

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 142/GT/2022**

**Coram:**

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

**Date of Order: 19<sup>th</sup> October, 2023**

**In the matter of:**

Petition for approval of tariff of Bairasiul Power Station (180 MW) after Renovation and Modernisation for the period 2019-24.

**And**

**In the matter of:**

NHPC Limited,  
NHPC Office Complex, Sector-33,  
Faridabad (Haryana) - 121 003.

**...Petitioner**

**Vs**

1. Punjab State Power Corporation Limited,  
The Mall, Near Kali Badi Mandir, Patiala-147001
2. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6, Panchkula-134109.
3. BSES Rajdhani Power Ltd., BSES Bhawan,  
Nehru Place, New Delhi-110019.
4. BSES Yamuna Power Ltd.,  
Shakti Kiran Building, Karkadooma, Delhi-110072.
5. Tata Power Delhi Distribution Ltd.  
33 kV Sub-station Building,  
Hudson Lines, Kingsway Camp, Delhi-110009.
6. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan, Kumar House, Shimla - 171 004.

**...Respondents**



**Parties Present:**

Shri Venkatesh, Advocate, NHPC  
Shri Ashutosh Shrivastava, Advocate, NHPC  
Shri Siddharth Nigotia, Advocate, NHPC  
Shri Kartikay Trivedi, Advocate, NHPC  
Shri Jayant Bajaj, Advocate, NHPC  
Shri Nihal Bhardwaj, Advocate, NHPC  
Shri Piyush Kumar, NHPC  
Shri Jitender Kumar, NHPC  
Shri Mohd. Farooq, NHPC  
Shri R.D. Shende, NHPC  
Shri Mohit K Mudgal, Advocate, BRPL  
Shri Sachin Dubey, Advocate, BRPL  
Ms. Aanchal, Advocate, BRPL

**ORDER**

This Petition has been filed by the Petitioner, NHPC Limited for approval of tariff of Bairasiul Power Station (180 MW) (in short ‘the generating station’) for the period 2019-24, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2019 (in short ‘the 2019 Tariff Regulations’).

2. The Petitioner has set up a generating station of 180 MW (3 x 60 MW) at Bairasiul Power Station Chamba District, in the State of Himachal Pradesh. The generating station utilizes the combined inflow of three tributaries of the Ravi river, namely Baira, Siul & Bhaledh for generation of power on a run-of-river basis (with small pondage). The beneficiaries of the power station are Himachal Pradesh, Punjab, Haryana and Delhi as per share allocation of MOP and Power Purchase Agreement (PPA) / Bulk Power Supply Agreement (BPSA) has been signed by the Petitioner with them. The date of commercial operation of the generating station are as under:

<b>Unit</b>	<b>COD</b>
Unit - I	18.5.1980
Unit – II	19.5.1980
Unit – III	13.9.1981
Station (180 MW)	1.4.1982



3. The Commission vide its order dated 29.8.2022 in Petition No. 143/GT/2020 had revised the tariff of the generating station for the period 2014-19, after truing up exercise of the actual additional capital expenditure incurred in respect of the generating station. Accordingly, the capital cost and the annual fixed charges allowed by order dated 29.8.2022 are as under:

**Capital Cost allowed**

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	18908.17	19753.25	20227.05	20310.92	20359.01
Additional capital expenditure allowed (Net)	845.08	473.80	83.88	48.09	9.97
Closing Capital Cost	19753.25	20227.05	20310.92	20359.01	20368.98
Average Capital Cost	19330.71	19990.15	20268.98	20334.97	20364.00

**Annual Fixed Charges allowed**

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	942.99	986.41	1109.19	53.55	54.79
Interest on Loan	0.00	0.00	0.00	4.96	9.03
Return on Equity	1723.98	1771.04	1785.70	1787.35	1791.59
O&M Expenses	8886.98	9330.59	9895.07	10586.47	11248.06
Interest on Working Capital	552.33	578.92	613.27	627.32	664.08
<b>Total</b>	<b>12106.28</b>	<b>12666.96</b>	<b>13403.23</b>	<b>13059.65</b>	<b>13767.55</b>

**Present Petition**

4. The Petitioner has filed the present petition for determination of tariff for the generating station for the period 2019-24, in terms of the 2019 Tariff Regulations. The Petitioner vide affidavit dated 14.10.2022, has revised the submissions/tariff forms and accordingly, the capital cost and annual fixed charges claimed by the Petitioner are as under:

**Capital cost claimed**

Sl. No.		2019-20	2020-21	2021-22		2022-23	2023-24
				(till 30.8.2021)	(from 31.8.2021)		
1	Opening Capital Cost	20486.13	19249.66	17751.62	30340.03	30685.56	31189.06
2	Add: Addition during the year / period	29.54	-	12.40	-	-	-



Sl. No.		2019-20	2020-21	2021-22		2022-23	2023-24
				(till 30.8.2021)	(from 31.8.2021)		
3	Less: De-capitalization during the year / period	1267.65	1498.04	13.36	-	-	-
4	Less: Reversal during the year / period	-	-	-	-	-	-
5	Add: Discharges during the year / period	1.63	-	-	345.53	503.50	-
6	Closing Capital Cost	19249.66	17751.62	17750.66	30685.56	31189.06	31189.06
7	Average Capital Cost	19867.89	18500.64	17751.14	30512.80	30937.31	31189.06

### **Annual Fixed Charges claimed**

(Rs. in lakh)

	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Depreciation	59.96	60.70	25.40	637.54	1108.02	1117.70
Interest on Loan	-	-	-	837.17	1390.68	1319.22
Return on Equity	1680.53	1600.99	647.91	1328.84	2302.58	2317.68
Interest on Working Capital	489.83	510.20	190.85	292.18	521.48	542.67
O & M Expenses	10566.02	11898.59	4771.08	6685.79	12003.06	12575.27
<b>Total AFC</b>	<b>12796.34</b>	<b>14070.48</b>	<b>5635.25</b>	<b>9781.53</b>	<b>17325.82</b>	<b>17872.55</b>

5. The Commission vide ROP of the hearing dated 20.9.2022, directed the Petitioner to submit certain additional information and in response, the Petitioner vide affidavit dated 14.10.2022, has submitted the additional information with copy to the Respondents. Thereafter, the Commission after hearing the parties on 9.11.2022 reserved its order in the matter. The Respondent BRPL vide affidavit dated 24.1.2023 has filed its reply in the matter. Taking into consideration the submissions of the parties and the documents available on record, we now proceed to examine the claims of the Petitioner in this Petition, as stated in the subsequent paragraphs.

### **Renovation and Modernization of the instant generating station.**

6. As per the Commission's order dated 3.6.2016 in Petition No. 76/MP/2015, approval to the R&M proposal of the Petitioner, for life extension of the generating station by 25 years w.e.f 1.4.2021, was accorded at the capital cost of Rs. 341.41 crores, including Interest During Construction (IDC) of Rs. 68.35 crore, based on R&M proposal vetted by Central



Electricity Authority (CEA). The Commission in the said order, had directed the Petitioner to obtain the investment approval of the competent authority. Accordingly, the Petitioner has taken the approval of NHPC board vide 417<sup>th</sup> meeting held on 13.8.2018.

### ***Time Over-run***

7. The Commission in its order dated 3.6.2016 in Petition No. 76/MP/2015, had observed that the schedule of completion of R&M works of Unit-I would be from December, 2017 to December 2018, Unit-II would be from January, 2019 to January, 2020 and Unit-III would be from February, 2020 to February, 2021. The Commission had allowed the R&M completion date as 1.4.2021, while the Petitioner has completed its R&M works on 31.8.2021. Therefore, there is time over-run of 152 days. In justification for the same, the Petitioner has submitted that it had floated the tender for vetting of completion capital expenditure on 9.3.2018, however, despite three extensions in the tendering process, no bids were received and subsequently, the tender was cancelled on 31.8.2018. The Petitioner has further submitted that all three units were shut down from 15.10.2018, for the commencement of R&M works. The Petitioner has also submitted that R&M works were badly hampered due to the outbreak of COVID-19 pandemic in the country and subsequent lockdowns from 25.3.2020 and even after the withdrawal of lockdown, the R&M works were performed with staggered staff and limited working hours. The Petitioner has stated that all these factors delayed the execution of R&M works and the Petitioner was able to achieve the entire R&M in 34 months & 16 days against the duration of 39 months.

8. With regard to time overrun, Commission, vide ROP of the hearing dated 20.9.2022 directed the Petitioner as under:

*“There is a time over-run of 6 months as per order dated 20.9.2016 in Petition No. 76/MP/2015. As the completion date for R&M of all units was February, 2021, but the actual R&M was completed in August 2021, clarification for this time over run to be submitted.”*



9. In response to the above, the Petitioner vide its affidavit dated 28.11.2022 has submitted as under:

“As per order dated 20.9.2016 in Petition No. 76/MP/2015, work of R&M was supposed to be started in December 2017 and completion was scheduled in February 2021 i.e. in a period of 39 months. The schedule starts of the work got slightly delayed due to delay in award of works. Therefore, the R&M works started on 15 Oct 2018 taking in view the lean inflow season and final commissioning achieved in August 2021. Thus, the actual completion for R&M is 34 months 16 days as compared to 39 months.

It is pertinent to mention that R&M works was badly hampered due to outbreak of COVID-19 pandemic in the country and subsequent lockdown imposed by Govt. of India from 25.03.2020. R&M works performed with staggered staff and limited working hours after withdrawal of lockdown. These factors delayed the execution of R&M works but still we achieved the entire R&M in 34 months & 16 days against 39 months.

Therefore, there is no time over run in the completion of the R&M works.”

10. The matter has been considered. It is noticed that the delay in the start of R&M works is of about 318 days. Further, the delay in completion of the R&M works is 152 days due to delay in starting of R&M works due to non-participation of bidders. It is observed that, even though the completion of R&M work has been delayed by 152 days due to delay in start of work, the Petitioner has completed the R&M work (within 34 months & 16 days) before the total time allowed (39 months) for R&M works. Further, during the delay period, the Petitioner has supplied power to the beneficiaries and has not claimed any IEDC for the period. Accordingly, considering the above reason of non-participation of bidders beyond the control of the Petitioner, the total time overrun of 152 days, is not attributable to the Petitioner and accordingly, the same is condoned.

### **Cost Over-run**

11. As stated, the Commission in its order dated 3.6.2016 in Petition No. 76/MP/2015, had approved the R&M proposal for life extension of the generating station by 25 years w.e.f 1.4.2021, at the capital cost of Rs. 341.41 crores, including Interest During Construction



(IDC) of Rs. 68.35 crore. The Commission in the said order had directed the Petitioner to obtain the investment approval of the competent authority and the Petitioner has obtained the approval of NHPC board in August, 2018 for a capital cost of Rs. 357.74 crores including IDC of Rs. 49.74 crore. The Petitioner has further submitted that the actual capital cost, after R&M works, as on COD i.e., 31.8.2021 is Rs 295.27 crores (excluding IDC) while estimated expected final capital cost was Rs 371.11 (excluding IDC).

