

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No.30/GT/2020**

**Coram:**

**Shri P.K. Pujari, Chairperson  
Shri I.S. Jha, Member  
Shri Arun Goyal, Member  
Shri Pravas Kumar Singh, Member**

**Date of Order: 16<sup>th</sup> September, 2021**

**IN THE MATTER OF**

Petition for determination of tariff of Nathpa Jhakri Hydro Power Station (1500 MW) for the period from 1.4.2019 to 31.3.2024.

**AND**

**IN THE MATTER OF**

SJVN Limited,  
SJVN Corporate Office Complex,  
Shanan, Shimla-171006,  
Himachal Pradesh

**...Petitioner**

Vs

1. Punjab State Power Corporation Limited,  
The Mall, Patiala, Punjab – 147001
2. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6,  
Panchkula, Haryana – 134109
3. Tata Power Delhi Distribution Limited,  
NDPL House, Hudson Lane,  
Kingsway Camp, New Delhi-110019
4. BSES Rajdhani Power Limited,  
2<sup>nd</sup> Floor, B-Bock, BSES Bhawan,  
Nehru Place, New Delhi-110019
5. BSES Yamuna Power Limited  
3<sup>rd</sup> Floor, Shakti Kiran Building, Karkardooma,  
Near Court Road New Delhi-110092
6. Jaipur Vidyut Vitran Nigam Limited,  
Vidyut Bhawan, Janpath, Jyoti Nagar,  
Jaipur – 302005, Rajasthan



7. Ajmer Vidyut Vitran Nigam Limited,  
Vidyut Bhawan, Janpath,  
Jyoti Nagar, Jaipur – 302005, Rajasthan
8. Jodhpur Vidyut Vitran Nigam Limited,  
Vidyut Bhawan, Janpath, Jyoti Nagar,  
Jaipur – 302005, Rajasthan
9. Himachal Pradesh State Electricity Board Limited,  
Vidyut Bhawan, Kumar House,  
Shimla – 171004
10. Power Development Department,  
Government of J&K, Civil Secretariat Building,  
Jammu-180001 (J&K)
11. Engineering Department,  
1<sup>st</sup> Floor, UT Secretariat, Sector 9-D,  
Chandigarh-160009
12. Uttar Pradesh Power Corporation Limited,  
Shakti Bhawan, 14 Ashok Marg,  
Lucknow, Uttar Pradesh – 226001
13. Uttaranchal Power Corporation Limited,  
Urja Bhawan, Kanwali Road,  
Dehradun-248001
14. Government of Himachal Pradesh,  
H.P. Secretariat, Shimla-171002
15. Madhya Pradesh Power Management Company Limited,  
Shakti Bhawan, Rampur,  
Jabalpur-482008

...Respondents

**Parties Present:**

1. Ms. Anushree Bardhan, Advocate, SJVNL
2. Shri Aman Katoch, SJVNL
3. Shri Naveen Yadav, SJVNL
4. Shri Varun Dang, SJVNL
5. Shri Mohit Mudgal, Advocate, BYPL
6. Shri R.B. Sharma, Advocate, BRPL
7. Ms. Megha Bajpeyi, BRPL
8. Shri Ravindra Khare, MPPMCL
9. Ms. Ranjana Roy Gawai, Advocate, TPDDL
10. Ms. Vasudha Sen, Advocate, TPDDL
11. Ms. Prachi Golechha, Advocate, TPDDL
12. Shri Anurag Bansal, TPDDL
13. Ms. Shefali Sobti, TPDDL
14. Shri Manish Garg, UPPCL



## **ORDER**

This petition has been filed by the Petitioner, SJVN Limited for approval of tariff of Nathpa Jhakri Hydroelectric Project (1500 MW) (hereinafter referred to as “the generating station” or “the Project”) for the period from 1.4.2019 to 31.3.2024 in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as 'the 2019 Tariff Regulations').

### **Background**

2. The generating station located in the State of Himachal Pradesh, is a joint venture between the Government of India and Government of Himachal Pradesh, as a run-of-river project with pondage. The generating station comprises of six units of 250 MW each. The dates of commercial operation (COD) of the different units of the generating station are as under:

<b>Units</b>	<b>COD</b>
Unit– 5	6.10.2003
Unit – 6	2.1.2004
Unit – 4	30.3.2004
Unit – 3	31.3.2004
Unit – 2	6.5.2004
Unit – 1 (station)	18.5.2004

3. The Petitioner has entered into Power Purchase Agreement (PPAs) with the Respondents for the power generated from the project. The allocation of power from the generating station was notified on 12.5.2014 by the Ministry of Power, Government of India (MoP). Further, MoP vide its letter dated 28.5.2018 had directed NRPC to allocate 40 MW power to Madhya Pradesh from the unallocated pool of Northern Region. Thereafter, NRPC vide letter dated 1.6.2018, issued revision in the allocation of power from the central generating stations in the



Northern Region, by which 0.18% power from the unallocated quota of power from the generating station was allocated to Respondent, Madhya Pradesh Power Management Company Limited (MPPMCL).

4. The project was originally approved by the Central Government vide MoP letter dated 5.4.1989 at an estimated cost of Rs. 167802 lakh, including IDC of Rs. 20602 lakh (September 1988 price level) with completion schedule of March 1996 including 1½ years for infrastructure works which were under development. The Revised Cost Estimate (RCE-I) was approved by the Central Government vide MoP letter dated 24.6.1993 for Rs. 433795 lakh, including IDC of Rs. 64869 lakh with revised commissioning schedule of December 1998. Later, the Revised Cost Estimate (RCE-II) was approved by the Central Government vide MoP letter dated 10.5.1999 at an estimated cost of Rs. 766631 lakh, including IDC of Rs. 173479 lakh (June 1998 price level) with the commissioning schedule of March 2002. Thereafter, the Revised Cost Estimate (RCE-III) was approved by the Central Government vide MoP letter dated 14.8.2007 at the cost of Rs. 818771 lakh, including IDC of Rs. 195181 lakh but excluding an expenditure of Rs. 14500 lakh, which had already been incurred as advance to contractors, on account of extension of time (EOT), Dispute Review Board (DRB) and other claims in respect of major civil works. The Revised Cost Estimate (RCE-IV) was approved by MoP, GOI vide letter dated 21.8.2018 at the cost of Rs. 857528 lakh, including the cost overrun of Rs. 38757 lakh. Further, the Petitioner had been directed to approach MoP, GOI for fresh approval in respect of the settlement of pending claims/contingent liabilities amounting to Rs. 35252 lakh, as on 31.3.2018.



5. Petition No. 314/GT/2018 was filed by the Petitioner for approval of tariff for the 2014-19 tariff period, based on the actual additional capital expenditure, duly audited up to 31.3.2018 and the projected additional capital expenditure for the year 2018-19, in accordance with the provisions of the 2014 Tariff Regulations. Subsequently, Petition No.31/GT/2020 was filed by the Petitioner for revision of tariff of the generating station, based on truing up of tariff for the 2014-19 tariff period. The Commission vide its order dated 6.9.2021 in Petition No.31/GT/2020 had approved the annual fixed charges of the generating station for the 2014-19 tariff period, after truing up exercise as under:

### Capital Cost

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	877307.50	878668.25	879791.97	881254.42	883863.13
Admitted additional capitalization	1360.75	1123.72	1462.45	2608.71	2563.55
Closing Capital Cost	<b>878668.25</b>	<b>879791.97</b>	<b>881254.42</b>	<b>883863.13</b>	<b>886426.68</b>

### Annual Fixed Charges

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	86462.03	86958.56	87039.93	87168.03	87561.43
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	44671.15	44715.88	44783.41	10873.92	10981.13
Interest on Working Capital	4426.20	4475.51	4583.24	3862.75	3987.52
O&M Expenses	23842.88	25426.04	27114.33	28914.72	30834.66
Additional O&M Expense	1640.69	724.56	924.43	157.32	287.46
<b>Total</b>	<b>161042.94</b>	<b>162300.55</b>	<b>164445.35</b>	<b>130976.74</b>	<b>133652.21</b>

### Present Petition

6. The Petitioner vide affidavit dated 11.10.2019 has filed the present petition for determination of tariff of the generating station for the 2019-24 tariff period, in terms of the provisions of the 2019 Tariff Regulations. The annual fixed charges claimed by the Petitioner in the present petition are as under:



## Annual Fixed Charges claimed

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Return on Equity	87785.38	87928.44	87947.59	87959.53	87962.96
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	9001.86	9083.52	9092.45	9097.84	9098.80
Interest on Working Capital	3355.53	3249.20	3425.71	3359.79	3588.11
O&M Expenses	43464.40	40949.20	44985.87	43468.83	48701.43
<b>Total</b>	<b>143607.17</b>	<b>141210.4</b>	<b>145451.6</b>	<b>143885.99</b>	<b>149351.29</b>

7. In compliance with the directions of the Commission vide RoP (record of proceedings) of the hearing dated 13.8.2020, the Petitioner has filed additional information vide affidavit dated 9.9.2020 and had served the same on the Respondents. The Respondents UPPCL, MPPMCL, BRPL and TPDDL have filed their replies vide affidavits dated 29.1.2020, 3.2.2020, 23.9.2020 and 24.9.2020 respectively and the Petitioner has filed its rejoinder vide affidavits dated 17.2.2020 and 30.9.2020 to the said replies. The petition was further heard on 13.4.2021 through video conferencing and the Commission after hearing the parties reserved its order in the petition.

### **Capital Cost**

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

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

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

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

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



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

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to 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....”

