cameras are proposed to be purchased.	2020-21, in item no. 11 in 2021-22 and in item no. 7 in 2022-23. Accordingly, the projected claim of the Petitioner is **not allowed**. However, the Petitioner is granted liberty to claim the same at the time of truing of tariff along with the all relevant documents substantiating that the claim is over and above already allowed amount during the period 2014-19 and is necessary for the safe and secure operation of the plant. The Petitioner is also directed to submit the completed details of scope of works, already claimed, allowed, to be claimed along with audited documents	
5A	Security & surveillance	26(1)(d)	19.00	The details of item are provided at item no. 11A in 2020-21.	The item has already been dealt with in item no. 11A in 2020-21. Accordingly, the proposed claim is **not allowed**. However, the Petitioner is granted liberty to claim the same at the time of truing of tariff along with the all relevant documents substantiating that the claim is over and above already allowed amount during the period 2014-19 and is necessary for the safe and secure operation of the plant.	0.00
6	Construction of field hostel, Barrack along with boundary wall for CISF near Power House	26(1)(d)	100.00	The details of item are provided at item no. 8 in 2022-23.	The item has already been dealt with in item no. 8 in 2022-23. Accordingly, the proposed claim is **allowed** under Regulation 26(1)(d) of 2019 Tariff Regulations. The Petitioner is directed to submit the detailed information regarding the subject claim including the amount claimed during the period 2014-19 and 2019-24 and allowed by the Commission and envisaged expenditure in future along with relevant documents at the time of truing up tariff.	100.00
	Total amount claimed		**285.85**			**238.00**
	Total amount allowed					
	Additional capital expenditure eligible for ROE at normal rate		141.70			138.00
	Additional capital expenditure		144.15			100.00

S.No.	Item	Regulation	Amount claimed	Justification	Reason for admissibility/ non- admissibility	Amount allowed
	eligible for ROE at weighted Average Rate of Interest					

De-capitalization

79. The Petitioner had claimed the de-capitalization of various assets through Form 9B(i). Subsequently, the said form was revised, wherein, more no. of items has been included under Form 9B(i). As the decapitalization information furnished by the Petitioner for the period 2019- 24, is not on actual basis and is subject to truing up, based on audited forms, the revised Form 9B(i) has been considered as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
13.59	323.77	66.05	46.17	17.62

80. The Petitioner has submitted the year of 'put to use' of the de-capitalized assets and accordingly, the de-capitalization value of the assets has been calculated. The Petitioner has claimed decapitalization of few assets in lieu of the additional capital expenditure claimed during the 2019–24 tariff period. However, some of these claims were admitted. Therefore, the de-capitalization of assets with regard to the assets, which were not allowed was excluded. Further, some of the additional capital expenditure claimed are towards replacement/upgradation of assets and the Petitioner had not furnished any information regarding their decapitalization. Thus, the decapitalized values of old assets have been determined through Assumed Deletion Methodology. Accordingly, the decapitalization against some assets was not allowed and for few decapitalized value was determined as described in para 21 of this order. Accordingly, after prudence check, the de-capitalization allowed is as follows:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
De-capitalisation allowed for assets eligible for Normal RoE	6.42	285.29	22.42	18.41	17.62
Decapitalisation allowed for assets eligible for WAROI	0.00	0.00	0.00	0.00	0.00

Assumed Deletion allowed for assets eligible for Normal RoE	15.50	23.48	8.84	3.83	10.69
Assumed Deletion allowed for assets eligible for WAROI	0.00	0.00	56.42	0.00	0.00
Total De-capitalisation allowed	**21.92**	**308.78**	**87.68**	**22.24**	**28.31**

Discharge of liabilities

81. The Petitioner has claimed following discharge of liabilities during the tariff period 2019-24:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
751.51	0.00	0.00	0.00	0.00