12. The Respondent, BRPL has submitted that the Commission had approved an amount of Rs.341.41 crore for R & M of the project, out of which Rs. 273.06 crore was approved for civil infrastructure and electric works. However, it has pointed out that the Board of Directors of Petitioner had approved the cost of Rs. 308 crores for civil infrastructure and electric works which is 12.81% higher than the cost approved by CEA. It has further submitted that the Petitioner has not given any valid justification for the variation of Rs. 34.94 crore in civil infrastructure and electric works. The Respondent has further submitted that in clause 4 of the agenda note, the Board of Directors have provided justification for the variation in the cost, wherein for C-2 package under Civil & HM works, the Board has recommended the cost of Rs. 17.72 crore against the Commission approved cost of Rs. 8.41 crore. The Respondent has further submitted vide clause 4.1 of the agenda note, it was stated that the variation was mainly due to “increase in rate of excavation and concerting Bhaledh Feeder Tunnel (BFT)”, however, the Petitioner has not mentioned any calculation in this regard, in the agenda note. Similarly, the Respondent has submitted that the Board of Directors had awarded Rs. 19.91 crore for HM work, against the approved cost of Rs. 16.63 crore, stating that such variation is due to quoted rates of the L1 bidder, updation of escalation and revision of taxes, but, the Petitioner has not furnished any documents in this regard. The Respondent has stated that in para 3 of the agenda note, there are substantial variations in the cost of



Electric works which are mainly on account of increase in rates or revision in taxes, and such variations are not justified by any detailed calculations or documents or bill of items. The Respondent has added that in the light of the aforesaid submissions, the variations in cost should not be capitalized, as the Petitioner has failed to give any valid justifications.

13. The matter has been considered. It is observed that there is cost overrun from the capital cost of Rs. 357.74 crores approved by NHPC board on August, 2018 and the Petitioner has not submitted any justification for the increase in capital cost. Further, as the claimed actual capital cost after R&M works as on COD i.e., 31.8.2021 is Rs 295.27 crores (excluding IDC), is lower than the approved capital cost (approved by NHPC Board) for Rs. 308 crores (excluding IDC of Rs. 49.74 crore), the Commission allows the capital cost of Rs 295.27 crores, subject to the submission of proper justification along with supporting documents, as regards the increase in cost (against NHPC board approved cost) at the time of truing -up of tariff of the generating station.

### **Capital Cost**

14. 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 generating stations. However, capital cost for an existing generating station is governed as per clause (3) of Regulation 19 of the 2019 Tariff Regulations, which is as under:

*“(3) 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 modernisation 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.*

### **Capital Cost for the period 1.4.2019 to 30.8.2021**

15. The annual fixed charges claimed by the Petitioner, is based on the opening capital cost of Rs.20486.13 lakh. However, the Commission vide its order dated 29.8.2022 in Petition No. 143/GT/2020 had approved the closing capital cost of Rs. 20368.98 lakh, on cash basis, as on 31.3.2019. Accordingly, in terms of Regulation 19(3) of the 2019 Tariff Regulations, the capital cost of Rs. 20368.98 lakh, on cash basis, as on 31.3.2019, has been considered as the opening capital cost as on 1.4.2019.

16. The Petitioner has claimed closing capital cost of Rs 17750.66 lakh, as on 30.8.2021 based on opening capital cost as on 1.4.2019 (Rs 20486.13 lakh), plus net additional capitalization (Rs. (-) 2735.47 lakh), for the period 1.4.2019 to 30.8.2021. The claim for additional capitalisation is dealt in the following paragraphs:

### **Additional Capital Expenditure**

17. Regulation 24, Regulation 25 and Regulation 26 of the 2019 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including any additional capital expenditure already admitted 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 period 2019- 24. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provides as under:

*“24. Additional Capitalisation within the original scope and upto the cut-off date*

*(1) The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the*



*date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

- (a) Undischarged liabilities recognized to be payable at a future date;*
- (b) Works deferred for execution;*
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) 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;*
- (e) Change in law or compliance of any existing law; and*
- (f) Force Majeure events:*

*Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.*

*(2) The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.*

*25. Additional Capitalisation 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.*

**18. Regulations 26 of the 2019 Tariff Regulations provides as follows:**

*26. Additional Capitalisation 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 Modernisation (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 decapitalisation 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 with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised.”

19. The year-wise projected additional capital expenditure claimed by the Petitioner for the period 2019-24, in terms of the 2019 Tariff Regulations are summarized as under:

**(Rs. in lakh)**

	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Add: Addition during the year / period	29.54	-	12.40	-	-	-

20. The additional capital expenditure claimed by the Petitioner for the period 2019-24 on cash basis, are examined as under:

**(Rs. in lakh)**

Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)	Regulation under which claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Allowed
<b>2019-20</b>						
1	Tipper 4.5 Cubic Meter	29.54	27(4)	CERC has allowed Rs. 44.00 lakhs for replacement of 2 Nos. old tata tippers during FY 2017-18 at sl no. 2 vide order dated 17.06.2015 in Petition No. 235/GT/2014. Due to delay in tendering process, tippers were	As the Commission had allowed the claim for the said asset in 2017-18 vide order dated 17.6.2015 in Petition No. 235/GT/2014, the claim of the Petitioner is <b>allowed</b> under Regulation 25 (2)	29.54



				purchased during Aug' 2019. Old tipper has been decapitalized during FY 2021-22. Refer item no. 62 &63	(d) of the 2019 Regulations. The decapitalization of old asset/work has been considered under "Decapitalization"	
<b>2021-22 (till 30.8.2021)</b>						
2	AGC system, Aandritz & AGC-RTU	12.40	26(1)(a)	For implantation of Automatic generation control (AGC) as per direction of CERC vide order dated 28.08.2019 in petition no. 319/RC/2018	Considering the fact that the Petitioner has incurred the expenses in terms of the directions of this Commission, vide order dated 28.08.2019 in Petition no. 319/RC/2018, the claim is <b>allowed</b> under Regulation 26(1)(a) of the 2019 Regulations.	12.40
	<b>Total Additional capital expenditure allowed</b>	<b>41.94</b>				<b>41.94</b>

### **Decapitalization**

21. The Petitioner has claimed de-capitalization as under:

<i>(Rs. in lakh)</i>					
2019-20	2020-21	2021-22		2022-23	2023-24
		(till 30.8.2021)	(from 31.8.2021 to 31.3.2022)		
1267.65	1498.04	13.36	-	-	-

22. Regulation 26(2) of the 2019 Tariff Regulations provides that original value of de-capitalized assets shall be deducted from the capital cost allowed to the generating station. However, with regard to decapitalization of Tippers in 2021-22, the Petitioner has replaced this asset with new asset in 2019-20. As such, the decapitalization of Rs. 13.36 lakh is shifted to the year of capitalization of new asset i.e. 2019-20. Accordingly, the de-capitalization considered is as under:



*(Rs. in lakh)*

2019-20	2020-21	2021-22		2022-23	2023-24
		(till 30.8.2021)	(from 31.8.2021 to 31.3.2022)		
1281.00	1498.04	0.00	0.00	0.00	0.00

### **Discharge of Liabilities**

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

*(Rs. in lakh)*

2019-20	2020-21	2021-22		2022-23	2023-24
		(till 30.8.2021)	(from 31.8.2021)		
1.63	-	-	345.53	503.50	-

24. The discharge of liabilities in 2019-20 has been allowed for Rs.1.50 lakh, on the basis of items that have been allowed. The Petitioner has claimed the discharge of liabilities during the years 2021-22 and 2022-23 for Rs.345.53 lakh and Rs.503.50 lakh respectively, pertaining to R&M works and the same has been allowed. This is subject to truing up.

### **Exclusions**

25. The Petitioner has claimed the exclusions as under:

*(Rs. in lakh)*

2019-20	2020-21	2021-22		2022-23	2023-24
		(till 30.8.2021)	(from 31.8.2021)		
1311.3	2473.3	13.40	-	-	-

26. It is noticed that the Petitioner has not submitted any exclusion amount in Form 9D. The above exclusions claimed is for negative exclusion as submitted in Form- 9B(i) upto the completion of R&M works i.e. 30.8.2021. On perusal of the same, it is noticed that the Petitioner has de-capitalized these amounts in the books of accounts pertaining to minor assets such as computers, office equipment, furniture, inter unit transfer etc.

27. It is observed that the provisions of the 2014 Tariff Regulations provide that the expenditure on minor items/assets, tools and tackles etc., procured after the cut-off date,



shall not be considered for additional capitalization. The minor assets are not considered as capital assets and are not permitted to be capitalized after the cut-off date. In our view, since the cost of new assets would not be considered for capitalization on account of implication of the Regulations, the value of old assets should be permitted to continue to form part of the gross block. In other words, if the cost of the new assets is not considered on account of implication of the regulations, the cost of minor assets originally included in the capital cost of the projects and replaced by new assets should not be reduced from the gross block. The generating station should not be debarred from servicing the capital originally deployed on account of procurement of minor assets, if the services of these assets are being rendered by similar assets which do not form part of the gross block. In view of the above, the exclusions of minor assets are allowed including exclusion on inter unit transfer. The Petitioner is however, directed to submitted reconciliation of exclusions claimed for the period 2019-24 at the time of truing up of tariff. As such, the exclusions claimed is allowed.

28. Accordingly, the capital cost allowed based on the closing capital cost of Rs. 20368.98 lakh, as approved by the Commission vide order dated 29.8.2022 in Petition No. 143/GT/2020 for the period 1.4.2019 to 30.8.2021 is as under:

<i>(Rs in lakh)</i>				
Sl. No.		2019-20	2020-21	2021-22 (till 30.8.2021)
1	<b>Opening Capital Cost</b>	20368.98	<b>19119.02</b>	<b>17620.98</b>
2	Add: Addition during the year / period	29.54	0.00	12.40
3	Less: De-capitalization during the year / period	1281.00	1498.04	0.00
4	Add: Discharges during the year / period	1.50	0.00	0.00
5	<b>Closing Capital Cost</b>	<b>19119.02</b>	<b>17620.98</b>	<b>17633.38</b>

### **Capital Cost after Renovation and Modernisation (R&M) as on 31.8.2021**

29. The Petitioner has claimed the net capital cost of Rs 30340.03 lakh, as on 31.8.2021 based on R&M expenditure as on 31.8.2021, plus the original project cost reduced by



accumulated depreciation recovered by the plant till 30.8.2021. The detailed computation furnished by the Petitioner is as under:

	<b>Amount in Rs. lakh</b>
R&M works (Opening Capital cost)	29539.66
Add: Residual Value	3193.95
Add: Normative IDC	2482.52
Less: IEDC	4027.07
Less: Undischarged Liability	849.02
<b>Net Opening Capital Cost at COD after R&amp;M</b>	<b>30340.03</b>

30. The Commission vide its order dated 3.6.2016 in Petition No. 76/MP/2015 had observed the following:

(a) *The petitioner shall engage one of the Independent Agencies designated by the Commission, during execution of the R&M which shall be vetting completion capital expenditure on R&M of the project.*

(b) *During the period of unit shut down/station shut down for the purpose of carrying out R&M activities, the petitioner shall keep the following two separate records and shall submit the same to the Commission along with the tariff petition for approval of capital cost after R&M of the generating station:*

(i) *IEDC including man power cost, construction power cost, water charges etc. booked to R&M activities;*

(ii) *Normal O&M expenses of the generating station (not booked to R&M expenditure) which are not avoidable even when the unit/s/station is under shut down.*

(c) *As per CEA's report dated 8.2.2016, the petitioner shall conduct a model study in respect of the losses in water conductor system in the post renovation scenario to take into account any improvement in the lining etc. of the water conductor system and the design energy from the project would be firmed up based on the same as well as the efficiency of the TG units in the post renovation scenario.*

(d) *The petitioner shall obtain the investment approval of the Competent Authority. Based on the investment approval and actual expenditure, tariff will be determined in line with provisions of extant Regulations.*

(e) *The petitioner shall initiate the following action points as suggested by CEA in its report dated 8.2.2016:*

(i) *Carry out necessary dam break analysis and necessary Emergency Action Plan should be prepared for mitigation of flood hazards in downstream side of the project in consultation with State Disaster management Authority.*

(ii) *Establishment of necessary hydro-mechanical network to collect the flood discharge and concurrent short interval rain data for revising the studies at later date.*

31. In response, the Petitioner has submitted as under:

a. It has appraised this issue to the Commission vide letters dated 18.12.2019 and 9.3.2020, about their inability to appoint Designated Independent Agency and





requested to waive of the condition regarding vetting of capital cost during R&M of Bairasiul Power Station by Independent Agencies designated.