## Opening Capital Cost

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

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	886594.81	890817.88	891129.60	891424.60	891508.21
Add: Addition during the year / Period	4345.61	311.72	295.00	83.60	25.00
Less: De-capitalization during the year/period	122.54	0.00	0.00	0.00	0.00
Closing Capital Cost	890817.88	891129.60	891424.60	891508.21	891533.20

10. The Commission vide order dated 6.9.2021 in Petition No.31/GT/2020 had allowed the closing capital cost of Rs. 886426.68 lakh as on 31.3.2019. Accordingly, in terms of Regulation 19 of the 2019 Tariff Regulations, the capital cost of Rs. 886426.68 lakh as on 31.3.2019 has been considered as the opening capital cost as on 1.4.2019, for the purpose of determination of tariff for the 2019-24 tariff period.

## Additional Capital Expenditure

11. Regulations 25 and 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 2019- 24 tariff period.

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

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



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

- (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- (b) Change in law or compliance of any existing law;*
- (c) Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) Liability for works executed prior to the cut-off date;*
- (e) Force Majeure events;*
- (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*
- (g) Raising of ash dyke as a part of ash disposal system.*

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

- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;*
- (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;*
- (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission.*

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

*“26. Additional Capitalization beyond the original scope*

*(1) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:*

- (a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;*
- (b) Change in law or compliance of any existing law;*
- (c) Force Majeure events;*
- (d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;*
- (e) Deferred works relating to ash pond or ash handling system in addition to the original scope of work, on case to case basis:*





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

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

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

14. The Petitioner, in this petition, has claimed additional capital expenditure for 2019-24 tariff period, on projection basis. The Commission vide RoP (record of proceedings) of hearing dated 13.8.2020, had directed the Petitioner to submit the details of additional capital expenditure claimed for the 2019-24 tariff period in the format specified under the 2019 Tariff Regulations i.e. Form 9A, for projected additions during the said period and Form 9Bi for projected deletions during the period. In response, the Petitioner vide affidavit dated 9.9.2020 has submitted the details in the requisite format. The details of additional capital expenditure claimed for the 2019-24 tariff period are as under:

Sl. No	Regulation	Amount (Rs. in lakh)				
		2019-20	2020-21	2021-22	2022-23	2023-24
1	25(1)(a)	65.54	100.00	50.00	63.60	-
2	26(1)(b)	184.16	45.00	45.00	-	-
1	26(1)(b) (allowed on projection basis in 2018-19)	9.00	-	-	-	-
2	26(1)(d)	446.84	80.00	-	20.00	25.00
3	26(1)(d) (allowed on projection basis in 2018-19)	1625.93	6.72	-	-	-
4	26(1) (allowed on projection basis in 2018-19)	1652.65	-	-	-	-
5	26(1) (Others) - The expenses not covered in any of the clauses)	361.49	80.00	200.00	-	-
6	25 (De-capitalization)	(-)122.54	-	-	-	-
	<b>Total as per Form 9A (Net)</b>	<b>4223.07</b>	<b>311.72</b>	<b>295.00</b>	<b>83.60</b>	<b>25.00</b>



15. The Petitioner has claimed additional capital expenditure in terms of Regulation 25 of the 2019 Tariff Regulations i.e. additional capital expenditure within original scope of work. The Petitioner was directed to provide details of the additional capital expenditure incurred within the original scope of work/ approved RCE as on 31.3.2019 and the balance expenditure available under the original scope of work/ approved RCE for the 2019-24 tariff period. In response, the Petitioner has submitted that the additional capital expenditure claimed under Regulation 25(1)(a) for the 2019-24 tariff period pertain to enhanced compensation for left out cases of land oustees as per decision of the Hon'ble High Court of Himachal Pradesh in respect of the land acquired for the generating station. Accordingly, it has been certified that the enhanced compensation towards the cost of land is within the original scope of work of the project. Further, it has been certified that the details of the additional capital expenditure incurred are within the original scope of work/ approved RCE as on 31.3.2019 and the balance expenditure available under the original scope of work/ approved RCE for the 2019-24 tariff period has been furnished by the Petitioner.

16. The Respondents UPPCL, MPPMCL, BRPL and TPDDL have submitted that claims made by the Petitioner are not in line with the 2019 Tariff Regulations and have prayed that the Commission may undertake prudence check of such additional capital expenditure. The Respondent UPPCL has submitted that the Petitioner has claimed additional capital expenditure under Regulation 26(1) (other), which does not qualify for additional capitalization. It has further stated that the claims under Regulation 26(1)(d) of the 2019 Tariff Regulations do not satisfy the twin criteria as provided under the said regulation. The Respondent, BRPL has submitted that the Petitioner has failed to provide detailed information with regard to the projected



additional capital expenditure. The Respondent has also submitted that the Petitioner's claim for additional capital expenditure does not qualify as a 'change in law' event as necessary documents have not been provided and, therefore, are liable to be rejected. The Respondents TPDDL and BRPL have also submitted that the additional capital expenditure claimed by the Petitioner is not evenly spread over the tariff period as almost 85% of the additional capital expenditure to be incurred, has been claimed in 2019-20, which will result in higher return on equity for a longer period, resulting in extra burden on end consumers.

17. In response, the Petitioner has submitted that the capital expenditure claimed during the years 2019-20, 2020-21 and 2021-22 are necessary for efficient and successful operation of plant. The Petitioner further submitted that the projected additional capitalization for the respective years has been claimed with proper justification and supporting documents in accordance with the 2019 Tariff Regulations.

18. Based on the submissions of the parties and the documents available on record, we proceed to examine the claims of the Petitioner in the subsequent paragraphs.

19. As regards the additional capital expenditure claimed by the Petitioner, the Commission vide RoP of hearing dated 13.8.2020, had directed the Petitioner to submit break-up of additional capitalization claims which are "within the original scope of work", beyond the original scope of work" and claims on account of "change in law". In response, the Petitioner has submitted the detailed break-up of the additional capitalization as under:



(Rs in lakh)

Particulars	Additional capitalization during the period within original scope of work	Assets De-capitalized during the period within original scope of work	Total within original scope of work	Change in law	Higher security and safety	Efficient and successful operation	Total beyond original scope of work	Total Capital cost claimed
2019-20	65.54	(-)122.54	(-)57.00	193.16	2072.77	2014.14	4280.07	4223.07
2020-21	100.00		100.00	45.00	80.00	86.72	211.72	311.72
2021-22	50.00		50.00	45.00		200.00	245.00	295.00
2022-23	63.60		63.60		20.00	0.00	20.00	83.60
2023-24	0.00		0.00		25.00	0.00	25.00	25.00
<b>Total</b>	<b>279.14</b>			<b>283.16</b>	<b>2197.77</b>	<b>2300.86</b>	<b>4781.79</b>	<b>4938.39</b>

20. With regard to the additional capital expenditure allowed in 2018-19, the Commission had directed the Petitioner to submit the reasons for spill over of the additional capital expenditure allowed for 2018-19 to the period 2019-21. In response, the Petitioner has submitted that the additional capital expenditure was claimed in 2018-19 on projection basis, and the same was allowed by the Commission vide its order dated 19.7.2019 in the Petition No.314/GT/2018. It has also stated that out of the additional capital expenditure allowed, a part of the additional capital expenditure was claimed in 2018-19, on actual basis, in Petition No.31/GT/2020 and the balance additional capital expenditure has been claimed, on projection basis, in the subsequent years i.e. 2019-20 and 2020-21 in this petition. The Petitioner has stated that spill over of additional capital expenditure from 2018-19 to 2019-21 is for the reason that though the proposal for such expenditure was initiated/ proposed in 2018-19, orders/ LOA/ bids could not be executed/ processed in the same year. Based on the submissions, the additional capital expenditure claims for the 2019-24 tariff period are examined in subsequent paragraphs.

## 2019-20

21. The Petitioner has claimed additional capital expenditure of Rs. 4223.07 lakh in 2019-20, under the provisions of Regulations 25 and 26 of the 2019 Tariff Regulations and the same are examined below.



### Claims of the Petitioner under Regulation 25(1)(a)

22. The Petitioner has claimed total additional capital expenditure of Rs.65.54 lakh under Regulation 25(1)(a) of the 2019 Tariff Regulations. The claims of the Petitioner are discussed as under:

*(Rs. in lakh)*

Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility/ Nonadmissibility	Amount Allowed
Capitalization of Land/ Assets	65.54	The amount of enhanced compensation for left out cases against the land acquired for the Project in line with the decision of Hon'ble High Court of H.P.	As the additional capital expenditure incurred has been claimed in compliance to the order of the Hon'ble High Court, the same <b>allowed</b> .  This is, however, subject to the Petitioner furnishing relevant documents including orders of the court, at the time of truing-up of tariff, failing which the claim may not be considered.	65.54

### Claims of the Petitioner under Regulation 26(1)(b)

23. The Petitioner has claimed total additional capital expenditure of Rs.193.16 lakh on account of change in law under Regulation 26(1)(b) of the 2019 Tariff Regulations. Out of this, projected additional capitalization of Rs.19.16 lakh in 2018-19 was allowed by the Commission vide its order dated 19.7.2019 in Petition No. 314/GT/2018 and the balance amount of Rs.174.00 lakh has been claimed as additional capitalization on account of 'change in law' in 2019-20. The claims of the Petitioner are discussed as under:



(Rs. in lakh)

Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Procurement of online energy meter	25.00	As per the office memorandum issued by Ministry of heavy industries and Public enterprises, Hon'ble Prime Minister during his address at CPSE conclave urged CPSE to develop some of their townships/ residential colonies as "Mini Smart cities by 2022". This project is as per above guidelines of conclave.	Since the additional capital expenditure claimed is not directly related with the operation of the generating station, the same is <b>not allowed</b> .	0.00
Supply & installation of EV Charging stations	15.00			0.00
To provide free Wi-Fi connectivity within Jhakri village	65.00			0.00
Motorized Lifeboat	9.00	Motorized lifeboat is required for repair of Log Boom Barrier, under water diving, and other safety related matters which can be performed efficiently. The motorized boat is required under Disaster Management.	The additional capital expenditure was allowed vide order dated 19.7.2019 in Petition No. 314/GT/2018. Accordingly, the additional capital expenditure claimed is <b>allowed</b> .	9.00
Supply, installation, testing and Commissioning of paper to pencil making plant at the generating station	10.16	The work was taken up in compliance to the Solid Waste Management Rules, 2016 (Notice issued by H.P. State Pollution Control Board)	The expenditure was allowed vide dated 19.7.2019 in Petition No. 314/GT/2018. Accordingly, the additional capital expenditure claimed is <b>allowed</b> .	10.16
Purchase of Satellite phones for Khab, Nathpa and Jhakri as an alternative mode of communication during any emergency condition.	4.00	Guidelines on the issues relating to safe release of flood during Monsoon season received from District Disaster Management Authority (DDMA) Shimla necessitates to have accurate and reliable forecasting and communication	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Governmental agencies/ statutory authorities	4.00



Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
		mechanism for coming inflow along with silt concentration from the catchment areas.	Accordingly, the expenditure claimed is <b>allowed.</b>	
Procurement of IT hardware and software.	65.00	To cater to the ERP requirement and as per government office memorandum.	The expenditure incurred is for compliance to the directions dated 31.8.2018 issued by the Ministry of Heavy Industries and Public Enterprises, GOI, wherein the criteria for cashless transaction and Digital security arrangement has been notified.  In view of the above, the additional capital expenditure claimed is <b>allowed.</b>  This is, however, subject to submission of documentary evidence of the expenditure incurred along with clarification as to whether any separate fund under "Mini Smart cities by 2022" has been provided by GOI.	65.00
<b>Total claimed</b>	<b>193.16</b>			
<b>Total allowed</b>				<b>88.16</b>

### Claims of the Petitioner under Regulation 26(1)(d)

24. The Petitioner has claimed additional capital expenditure of Rs.2072.77 lakh in 2019-20 on account of need for higher security and safety of the generating



station. Out of this, an amount of Rs.446.84 lakh is for new items and the remaining amount of Rs.1625.93 lakh pertains to assets which were allowed by the Commission for spending in 2018-19 on projection basis vide its order dated 19.7.2019 in Petition No. 314/GT/2018. The claims of the Petitioner are discussed as under:

<i>(Rs. in lakh)</i>				
Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Procurement of CCTV cameras for petrol pump stores and colony below NH5.	30.00	For safety purpose in the stores and at petrol pumps, the CCTV surveillance is necessary from safety and security point of view and is recommended by NSG.	Since the additional capital expenditure claimed is not directly related with the operation of the generating station, the same is <b>not allowed</b> .	0.00
Installation, testing and commissioning of sophisticated centrally controlled electronic siren/hooter system i.e. Advance warning cum alert system for the generating station, Dam Nathpa.	198.84	Presently, hooters are placed in different locations in the downstream of river Satluj. Hooters are blown before releasing of water as per guidelines and at the same time, administration is conveyed telephonically before releasing of water. With the introduction of this system, from Nathpa Dam up to Duttanagar can be publicly addressed in a short time. This is very important from the perspective of public safety. Guidelines on the issues relating to safe release of flood during Monsoon season received from DDMA (District Disaster management	The Additional Chief Secretary (Revenue), GoHP vide his letter dated 30.6.2017 has sought the implementation of guidelines related to safe release of water from In compliance to above, the additional capital expenditure of Rs 198.84 lakh and Rs 70 lakh incurred for the works/ asset is <b>allowed</b> .  However, the Petitioner is directed to complete the installations based on the additional capital expenditure allowed, within the 2019-24 tariff period, pursuant to which no additional expenditure shall be admissible on this count.	198.84





Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
		authority), Shimla necessitates having Advance warning cum alert system.		
Purchase and Installation of CCTV cameras for BTRDT Complex and Intake panels at generating station, Nathpa cum Campus area Networking for Dam site at the generating station.	70.00	Presently, no camera has been installed at BTRDT and intake gate panels. These locations are very vulnerable from the viewpoint of safety of dam. By installing CCTV system at these locations, it will enhance safety and surveillance as well as let the Petitioner know the status of various sites which are unmanned. OFC based network will reduce the data loss and also increase the data transmission system speed. The proposed data transmission system will also be used in future for IP based exchange, IFS connectivity and to extend lease line connectivity to other location of NJHPS. IB during their visit to dam site has proposed additional cameras for Nathpa Dam and to improve communication network.		70.00
Supply, surface preparation & application of 02 (two) mm thick electrically insulated epoxy based anti-dust floor coating & 03	33.00	In order to ensure the safety of the generating stations and operation staff, and to comply with the CEA recommendation (page 155 to 159 of the Petition).	As the additional capital expenses claimed is on account of need for higher security and safety of the generating station as directed by the Central Electricity Authority vide its letter	33.00



Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
(three) inch wide walkway lining to GIS floors (GIS-I & GIS-II)			dated 13.6.2018, the expenditure claimed is <b>allowed</b> .	
Procurement of air conditioners for rest house of the Petitioner's company at Jhakri and providing the new air conditioners in clubs of the Petitioner.	25.00	Existing window ACs are very old and consume more power and need to be replaced with Energy efficient ACs as per GOI notifications.	Since the additional capital expenditure claimed is not directly related with the operation of the generating station, the same is <b>not allowed</b> .	0.00
Remote Control and monitoring the status of major equipment installed at different locations of dam site of the generating station, Nathpa through Distributed Control System/ SCADA and displaying status on Large Video screen in Dam Control room.	80.00	Sites at Nathpa Dam are isolated and scattered. Therefore, it is necessary to display status of Radial Gates, Intake Gates, SFT Gates, and BTRDT Pumps etc in one centralized location i.e. DAM control room. By incorporating LVS, operation personnel at control room will be aware about the events on real time basis. This will enhance the efficiency & safety of the power plant and will also facilitate the remote control of major equipment, thus, cause saving in manpower. Guidelines on the issues relating to safe release of flood during Monsoon season received from District Disaster management authority (DDMA), Shimla necessitates to establish Effective Dam safety	As the additional capital expenditure claimed is for higher security and safety of the generating station and based on IB recommendations vide its letter dated 25.6.2017, the same is <b>allowed</b> .	80.00



Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
		surveillance and monitoring program.		
Purchase of Drone Cameras for Dam site Nathpa.	10.00	In Draft Protocol of operation of dams & release of water during monsoon prepared by CWC, CWC has suggested use of Drone cameras for monitoring downstream of Dam before release of water from Dams. In addition to this Drones can be used for HT line patrolling and Security patrolling.	Since the additional capital expenditure claimed is not directly related with the operation of the generating station, the same is <b>not allowed</b> .	0.00
Design, Manufacture, Supply, Erection Storage, Testing & Commissioning of 400/22 kV, 25 MVA, 3 Phase, Star/ Star Transformer & its Protection System	567.00	Since inception, the generating station has no arrangement to use its own Power Supply to meet the Auxiliary Power requirement of Power station. The generating station has been drawing power from HPSEB to meet the station auxiliary requirement of generating station Unit including Dam site. The Power Supply from HPSEB is not only a costly affair but also an erratic and unreliable, which affect the safety requirement of Power Plant.	The assets/ works allowed by the Commission vide its order dated 19.7.2019 in Petition No. 314/GT/2018 were based on the recommendations of CEA and are spilled over works of 2018-19. Hence, the additional capital expenditure claimed is <b>allowed</b> .	567.00
Variation Order for 420 kV outdoor and Miscellaneous equipment for 400 kV/ 22kV Station Transformer at the generating station Pothead Yard.	135.89	Accordingly, the 25 MVA, 400/22 kV Station Transformer was approved by CEA in order to use own reliable station Auxiliary Power Supply at the	This is, however, subject to the Petitioner furnishing the relevant documents such as copy of purchase orders, LOA, copy of award of contract and other relevant documents, at the time of truing up of tariff, failing which the expenditure may not be considered.	135.89
Supply, Installation, Testing & Commissioning of 12 Nos. 22 kV Panels with 22 kV Breakers & all cable works of Control & 22 kV Power Cables & all related works.	167.60			167.60



Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
		<p>generating station. Reliability of power supply needs to be given thrust as Francis type Hydro Power Stations are submerged in the water well below the level of TRT and there are always chances of back inrush of water to Power House floors in case of any eventuality. In that case, water has to be lifted with starting of number of submersible Pump System (Flooding water System) in one go to save the Powerhouse from expected flooding. As power supply from DISCOMs is not reliable, there are chances that water may not get lifted due to non-Availability of supply on that moment/ day. Moreover, the emergency DG sets installed at Power Station have the capacity only to run one or two submersible pump(s) at a time whereas with proposed reliable GRID Supply System at 420/22 kV level, number of pumps can be started in one go without any problems which would save Power House from unexpected flooding in near future and definitely enhance the</p>		



Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
		safety of Power Plant.		
Design, Manufacture, Supply, Erection Storage, Testing & Commissioning of 400 kV, 80 MVAR Bus Reactor, oil to Air Bushing on 400 kV side a/w protection panel.	541.00	The High Transmission voltage particularly during lean season in the range of 430 kV to 440 kV has been a serious threat to high voltage GIS equipment of 420 kV GIS system of the generating station as line has been opened very frequently on High Voltage to Control the GRID Voltage. On account of opening of 400 kV Line at High Voltage in the range of 430 kV to 440 kV, four Nos. 400 kV Line Circuit Breaker got flashover in the year 2009-10 which affected the safe evacuation of power to GRID. Accordingly, 80 MVAR Bus Reactor for generating station was approved by NRPC in order to control the GRID voltage and also to avoid frequent failure of GIS Line Circuit Breakers at generating station on account of High GRID Voltage. The Installation & Commissioning of reactor on these parts of the GRID may help in controlling the GRID Voltage & thus increase the overall efficiency of the generating station.	The assets/ works allowed by the Commission vide order dated 19.7.2019 in Petition No. 314/GT/ 2018 were based on the recommendations of CEA and are spilled over works of 2018-19. Hence, the additional capital expenditure claimed is <b>allowed</b> .	541.00
420 kV outdoor and miscellaneous equipment for reactor bay at pot head yard (pkg- 175)	214.44		This is, however, subject to the Petitioner furnishing the relevant documents such as copy of purchase orders, LOA, copy of award of contract and other relevant documents, at the time of truing up of tariff, failing which the expenditure may not be considered.	214.44



Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
<b>Total claimed</b>	<b>2072.77</b>			
<b>Total allowed</b>				<b>2007.77</b>

25. The Petitioner is directed to submit the de-capitalization amount of the old assets being replaced with the new asset, if, any, at the time of truing-up.

26. In addition, the Petitioner has claimed Rs.1652.65 lakh as spill over works and assets towards additional capital expenditure which were allowed on projected basis in 2018-19 by the Commission vide its order dated 19.7.2019 in Petition No. 314/GT/2018. The claims of the Petitioner are discussed as under:

#### Claims of the Petitioner under Regulation 26(1)

(Rs. in lakh)

Head of Work / Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Installation of Emulsifier firefighting system in the Radial Gate and SFT Gate Power Pack (PCD-684)	34.62	The hydraulic Power Packs of Radial Gates and SFT Gates which are core components of Nathpa Jhakri Hydro Power Station contains large quantity of Hydraulic Oil. Therefore, Emulsifier system is to be required for protection from fire under safety aspects.	The assets/ works are spilled over works of 2018-19 and was allowed by the Commission vide its order dated 19.7.2019 in Petition No.314/GT/2018. Hence, the additional capital expenditure claimed is <b>allowed</b> .	34.62
Fuel/ Gas Supply System including Gas Leakage Detection & Alarm System.	68.93	The proposed central O&M workshop at the generating station is being developed as a fully equipped facility to facilitate repair & reclamation work of massive turbine parts. The generating station turbine suffers from extensive damage in its underwater	The assets/ works are spilled over works of 2018-19 and was allowed by the Commission vide its order dated 19.7.2019 in Petition No.314/GT/2018. Hence, the additional capital expenditure	68.93
Design, Supply and erection of 60/40 Ton capacity EOT crane in proposed Central O&M Workshop.	103.90			103.90



Head of Work / Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Purchase of New Hard Coating Equipment.	484.04	parts due to heavy silt load and requires replacement of all underwater parts in order to make the generating machines operation worthy for every monsoon season. The related works involved for reclamation of underwater parts are required to be completed in a short time span and moreover require designated/ independent allocated area for execution & achieving of quality standards. As major repair works have become an integral part of generating station maintenance programme, need for establishment of a central O&M workshop for generating station is being felt since long. Repair and reclamation works on large turbine components generate lot of metallic dust and smoke during the process which is perceived detrimental to the life of electric and electronic installations in machine hall and transformer hall where such works are being performed at present. Beside above, keeping in view the essentiality of hard coating on generators turbine parts, it has been decided to establish additional coating facility at generating station in order to cater to future requirements and also create redundancy to existing facility. The establishment of this	claimed is <b>allowed.</b>	484.04
40 Ton capacity Large Turntable/ Manipulator/ positioner for Coating Runner and other large Components	83.54		This is, however, subject to the Petitioner furnishing relevant documents such as purchase order, contract copy etc. at the time of truing up of tariff, failing which the expenditure may not be considered.	83.54
Runner Manipulator for Repair Works	95.58		95.58	
Acoustic Rooms for coating process and grit blasting including Dist. Extraction Filter for both chambers	123.90		123.90	
Air Compressors (02 nos.) with receiver for Service Air and Hard Coating process.	18.43		18.43	
Lab Equipment (Sample Cutting and Polishing Machine- Portable)	4.28		4.28	
Development of bench for C/O of integrated O&M workshop at Jhakri	167.17		167.17	
Providing and laying concrete pavement, chequer tiles, chain link fencing, m.s. gate and sewage line etc. at New O&M Workshop	55.00		55.00	
Construction of Central O&M Workshop (PEB Structure along with Civil Works)	347.09		347.09	
Supply, Erection & Commissioning of Power Supply System including Transformer, Illumination of	60.00		60.00	





Head of Work / Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
premises, distribution board and associated cabling etc.		facility shall enhance efficiency of works being performed together with quality in all aspects of works and safety to already installed machines, equipment and personnel.		
Offices & showrooms	6.15	The CISF Security guard are deployed for watch and ward of GVG Structure day and night. They even stay there, but there was no facility for toilet at check post at GVG Portal. A note sheet from Company Commander CISF unit of Generating station Nathpa had been received regarding construction of toilet and check Post at GVG Portal.	The assets/ works are spilled over works of 2018-19 and was allowed by the Commission vide its order dated 19.7.2019 in PetitionNo.314/GT/2018. Therefore, the additional capital expenditure claimed is <b>allowed</b> .	6.15
<b>Total claimed</b>	<b>1652.65</b>			
<b>Total allowed</b>				<b>1652.65</b>

27. The Petitioner has claimed additional capital expenditure of Rs.361.49 lakh on the ground that the same is necessary for the efficient and successful operation of the generating station. The claims of the Petitioner are discussed as under:

#### Claims of the Petitioner under Regulation 26(1)(Others)

<i>(Rs. in lakh)</i>				
Head of Work / Equipment	Actual additional capital expenditure claimed	Justification	Admissibility	Amount Allowed
Installation of acoustic chamber/ enclosure for the Turbine Pit & Draft Tube Cone Pit of 06 nos. 250 MW Turbine of the generating station	94.58	To reduce the noise level and for safety and health hazards of occupants.	Since the additional capital expenditure is not directly related with the operation of the generating station, the same is <b>not allowed</b> .	0.00
Installation of Small Hydel Project - Captive Mini	247.53	To increase efficiency by reduction in	The provisions of the 2019 Tariff Regulations do not	0.00





Head of Work / Equipment	Actual additional capital expenditure claimed	Justification	Admissibility	Amount Allowed
Hydropower Station – Jhakri – 20 MW		Auxiliaries power consumption	provide for capitalisation of the additional capital expenditure claimed by the Petitioner. Moreover, such major investments should be backed by DPR, beneficiaries' consent, cost-benefit analysis, etc. Accordingly, the additional capital expenditure claimed is <b>not allowed</b> .	
Supply, installation, testing Commissioning of STP (sewage treatment plant) at Powerhouse.	19.38	Due to obsolete of Technology, spare parts of sewage system are not available. New system to be installed with latest technology to meet pollution control Board norms.	The additional capital expenditure incurred is in order to meet the pollution control norms prescribed by the Board. Hence, the claim is <b>allowed</b> .  This is, however, <b>subject to</b> the Petitioner furnishing the relevant documents at the time of truing-up of tariff, failing which the expenditure may not be considered.	19.38
<b>Total claimed</b>	<b>361.49</b>			
<b>Total allowed</b>				<b>19.38</b>

28. Based on the above discussion, the total additional capital expenditure of Rs. 3833.49 lakh (Rs. 65.54 lakh + Rs. 88.16 lakh + Rs.2007.77 lakh + Rs.1652.65 lakh + Rs. 19.38 lakh) is allowed for the year 2019-20.