82. The discharge of liabilities allowed as part of the additional capital expenditure, corresponding to allowed assets, are as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening liabilities corresponding to allowed capital cost	746.93	0.00	0.00	0.00	0.00
Add: Liability additions corresponding to allowed capital cost	0.00	0.00	0.00	0.00	0.00
Less: Discharges of liabilities corresponding to allowed capital cost	746.93	0.00	0.00	0.00	0.00
Less: Reversal of liabilities corresponding to allowed capital cost	0.00	0.00	0.00	0.00	0.00
Closing liabilities corresponding to allowed capital cost	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Additional capital expenditure allowed (Net) for the 2019-24 period

83. In view of above, the net additional capital expenditure allowed for the 2019-24 tariff period is summarized as under:

Additional Capital Expenditure Eligible for Normal ROE:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Admitted projected additional capital expenditure (A)	82.92	1073.50	243.00	146.00	138.00
Less: De-capitalization of assets (B)	21.92	308.78	31.26	22.24	28.31
Less: Undischarged Liabilities (C)	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities (against allowed assets / works) (D)	746.93	0.00	0.00	0.00	0.00

	2019-20	2020-21	2021-22	2022-23	2023-24
Net projected additional capital expenditure allowed (on cash basis) (E) = (A-B-C+D)	807.92	764.72	211.74	123.76	109.69

Additional Capital Expenditure Eligible for WAROI ROE:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Admitted projected additional capital expenditure (A)	23.20	2.00	210.65	146.00	100.00
Less: De-capitalization of assets (B)	0.00	0.00	56.42	0.00	0.00
Less: Undischarged Liabilities (C)	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities (against allowed assets / works) (D)	0.00	0.00	0.00	0.00	0.00
Net projected additional capital expenditure allowed (on cash basis) (E) = (A-B-C+D)	23.20	2.00	154.23	146.00	100.00

Capital cost allowed

84. Accordingly, the capital cost allowed for the period 2019-24 is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	208496.86	209327.99	210094.71	210460.68	210730.44
Net Additional capital expenditure allowed during the year/ period	831.12	766.72	365.97	269.76	209.69
Closing Capital Cost	**209327.99**	**210094.71**	**210460.68**	**210730.44**	**210940.13**

Debt-Equity Ratio

85. Regulation 18 of the 2019 Tariff Regulations provides as under:

> *"18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. 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, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds 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 1.4.2019, debt:equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of a generating station or a transmission system including communication, system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30%shall not be taken into account for tariff computation;

Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation."

86. The gross loan and equity amounting to Rs. 143909.52 lakh and Rs. 64587.35 lakh, respectively as on 31.3.2019, as considered in this order for the period 2014-19 has been retained as the opening gross loan and equity as on 1.4.2019. Further, the projected additional capital expenditure approved as above, has been claimed to be funded in the debt: equity ratio of 70:30. Further, for the assets de-capitalized during the 2019-24 tariff period, the relevant original debt-equity ratio considered during capitalization in the relevant tariff petitions has been considered for de-capitalization. The details of debt-equity ratio in respect of the generating station as on 1.4.2019 and as on 31.3.2024 are as follows:

(Rs. in lakh)

	Capital cost as on 1.4.2019		**Additional Capital Expenditure in 2019-24**		**De-capitalization**		**Capital cost as on 31.3.2024**	
	Amount	**(%)**	**Amount**	**(%)**	**Amount**	**(%)**	**Amount**	**(%)**

	Capital cost as on 1.4.2019		Additional Capital Expenditure in 2019-24		De-capitalization		Capital cost as on 31.3.2024	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt (A)	143909.52	69.02%	2038.54	70.00%	326.54	69.64%	145621.52	69.03%
Equity (B)	64587.35	30.98%	873.66	30.00%	142.39	30.36%	65318.62	30.97%
Total (C)=(A)+(B)	**208496.86**	**100.00%**	**2912.20**	**100.00%**	**468.93**	**100.00%**	**210940.13**	**100.00%**

Return on Equity

87. Regulations 30 and 31 of the 2019 tariff Regulations provide as under:

"30. Return on Equity

(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% 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) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;

ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

iii. in case of a thermal generating station, with effect from 1.4.2020:

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.

31. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations 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 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 paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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

Illustration-

(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess: Rate of return on equity = 15.50/(1-0.2155) = 19.758%

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

(a) Estimated Gross Income from generation or transmission business for 2019-20 is Rs. 1,000 Crore;

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

(c) Effective Tax Rate for the year 2019-20 = Rs. 240 Crore/Rs. 1000 Crore = 24%;

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 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 customers, as the case may be, on year to year basis."

88. The Return on Equity (ROE) for the existing asset base and the additional capital expenditure allowed in this order for asset/works within the original scope of work, has been calculated by grossing up the base RoE at MAT rate of 17.472% as submitted by the Petitioner. Further, based on the additional capital expenditure which are beyond the original scope and allowed in this order, ROE has been

calculated considering the weighted average rate of interest claimed by the Petitioner. Accordingly, ROE has been worked out and allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Equity-Opening (A)	64587.35	64829.64	65057.94	65121.34	65158.39
Addition of Equity due to additional capital expenditure (B)	242.30	228.29	63.41	37.05	32.80
Equity-Closing (C) = (A) + (B)	64829.64	65057.94	65121.34	65158.39	65191.20
Average Equity (D) = (A+C)/2	64708.49	64943.79	65089.64	65139.87	65174.79
Return on Equity (Base Rate) (E)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax Rate (F)	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre Tax) (G) = (E)/(1-F)	19.993%	19.993%	19.993%	19.993%	19.993%
Return on Equity (Pre Tax) annualised (H) = (D)x(G)	**12937.17**	**12984.21**	**13013.37**	**13023.41**	**13030.40**
Addition due to additional capitalization beyond scope of work					
Equity - Opening (A)	0.00	6.96	7.56	53.62	97.42
Addition of Equity due to additional capital expenditure (B)	6.96	0.60	46.06	43.80	30.00
Equity-Closing (C) = (A) + (B)	6.96	7.56	53.62	97.42	127.42
Average Equity (D) = (A+C)/2	3.48	7.26	30.59	75.52	112.42
Rate (WAROI) (E)	7.92%	7.92%	7.92%	7.92%	7.92%
Effective Tax Rate (F)	17.472%	17.472%	17.472%	17.472%	17.472%
Weighted average rate of interest on actual loan portfolio (G)= E/(1-F)	9.597%	9.597%	9.597%	9.597%	9.597%
Return on Equity (Pre-Tax) - annualised (H) = (D) x (G)	**0.33**	**0.70**	**2.94**	**7.25**	**10.79**

Interest on Loan

89. Regulation 32 of the 2019 Tariff Regulations provides as under:

“32. Interest on loan capital:

(1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2019-24 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 changes to the terms and conditions of the loans shall be reflected from the date of such re-financing."

90. The normative loan for the project has already been repaid. The normative loan on account of the admitted additional capital expenditure during the respective years of the tariff period have also been considered as fully paid, as the admitted depreciation is more than the amount of normative loan in these years. As such, Interest on loan during the 2019-24 tariff period is worked out as "Nil".

<u>Depreciation</u>

91. Regulation 33 of the 2019 Tariff Regulations provides as under:

"33. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. 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:

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 a 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 the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

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

Provided also 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 unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or 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-I 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 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2019 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 five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