- b. The Petitioner has incurred IEDC of Rs.4027.07 lakh, against the approved IEDC of Rs.19.64 crore. The details of same has been given in Form-13D. The Petitioner has already billed the O&M expenses for the units under shutdown as allowed by the Commission order dated 3.6.2016 in Petition No. 76/MP/2015 and the methodology mentioned in order dated 24.7.2019 in Petition No. 248/MP/2018. Accordingly, the Petitioner has not claimed IEDC in capital cost for the units which were under R&M.
- c. A model test study was conducted in pre-R&M period, report of which has been submitted. Further, LOA for conducting the model study in respect of the losses in water conductor system in the post renovation scenario to take into account any improvement in the lining etc. of the water conductor system has been issued on 28.3.2022. The report shall be submitted once the test is conducted during the pendency of this petition. Till such time, the Petitioner may be allowed the design energy of 708.59 MU.
- d. Approval of NHPC board is accorded for R&M of the generating station.
- e. The Dam break report of Bairasiul Power Station has been submitted.

32. The Petitioner has submitted that the capital cost (on accrual basis) due to R&M as on 31.8.2021 is Rs 29539.66 lakh, the details of which are attached in **Annexure-I** to this order.

33. As stated earlier, based on the CEA vetted cost, in-principle approval to the R&M proposal of the generating station was approved vide Commission's order dated 3.6.2016 in Petition No. 76/MP/2015. It is observed that the Petitioner has taken the approval of NHPC Board for a capital cost of Rs. 357.74 crore (including IDC of Rs 68.35 crore). As regards engagement of DIA, the Petitioner has already accorded approval of competent authority i.e. NHPC Board and also there is no specific/compulsory provision to engage DIA for vetting of capital cost of hydro generating station. Hence, we consider the capital cost as approved by the NHPC Board. Further, considering the capital cost of Rs. 357.74 crore, the per MW cost for the generating station works out to Rs.1.99 crore/MW. In view of this, the completion cost of Rs. 357.74 crore appears reasonable as compared to other new hydro generating stations





commissioned during recent period, wherein, the capital cost ranges from 4 crore/MW to 8 crore/MW.

***Capital cost for the purpose of tariff***

34. The Petitioner has claimed R&M works of Rs 295.40 crore, on accrual basis (excluding IDC) and Rs 286.91 crore, on cash basis. Since the claimed amount of Rs 295.40 crore, is less than the approved capital cost of Rs 308 crore (excluding IDC of Rs. 49.74 crore), the Capital cost of Rs 295.40 crore is allowed on accrual basis.

***Interest During Construction (IDC)***

35. The Petitioner has submitted that it has not taken any loan for R&M works for the generating station, and therefore the excess 70% of equity deployed in the project has been considered as normative loan and accordingly the Normative IDC has been calculated, which is Rs.2482.52 lakh, till the COD of the generating station after R&M. Further, the Petitioner has not claimed any Interest on loan during the period between the COD of individual units. It is also observed that the actual cash expenditure as per Form-14 A is not in line with the year wise additional capitalisation claimed by the Petitioner in Form 9A for the R&M period. Therefore, the Petitioner is directed to submit the reconciliation of Form 14A with Form 9A, at the time of truing-up of tariff. As, the schedule of completion of R&M works of Unit-I has been started from December, 2017 the Normative IDC has been calculated for the total cost from December, 2017 till the declaration of COD i.e., up to 30.8.2021. Therefore, after prudence check IDC of Rs.2471.44 lakh is allowed, subject to submission of the above details at the time of truing-up of tariff.

***Incidental Expenditure during Construction (IEDC)***

36. The Petitioner has submitted that against the estimated IEDC of Rs.19.64 crores, the actual expenditure of Rs.40.27 crores have been booked in the books of accounts. The



Petitioner has submitted that it has billed the O&M expenses for units under shutdown as allowed vide order dated 3.6.2016 in Petition No. 76/MP/2015 and the methodology mentioned in order dated 24.7.2019 in Petition No. 248/MP/2018. Accordingly, the Petitioner has submitted that it has not claimed IEDC in capital cost for units under R&M. Considering the fact that the units were under shut down in different periods under R&M, the normative O&M expenses as claimed by the Petitioner is allowed.

37. The net capital cost worked out as on 31.8.2021 based on R&M expenditure as on 31.8.2021, plus the original project cost, reduced by the accumulated depreciation recovered by the plant till 30.8.2021 in accordance with Regulation 27(4) of Tariff Regulation 2019, is as under:

	<b>Amount (Rs in lakh)</b>
R&M works on accrual basis	29539.66
Less: Undischarged Liability	849.02
Add: Normative IDC	2471.44
Less: IEDC	4027.07
Add: Residual Value	2857.35
<b>Net Opening Capital Cost as on 31.8.2021 after R&amp;M</b>	<b>29992.35</b>

38. Based on the above discussion, the capital cost allowed for the purpose of tariff for the period 2019-24 i.e. from 1.4.2019 to 30.8.2021 to post R&M period i.e. from 31.8.2021 to 31.3.2024 is as under:

	<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Opening Capital Cost (A)	20368.98	19119.02	17620.98	29992.35	30337.88	30841.38
Add: Additional capital expenditure (B)	29.54	0.00	12.40	0.00	0.00	0.00
Less: Decapitalisation during the year	1281.00	1498.04	0.00	0.00	0.00	0.00
Add: Discharges during the year	1.50	0.00	0.00	345.53	503.50	0.00
<b>Closing Gross Block (C) = (A+B)</b>	<b>19119.02</b>	<b>17620.98</b>	<b>17633.38</b>	<b>30337.88</b>	<b>30841.38</b>	<b>30841.38</b>
Average Gross Block	19744.00	18370.00	17627.18	30165.12	30589.63	30841.38



	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
(D) = (A+C)/2						

## Debt-Equity Ratio

39. Regulation 18 of the 2019 Tariff Regulations provides as follows:

**“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.”



38. The gross loan and equity amounting to Rs. 11851.88 lakh and Rs. 8517.10 lakh, respectively, as on 31.3.2019, as considered in order dated 29.8.2022 in Petition No. 143/GT/2020 has been considered as the opening gross loan and equity as on 1.4.2019. The debt: equity ratio for the projected additional capital expenditure approved from 1.4.2019 to 30.8.2021, has been considered as 70:30. Further, the debt-equity ratio of 70:30 has been considered to post R&M period i.e. from 31.8.2021 to 31.3.2024.

### **Return on Equity**

40. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provide as follows:

*“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 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:*

*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;*

*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; in case of a thermal generating station, with effect from 1.4.2020:*

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

*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.

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

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

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

*Illustration-*

(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2155) = 19.758\%$$

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

Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;

Estimated Advance Tax for the year on above is Rs 240 crore;

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

$$\text{Rate of return on equity} = 15.50 / (1 - 0.24) = 20.395\%.$$

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."

41. The Petitioner has claimed Return on Equity (ROE) considering base rate of 16.50% and effective tax rate of 17.472% for the opening equity as on 1.4.2019 and projected additional capital expenditure claimed under original scope of work, change in law etc. for the period 2019-24. Further, based on the additional capital expenditure incurred which are beyond the original scope of works 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 as under:



(Rs. in lakh)

	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Gross Normative equity - Opening	8517.10	0.00	0.00	0.00	0.00	0.00
Less: Adjustment to equity in terms of first proviso to Regulation 18(3) of the 2019 Tariff Regulations	2406.41	0.00	0.00	0.00	0.00	0.00
Opening Equity (Net) (A)	6110.69	5735.71	5286.30	8997.71	9101.36	9252.41
Total addition due to Capitalization (B)	(-)374.99	(-)449.41	0.00	103.66	151.05	0.00
Closing Equity (C) =(A)+(B)	5735.71	5286.30	5286.30	9101.36	9252.41	9252.41
Average Equity (D)=(A+C)/2	5923.20	5511.00	5286.30	9049.54	9176.89	9252.41
Base rate (%) (E)	16.500%	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax rate (%) (F)	17.472%	17.472%	17.472%	17.472%	17.472%	17.472%
Effective ROE rate (%) (G) =E/(1-F)	19.993%	19.993%	19.993%	19.993%	19.993%	19.993%
<b>Return on Equity within the original scope of work (H)=(D)*(G)</b>	<b>1184.23</b>	<b>1101.81</b>	<b>440.13</b>	<b>1055.82</b>	<b>1834.74</b>	<b>1849.84</b>
<b>Addition due to additional capitalization beyond original scope of work</b>						
Opening Equity (A)	0.00	0.00	0.00	0.00	0.00	0.00
Addition due to Capitalization beyond scope of work (B)	0.00	0.00	3.72	0.00	0.00	0.00
Closing Equity (C)=(A)+(B)	0.00	0.00	3.72	0.00	0.00	0.00
Average Equity (D)=(A+C)/2	0.00	0.00	1.86	0.00	0.00	0.00
Base rate (%) (E)	7.922%	7.746%	7.629%	7.629%	7.629%	7.629%
Effective Tax rate (%) (F)	17.472%	17.472%	17.472%	17.472%	17.472%	17.472%
Effective ROE rate (%) (G) =E/(1-F)	9.599%	9.386%	9.244%	9.244%	9.244%	9.244%
<b>Return on Equity beyond original scope of work (H)=(D)*(G)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### **Total Return on Equity allowed**

(Rs. in lakh)

	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Return on Equity at Normal Rate	1184.23	1101.81	440.13	1055.82	1834.74	1849.84
Return on Equity at WAROI	0.00	0.00	0.07	0.00	0.00	0.00
<b>Total Return on Equity allowed</b>	<b>1184.23</b>	<b>1101.81</b>	<b>440.20</b>	<b>1055.82</b>	<b>1834.74</b>	<b>1849.84</b>

### **Interest on Loan**

42. Regulation 32 of the 2019 Tariff Regulations provides as follows:

*“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 de-capitalization 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 upto the date of de-capitalisation of such asset.*

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

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

43. Interest on loan has been computed as under:

- (i) The gross normative loan amounting to Rs. 11851.88 lakh, has been considered as on 1.4.2019;
- (ii) Cumulative repayment amounting to Rs. 11786.81 lakh, as on 31.3.2019, as considered in order dated 29.8.2022 in Petition No. 143/GT/2020 has been considered as on 1.4.2019;
- (iii) Accordingly, the net normative opening loan as on 1.4.2019, works out as Rs. 65.07 lakh;
- (iv) Addition to normative loan on account of additional capital expenditure approved above has been considered;
- (v) Depreciation allowed has been considered as repayment of normative loan during the respective years of the period 2019-24;