### 2020-21

29. The Petitioner has claimed additional capital expenditure of Rs. 311.72 lakh in 2020-21 and the same is discussed as under:



### Claims of the Petitioner under Regulation 25(1)(a)

(Rs. in lakh)

Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Capitalization of Land/ Assets	100.00	The amount of enhanced compensation for left out cases against the land acquired for the Project in line with the decision of Hon'ble High Court of H.P.	The additional capital expenditure incurred has been claimed for compliance with the orders of the Hon'ble High Court. Hence, the same is <b>allowed</b> .  This is, however, subject to the Petitioner furnishing relevant documents at the time of truing-up of tariff, failing which the expenditure may not be considered.	100.00
<b>Total claimed</b>	<b>100.00</b>			
<b>Total allowed</b>				<b>100.00</b>

30. The Petitioner has claimed additional capital expenditure of Rs. 45.00 lakh on account of change in law in 2020-21. The claims of the Petitioner are discussed as under:

### Claims of the Petitioner under Regulation 26(1)(b)

(Rs.in lakh)

Head of Work/ Equipment	Projected additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Procurement of online energy meter	25.00	As per the office memorandum issued by Ministry of heavy industries and Public enterprises, Hon'ble Prime Minister during his address at CPSE conclave urged CPSE to develop some of their townships/ residential colonies as "Mini Smart cities by 2022". This project is as per above guidelines of conclave.	Since the additional capital expenditure is not directly related to the operation of the generating station, the same is <b>not allowed</b> .	<b>0.00</b>



Procurement of IT hardware and software.	20.00	To cater to the ERP requirement and as per government office memorandum.	The expenditure incurred is for compliance to the directions dated 31.8.2018 issued by the Ministry of Heavy Industries and Public Enterprises, GOI, wherein the criteria for cashless transaction and Digital security arrangement has been notified. As the additional capital expenditure is part of the expenditure allowed in 2019-20 (table under para 22 above) under Regulation 26(1)(b) of the 2014 Tariff Regulations, the same <b>is allowed</b> .	20.00
<b>Total claimed</b>	<b>45.00</b>			
<b>Total allowed</b>				<b>20.00</b>

### Claims of the Petitioner under Regulation 26(1)(d)

31. The Petitioner has claimed additional capital expenditure of Rs. 86.72 lakh in 2020-21 on the ground that the same is required for higher security and safety of the generating station. Out of this, an amount of Rs. 80.00 lakh is for new assets and the remaining amount of Rs. 6.72 lakh pertains to asset which was allowed by the Commission in 2018-19 on projection basis, vide order dated 19.7.2019 in Petition No. 314/GT/2018. The claims of the Petitioner are discussed as under:



(Rs. in lakh)

Head of Work / Equipment	Actual additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Augmentation of CCTV network at SJVN Jhakri.	30.00	For safety purpose in the stores and at petrol pumps, CCTV surveillance is necessary from safety and security point of view recommended by NSG.	Since the additional capital expenditure is not directly related to the operation of the generating station, the same is <b>not allowed</b> .	0.00
Procurement of Fire Jeep	20.00	The vehicle is proposed on the requirement of CISF.	As the additional capital expenditure claimed is related to the safety of the generating station, the same is <b>allowed</b> .  This is, however, subject to the Petitioner furnishing the relevant document for the claim at the time of truing-up of tariff, failing which the same may not be considered.	20.00
Establishment of automatic gauge recorder in the catchment upstream of Dam.	30.00	In draft protocol of operation of dams & release of water during monsoon prepared by CWC, it has been suggested to establish automatic gauge recorder in the catchment upstream of dam. This will be helpful in flood and discharge forecasting and will help in taking timely corrective action for the safety of the generating station.	The Additional Chief Secretary (Revenue), GoHP vide his letter dated 30.6.2017 has sought the implementation of guidelines related to the safe release of water from hydroelectric projects. As the additional expenditure claimed is in compliance of the directions of State Authorities, the expenditure is <b>allowed</b> .	30.00
Fixing of Monorail Crane	6.72	The replacement of side seal rubber seal and other	The assets/ works are spilled over	6.72



Head of Work / Equipment	Actual additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
		small items are being done through available 50-ton mobile crane for Radial Gate Nos 1, 2, 4, and 5 except 3, because of automatic spillway trajectory portion over the Radial Gate No 03. Hence 2-ton monorail hoist is inevitably required over Radial Gate No 03 for change of side seal rubber. This is a functional and safety requirement.	works of 2018-19 and was allowed by the Commission vide its order dated 19.7.2019 in Petition No.314/GT/2018. Hence, the additional capital expenditure claimed is <b>allowed</b> .	
<b>Total claimed</b>	<b>86.72</b>			
<b>Total allowed</b>				<b>56.72</b>

### Claims of the Petitioner under Regulation 26(1)(Others)

32. The Petitioner has claimed additional capital expenditure of Rs. 80 lakh on account of same being necessary for the efficient and successful operation of the generating station. The claims of the Petitioner are discussed as under:

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Purchase and Installation of Linear Heat sensing cables at generating station.	80.00	Power and control cables have been laid in different dam areas which remains unmanned most of the time. By installing LHS, the heat/ fire can be detected well in advance and thereby quick intimation to Fire Personnel/ Control room personnel at Dam site. It will enhance the safety of various equipment's at Dam/ Plant.	The Petitioner has not submitted detailed documents for this proposed expenditure and also not submitted the details of the existing system in place. Therefore, the additional capital expenditure claimed is <b>not allowed</b> .  The Petitioner may claim the same with proper justification.	0.00
<b>Total claimed</b>	<b>80.00</b>			
<b>Total allowed</b>				<b>0.00</b>



33. Based on the above, the total additional capital expenditure of Rs.176.72 lakh (Rs. 100.00 lakh + Rs. 20.00 lakh + Rs.56.72 lakh) is allowed to be capitalized in 2020-21.

### 2021-22

34. The Petitioner has claimed additional capital expenditure of Rs.295.00 lakh in 2021-22 and the same is discussed as under:

### Claims of the Petitioner under Regulation 25(1)(a)

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Capitalization of Land/ Assets	50.00	The amount of enhanced compensation for left out cases against the land acquired for the Project in line with the decision of Hon'ble High Court of H.P.	As the additional capital expenditure claimed is in compliance with the order of the Hon'ble High Court, the same is <b>allowed</b> .  This is, however, subject to the Petitioner furnishing the relevant documents at the time of truing-up of tariff, failing which the expenditure may not be considered.	50.00

### Claims of the Petitioner under Regulation 26(1)(b)

35. The Petitioner has claimed additional capital expenditure of Rs. 45.00 lakh in 2021-22 on account of change in law. The claims of the Petitioner are discussed as under:



(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Procurement of online energy meter.	25.00	As per the office memorandum issued by Ministry of heavy industries and Public enterprises, Hon'ble Prime Minister during his address at CPSE conclave urged CPSE to develop some of their townships/ residential colonies as "Mini Smart cities by 2022". This project is as per guidelines of conclave.	Since the additional capital expenditure is not directly related with the operation of the generating station, the same is <b>not allowed</b> .	0.00
Supply & installation of EV Charging stations	20.00			0.00
<b>Total claimed</b>	<b>45.00</b>			
<b>Total allowed</b>				<b>00.00</b>

### Claims of the Petitioner under Regulation 26(1)(Others)

36. The Petitioner has claimed additional capital expenditure of Rs. 200 lakh on the ground that the same is necessary for the efficient and successful operation of the generating station. The claims of the Petitioner are discussed as under:

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Establishment of infrastructures to collect silt samples at Area 3 i.e. downstream of KWHPS's outfall for actual assessment of silt in river Satluj after the confluence of water from KWHEP's outfall with Satluj.	200.00	For actual assessment of silt in Satluj river, the silt samples need to be taken downstream of KWHEP's outfall. However, presently there is no infrastructure for taking samples from river. Hence, it is proposed to develop infrastructure (i.e. Foot Bridge) for	As the asset for which the additional capital expenditure is claimed will facilitate silt sample collection safely, the same is <b>allowed</b> .  This is, however, subject to the Petitioner furnishing the details of the existing system, if any, at the time of truing up of tariff, failing which the	200.00



Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
		collecting silt samples.	expenditure may not be considered.	
<b>Total claimed</b>	<b>200.00</b>			
<b>Total allowed</b>				<b>200.00</b>

37. Based on the above, the total additional capital expenditure of Rs. 250.00 lakh (Rs. 50.00 lakh + Rs. 200.00 lakh) is allowed to be capitalized for 2021-22.

### 2022-23

38. The Petitioner has claimed additional capital expenditure of Rs.83.60 lakh in 2022-23 and the same is discussed under:

#### Claims of the Petitioner under Regulation 25(1)(a)

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed (Rs. in lakh)	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Capitalization of Land/ Assets	63.60	The amount of enhanced compensation for left out cases against the land acquired for the Project in line with the decision of Hon'ble High Court of H.P.	As the additional capital expenditure claimed is in compliance with the order of the Hon'ble High Court, the same is <b>allowed</b> .  This is, however, subject to the Petitioner furnishing the relevant documents at the time of truing-up of tariff, failing which the expenditure may not be considered	63.60

#### Claims of the Petitioner under Regulation 26(1)(d)

39. The Petitioner has claimed additional capital expenditure of Rs. 20 lakh in 2022-23 on the ground that the same is required for higher security and safety of the generating station. The claims of the Petitioner are discussed below:





(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Procurement of ACs for rest house of the Petitioner at Jhakri.	20.00	Existing window ACs are very old and consume more power and needs to be replaced with Energy efficient ACs as per GOI notifications.	As the additional capital expenditure claimed is in the nature of minor assets and is not directly linked to operation of the generating station, the same is <b>not allowed.</b>	0.00
<b>Total claimed</b>	<b>20.00</b>			
<b>Total allowed</b>				<b>0.00</b>

40. Based on the above, the total additional expenditure of Rs. 63.60 lakh is allowed for the year 2022-23.

#### 2023-24

#### Claims of the Petitioner under Regulation 26(1)(b)

41. The Petitioner has claimed additional capital expenditure of Rs. 25.00 lakh in 2023-24 on account of change in law and the same is discussed below:

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification submitted by the Petitioner	Remarks for Admissibility	Amount Allowed
Procurement of online energy meter	25.00	As per the office memorandum issued by Ministry of heavy industries and Public enterprises, Hon'ble Prime Minister during his address at CPSE conclave urged CPSE to develop some of their townships/ residential colonies as "Mini Smart cities by 2022". This project is as per above guidelines of conclave.	Since the additional capital expenditure is not directly related with the operation of the generating station, the same is <b>not allowed.</b>	0.00
<b>Total claimed</b>	<b>25.00</b>			
<b>Total allowed</b>				<b>0.00</b>