92. Accordingly, the cumulative depreciation amounting to Rs. 139396.44 lakh as on 31.3.2019, has been considered for the purpose of tariff. The COD of the generating station is 1.5.1994. Since the generating station has completed 12 years of operation as on 30.4.2006, the remaining depreciable value has been spread over the balance useful life of the assets. In terms of the 2014 Tariff Regulations, the useful life of a hydro generating station was 35 years. However, the 2019 Tariff Regulations stipulates that the useful life of a hydro generating station is 40 years. Accordingly,

the balance useful life of the generating station, as on 1.4.2019, has been considered as 15.08 years in line with the 2019 Tariff Regulations. Accordingly, depreciation has been computed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Average Capital Cost (A)	208912.42	209711.35	210277.69	210595.56	210835.29
Value of freehold land included in average capital cost (B)	3910.57	3910.57	3910.57	3910.57	3910.57
Land under reservoir & land lease hold (C)	1405.72	1405.72	1405.72	1405.72	1405.72
Aggregated Depreciable Value (D)= (A-B+C) *90%	185766.82	186485.85	186995.56	187281.64	187497.39
Remaining aggregate depreciable value at the beginning of the year (E) = (D) - (K)	46370.38	44029.92	41625.14	38790.95	35812.26
No. of completed years at the beginning of the year (F)	24.92	25.92	26.92	27.92	28.92
Balance useful life at the beginning of the year (G) = 40 - (F)	15.08	14.08	13.08	12.08	11.08
Combined Depreciation during the year/ period (H) = (E)/(G)	3074.28	3126.38	3181.54	3210.29	3231.18
Cumulative depreciation at the end of the year (before adjustment for de-capitalization) (I) = (H) + (Cumulative Depreciation at the end of the previous year) *	142470.72	145582.32	148551.96	151700.98	154916.31
Less: Depreciation adjustment on account of de-capitalization (J)	14.79	211.90	61.27	15.85	20.58
Cumulative depreciation at the end of the year (K) = (I) - (J)	**142455.93**	**145370.42**	**148490.69**	**151685.13**	**154895.73**

**Cumulative Depreciation as on 31.3.2019 is Rs. 139396.44 lakh*

Operation & Maintenance Expenses

93. Regulation 35(2)(a) of the 2019 Tariff Regulations provides as under:

"(2) Hydro Generating Station: (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 1.4.2019:

(Rs. in Lakh)

Particulars	***2019-20***	***2022-21***	***2021-22***	***2022-23***	***2023-24***

Chamera-I	*11773.57*	*12334.77*	*12922.71*	*13538.68*	*14184.00*

***Note**: The impact in respect of revision of minimum wage, pay revision and GST, if any, will be considered at the time of determination of tariff.”*

94. The Petitioner has claimed O&M expenses as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Normative O&M expenses Regulation 35(2)(a) of the 2019 Tariff Regulations (a)	11773.57	12334.77	12922.71	13538.68	14184.00
Impact of pay revision of NHPC staff (b)	1438.09	1506.69	1578.56	1653.86	1732.75
Impact of pay revision of KV Staff (c)	23.45	24.57	25.75	26.97	28.26
Impact of Goods & Service Tax (d)	120.00	125.73	131.72	138.01	144.59
Total additional O&M Expenses (a+b+c+d)	**13355.12**	**13991.76**	**14658.74**	**15357.52**	**16089.60**
Security Expenses (estimated)	1330.06	1393.50	1459.97	1529.61	1602.58
Total (a+b+c+d+e)	**14685.18**	**15385.26**	**16118.71**	**16887.13**	**17692.18**

95. As the Petitioner has claimed normative O&M expenses in accordance with Regulation 35(2)(a) of the 2019 Tariff Regulations, the same is allowed:

Additional O&M expenses

96. As per note under Regulation 35(2)(a) of the 2019 Tariff Regulations, the impact in respect of revision of pay / wage and GST is also required to be considered at the time of determination of tariff for the period 2019-24. As per Para 10.7.4 of the Statement of Reasons to the 2019 Tariff Regulations, in case of hydro generating stations, the O&M expenses norms are provided for each of the generating stations in absolute terms, i.e. Rs in lakh/year. As it was not practicable to derive a common impact for all the hydro generating stations on account of employees pay revision, escalation in minimum wages and GST, it was decided that the Impact on O&M expenses due to these components shall be considered for each generating station separately at the time of determination of tariff for the period 2019-24. Accordingly, the allowable impact of pay revision and GST, in addition to the normative O&M expenses allowed in accordance with Regulation 35(2)(a) of the 2019 Tariff Regulations are dealt in the following paragraphs.