44. The Petitioner has claimed interest on loan by applying the weighted average rate of interest of 7.92% in 2019-20, 7.75% in 2020-21, 7.63% in 2021-22, 7.63% in 2022-23 and 7.63% in 2023-24. For the R&M expenditure incurred during the period from 1.4.2019 to 30.8.2021, the Petitioner has not taken commercial loan and the fund required for the R&M



activities has been deployed from internal resources. Accordingly, the Petitioner has claimed the normative IDC during the R&M period. From 31.8.2021 to 31.3.2024, the Petitioner has claimed interest on loan on normative loan after R&M works. Accordingly, Interest on loan has been worked out as under:

*(Rs. in lakh)*

	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Gross opening loan (A)	11851.88	10976.91	9928.28	20994.65	21236.52	21588.97
Cumulative repayment of loan upto previous year (B)	11786.81	10945.83	9928.28	0.00	630.24	1725.87
Net Loan Opening (C) = (A) - (B)	65.07	31.08	0.00	20994.65	20606.28	19863.10
Addition due to additional capital expenditure (D)	(874.97)	(1048.63)	8.68	241.87	352.45	0.00
Repayment of Loan during the period (E)	55.72	31.08	8.68	630.24	1095.63	1105.31
Less: Repayment adjustment on a/c of decapitalization (F)	896.70	1048.63	0.00	0.00	0.00	0.00
Net Repayment of Loan during the period (G) = (E) - (F)	(840.98)	(1017.54)	8.68	630.24	1095.63	1105.31
Net Loan Closing (H) = (C) + (D) - (G)	31.08	0.00	0.00	20606.28	19863.10	18757.79
Average Loan (I) = (C+H)/2	48.08	15.54	0.00	20800.46	20234.69	19310.45
Weighted Average Rate of Interest of loan (J)	7.92%	7.75%	7.63%	7.63%	7.63%	7.63%
<b>Interest on Loan (K) = (I)*(J)</b>	<b>3.81</b>	<b>1.20</b>	<b>0.00</b>	<b>926.04</b>	<b>1543.71</b>	<b>1473.20</b>

### **Depreciation**

45. Regulation 33 of the 2019 Tariff Regulations provides as follows:

*“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 upto 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.”*

46. Depreciation for the period 1.4.2019 to 30.8.2021 has been computed based on the methodology adopted in Commission's order dated 29.8.2022 in Petition No. 143/GT/2020 and accordingly, the cumulative depreciation as on 31.3.2019, as considered in order dated 29.8.2022 in Petition No. 143/GT/2020 has been retained for the purpose of tariff. From



31.8.2021 onwards, the capital cost has been considered, based on R&M expenses as on 31.8.2021. Accordingly, depreciation is worked out and allowed is as under:

(Rs. in lakh)

Without the impact of additional capitalization during 2014-19	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Average gross block (a)	19744.00	18370.00	17627.18	30165.12	30589.63	30841.38
Balance Useful Life (b)	0.00	0.00	0.00	25.00	24.42	23.42
Value of Freehold Land (c)	165.62	165.62	165.62	165.62	165.62	165.62
Depreciable Value (d= a- avg. gross block of add cap of pre-R&M period -c) *90%	16291.84	15041.27	14367.16	26999.55	27381.61	27608.18
Remaining Depreciable Value (e = d-cum. dep. of last year*)	0.00	0.00	0.00	26999.55	26751.37	25882.32
Depreciation annualized (f=e/b)	0.00	0.00	0.00	1079.98	1095.63	1105.31
<b>Depreciation for the period</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>630.24</b>	<b>1095.63</b>	<b>1105.31</b>
Cumulative Depreciation (at the end of the period) (g)	16701.86	15652.28	14425.88	630.24	1725.87	2831.17
Less: Cumulative Depreciation reduction due to decapitalization (h)	1049.58	1226.41	0.00	0.00	0.00	0.00
Cumulative Depreciation after adjustment due to decapitalization (at the end of the period) (i=g-h)	15652.28	14425.88	14425.88	630.24	1725.87	2831.17

\*Cumulation depreciation as on 31.3.2019 is Rs. 16701.86 lakhs

(Rs. in lakh)

Depreciation on additional capitalization during 1.4.2019 to 30.8.2021	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Average gross block (a)	1476.33	1491.85	1498.05	0.00	0.00	0.00
Balance Useful Life (b)	20.00	19.00	18.00	0.00	0.00	0.00
Depreciable Value (c=a*90%)	1328.70	1342.67	1348.25	0.00	0.00	0.00
Remaining Depreciable Value (d= c-cum. Dep. of last year)	1114.35	1072.60	1021.73	0.00	0.00	0.00
Depreciation annualized (e= d/b)	55.72	56.45	56.76	0.00	0.00	0.00
<b>Depreciation for the period</b>	<b>55.72</b>	<b>56.45</b>	<b>23.64</b>	0.00	0.00	0.00
Cumulative Depreciation (at the end of the period) (f)	270.07	326.52	350.16	0.00	0.00	0.00
Less: Cumulative Depreciation reduction due to decapitalization (g)	0.00	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation after adjustment due to	270.07	326.52	350.16	0.00	0.00	0.00



Depreciation on additional capitalization during 1.4.2019 to 30.8.2021	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
decapitalization (at the end of the period) (h=f-g)						

\*Cumulation depreciation as on 31.3.2019 is Rs.214.35 lakhs

Total Depreciation	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Without the impact of additional capitalization during 2014-19	0.00	0.00	0.00	630.24	1095.63	1105.31
Depreciation on additional capitalization during 2014-19	55.72	56.45	23.64	0.00	0.00	0.00
<b>Total</b>	<b>55.72</b>	<b>56.45</b>	<b>23.64</b>	<b>630.24</b>	<b>1095.63</b>	<b>1105.31</b>

### Operation & Maintenance Expenses

47. The Petitioner has claimed O&M expenses for the period 2019-24 as given under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expense allowed as Regulation 35(2)(a) of the 2019 Tariff Regulations.	8292.11	8687.36	9101.45	9535.28	9989.78
Impact on O&M expenses due to 3rd Pay Commission wage revision (refer Annex-III to Form-17)	924.07	968.15	1014.33	1062.71	1113.41
Additional O&M expenses due to Goods and Service Tax (GST)	75.28	78.87	82.63	86.57	90.70
Security Expenses (estimated)	1254.44	1201.17	1258.46	1318.49	1381.38
Consumption of Stores & Spares (refer Annex-II to Form-17)	20.13	963.04	-	-	-
<b>Total O&amp;M Expenses</b>	<b>10566.02</b>	<b>11898.59</b>	<b>11456.87</b>	<b>12003.06</b>	<b>12575.27</b>

48. 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:

(in Rs. lakh/MW)				
2019-20	2020-21	2021-22	2022-23	2023-24
8292.11	8687.36	9101.45	9535.28	9989.78

49. Since the normative O&M expenses claimed by the Petitioner are in terms of Regulation 35(2)(a) of the 2019 Tariff Regulations, the claim is allowed.



## **Additional O&M Expenses**

### **Security Charges**

50. The 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.”*

51. The Petitioner has claimed total security expenses of Rs. 6413.95 lakh, for the period 2019-24 (i.e., Rs. 1254.44 lakh in 2019-20, Rs. 1201.17 lakh in 2020-21, Rs. 1258.46 lakh in 2021-22, Rs. 1318.49 lakh in 2022-23 and Rs 1381.38 lakh in 2023-24) in terms of Regulation 35(2) (d) of the 2019 Tariff Regulations. The Petitioner has submitted that the Security expenses for 2019-20 and 2020-21 has been claimed based on the actual security expenses, and as per audited books of accounts. The Petitioner has further submitted that for the period 2021-24, the actual security expenses for 2020-21 have been escalated @ 4.77% p.a. Since the security expenses are to be allowed on actual basis, the claim of the Petitioner for the period 2019-21 and the escalated expenses for the period 2021-24, is allowed. However, the Petitioner is directed to furnish the actual security expenses incurred at the time of truing up of tariff.

### **Impact of wage revision**

52. The Petitioner has claimed total amount of Rs. 5082.67 lakh for the period 2019-24 (Rs. 924.07 lakh in 2019-20, Rs. 968.15 lakh in 2020-21, Rs. 1014.33 lakh in 2021-22, Rs. 1062.71 lakh in 2022-23 and Rs. 1113.41 lakh in 2023-24), towards impact of pay revision, which has been calculated based on impact of wage revision during 2018-19 by escalating it @ 4.77% p.a. It is pertinent to mention that the wage revision impact has been allowed for the generating stations during the period 2019-24, based on impact of wage revision during



2018-19 a claimed by the Petitioner in their respective Petitions, and the same was allowed by the Commission after prudence check/verification. It is noticed that, for the present generating station, the Petitioner has not submitted any petition for seeking additional O&M expenses, due to impact of wage revision for the period 2014-19. Similar issue has already been dealt by the Commission vide order dated 30.11.2022 in Petition No. 145/GT/2020 (Chamera-III Power Station of the Petitioner) and Order dated 22.6.2023 in Petition No. 257/GT/2020 (Ranjit Power Station of the Petitioner) Accordingly, in line with decision in the above orders, the claim of the Petitioner on account of impact due to pay revision of Petitioner's staff and KV staff is not considered in this order. 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.

**Goods & Service Tax (GST)**

53. The Petitioner has claimed impact of GST for the period 2019-24 on the basis of the actual impact of GST in 2018-19. The Petitioner has submitted that the total GST amount of Rs.115.32 lakh for the period from 1.7.2017 to 31.3.2019, based on actual audited accounts for 21 months (Rs.43.47 lakh in 2017-18 and Rs.71.85 lakh in 2018-19). On scrutiny of the details, it is noticed that the claim of Petitioner also includes impact of GST on security expenses which is summarized as under:

Year	<i>(Rs in lakh)</i>		
	Security Services	Operational Services	Total
2017-18	19.30	24.17	43.47
2018-19 (till Dec.18)	20.16	27.94	48.09
2018-19 (1.1.19 to 31.03.19)	9.91	13.85	23.76
<b>Total</b>	<b>49.37</b>	<b>65.95</b>	<b>115.32</b>

54. As per Regulation 35(2)(d) of the 2019 Tariff Regulations, Security expenses shall be allowed separately after prudence check. Hence, excluding the Security expenses, the claim



works out to Rs.65.95 lakh, as shown in the table above, for the period from 1.7.2017 to 31.3.2019. This has been normalized and an amount of Rs.39.48 lakh has been worked out for 2019-20 (after escalating the amount of Rs.37.69 lakh @ 4.77%). Accordingly, the base value of 2019-20 has been escalated @4.77% and GST impact has been worked out and allowed for the period 2020-24, as per note under Regulation 35(2)(a) of the 2019 Tariff Regulations as under:

<i>(Rs in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
39.48	41.37	43.34	45.41	47.58

### **Capital spares**

55. The Petitioner has claimed amounts for Rs.20.13 lakh in 2019-20 and Rs.963.04 lakh in 2020-21, in respect of the capital spares purchased during the period 2014-19 and capitalized in books of accounts. It has submitted that for the purpose of tariff, these capital spares were kept under exclusion category in Petition No. 143/GT/2020, and out of these capital spares, some spares were put to use/consumed during the years 2019-20 & 2020-21 and have been claimed in the present petition. As per Regulation 35(2) (d) of the 2019 Tariff Regulations, capital spares have to be allowed on actual capital spares consumed at the time of truing up with appropriate justification. Accordingly, the capital spares purchased have been provisionally allowed as claimed and shall be trued-up based on actual consumption basis, for the period 2019-24 for the generating station.