42. Based on the above, no additional capital expenditure is allowed in 2023-24.

### De-capitalization

43. The Petitioner has claimed the following de-capitalization (as per Form 9Bi) during the 2019-24 tariff period:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
(-)122.54	0.00	0.00	0.00	0.00

44. The Petitioner has claimed de-capitalization in 2019-20 on account of assets which were de-capitalized during the years 2017-18 and 2018-19. The details of the assets are examined under:

Head of Work/ Equipment	Actual De- capitalization claimed (Rs. in lakh)	Justification	Admissibility	Amount Allowed
Replacement of robotic system installed at Hard Coating System supplied along with Hard Coating Equipment (Pkg-176)	(-) 106.96	Robotic System was claimed and allowed as capital expenditure in 2018-19 vide Order dated 19.7.2019 in Petition No.314/GT/2018. However, the item was not de-capitalized in the Books of Account during the period 2014-19. Therefore, the de-capitalized value has not been considered in the Petition No.31/GT/2020 for 2014-19, instead the de-capitalization is considered in 2019-20.	The de-capitalization of asset in the year in which new assets were capitalized on replacement of de-capitalized asset has been considered. The corresponding de-capitalisation value during the years 2017-18	0.00



Head of Work/ Equipment	Actual De- capitalization claimed (Rs. in lakh)	Justification	Admissibility	Amount Allowed
Supply of Dry Type Scrubber Unit (Cartridge Type) for Hard Coating Facility of Generating station (PPR-1463)	(-) 14.26	Dry Type Scrubber Unit was claimed and allowed as capital expenditure in 2017-18 vide Order dated 19.7.2019 in Petition No.314/GT/2018. However, the item was not de-capitalized in the Books of Account during the period 2014-19. Therefore, the de-capitalized value has not been considered in Petition No.31/GT/2020 for 2014-19. Instead de-capitalization is considered in 2019-20.	and 2018-19 has already been considered in order dated 6.9.2021 in Petition No. 31/GT/2020.	0.00
Replacement of two numbers of Old Fire Tenders (HP-06-1322 & HP-06-1323)	(-) 1.32	New Fire Tenders were claimed and allowed as capital expenditure in 2017-18 vide Order 19.7.2019 in Petition No. 314/GT/2018. However, the items were not de-capitalized in the Books of Account during the period 2014-19. Therefore, the de-capitalized value has not been considered in Petition No.31/GT/2020 for 2014-19. Instead de-capitalization is considered in 2019-20.		0.00
<b>Total claimed</b>	<b>(-) 122.54</b>			
<b>Total allowed</b>				<b>0.00</b>

45. Accordingly, the total deletions for the 2019-24 tariff period are 'nil'.

### Exclusions

46. No exclusion in additions (incurred, capitalized in books but not to be claimed for tariff purpose) have been claimed by the Petitioner.



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

47. The Petitioner, in Form 9B(i), has indicated exclusion under deletions for an amount of Rs. 17900.36 lakh during the 2019-24 tariff period, other than the above claimed deletion amount of Rs.122.54 lakh. The following are the year-wise exclusions under deletions claimed by the Petitioner:

<i>(Rs. in lakh)</i>					
2019-20	2020-21	2021-22	2022-23	2023-24	Total
(-) 8912.84	(-) 1404.14	(-) 3675.15	(-)1032.54	(-)2875.69	(-)17900.36

48. The de-capitalization of Rs.17900.36 lakh is in respect of assets such as capital spares, runners, D.G. set, Battery Bank, etc., claimed under exclusions for the 2019-24 tariff period, the details of which are given under:

<i>(Rs. in lakh)</i>						
	2019-20	2020-21	2021-22	2022-23	2023-24	Total
De-capitalization of assets against which capitalization was not allowed by the Commission in previous tariff orders for the period after COD of the station <b>(A)</b>	(-) 0.00	(-) 787.01	(-) 976.8	(-) 751.74	(-) 1184.20	(-) 3699.75
De-capitalization of assets which were capitalized on and before COD of the station <b>(B)</b>	(-) 1205.92	(-) 617.14	(-) 2657.35	(-) 219.79	(-) 1691.48	(-) 6391.68
De-capitalization of assets which were capitalized after COD of the station <b>(C)</b>	(-) 7706.92	(-) 0.00	(-)41.00	(-) 61.00	(-)0.00	(-) 7808.92
Exclusion in deletions claimed <b>A+B+C</b>	(-) 8912.84	(-) 1404.15	(-) 3675.15	(-) 1032.53	(-) 2875.68	(-) 17900.40

49. On perusal of Form 9B(i) of the petition, it is noticed that the Petitioner has proposed de-capitalization of Rs.3699.75 lakh towards capital spares, namely the de-capitalization of old upper and lower labyrinth seal stationary, wear rings, etc. during the 2019-24 period. The Petitioner has submitted that de-capitalization is for assets against which capitalization was not allowed by the Commission in its



previous tariff orders and has provided details of previous orders. It is pertinent to mention that the capital spares proposed to be de-capitalized during the 2019-24 tariff period are the ones which were not allowed to be considered in the capital base for the purpose of tariff. In other words, positive entries arising out of their purchase were also excluded/ ignored for the purpose of tariff. Accordingly, the exclusion/ ignoring of negative entries arising out of de-capitalization of capital spares for the purpose of tariff is allowed.

50. With regard to exclusion of the deletions claimed for Rs. 6391.68 lakh and Rs. 7808.92 lakh for de-capitalization of assets which were capitalized before and after COD of the generating station, the Petitioner has not provided any reason. Further, the nature of the assets de-capitalized are capital in nature (D.G. set, runner, battery bank, circuit breakers, etc.) and form part of the allowed capital cost. Since no proper details have been provided by the Petitioner, the exclusion of these deletions is not allowed and accordingly the de-capitalization of these assets is considered for the purpose of tariff. However, the Petitioner is directed to submit the actual deletions as per books and submit justification with proper linkage for claiming exclusions in deletions, if any, at the time of truing up of tariff.

51. In view of the above, the exclusions in deletions allowed for the purpose of tariff is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24	Total
De-capitalization of assets against which capitalization was not allowed by the Commission in previous tariff orders for the period after COD of the generating station	(-) 0.00	(-) 787.01	(-) 976.8	(-) 751.74	(-) 1184.20	(-) <b>3699.75</b>



52. The exclusions in deletions, which are not allowed for the purpose of tariff is as under:

<i>(Rs. in lakh)</i>						
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>Total</b>
De-capitalization of assets which were capitalized on and before COD of the station <b>(a)</b>	(-)1205.92	(-)617.14	(-)2657.35	(-)219.79	(-)1691.48	<b>(-)6391.68</b>
De-capitalization of assets which were capitalized after COD of the station <b>(b)</b>	(-)7706.92	(-)0.00	(-)41.00	(-)61.00	(-)0.00	<b>(-)7808.92</b>
<b>Exclusions in deletions not allowed (c)=(a)+(b)</b>	<b>(-)8912.84</b>	<b>(-)617.14</b>	<b>(-)2698.35</b>	<b>(-)280.79</b>	<b>(-)1691.48</b>	<b>(-)14200.60</b>

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

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

<i>(Rs. in lakh)</i>					
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Additions allowed during the year <b>(a)</b>	3833.49	176.72	250.00	63.60	0.00
Deletions considered during the year <b>(b)</b>	0.00	0.00	0.00	0.00	0.00
Exclusions in deletions not allowed <b>(c)</b>	(-)8912.84	(-)617.14	(-)2698.35	(-)280.79	(-)1691.48
<b>Net additional capital expenditure allowed (d)=(a)-(b)+(c)</b>	<b>(-)5079.35</b>	<b>(-)440.42</b>	<b>(-)2448.35</b>	<b>(-)217.19</b>	<b>(-)1691.48</b>

### **Capital cost Allowed**

54. As stated earlier, the Commission vide its order dated 6.9.2021 in Petition No.31/GT/2020 had allowed the closing capital cost of Rs. 886426.68 lakh as on 31.3.2019. Accordingly, the same is considered as opening capital cost as on 1.4.2019. As such, capital cost allowed for the purpose of tariff for the 2019-24 tariff period is as under:

<i>(Rs. in lakh)</i>					
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Capital Cost <b>(a)</b>	886426.68	881347.33	880906.92	878458.57	878241.37
Net additional capital expenditure allowed during the year/period <b>(b)</b>	(-)5079.35	(-)440.42	(-)2448.35	(-)217.19	(-)1691.48



	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Closing Capital Cost (c)=(a)+(b)</b>	<b>881347.33</b>	<b>880906.92</b>	<b>878458.57</b>	<b>878241.37</b>	<b>876549.89</b>

### **Debt-Equity Ratio**

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

*“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that:*

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

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

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

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

*(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*

*(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:*

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

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

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

*(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for*





*determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”*

56. The debt-equity ratio of 70:30 has been considered in terms of Regulation 18 of the 2019 Tariff Regulations.

### **Return on Equity**

57. Regulations 30 and 31 of the 2019 Tariff Regulations provide as under:

*“30. Return on Equity*

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

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

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

*Provided further that:*

*i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without Commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*

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

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

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

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

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

*31. Tax on Return on Equity:*

*(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the*





provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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

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

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

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

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

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis."