97. The Petitioner has claimed additional O&M expenses on account of impact of pay revision of the Petitioners staff and KV staff, including GST is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Impact of pay revision of Petitioner's Staff (a)	1438.09	1506.69	1578.56	1653.86	1732.75
Impact of pay revision of KV Staff (b)	23.45	24.57	25.75	26.97	28.26
Impact of GST (c)	120.00	125.73	131.72	138.01	144.59

Impact of pay revision of Petitioners staff and KV Staff

98. Based on the impact of pay revision of Petitioner's staff and KV staff in 2018-19, the Petitioner has claimed expenses for Rs.1438.09 lakh and Rs. 23.45 lakh in 2019-20, as additional O&M expenses, due to impact of pay revision of Petitioner's Staff and KV staff, respectively. It is pertinent to mention that the Commission in its order dated 22.11.2021 in Petition No. 235/MP/2019 filed by the Petitioner for the seeking recovery of additional O&M expenses on account of impact of wage / pay revision for the 2014-19 tariff period, had observed that there is no under recovery due to Impact of pay revision of Petitioner's staff and KV staff in 2018-19. Accordingly, the claim of the Petitioner on account of impact due to pay revision of Petitioner's staff and KV staff has been disallowed during the period 2019-24. However, the Petitioner is granted liberty to approach the Commission for the same at the time of truing up of tariff along with relevant documents including auditor certified statement.

GST

99. The Petitioner has claimed the impact of GST for the period 2019-24 on the basis of impact of GST in 2018-19. It is noticed that the Petitioner has submitted the total impact of GST as Rs.192.83 lakh for the period from 1.7.2017 to 31.3.2019, based on actual audited accounts for 21 months (Rs 78.29 lakh in 2017-18 and Rs.

114.54 lakh in 2018-19). On scrutiny of the details, it is noticed that the claim of Petitioner includes impact of GST towards Security expenses also. As per Regulation 35(2)(d) of the 2019 Tariff Regulations, Security expenses shall be allowed separately after prudence check. As such, the actual audited impact of GST for the period from 1.7.2017 to 31.3.2019 has been normalized (excluding impact on security expenses of Rs. 32.28 lakh) and an amount of Rs. 86.19 lakh has been worked out for 2019-20 (after escalating @ 4.77%). Accordingly, the base value of 2019-20 has been escalated @4.77% and the GST impact has been worked out and allowed for the period 2019-24, as per note under Regulation 35(2)(a) of the 2019 Tariff Regulations as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
86.19	90.30	94.60	99.12	103.85

<u>Security Expenses</u>

100. Further, Regulation 35(2) (d) of the 2019 Tariff Regulations provides as under:

> *"The Security Expenses and Capital Spares for hydro generating stations shall be allowed separately after prudence check:*
>
> *Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification."*

101. The Petitioner has claimed Security expenses as part of the O&M expenses in terms of Regulation 35(2)(d) of the 2019 Tariff Regulations. The actual security expenses incurred during 2018-19 i.e. Rs.1269.50 lakh and the year-wise escalation rate of 4.77% thereof has been considered to arrive at the security expenses for the period 2019-24. Accordingly, the estimated security expenses claimed by the Petitioner are as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1330.06	1393.50	1459.97	1529.61	1602.58

102. Considering the security requirements of the generating station, we allow the estimated security expenses as claimed by the Petitioner for the period 2019-24. The Petitioner is however, directed to submit the actual security expenses incurred, duly audited, at the time of truing up of tariff. Accordingly, the estimated security expenses claimed as above is allowed:

Capital Spares

103. As regards capital spares, the Petitioner has submitted that same will be claimed at the time of truing-up of tariff based on the actual expenses incurred. In view of this, capital spares have not been considered in this order.