56. Accordingly, the O&M expenses allowed for the generating station are as under:

	<i>(Rs in lakh)</i>					
	2019-20	2020-21	2021-22 (till 30.8.2021)	2021-22 (Post R&M from 31.8.2021to 31.3.2022)	2022-23	2023-24
Normative O&M expenses (a)	8292.11	8687.36	3790.19	5311.26	9535.28	9989.78
Security Expenses	1254.44	1201.17	524.07	734.39	1318.49	1381.38
Impact of wage Revision	0.00	0.00	0.00	0.00	0.00	0.00
GST	39.48	41.37	18.05	25.29	45.41	47.58



Capital Spares	20.13	963.04	0.00	0.00	0.00	0.00
<b>Total</b>	<b>9606.16</b>	<b>10892.94</b>	<b>4332.31</b>	<b>6070.94</b>	<b>10899.18</b>	<b>11418.74</b>

### **Interest on Working Capital**

57. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provides as follows:

*“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”*

*“(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.*

*(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”.*”

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

58. Regulation 34(1) (c)(iii) of the 2019 Tariff Regulations provides for O&M expenses for one month, including capital spares and security expenses. Accordingly, the O&M expenses for working capital is allowed as under:

<i>(Rs. in lakh)</i>					
2019-20	2020-21	2021-22		2022-23	2023-24
		(till 30.8.2021)	(from 31.8.2021)		
800.51	907.74	361.03	505.91	908.27	951.56

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

59. Regulation 34(1) (c)(ii) of the 2019 Tariff Regulations provides for Maintenance spares @ 15% of the O&M expenses, including capital spares and security expenses. Accordingly, maintenance spares have been considered and allowed as under:





*(Rs. in lakh)*

2019-20	2020-21	2021-22		2022-23	2023-24
		(till 30.8.2021)	(from 31.8.2021)		
1440.92	1633.94	649.85	910.64	1634.88	1712.81

**Working Capital for Receivables**

60. Regulation 34(1)(c)(i) of the 2019 Tariff Regulations provides for receivables for 45 days. Accordingly, receivables for computation of working capital is allowed as under:

*(Rs. in lakh)*

2019-20	2020-21	2021-22		2022-23	2023-24
		(till 30.8.2021)	(from 31.8.2021)		
1387.77	1542.56	612.32	1103.13	1953.54	2008.74

**Rate of interest on working capital**

61. In accordance with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital considered on projection basis, for the period 2019-24, is 12.05% (i.e., 1-year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). SBI MCLR as on 1.4.2020 (7.75%) and as on 1.4.2021 (7.00%) is also available which is lower in comparison to the 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 and 1.4.2021, for the subsequent financial years. Accordingly, the rate of interest for the year 2019-20 is 12.05%, 2020-21 is 11.25% and for the subsequent years 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 and 1-year SBI MCLR of 7.00% as on 1.4.2021 + 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
			(till 30.8.2021)	(from 31.8.2021)		
Working Capital for O & M expenses - 1 month (A)	800.51	907.74	361.03	505.91	908.27	951.56





	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(from 31.8.2021)		
Working Capital for Maintenance Spares - 15% of O&M (B)	1440.92	1633.94	649.85	910.64	1634.88	1712.81
Working Capital for Receivables - 45 Days (C)	1387.77	1542.56	612.32	1103.13	1953.54	2008.74
<b>Total Working Capital (D) = (A+B+C)</b>	<b>3629.21</b>	<b>4084.25</b>	<b>1623.19</b>	<b>2519.68</b>	<b>4496.69</b>	<b>4673.11</b>
Rate of Interest (E)	12.05%	11.25%	10.50%	10.50%	10.50%	10.50%
<b>Interest on Working capital (F) = (D)x(E)</b>	<b>437.32</b>	<b>459.48</b>	<b>170.44</b>	<b>264.57</b>	<b>472.15</b>	<b>490.68</b>

### **Annual Fixed Charges**

62. Accordingly, the annual fixed charges allowed for the generating station for the period 2019-24 is summarised below:

	2019-20	2020-21	2021-22		2022-23	2023-24
			(till 30.8.2021)	(Post R&M from 31.8.2021 to 31.3.2022)		
Depreciation (A)	55.72	56.45	23.64	630.24	1095.63	1105.31
Interest on Loan (B)	3.81	1.20	0.00	926.04	1543.71	1473.20
Return on Equity (C)	1184.23	1101.81	440.20	1055.82	1834.74	1849.84
Interest on Working Capital (D)	437.32	459.48	170.44	264.57	472.15	490.68
O&M Expenses (E)	9606.16	10892.94	4332.31	6070.94	10899.18	11418.74
<b>Total AFC (F) = (A+B+C+D+E)</b>	<b>11287.23</b>	<b>12511.89</b>	<b>4966.59</b>	<b>8947.60</b>	<b>15845.41</b>	<b>16337.76</b>

*All figures under each head have been rounded off. The figure in total column in each year is also rounded off. As such the sum of individual items may not be equal to the arithmetic total of the column.*

63. The annual fixed charges determined as above are subject to truing-up in terms of Regulation 13 of the 2019 Tariff Regulations.

### **Normative Annual Plant Availability Factor**

64. The Petitioner has submitted that in respect of this generating station, only two units were operating during R&M and therefore the available capacity at any moment was 120 MW. It has also been submitted that the Commission had allowed recovery of only 2/3rd AFC, based on the availability of 2 units, and therefore, the Petitioner had approached NRLDC through an agenda note to calculate the PAFM of the generating station using



capacity of 120 MW instead of installed capacity of 180 MW. The Petitioner has also submitted that the same was discussed in 44<sup>th</sup> Commercial Subcommittee meeting of NRPC and following are the deliberations on the issue:

*“ITEM-37 PAF of Bairasiul power station needs to be revised for the period 06.07.2019 to 30.08.2021 based on capacity of 120 MW (excluding capacity of units under R&M) instead of 180 MW (i.e. installed capacity) (Agenda by NHPC)*

*37.1 PAFM was worked out by NRPC/ NRLDC considering installed Capacity of 180 MW (3x 60 MW), viz. 52.736 whereas 1 unit of 60 MW was under R&M 06.07.2019 to 30.08.2021 and PAFM works out to be 79.104 considering available installed capacity of 120 MW of station.*

*37.2 There is no regulation on how to treat PAFM or AFC of station while one or more units of the station are under R&M. Further, there was no clarity on AFC of running units in the CERC order dated 03.06.2016 in Petition no 76/MP/2015 (In-principle approval of R&M of Bairasiul Power Station).*

*37.3 As such methodology given by CERC for recovery of AFC in its order dated 24.07.2019 (copy attached in Annexure of Agenda note) in Petition no 248/MP/2018 (In-principle approval of R&M of Loktak Power Station) has been followed by NHPC in this case also during R&M period where 2/3rd of AFC is allowed to be recovered, provisionally, in case one unit out of three units is under R&M. In view of this, NHPC reduced the AFC by 2/3rd for during R&M the billing purpose.*

*37.4 Reduction in AFC by 2/3rd value and PAFM (considering installed Capacity of 180 MW) resulted in shortfall in recovery of Capacity charges during the period of R&M. NHPC requested to revise the PAFM a/c by considering installed Capacity of station as 120 MW during R&M. Further, it requested to revise the REA accordingly.*

*37.5 Sub-committee agreed to revise the PAFM and REA as put out in 37.4 above, but it would be subject to CERC decision on tariff petition of Bairasiul power station. However, MS, NRPC asked NHPC to furnish brief summary of case of Loktak Power Station covering what was filed in petition and what has been decided by CERC.”*

65. The Petitioner has claimed Normative Annual Plant Availability Factor (NAPAF) of 90% for the period 2019-24. As regards NAPAF, clause (4) of Regulation 50 (A) of the 2019 Tariff Regulations, provides for NAPAF of 90% for the generating station. Accordingly, NAPAF of 90% has been considered for the generating station for the period 2019-24.

## **Design Energy**

66. The Petitioner has claimed design energy (DE) of 779.28 MU for pre-R&M period and design energy of 708.59 MU for post renovation scenario. The Commission in its order dated 3.6.2016 in Petition No.76/MP/2015 had directed the Petitioner to conduct a model study in respect of the losses in water conductor system in the post renovation scenario to take into



account any improvement in the lining etc. of the water conductor system and the design energy from the project would be firmed up based on the same as well as the efficiency of the TG units in the post renovation scenario. In compliance, the Petitioner has submitted that a model test study was conducted in pre-R&M period, report of which is provided. It has further submitted that the LOA for conducting the model study in respect of the losses in water conductor system in the post renovation scenario to take into account any improvement in the lining etc. of the water conductor system has been issued on 28.3.2022. The Petitioner has also submitted that the report will be submitted once the test is conducted, during the pendency of this petition. The Petitioner has accordingly requested the Commission to allow DE of 708.59 MUs for post renovation scenario. We have considered the submission of the Petitioner. It is observed that Commission in order dated 3.6.2016 in Petition No. 76/MP/2015 has observed that ‘since the design energy of the project has been revised by CEA to 708.59 MUs, in consultation with CWC, we agree with the same subject to model study as suggested by CEA in its report dated 2.8.2016’. Considering the fact the above study report is not available in the petition, accordingly, we allow the design energy of 779.28 MUs for pre-R&M period as allowed by the Commission in order dated 29.8.2022 in Petition No. 143/GT/2020 and the design energy of 708.59 MUs for post renovation period as allowed by the Commission in order dated 3.6.2016 in Petition No. 76/MP/2015, subject to submission of above model study as directed in order dated 3.6.2016 and corresponding revision of design energy by CEA, if any. The month-wise details of above both the design energies are given below:

(i) Month-wise design energy of 779.28 MUs for pre-R&M period is as under:

<b>Month</b>	<b>Design Energy (MUs)</b>
April	97.85
May	106.00
June	92.8



<b>Month</b>	<b>Design Energy (MUs)</b>
July	109.24
August	115.08
September	59.86
October	35.39
November	25.22
December	22.21
January	23.81
February	29.43
March	62.39
<b>Total</b>	<b>779.28</b>

(i) Month-wise design energy of 708.59 MUs for post R&M period is as under:

<b>Month</b>	<b>Design Energy (MUs)</b>
April	95.89
May	116.67
June	119.32
July	68.83
August	41.43
September	28.28
October	22.86
November	20.26
December	18.69
January	29.55
February	70.69
March	76.13
<b>Total</b>	<b>708.59</b>

### ***Application filing fees and Publication charges***

67. 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.

68. 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, 2015, shall be recovered from the beneficiaries. In addition, the Petitioner is entitled for recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2019 Tariff Regulations.