58. The Respondent, UPPCL has submitted that the claim of additional capitalization of the Petitioner is beyond the original scope and not due to change in law. Therefore, the rate of RoE of 5.866% which is last available weighted average rate of Interest on actual loan portfolio as per Form 13 should only be allowed. The Respondent MPPMCL has submitted that as per Income Tax Department's website,



domestic companies are liable to pay MAT@15% for 2019-20, whereas the Petitioner has claimed MAT @18.5% during the tariff period 2019-24. Therefore, it has prayed that the Commission may consider MAT @15% instead of 18.5% for computation of pre-tax RoE. The Respondent, BRPL has submitted that as per Regulation 31(3) of the 2019 Tariff Regulations, it is the statutory duty of the Petitioner to undertake annual truing up of the grossed-up rate of RoE at the end of every financial year based on actual tax paid. Therefore, the Commission may lay down a procedure for annual truing up of tariff.

59. Further, as per proviso to Regulation 30 of the 2019 Tariff Regulations, the return on equity in respect of the additional capitalization after the cut-off date and beyond the original scope of work, excluding the additional capitalization due to change in law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station. The net additional capital expenditure has been approved in paragraph 53 of this order. The bifurcation of the net additional capital expenditure within the original scope of work and beyond the cut-off date, excluding additional capitalization due to change in law, is shown as under:

	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Net additional capital expenditure allowed	3833.49	176.72	250.00	63.60	0.00
Additional capital expenditure within the original scope of work and due to change in law	153.70	120.00	50.00	63.60	0.00
Additional capital expenditure beyond original scope of work excluding change in law	3679.79	56.72	200.00	0.00	0.00

60. Based on the additional capital expenditure approved in this order, the additional capital expenditure within the scope of work is calculated as per the methodology provided in Regulations 30 and 31 of the 2019 Tariff Regulations. The RoE beyond the scope of work has been calculated by considering the weighted



average rate of interest of 8.850% for the year 2013-14 as approved in order dated 22.5.2019 in Petition No. 309/GT/2018. For equity base, RoE has been calculated by grossing up of RoE during the 2019-24 tariff period. The Petitioner has applied the MAT rate of 17.472% for the year 2019-20 and the same has been allowed. This is, however, subject to truing up. Accordingly, RoE has been worked out and allowed as under:

<i>(Rs. in lakh)</i>					
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Equity	416705.70	414077.96	413928.82	413134.32	413069.16
Total addition due to Capitalization	1150.05	53.02	75.00	19.08	0.00
Addition due to capitalization within scope of work	46.11	36.00	15.00	19.08	0.00
Addition due to capitalization beyond scope of work	1103.94	17.02	60.00	0.00	0.00
Addition due to un-discharged liability	0.00	0.00	0.00	0.00	0.00
Assumed Deletions	0.00	0.00	0.00	0.00	0.00
Un-discharged liability	0.00	0.00	0.00	0.00	0.00
Exclusion in deletion not allowed	(-)2673.85	(-)185.14	(-)809.50	(-)84.24	(-)507.45
Closing Equity	414077.96	413928.82	413134.32	413069.16	412561.71
Base rate (%)	16.500	16.500	16.500	16.500	16.500
Effective Tax rate (%)	17.472	17.472	17.472	17.472	17.472
Effective ROE rate (%)	19.993	19.993	19.993	19.993	19.993
Return on Equity for Original scope	<b>83050.18</b>	<b>82772.59</b>	<b>82678.25</b>	<b>82592.32</b>	<b>82535.08</b>
<b>Addition due to Capitalization beyond scope of work</b>					
Opening Equity	0.00	1103.94	1120.95	1180.95	1180.95
Addition due to Capitalization beyond scope of work	1103.94	17.02	60.00	0.00	0.00
Closing Equity	1103.94	1120.95	1180.95	1180.95	1180.95
Average Equity	551.97	1112.45	1150.95	1180.95	1180.95
Rate of return for additional capitalization beyond original scope (i.e. weighted average rate of interest approved by the Commission vide order dated 22.5.2019 in Petition No. 309/GT/2018) (%)	8.850	8.850	8.850	8.850	8.850
Return on equity for	48.85	98.45	101.86	104.51	104.51



	2019-20	2020-21	2021-22	2022-23	2023-24
additional capitalization beyond original scope.					
<b>Total Return on Equity</b>	<b>83099.03</b>	<b>82871.04</b>	<b>82780.11</b>	<b>82696.83</b>	<b>82639.59</b>

### **Interest on Loan**

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

*“32. Interest on loan capital:*

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

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

*(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered 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.”*

62. The normative loan for the project has already been repaid. The normative loan on account of admitted additional capital expenditure during the respective years of the tariff period has been considered as paid fully, as the admitted depreciation is more than the amount of normative loan in these years. As such, the Interest on loan during the 2019-24 tariff period is ‘nil’.



## **Depreciation**

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

*“33. Depreciation:*

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

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

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

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

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

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

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

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

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

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

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

*(6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2019 from the gross depreciable value of the assets.*



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

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

64. In terms of the 2014 Tariff Regulations, the useful life of the hydro generating station is 35 years. However, in contrast to the 2014 Tariff Regulations, the 2019 Tariff Regulations stipulates the useful life of the hydro generating station as 40 years. Accordingly, the balance useful life of the generating station as on 1.4.2019 has been considered as 25.12 years in line with the 2019 Tariff Regulations. Accordingly, the cumulative depreciation amounting to Rs. 569095.00 lakh as on 31.3.2019, as considered in order dated 6.9.2021 in Petition No.31/GT/2020 has been considered for the purpose of tariff. The COD of the generating station is 18.5.2004. Since, the project has completed 12 years of commercial operation, the remaining depreciable value has been spread over the balance useful life of the generating station from 2017-18 onwards. Accordingly, depreciation has been computed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost (A)	886426.68	881347.33	880906.92	878458.57	878241.37
Closing Capital Cost (B)	881347.33	880906.92	878458.57	878241.37	876549.89
Average Capital Cost [C=(A+B)/2]	883887.01	881127.13	879682.74	878349.97	877395.63
Freehold Land Value (D)	7319.78	7419.78	7469.78	7533.38	7533.38
Weighted Average Rate of Depreciation (%) [E=(J/C)]	0.99	0.98	0.98	0.97	0.97
Depreciable Value [F=90% of (C-D)]	788910.50	786336.61	784991.66	783734.93	782876.02
Balance Life (G)	25.12	24.12	23.12	22.12	21.12
Cumulative Depreciation beginning (H)	569095.00	577844.47	586487.25	595071.86	603599.66
Remaining Depreciable value [I= (F-H)]	219815.50	208492.14	198504.42	188663.07	179276.36
<b>Depreciation during the period [J= (I/G)]</b>	<b>8749.47</b>	<b>8642.77</b>	<b>8584.61</b>	<b>8527.80</b>	<b>8487.14</b>





	2019-20	2020-21	2021-22	2022-23	2023-24
Cumulative Depreciation [K=(H+J)]	577844.47	586487.25	595071.86	603599.66	612086.80
Less Adjustment on account of De-capitalization (L)	0.00	0.00	0.00	0.00	0.00
<b>Net Cumulative Depreciation [M=(K-L)]</b>	<b>577844.47</b>	<b>586487.25</b>	<b>595071.86</b>	<b>603599.66</b>	<b>612086.80</b>

### **Operation & Maintenance Expenses**

65. 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:*

Particulars	FY 2019-20	FY 2022-21	FY 2021-22	FY 2022-23	FY 2023-24
Naptha Jhakari	33,326.11	34,914.62	36,578.84	38,322.39	40,149.04

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

*(c) In case of hydro generating stations which have not completed a period of three years as on 1.4.2019, operation and maintenance expenses for 2019-20 shall be worked out by applying escalation rate of 4.77% on the applicable operation and maintenance expenses as on 31.3.2019. The operation and maintenance expenses for subsequent years of the tariff period shall be worked out by applying escalation rate of 4.77% per annum.*

*(c) 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.*

66. The Petitioner has claimed O&M expenses as per Regulation 35(2)(a) of the 2019 Tariff Regulations. In addition, the Petitioner has claimed Security expenses and Capital spares as an item of O&M expenses in terms of Regulation 35(2)(c) of the 2019 Tariff Regulations. Also, the Petitioner has claimed Corporate Office capital expenses based on the balance useful life in line with the order dated 26.4.2006 in Petition No.3/2006 (tariff of the generation stations of NTPC for 2004-09 tariff period), wherein only the O&M expenses, including depreciation incurred were allowed to be recovered by way of allocation of Corporate O&M expenses. Accordingly, the total O&M expenses claimed by the Petitioner are as under:



	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O & M Expenses	33326.11	34914.62	36578.84	38322.39	40149.04
Security Expenses	3445.04	3609.37	3781.54	3961.92	4150.9
Capital Spares	6196.12	1928.07	4,128.35	687.39	3904.35
Corporate Office Expense	497.13	497.13	497.13	497.13	497.13
<b>Total</b>	<b>43464.40</b>	<b>40949.20</b>	<b>44985.87</b>	<b>43468.83</b>	<b>48701.43</b>

67. The Respondents UPPCL, MPPMCL, BRPL and TPDDL have submitted that the O&M expenses claimed by the Petitioner are exorbitant and unreasonable and the same would result in additional burden on end consumers. The Respondents have also submitted that the Petitioner may be directed to furnish the detailed information for prudence check, as required under Regulation 35(2)(d) of the 2019 Tariff Regulations. As regards Corporate expenses, the Respondents have submitted that the said expenses may not be allowed and the Petitioner may be directed to submit the detailed information and justification in support of such claims. The Respondent, MPPMCL has further submitted that the Commission may direct the Petitioner to file appropriate application with regard to pay revision, at the time of truing up, and the Commission may examine the same on a case to case basis. In response, the Petitioner has submitted that the impact of pay/ wage revision has not been claimed in O&M expenses and the petition for the same will be filed only after finalization of pay revision by the appropriate Government/ Authorities.