104. Accordingly, based on above the O&M expenses allowed for the generating station are as under:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
Installed Capacity (MW) (A)		540.00	540.00	540.00	540.00	540.00
O&M Expenses under Reg.35(1) in Rs lakh / MW (B)	Claimed	11773.57	12334.77	12922.71	13538.68	14184.00
	Allowed	**11773.57**	**12334.77**	**12922.71**	**13538.68**	**14184.00**
Capital Spares (in Rs lakh) (C)	Claimed	0.00	0.00	0.00	0.00	0.00
	Allowed	0.00	0.00	0.00	0.00	0.00
Security Expenses (in Rs lakh) (D)	Claimed	1330.06	1393.50	1459.97	1529.61	1602.58
	Allowed	**1330.06**	**1393.50**	**1459.97**	**1529.61**	**1602.58**
Impact of Goods & Service Tax (E)	Claimed	120.00	125.73	131.72	138.01	144.59
	Allowed	**86.19**	**90.30**	**94.60**	**99.12**	**103.85**
Total O&M Expenses as allowed (including Water Charges and Capital Spares Consumed) (F) = (B+C+D+E)	Claimed	13223.63	13854.00	14514.40	15206.30	15931.16
	Allowed	**13189.81**	**13818.57**	**14477.29**	**15167.41**	**15890.42**

Interest charges on account of arbitration

105. It is further observed that the Petitioner vide affidavit dated 21.6.2021, has also claimed principal amount of Rs.178.27 lakh along with interest charges of Rs.890.91 lakh in 2019-20 towards the claim for arbitration cases settled, along with documentary evidence. The principal amount of Rs.178.27 lakh has been allowed as additional capitalization during 2019-20, while the interest amount of Rs.890.91 lakh is allowed as an one-time reimbursement, as additional O&M expense, in line with paragraph 53 above of this order. Further, the interest charges of Rs.890.91 lakh shall not be made part of the annual fixed charges determined in this order.

Interest on Working Capital

106. Sub-section (c) of clause (1) of Regulation 34 of the 2019 Tariff Regulations provides as under:

> *"34. Interest on Working Capital: (1) The working capital shall cover*
>
> *(c) For Hydro generating station (Including Pumped Storage Hydro Generating Station) and transmission system:*
>
> *(i) Receivables equivalent to 45 days of annual fixed cost;*
>
> *(ii) Maintenance spares @ 15% of operation and maintenance expense including security expenses; and*
>
> *(iii) Operation and maintenance expenses including security expenses for one month"*

Working capital for Receivables

107. Receivable component of working capital has been worked out and allowed on the basis of 45 days of fixed cost as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
3690.64	3787.23	3875.77	3969.46	4054.65

Working capital for Maintenance Spares

108. Maintenance spares component of Working Capital has been worked out on the basis of 15% of annual O&M expenses and allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1978.47	2072.79	2171.59	2275.11	2383.56

Working capital for O&M expenses

109. O&M expenses component of Working Capital has been worked out on the basis of one month of O&M expenses including security expenses and allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1099.15	1151.55	1206.44	1263.95	1324.20

Rate of Interest of working Capital

110. Regulation 34(3) of the 2019 Tariff Regulations provides as under:

> *"34(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 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." Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24."*

111. In accordance with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital considered on projection basis, for the 2019-24 tariff period is 12.05% (i.e.1-year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for 2019-24 tariff period is being determined during 2022-23, SBI MCLR as on 1.4.2020 (7.75%), as on 1.4.2021 (7.00%) and as on 1.4.2022 (7.00%) are also available, which are lower in comparison to same, as on 1.4.2019 (8.55%). Since the rate of interest on working capital is subject to revision at the time of truing-up of tariff, based on the bank rate as on 1st April of each financial year, we find it prudent to allow the rate of interest as on 1.4.2020, 1.4.2021 and 1.4.2022 for 2020 – 21, 2021 – 22, 2022 – 23 and the rate of interest as on 1.4.2022 for 2023 – 24. Accordingly, the rate of interest for the year 2019-20 is 12.05%, 2020-21 is 11.25%, 2021-22 is 10.50 %, 2022 - 23 is 10.50 % and for the subsequent year the rate of interest of 10.50% has been considered (i.e. 1-year SBI MCLR of 7.75% as on 1.4.2020 + 350 basis points, 1-year SBI MCLR of 7.00% as