69. Petition No. 142/GT/2022 is disposed of in terms of the above.

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

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

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



## Annexure-I

(Rs. in lakh)

Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)				Justification
		Accrual basis	Un-discharged Liability	Cash basis	IDC included	
<b>Renovation and Modernization related works claimed under Regulation 27(4) of the 2019 Tariff Regulations</b>						
1	410201 - C/o Surangani-Valve House Road, Near Surangani Market-RD 110.00m to 136.00m under RMU of BSPS - 2150278 - 101/001118	21.50	-	21.50	-	RMU
2	410201 - C/o Approach Road by way of Providing wire crates at Kurched Adit - 655336 - 101/001234	6.55	-	6.55	-	RMU
3	410203 - Strengthening/ Rehabilitation of 75M Span steel truss Bridge over river Ravi at Baloo, Distt. Chamba - 2284866 -	22.85	-	22.85	-	RMU
4	410301 - C/o Retaining Wall U/S of Power House - 18742013 - 101/000811	187.42	-	187.42	-	RMU
5	410325 - C/o 12 No. C Type Quarters at Lower Colony of BSPS (Sub Contract 101/000884) - 31891255 - 101/000884	318.91	9.09	309.82	-	RMU
6	410325 - C/o Protection Wall for C Type Quarters at Lower Colony, BSPS (Sub Contract 101/001109) - 1419211 - 101/001109	14.19	-	14.19	-	RMU
7	410328 - Construction of DG Building at BSPS, Surangani - 7155498 - 101/000891	71.55	-	71.55	-	RMU
8	410328 - C/o Fire Fighting Tank under RMU work of BSPS - 9440653 - 101/001004	94.41	-	94.41	-	RMU
9	410425 - Wiring of 12 Nos. C Type Quarters at Lower Colony, Surangani, BSPS - 2346138 - 101/001025	23.46	-	23.46	-	RMU
10	410428 - Wiring of New Quarter Guard with Magazine for Arms & Ammunitions for CISF, BSPS - 207106 - 101/001267	2.07	-	2.07	-	RMU
11	410428 - Earthing for DG Sets Package EM-4 (v) - 266825 - 101/001274	2.67	2.51	0.16	-	RMU
12	410601 - C/o of New Steel Walkway along with railing for inspection platform in DC at Siul weir under RMU - 6130453 - 101/001033	61.30	1.83	59.47	-	RMU
13	410701 - RMU OF GENERATING PLANT & EQUIPMENT (UNIT#02) - 455911416 - 101/000954	4559.11	365.94	4193.17	-	RMU
14	410701 - BUS DUCT SYSTEM FOR GENERATING PLANT & EQUIPMENT (UNIT#02) - 8674134 - 101/001147	86.74	48.39	38.35	-	RMU
15	410705 - Commissioning of Outdoor Switch Yard Equipment Pkg -EM (iv) (ii) - 73067153 - 101/001088	730.67	103.52	627.15	-	RMU
16	410710 - POWER LINE COMMUNICATION CARRIER SYSTEM FOR BSPS - 5569049 - 101/001188	55.69	13.76	41.93	-	RMU
17	410713 - Installation, Testing & Commissioning of Oil Handling System for RMU of BSPS (Package EM-4) - 31522417 - 101/001153	315.22	21.48	293.74	-	RMU
18	410713 - 125/20 T EOT CRANE FOR POWER HOUSE - 1 NO. (CRANE NO. 01) - 12025510 - 101/001085	120.26	41.42	78.84	-	RMU



Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)				Justification
		Accrual basis	Un-discharge d Liability	Cash basis	IDC included	
19	410713 - 30/5 T EOT CRANE FOR VALVE HOUSE - 4849292 - 101/001085	48.49	-	48.49	-	RMU
20	410101 - C/o Burjies around Dam, Surangani and Other Misc. Locations for demarcation of Project Land at BPS - 1358693 - 101/000898	13.59	-	13.59	-	RMU - Misc.
21	410101 - C/o Burjies around Dam, Surangani and Other Misc. Locations for demarcation of Project Land at BPS - 285619 - 101/000908	2.86	-	2.86	-	RMU - Misc.
22	410201 - C/o Pedestrian Suspension Bridge over Chanju Nalla in the D/s of Trench Weir, BPS - 678755 - 101/001255	6.79	-	6.79	-	RMU - Misc.
23	410201 - Construction of Road and Fencing of Mandir Colony at Bairasiul Power Station, Surangani - 1645732 - 101/001061	16.46	-	16.46	-	RMU - Misc.
24	410328 - C/o 02 Nos. Composite pit for Solid Waste, BPS - 575596 - 101/001245	5.76	-	5.76	-	RMU - Misc.
25	410328 - C/O 02 NOS. TOILETS AT NAKROD FOR CISF - BPS - 300944 - 101/001041	3.01	-	3.01	-	RMU - Misc.
26	410328 - C/o CISF Morcha at BPS Surangani - 240365 - 101/001122	2.40	-	2.40	-	RMU - Misc.
27	410328 - C/o Quarter Guard with Magazine for Arms & Ammunitions for CISF, BPS - 4423738 - 101/000996	44.24	-	44.24	-	RMU - Misc.
28	412006 - TABLE TENNIS TABLE, CAXTON - 20720 -	0.41	-	0.41	-	RMU - Misc.
29	412501 - LED TV 32" MAKE-MICROMAX MODEL-32T7361HDS - 10889 -	1.63	-	1.63	-	RMU - Misc.
30	412501 - LED TV 43 FULL HD SMART, MAKE-SAMSUNG, MODEL-43N5470 - 44489 -	1.33	-	1.33	-	RMU - Misc.
31	412503 - CHAPPATTI BHATTI BUFFET TAWA WITH STAND - 15505 -	0.16	-	0.16	-	RMU - Misc.
32	412503 - MICROWAVE OVEN 32 LTRS, MAKE-SAMSUNG, MODEL NO.MC32J7035CT - 17894 -	0.89	-	0.89	-	RMU - Misc.
33	412503 - WASHING MACHINE 11KG FULLY AUTOMATIC, TOP LOADING, MAKE-SAMSUNG, MODEL-WA11J5750SP - 38500 -	0.77	-	0.77	-	RMU - Misc.
34	412503 - WATER GEYSER, USHA MAKE, SIZE 35 LTRS, MODEL USHA MISTY - 9646 -	1.45	-	1.45	-	RMU - Misc.
35	412505 - REFRIGERATOR 192 LITRES MAKE-SAMSUNG, MODEL-RR19R20CARH - 11554 -	0.69	-	0.69	-	RMU - Misc.
36	412505 - REFRIGERATOR 192 LITRES MAKE-SAMSUNG, MODEL-RR19R20CARH - 11555 -	0.23	-	0.23	-	RMU - Misc.
37	412801 - SINGLE BURNER GAS STOVE - 2254 -	0.05	-	0.05	-	RMU - Misc.
38	410713 - 5 TON ELECTRICAL WINCH MACHINE WITH VFD AND ACCESSORIES, WIRE ROPE. - MAKE - FALCON MODEL - HPTC-05 - 324500 -	3.25	-	3.25	-	RMU - T&P
39	410713 - INDUCTION MOTOR (5 HP, 415/440V, 3-PHASE, 50 HZ) - 34220 -	0.34	-	0.34	-	RMU - T&P
40	410714 - AIR CIRCUIT BREAKER, 1600 A, 3POLE,415V AC, WITH DRAWABLE TYPE, SCHNEIDER (MVS16N3NW6L) - 20965 -	0.63	-	0.63	-	RMU - T&P
41	410714 - AIR CIRCUIT BREAKER, 2000 A, 3POLE,415V AC, WITH DRAWABLE TYPE, SCHNEIDER (MVS20N3NW6L) - 24942 -	0.50	-	0.50	-	RMU - T&P



Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)				Justification
		Accrual basis	Un-discharge d Liability	Cash basis	IDC included	
42	410714 - AIR CIRCUIT BREAKER,1000 A, 3POLE,415V AC, WITH DRAWABLE TYPE, SCHNEIDER (MVS10N3NW6L) - 16348 -	0.33	-	0.33	-	RMU - T&P
43	410714 - AIR CIRCUIT BREAKER,800 A, 3POLE,415V AC, WITH DRAWABLE TYPE, SCHNEIDER (MVS08N3NW6L) - 15762 -	0.16	-	0.16	-	RMU - T&P
44	410714 - AIR CIRCUIT BREAKER,800 A, 3POLE,415V AC, WITH DRAWABLE TYPE, SCHNEIDER (MVS08N3NW6L) - 15763 -	0.16	-	0.16	-	RMU - T&P
45	410714 - SUB. PUMP,360 M3/HR H. 21M, CONTROL PANNEL & WATER LEVEL REGULATION SYASTEM, AQUA,0050_00415NJ - 112000 -	2.24	-	2.24	-	RMU - T&P
46	411801 - DESKTOP COMPUTER, ACER MAKE, MODEL VERITON M4660G - 51670	4.65	-	4.65	-	RMU - T&P
47	411803 - HP LASERJET PRO MFP M226DW - 33999 -	0.34	-	0.34	-	RMU - T&P
48	411803 - HP OFFICEJET 7740 WIDE FORMAT ALL-IN-ONE PRINTER - 23500 -	0.47	-	0.47	-	RMU - T&P
49	411903 - IP BASED CCTV SYSTEM INCLUDING AUXILIARIES & Accessories: SAMSUNG, XNO-6080R, XNV-6010, SRN-4000 - 1248906 -	12.49	-	12.49	-	RMU - T&P
50	412503 - IP Phone, Make Coral Telecom - 17251 -	0.17	-	0.17	-	RMU - T&P
51	412801 - BELCO MAKE, HEAT PILLAR, 2 X 750 W RODMODEL: ELEGANT ROOM HEATER - 2671 -	0.03	-	0.03	-	RMU - T&P
52	412801 - EXHAUST FAN 300 MM SWEEP, METAL BODY - 1511 -	0.45	-	0.45	-	RMU - T&P
53	412801 - HEAT PILLAR DOUBLE ROD 1500/1600W - 2909 -	0.87	-	0.87	-	RMU - T&P
54	412801 - MANTRA MFS100 DEVICE - BIOMETRIC IDENTIFICATION EQUIPMENT FOR LIFE CERTIFICATES OF RETIRED EMP - 1350 -	0.01	-	0.01	-	RMU - T&P
55	412801 - Room Heater Double ROD/SINGLE - 1194 -	0.60	-	0.60	-	RMU - T&P
56	412801 - Room Heater Double Rod/Single - 944 -	0.24	-	0.24	-	RMU - T&P
57	412801 - Room Heater Double Rod/Single - 945 -	0.14	-	0.14	-	RMU - T&P
58	412801 - Voltage Stabilizer 5.0 KVA - 2900 -	0.41	-	0.41	-	RMU - T&P
	<b>Total Addition</b>	<b>6874.26</b>	<b>607.94</b>	<b>6266.32</b>	<b>0.00</b>	
1	410301 - C/o AHU Room at Power House Surangani (101/001176) - 1076568 - 101/001176	10.77	-	10.77	-	RMU
2	410321 - C/o 10 No rooms Field hostel, 08 No rooms Bachelor Accommodation and Common mess at Nakrod for BSPS - 26332880 - 101/001000	263.33	-	263.33	-	RMU
3	410325 - C/o 12 No. C Type Quarters at Lower Colony of BSPS (Sub Contract 101/000884) - 244373 - 101/000884	2.44	-	2.44	-	RMU
4	410325 - C/o 08 Nos. of C Type quarters including Site development & Infra works at Mandir colony, Surangani - 24157934 - 101/000995	241.58	63.35	178.23	-	RMU





Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)				Justification
		Accrual basis	Un-discharge d Liability	Cash basis	IDC included	
5	410328 - Construction of Fire Fighting Tank under RMU work of BPS - 386746 - 101/001004	3.87	-	3.87	-	RMU
6	410328 - C/o DG Building including Drainage System & Fencing Work at DG Building Near Power House - 455240 - 101/000891	4.55	-	4.55	-	RMU
7	410421 - Wiring of 8 No. Bachelor Accommodation & 10 No. rooms Field hostel at Nakrod (101/001008) - 841165 - 101/001008	8.41	-	8.41	-	RMU
8	410425 - Wiring of 08 Nos. of C Type quarters at Mandir colony, Surangani - 1599457 - 101/001035	15.99	-	15.99	-	RMU
9	410601 - R&M of Down Stream Concrete Apron at Siul Weir by Providing HPC(M-60) (Sub Contract No. 101/000821) - 9081229 - 101/000821	90.81	-	90.81	-	RMU
10	410701 - RMU OF GENERATING PLANT & EQUIPMENT (UNIT#02) - 135868201 - 101/000954	1358.68	1.34	1357.34	-	RMU
11	410701 - RMU OF GENERATING PLANT & EQUIPMENT (UNIT#01) - 579563563 - 101/000954	5795.64	-	5795.64	-	RMU
12	410703 - DESIGN, MANUFACTURING, SUPPLY, DISSASSEMBLY, ERECTION, TESTING & COMMISSIONING OF LV SWITCHGEAR - 49815985 - 101/001149	498.16	55.83	442.33	-	RMU
13	410713 - 125/20 T EOT CRANE FOR POWER HOUSE - 1 NO. (CRANE NO. 01) - 868656 - 101/001085	8.69	-	8.69	-	RMU
14	410713 - 30/5 T EOT CRANE FOR VALVE HOUSE (CRANE NO. 02) - 868658 - 101/001085	8.69	-	8.69	-	RMU
15	410713 - 125/20 T EOT CRANE FOR POWER HOUSE - 1 NO. (CRANE NO. 03) - 12894166 - 101/001085	128.94	-	128.94	-	RMU
16	410328 - C/o Quarter Guard with Magazine for Arms & Ammunitions for CISF, BPS - 43853 - 101/000996	0.44	-	0.44	-	RMU - Misc.
17	412005 - SCHILLER AUTOMATIC EXTERNAL DEFIBRILLATOR (AED) MAKE - SCHILLER MODEL - FRED PA1 - 138635	1.39	-	1.39	-	RMU - Misc.
18	412005 - OXYGEN CYLINDER (MEDIUM) IRON 10LIT, - 6850 -	0.27	-	0.27	-	RMU - Misc.
19	412006 - "MOTORIZED TREADMILL-CTM01 AC MAKE - COCKATOOMODEL - CTM 01" - 94999 -	0.95	-	0.95	-	RMU - Misc.
20	412006 - MULTISTATION GYM - 88500 -	0.89	-	0.89	-	RMU - Misc.
21	412008 - LLOYD SPLIT AC 1.5 TON 3 STAR INV HC-LS18H31LF - 40784 -	0.41	-	0.41	-	RMU - Misc.
22	412501 - VOLTRIQ SMART TELEVISION TV 32 INCH LED BACKLIT LCD MAKE - VOLTRIQ MODEL - VI3203 - 13177 -	2.64	-	2.64	-	RMU - Misc.
23	412503 - WATER PURIFIER MAKE - AEMRIC MODEL - RO+UV+UF (8 LTR.) - 8990 -	0.54	-	0.54	-	RMU - Misc.
24	412503 - WATER PURIFIER CAP. 8 LTR. - 9810 -	0.39	-	0.39	-	RMU - Misc.
25	412505 - WHIRLPOOL 190 L 3 STAR DIRECT COOL SINGLE DOOR REFRIGERATOR MAKE-WHIRLPOOL MODEL-GENIUS CLS PLUS - 12114 -	1.45	-	1.45	-	RMU - Misc.



Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)				Justification
		Accrual basis	Un-discharge d Liability	Cash basis	IDC included	
26	412801 - SOLID DUMBELL 7.5 KG RUBBER COATED HEXAGONAL - 1469 -	0.03	-	0.03	-	RMU - Misc.
27	412801 - DUMBLE, 5 KG (HEXAGONAL DUMBBELL – RUBBER) COSCO MAKE - 980 -	0.04	-	0.04	-	RMU - Misc.
28	412801 - WEIGHT MACHINE MAKE - DOCBEL MODEL - SAMSO - 897 -	0.01	-	0.01	-	RMU - Misc.
29	410701 - COUPLING FITTED BOLT FOR 60MW FRANCIS RUNNER - 10063 -	1.21	-	1.21	-	RMU - T&P
30	410701 - COUPLING BOLT FOR 60MW FRANCIS RUNNER - 10063 -	0.40	-	0.40	-	RMU - T&P
31	410701 - COUPLING NUT FOR 60MW FRANCIS RUNNER - 49800 -	7.97	-	7.97	-	RMU - T&P
32	410713 - WELDING SET, PORTABLE INVERTOR BASED RECTIFIER,1-PHASE, CURRENT RANGE UPTO 200 AMP - 12799 -	0.51	-	0.51	-	RMU - T&P
33	410713 - WELDING RECTIFIER 3 PHASE UPTO 400 AMP WITH ACCESSORIES - 38490 -	1.15	-	1.15	-	RMU - T&P
34	410713 - HYDRAULIC JACK CAPACITY-50 TON WITH PUMP AND ACCESORIES - 105492 -	1.05	-	1.05	-	RMU - T&P
35	410714 - HAND PALLET TRUCK MAKE - EASYMOVE MODEL - EM103 - 21000 -	0.63	-	0.63	-	RMU - T&P
36	410714 - HAND PALLET TRUCK MAKE - EASYMOVE MODEL - 103 5 TON - 50000 -	0.50	-	0.50	-	RMU - T&P
37	410714 - PALLET STACKER MAKE - STACKER AND MOVER MODEL - ST2 - 55000 -	0.55	-	0.55	-	RMU - T&P
38	411112 - 20 HP MULTISTAGE HORIZONTAL PUMP FOR 50M HEAD AND DISCHARGE 1000 LPM MAKE - ROCKWELL MODEL - RHCP-20 - 278880 -	2.79	-	2.79	-	RMU - T&P
39	411701 - STEEL ALMIRAH BIG - 20954 -	0.21	-	0.21	-	RMU - T&P
40	411701 - ALMIRAH SMALL (MINOR PLAIN) - 17510 -	0.18	-	0.18	-	RMU - T&P
41	411801 - LAPTOP-NOTEBOOK MAKE - DELL MODEL - LATITUDE 3410 - 98901 -	2.97	-	2.97	-	RMU - T&P
42	411803 - HP LASERJET PRO MFP M226DW - 30890 -	1.85	-	1.85	-	RMU - T&P
43	411804 - PANASONIC STANDARD THROW (0.91 TO 2.5) MULTIMEDIA PROJECTOR (MMP) MAKE - PANASONIC MODEL - PT-VMZ50 - 190001 -	1.90	-	1.90	-	RMU - T&P
44	411806 - 48 PORTS L3 SWITCH NETGEAR, S3300 48P MAKE: NETGEAR; MODEL: S3300 48P - 98370 -	1.97	-	1.97	-	RMU - T&P
45	411806 - INTEL XEON SERVER MAKE - LENOVO MODEL - THINKSYSTEM SR550 - 47200 -	0.47	-	0.47	-	RMU - T&P
46	411806 - 24 PORT ETHERNET LAYER 2 SWITCH WITH 2 SFP PORT MAKE - DLINK MODEL - DGS120 - 12980 -	0.52	-	0.52	-	RMU - T&P
47	411806 - WIFI REPEATER MAKE - UBIQUITY MODEL - POWER BEAM AC GEN2 - 17700 -	0.71	-	0.71	-	RMU - T&P
48	411806 - INTEL XEON SERVER MAKE - LENOVO MODEL - THINKSYSTEM SR550 - 548877 -	5.49	-	5.49	-	RMU - T&P



Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)				Justification
		Accrual basis	Un-discharge d Liability	Cash basis	IDC included	
49	411903 - CCTV CAMERA SAMSUNG QNO 8080R - 2950 -	0.30	-	0.30	-	RMU - T&P
50	411903 - 16 PORTS UNMANAGED POE+ LAYER 2 ACCESS SWITCH MAKE-NETGEAR, MODEL- GS116PP - 16284 -	0.16	-	0.16	-	RMU - T&P
51	411903 - 8 PORTS UNMANAGED POE+ LAYER 2 ACCESS SWITCH MAKE-NETGEAR, MODEL- GS108PP - 7552 -	0.08	-	0.08	-	RMU - T&P
52	411903 - CCTV CAMERA SAMSUNG QNO 8080R - 32273 -	3.23	-	3.23	-	RMU - T&P
53	411903 - UBIQUITI NANO STATION 5 5GHZ INDOOR/OUTDOOR DUAL POLARITY 14 DBI CPE - 27140 -	0.27	-	0.27	-	RMU - T&P
54	411903 - WALL MOUNT RACK 4 U - 4720 -	0.05	-	0.05	-	RMU - T&P
55	412201 - WINDOWS 2019 SERVER CLIENT ACCESS LICENSE (CAL) (R18-05786) - 3540 -	4.25	-	4.25	-	RMU - T&P
56	412201 - MICROSOFT WINDOWS SERVER 2019 STANDARD EDITION 16 CORE LICENSE MICROSOFT WINDOWS SERVER 2019 STD - 79650 -	0.80	-	0.80	-	RMU - T&P
57	412201 - AUTOCAD 2021 SPECIALIZED TOOLSETS AD COMMERCIAL NEW SINGLE-USER ELD 3YEAR SUBSCRIPTION AUTODESK - 204900 -	2.05	-	2.05	-	RMU - T&P
58	412503 - IP BIOMETRIC SYSTEM, SECUREYE, SB250CB - 11889 -	1.43	-	1.43	-	RMU - T&P
59	412503 - OIL FILLED RADIATOR/HEATER - 5299 -	1.06	-	1.06	-	RMU - T&P
60	412503 - ELECTRIC SIREN, SINGLE PHASE, 220/250 V, RANGE-5KM - 65490 -	1.31	-	1.31	-	RMU - T&P
61	412503 - OIL FILLED RADIATOR/HEATER - 7031 -	0.21	-	0.21	-	RMU - T&P
62	412503 - DOOR FRAME METAL DETECTOR MAKE - FUTURE-6 MODEL - V01 - 60500 -	2.42	-	2.42	-	RMU - T&P
63	412503 - FERRULE PRINTER SUITABLE FOR 1.5 SQMM TO 16 SQMM CABLE AND (DIRECT AND COMPUTER CONTROL PRINTING) - 49395 -	0.49	-	0.49	-	RMU - T&P
64	412801 - EXHAUST FAN - 1100 -	0.35	-	0.35	-	RMU - T&P
65	412801 - REVOLVING STOOL - 2048 -	0.04	-	0.04	-	RMU - T&P
66	412801 - HAND HELD METAL DETECTOR MAKE - LOTUS MODEL - LOTUS-201 - 3500 -	0.25	-	0.25	-	RMU - T&P
67	412801 - HAND HELD SEARCH LIGHT - 3960 -	0.40	-	0.40	-	RMU - T&P
68	412801 - BAJAJ 1200 MILLIMETER MM CEILING FAN MAKE - BAJAJ MODEL - EDGE 1200 MM - 1345 -	0.38	-	0.38	-	RMU - T&P
69	412801 - CEILING FAN 1200MM WITHOUT REGULATOR - 770 -	0.15	-	0.15	-	RMU - T&P
70	412801 - "A-4 SIZE FLATBED SCANNER, MAKE: EPSONMODEL: PERFECTION V39" - 3970 -	0.04	-	0.04	-	RMU - T&P
	<b>Total Addition</b>	<b>8502.75</b>	<b>120.52</b>	<b>8382.23</b>	<b>0.00</b>	
1	410201 - Repair & improvement of Approach Roads to Pangola, Kurchet, Dharkunda & SFT Adit (RMU) - 10208650 - 101/000893	102.09	-	102.09	-	RMU



Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)				Justification
		Accrual basis	Un-discharge d Liability	Cash basis	IDC included	
2	410301 - Protection work at Power House Right Bank at D/S of TRC, BSPS, Surangani (RMU) - 4261720 - 101/001322	42.62	-	42.62	-	RMU
3	410328 - C/o DG Set Room at Baira Dam for BSPS (RMU) - 2868174 - 101/001226	28.68	0.75	27.93	-	RMU
4	410328 - C/o CISF Barrack at Siul Complex of BSPS - 2987559 - 101/001100	29.88	0.54	29.34	-	RMU
5	410428 - Wiring of CISF Barrack at Siul Weir (101/001125) - 268631 - 101/001125	2.69	-	2.69	-	RMU
6	410428 - Earthing of 380 KVA DG Set at Baira Dam (101/001358) - 96981 - 101/001358	0.97	-	0.97	-	RMU
7	410601 - Civil Works pertains to Baira Dam (Pkg C-1 under RMU) {Completed till First Unit i.e. Unit # 2} - 22663631 - 101/001106	226.64	-	226.64	-	RMU
8	410601 - Civil Works pertains to Baira Dam (Pkg C-1 under RMU) {Completed till Last Unit i.e. Unit # 3} - 108229693 - 101/001106	1082.30	0.22	1082.08	-	RMU
9	410604 - Civil Works pertains to HRT Repair (Pkg C-1 under RMU) {Completed till First Unit i.e. Unit # 2} - 64862223 - 101/001106	648.62	48.94	599.68	-	RMU
10	410604 - Civil Works of Bhalehd Trench Weir, Intake & Outlet Structure, Link Tunnel & Bhalehd (Pkg C-2) (RMU) - 302380944 - 101/001084	3023.81	131.83	2891.98	-	RMU
11	410608 - HM works Pertains to Baira Dam & Siul weir (Work Completed till commissioning of First Unit) (RMU) - 95828487 -	958.28	-	958.28	-	RMU
12	410608 - HM works Pertains to Baira Dam & Siul Weir (Work Completed till commissioning of Last Unit) (RMU) - 37221054 -	372.21	-	372.21	-	RMU
13	410608 - Construction of Shed over Radial Gate Hoist Assembly at Baira Dam (RMU) - 1084136 -	10.84	-	10.84	-	RMU
14	410610 - HM works Pertains to 03 No. Penstocks (Work Completed till commissioning of First Unit) (RMU) - 6781700 -	67.82	-	67.82	-	RMU
15	410610 - HM works Pertains to Bhalehd Nallah & Penstocks (Work Completed till commissioning of Last Unit) (RMU) - 13710293 -	137.10	-	137.10	-	RMU
16	410611 - HM works Pertains to TRC - Power House (Work Completed till commissioning of First Unit) (RMU) - 16569469 -	165.69	-	165.69	-	RMU
17	410611 - HM works Pertains to TRC - Power House (Work Completed till commissioning of Last Unit) (RMU) - 10771327 -	107.71	-	107.71	-	RMU
18	410701 - RMU OF GENERATING PLANT & EQUIPMENT (UNIT#02) - 3747976 - 101/000954	37.48	-	37.48	-	RMU
19	410701 - BUS DUCT SYSTEM FOR GENERATING PLANT & EQUIPMENT (UNIT#02) (RMU) - 1357826 - 101/001147	13.58	-	13.58	-	RMU
20	410701 - BUS DUCT SYSTEM FOR GENERATING PLANT & EQUIPMENT (UNIT#01) (RMU) - 9703999 - 101/001147	97.04	-	97.04	-	RMU
21	410701 - BUS DUCT SYSTEM FOR GENERATING PLANT & EQUIPMENT (UNIT#03) (RMU) - 9782387 - 101/001147	97.82	-	97.82	-	RMU



Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)				Justification
		Accrual basis	Un-discharge d Liability	Cash basis	IDC included	
22	410701 - RMU OF GENERATING PLANT & EQUIPMENT (UNIT#03) - 447335090 - 101/000954	4473.35	-	4473.35	-	RMU
23	410702 - 11/220/v3KV, 25MVA, YNd11, Single Phase Generator Step-Up Transformer (Sl. No. L-0604) (RMU) - 30825126 - 101/001300	308.25	57.28	250.97	-	RMU
24	410702 - 11/220/v3KV, 25MVA, YNd11, Single Phase Generator Step-Up Transformer (Sl. No. L-0605) (RMU) - 30825126 - 101/001300	308.25	57.28	250.97	-	RMU
25	410702 - 11/220/v3KV, 25MVA, YNd11, Single Phase Generator Step-Up Transformer (Sl. No. L-0606) (RMU) - 30825126 - 101/001300	308.25	57.28	250.97	-	RMU
26	410702 - 11/220/v3KV, 25MVA, YNd11, Single Phase Generator Step-Up Transformer (Sl. No. L-0607) (RMU) - 31074127 - 101/001300	310.74	57.28	253.46	-	RMU
27	410702 - 11/220/v3KV, 25MVA, YNd11, Single Phase Generator Step-Up Transformer (Sl. No. L-0608) (RMU) - 30771983 - 101/001300	307.72	57.28	250.44	-	RMU
28	410702 - 11/220/v3KV, 25MVA, YNd11, Single Phase Generator Step-Up Transformer (Sl. No. L-0609) (RMU) - 30771983 - 101/001300	307.72	57.28	250.44	-	RMU
29	410708 - Supply, Installation & Commissioning of Cabling System installed with First Unit i.e. Unit # 2 - 19122722 - 101/001137	191.23	39.92	151.31	-	RMU
30	410708 - Supply, Installation & Commissioning of Cabling System installed with Second Unit i.e. Unit # 1 - 18497572 - 101/001137	184.98	39.92	145.06	-	RMU
31	410708 - Supply, Installation & Commissioning of Cabling System installed with Last Unit i.e. Unit # 3 - 18646993 - 101/001137	186.47	39.92	146.55	-	RMU
32	412005 - AED-MAKE - HEARTPLUS MODEL - NT-180 - 97571 -	0.98	-	0.98	-	RMU - Misc.
33	412005 - OXYGEN CONCENTRATOR TWO WAY DR. MOREPEN MODEL OC-01 - 51398 -	0.51	-	0.51	-	RMU - Misc.
34	412008 - LG 1.5 TON HOT AND COLD SPLIT AC MAKE - LG MODEL - 18VNXD - 37000 -	2.22	-	2.22	-	RMU - Misc.
35	412801 - FOLDING COT (IRON) WITH PLY TOP 3 X 6 INCH - 1600 -	0.24	-	0.24	-	RMU - Misc.
36	412801 - INFRARED THERMOMETER / non-contact thermal scanner - 2803 -	0.14	-	0.14	-	RMU - Misc.
37	412801 - DIGITAL BP APPARTUS ROMSON BP-10 - 1747 -	0.09	-	0.09	-	RMU - Misc.
38	412801 - DUSTBIN (BIO MEDICAL WASTE BIN 60 LTR.) - 1020 -	0.18	-	0.18	-	RMU - Misc.
39	412801 - NEBULISER ROMSON GS-9023 - 1669 -	0.05	-	0.05	-	RMU - Misc.
40	411801 - LAPTOP-ACER PREDATOR HELIOS 300 -CORE I7 10TH GEN-(16GB/1TB HDD/ 256GB SSD/ WINDOW 10 HOME - 80000 -	0.80	-	0.80	-	RMU - T&P
41	411801 - LAPTOP-MSI Bravo 15 Ryzen 7 4800H 15.6" FHD gaming laptop (16GB/512GB/144 Hz/ Windows 10 - 79990	0.80	-	0.80	-	RMU - T&P
42	411801 - DESKTOP COMPUTER, MAKE: ACER, MODEL: VERITONS2670G - 62868	4.40	-	4.40	-	RMU - T&P
43	411803 - HP COLOR PRINTER MAKE - HP MODEL - 6075 ALL IN ONE PRINTER - 9873 -	0.10	-	0.10	-	RMU - T&P



Sl. No.	Head of Work / Equipment	ACE Claimed (Actual / Projected)				Justification
		Accrual basis	Un-discharge d Liability	Cash basis	IDC included	
44	411803 - LEXMARK MONOCHROME LASER MULTI FUNCTION PRINTER MB2236ADW - 39000 -	1.17	-	1.17	-	RMU - T&P
45	411803 - SHEET FED SCANNER MAKE - AVISION MODEL - FF1905-B - 36000 -	0.72	-	0.72	-	RMU - T&P
46	411903 - CCTV CAMERA SAMSUNG QNO 8080R - 40179 -	4.02	-	4.02	-	RMU - T&P
47	411903 - HARD DISK 6TB MAKE: WD MODEL: WDCWD62PURZ - 15694 -	0.63	-	0.63	-	RMU - T&P
48	411903 - 16 PORTS UNMANAGED POE+ LAYER 2 ACCESS SWITCH MAKE-NETGEAR, MODEL- GS116PP - 16284 -	0.33	-	0.33	-	RMU - T&P
49	411903 - UBIQUITI NANO STATION 5 5GHZ Indoor/Outdoor Dual Polarity 14 DBI CPE - 27140 -	0.27	-	0.27	-	RMU - T&P
50	411903 - NVR 16 PORT XRN-1610A, SAMSUNG (HANWAH) NVR 16 PORT XRN-1610A, SAMSUNG (HANWAH) - 64310 -	1.29	-	1.29	-	RMU - T&P
51	412201 - AUTOCAD LT 2022 MAKE – AUTO DESKMODEL - 057N1-WW9153-L317 - 54280 -	1.09	-	1.09	-	RMU - T&P
52	412503 - Motorized Siren, 3-PHASE, AC, RANGE- 8KM - 46560 -	0.93	-	0.93	-	RMU - T&P
53	412503 - Rotary Hammer Drill Make - MAKITA MODEL - M8700B - 8795 -	0.18	-	0.18	-	RMU - T&P
54	412503 - ANGLE GRINDER 180 MM WHEEL DIA, 2400W-BOSCH-GWS-24-180 - 10800 -	0.22	-	0.22	-	RMU - T&P
55	412503 - MICRO FOGGER-MAKE - ULV MODEL - Fogger Stainless Steel - 13499 -	0.40	-	0.40	-	RMU - T&P
56	412801 - ANGLE GRINDER 100 MM WHEEL DIA, 750W-BOSCH-GWS-750-100 - 2949 -	0.06	-	0.06	-	RMU - T&P
	<b>Total Addition</b>	<b>14162.65</b>	<b>645.70</b>	<b>13516.95</b>	<b>0.00</b>	