68. The submissions have been considered. As regards the prayer of the Petitioner to claim the impact of wage/ pay revision in O&M expenses w.e.f. 1.1.2017/ 1.1.2016 as and when the same is finalized, the Petitioner is granted liberty to approach the Commission as and when the wage/ pay revision is finalized and the same will be considered in accordance with law.





69. As regards the claim for Security expenses and Corporate office expenses claimed on projection basis, the Petitioner has submitted that actual expenditure on these heads will be submitted at the time of truing-up of tariff. The Petitioner has also clarified that the expenditure referred by the Respondents are not corporate O&M expenses but are allocation of corporate capital expenditure. It has also submitted that the Corporate Office capital expenditure was not charged to P&L A/c as per Accounting Standards. Referring to the order dated 20.6.2014 in Petition No. 168/GT/2013, the Petitioner has submitted that corporate office expenses have been claimed (as depreciation) based on the balance useful life of the generating station under O&M expenses, in line with the order dated 26.4.2006 in Petition No.3/2006.

70. As regards the expenditure on account of Corporate Office Building and other Offices and other heads which were not allowed by the Commission, the expenditure under this head was for capitalization of solar plants at various locations. The Commission while disallowing the expenditure had observed that the asset will reduce the O&M expenses of the generating station. As O&M expenses have been allowed for the generating station on a normative basis, the claim of the Petitioner for additional O&M expenses on this count is not allowed for the 2019-24 tariff period.

### **Capital Spares**

71. As regards the claim for capital spares, Regulation 35(2)(c) of the 2019 Tariff Regulations provides that the generating station shall submit the details of the actual capital spares consumed at the time of truing up, with proper justification. The Petitioner is directed to submit the details of the actual capital spares consumed with detailed justification, at the time of truing up of tariff.



## Security Expenses

72. The Petitioner has claimed Security expenses in terms of Regulation 35(2)(c) of the 2019 Tariff Regulations, based on the actual security expenses incurred for the year 2018-19 (i.e Rs.3288.19 lakh) and escalated by 4.77% on year on year, to arrive at the Security expenses for the 2019-24 tariff period. The audited annual accounts for the year 2018-19 has been verified and as per Note 2.26 of the audited annual accounts, it is noticed that the Security expenses incurred for the year 2018-19 is Rs. 2982.41 lakh. This is allowed on projection basis, after escalation by 4.77% on year to year basis. The Petitioner is, however, directed to submit the details of the actual security expenses incurred, at the time of truing-up of tariff, in terms of the aforesaid regulation.

73. Accordingly, the year-wise O&M expenses allowed for the generating station are as under:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O & M Expenses	33326.11	34914.62	36578.84	38322.39	40149.04
Security Expenses	3124.67	3273.72	3429.87	3593.48	3764.89
<b>Total O&amp;M Expenses allowed</b>	<b>36450.78</b>	<b>38188.34</b>	<b>40008.71</b>	<b>41915.87</b>	<b>43913.93</b>

## Interest on Working Capital

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

*“34. Interest on Working Capital: (1) The working capital shall cover*

*(c) For Hydro generating station (Including Pumped Storage Hydro Generating Station) and transmission system:*

*(i) Receivables equivalent to 45 days of annual fixed cost;*

*(ii) Maintenance spares @ 15% of operation and maintenance expense including security expenses; and*

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



75. As regards the rate of interest on working capital, clause (3) of Regulation 34 of the 2019 Tariff Regulations provides as under:

*“34(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 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.”*

76. In accordance with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital considered on projection basis, for the 2019-24 tariff period is 12.05% (i.e. 1 year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for 2019-24 tariff period is being determined during the year 2021-22, the 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:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working Capital for O&M Expenses	3037.56	3182.36	3334.06	3492.99	3659.49
Working Capital for Maintenance Spares	5467.62	5728.25	6001.31	6287.38	6587.09
Working Capital for Receivables	16139.63	16340.91	16531.58	16758.13	16954.52
<b>Total Working Capital</b>	<b>24644.81</b>	<b>25251.52</b>	<b>25866.94</b>	<b>26538.50</b>	<b>27201.10</b>
Rate of interest for Working Capital	12.050%	11.250%	10.500%	10.500%	10.500%
<b>Interest on working capital</b>	<b>2969.70</b>	<b>2840.80</b>	<b>2716.03</b>	<b>2786.54</b>	<b>2856.12</b>



### **Annual Fixed Charges**

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

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	8749.47	8642.77	8584.61	8527.80	8487.14
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	83099.03	82871.04	82780.11	82696.83	82639.59
O&M Expenses	36450.78	38188.34	40008.71	41915.87	43913.93
Interest on Working Capital	2969.70	2840.80	2716.03	2786.54	2856.12
<b>Total</b>	<b>131268.98</b>	<b>132542.94</b>	<b>134089.46</b>	<b>135927.04</b>	<b>137896.77</b>

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

78. The Petitioner has claimed NAPAF of 90% in terms of Regulation 50(A)(4) of the 2019 Tariff Regulations. Accordingly, the same has been considered for the 2019-24 tariff period in terms of the said regulation.

### **Auxiliary Energy Consumption**

79. Regulation 50(C) of the 2019 Tariff Regulations provides as follows:

<b>Type of Station</b>	<b>Auxiliary Energy Consumption</b>	
	<b>Installed Capacity above 200 MW</b>	<b>Installed Capacity up to 200 MW</b>
<b>Surface</b>		
Rotating Excitation	0.7%	0.7%
Static	1.0%	1.2%
<b>Underground</b>		
Rotating Excitation	0.9%	0.9%
Static	1.2%	1.3%

80. The generating station is underground with static excitation system with installed capacity of 1500 MW. The Petitioner has claimed Auxiliary Energy Consumption (AEC) of 1.2% for the generating station in terms of 2019 Tariff Regulations and the same is allowed.

### **Design Energy (DE)**

81. The Petitioner has submitted that CEA vide letter dated 7.7.2009 has approved the annual DE of NJHPS as 6612 MU. It has also stated that the



Commission in its order dated 19.7.2019 in Petition No 314/GT/2018, had allowed the annual DE of 6612 MU and the same has been considered for the 2019-24 tariff period. The Respondent, BRPL has pointed out that the Petitioner had submitted one set of hydrology data to CEA to seek Techno Economic Clearance (TEC) of the project to justify its economic viability and immediately after construction of the project, the Petitioner had approached CEA with another set of hydrology data with the purpose to reduce DE. Accordingly, the Respondent has submitted that DE as set out in TEC may be considered for tariff purposes. The Respondent UPPCL has submitted that the Petitioner may be directed to furnish reasons and calculations of the revised DE of 6612 MU. In response, the Petitioner has clarified that CEA vide its letter dated 7.7.2009 has approved the annual DE of 6612 MU and accordingly, the same has been claimed for the 2019-24 tariff period.

82. We have considered the submissions of the parties. CEA vide its letter dated 7.7.2009 had approved the annual DE of the generating station as 6612 MU. Also, the Commission in its order dated 6.9.2021 in Petition No.31/GT/2020 had considered DE of the generating station as 6612 MU for the 2014-19 tariff period. In view of this, the annual DE of 6612 MU has been considered for the purpose of tariff of the generating station, as per month-wise details as under:

<b>Months</b>	<b>10 days monthly</b>	<b>Design Energy (MU)</b>
APR	1-10	92.55
	11-20	113.87
	21-30	146.61
MAY	1-10	265.59
	11-20	222.91
	21-31	376.07
JUN	1-10	301.80
	11-20	342.00
	21-30	342.00
JULY	1-10	342.00
	11-20	342.00
	21-31	376.00



<b>Months</b>	<b>10 days monthly</b>	<b>Design Energy (MU)</b>
AUG	1-10	342.00
	11-20	342.00
	21-31	376.20
SEPT	1-10	281.85
	11-20	212.75
	21-30	190.57
OCT	1-10	171.31
	11-20	146.88
	21-31	147.02
NOV	1-10	129.00
	11-20	114.29
	21-30	101.78
DEC	1-10	79.67
	11-20	67.93
	21-31	71.46
JAN	1-10	66.69
	11-20	61.83
	21-31	66.84
FEB	1-10	52.10
	11-20	54.10
	21-29	41.13
MAR	1-10	61.26
	11-20	79.75
	21-31	89.79
<b>Total</b>		<b>6611.77</b>
<b>say</b>		<b>6612</b>

### **Application Fee and Publication expenses**

83. The Petitioner has sought reimbursement of the fees paid by it for filing the petition and for publication expenses and has submitted that the reimbursement of the same are in accordance with Regulation 70(1) of the 2019 Tariff Regulations. In view of the above, the Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the filing of this petition, directly from the beneficiaries, on pro-rata basis, in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

84. Similarly, RLDC Fees & Charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2019, shall be recovered from the



beneficiaries. In addition, the Petitioner is entitled recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2019 Tariff Regulations.

85. The annual fixed charges approved in paragraph 77 above are subject to truing-up in terms of Regulation 13 of the 2019 Tariff Regulations.

86. This order disposes of Petition No. 30/GT/2020.

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

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

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

*Sd/-*  
**(P. K. Pujari)**  
**Chairperson**