on 1.4.2021 + 350 basis points and 1-year SBI MCLR of 7.00% as on 1.4.2022 + 350 basis points). Accordingly, Interest on working capital is allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Working capital for O&M expenses (one month)	1099.15	1151.55	1206.44	1263.95	1324.20
Working capital for Maintenance Spares - 15% of O&M	1978.47	2072.79	2171.59	2275.11	2383.56
Working capital for Receivables - 45 Days	3690.64	3787.23	3875.77	3969.46	4054.65
Total Working Capital	**6768.26**	**7011.57**	**7253.80**	**7508.52**	**7762.42**
Rate of interest (%)	12.05%	11.25%	10.50%	10.50%	10.50%
Interest on Working capital for	**815.58**	**788.80**	**761.65**	**788.40**	**815.05**

Annual Fixed Charges

112. Based on the above discussion, the annual fixed charges approved for the generating station for the 2019-24 tariff period are summarized as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	3074.28	3126.38	3181.54	3210.29	3231.18
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	12937.50	12984.91	13016.31	13030.66	13041.19
Interest on Working Capital	815.58	788.80	761.65	788.40	815.05
O&M Expenses	11859.76	12425.07	13017.31	13637.80	14287.85
Security Expenses	1330.06	1393.50	1459.97	1529.61	1602.58
Total Annual Fixed charges	**30017.17**	**30718.66**	**31436.78**	**32196.75**	**32977.84**

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 .

Normative Annual Plant Availability Factor (NAPAF)

113. The claim of the Petitioner for NAPAF of 90% is in accordance with Regulation 50 (4) of the 2019 Tariff Regulations and hence the same is considered.

Design Energy (DE)

114. The Commission in its order dated 4.9.2015 in Petition No.237/GT/2014 had approved the annual Design Energy (DE) of 1664.55 MUs for the period 2014-19 in respect of this generating station. This DE has been considered for this generating station for the 2019-24 tariff period as per month-wise details as under:

Months	Design Energy (MU)
April	99.02
May	184.54
June	183.46
July	279.62
August	340.25
September	168.17
October	96.93
November	65.91
December	59.93
January	64.45
February	58.13
March	64.15
Total	1664.55

Application Fee and Publication Expenses

115. The Petitioner has sought the reimbursement of fees paid by it for filing the tariff petition and for publication expenses in respect of the same. Accordingly, in terms of the Regulation 70(1) of the 2019 Tariff Regulations, the Petitioner shall be entitled for the reimbursement of filing fees and publication expenses in connection with the present petition, directly from the beneficiaries, on pro-rata basis.

116. Similarly, RLDC fees & charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2019, shall be recovered from the beneficiaries. In addition, the Petitioner is entitled recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2019 Tariff Regulations.

Summary

117. The annual fixed charges claimed and allowed for the 2019-24 tariff period are summarized below:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Annual fixed charges claimed	30233.40	31061.91	31927.04	32757.25	33570.52
Annual fixed charges allowed	**30017.17**	**30718.66**	**31436.78**	**32196.75**	**32977.84**

	2019-20	2020-21	2021-22	2022-23	2023-24
Additional one-time O&M expenses allowed on account of Interest on arbitration award	**890.91**				

118. The annual fixed charges approved as above, is subject to truing-up in terms of Regulation 13 of the 2019 Tariff Regulations.

119. Petition No. 145/GT/2020 is disposed of in terms of the above.

Sd/-	***Sd/-***	***Sd/-***
(Pravas Kumar Singh)	**(Arun Goyal)**	**(I. S. Jha)**
Member	**Member**	**Member**