CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

<u>Petition No. 229/GT/2020</u>

Coram:

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

Date of Order: 13th February, 2023

IN THE MATTER OF

Petition for revision of tariff for the 2014-19 tariff period and determination of tariff for the 2019-24 tariff period in respect of Salal Power Station (690 MW).

AND

IN THE MATTER OF

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

Vs

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

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

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

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

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

6. Power Development Department,
   New Secretariat, Jammu -180 001 (J&K).

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

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

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

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

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

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

13. Himachal Pradesh State Electricity Board
    Vidyut Bhawan, Kumar House,
    Shimla – 171 004 **….Respondents**

Parties Present:

Shri Rajiv Shankar Dwivedi, Advocate, NHPC
Shri Ajay Shrivas, NHPC
Shri Md. Faruque, NHPC
Shri Piyush Kumar, NHPC
Shri Mohit Mudgal, Advocate, BYPL
Shri Sachin Dubey, Advocate, BYPL
Shri Abhishek Srivastava, BYPL
Shri Sameer Singh, BYPL
Shri R.B. Sharma, Advocate, BRPL
Ms. Megha Bajpeyi, BRPL
Ms. Suparna Srivastava, Advocate, PSPCL
Shri Tushar Mathur, Advocate, PSPCL
Ms. Soumya Singh, Advocate, PSPCL

ORDER

The Petitioner, NHPC Limited has filed this petition for truing-up of tariff of Salal Power Station (690 MW) (hereinafter referred to as "the generating station") for the period 2014-19 in terms of Regulation 8(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short "the 2014 Tariff Regulations") and for determination of tariff of the generating station for the period 2019-24, in accordance with 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 with a total capacity of 690 MW comprises of six units of 115 MW each. The generating station is a run of river project, having a capacity of 690 MW, and is located in the State of Jammu and Kashmir (J&K) and was declared under commercial operation on 1.4.1995. Petition No. 236/GT/2014 was filed by the Petitioner for truing up of tariff of the generating station for the 2009-14 tariff period and for determination of tariff of the generating station for the 2014-19 tariff period. Accordingly, the capital cost and the annual fixed charges determined for the generating station for the period 2014-19 vide Commission's order dated 12.5.2015 in Petition No. 236/GT/2014 are as under:

Capital Cost allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	92085.17	92902.36	94633.15	97221.92	101292.78
Admitted additional capitalization	817.19	1730.79	2588.77	4070.86	3750.96
Closing Capital Cost	92902.36	94633.15	97221.92	101292.78	105043.74

Annual Fixed Charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	9570.70	9645.65	9772.72	9968.62	10198.71
Interest on Loan	0.00	0.00	0.00	11.11	13.74
Depreciation	2030.01	2121.21	2267.22	2550.09	2854.23
Interest on Working Capital	1064.16	1120.94	1183.71	1255.22	1331.81
O&M Expenses	14429.58	15388.29	16410.68	17501.01	18663.78
Total	**27094.44**	**28276.10**	**29634.33**	**31286.05**	**33062.28**

Present Petition

3. In terms of Regulation 8(1) of the 2014 Tariff Regulations, the Petitioner has filed the present petition for truing-up of tariff of the generating station, based on the actual additional capital expenditure incurred for the period 2014-19. The capital cost and annual fixed charges claimed by the Petitioner in the present petition are as under:

Capital Cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	92085.17	92401.61	93355.96	94478.37	98039.76
Add: Additional during the year*	444.09	1091.17	1230.94	4425.88	5148.18
Less: De-capitalisation during the year	127.64	136.82	128.67	864.50	617.93
Less: Reversal during the year	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year	0.00	0.00	20.14	0.00	0.00
Closing capital cost	**92401.61**	**93355.96**	**94478.37**	**98039.76**	**102570.01**
Average capital cost	92243.39	92878.79	93917.17	96259.06	100304.88

**As per petition. However vide affidavit dated 30.6.2021 the Petitioner has revised the additional capital expenditure and the corresponding de-capitalisation*.

Annual Fixed Charges claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2015.92	2058.90	2131.38	2299.45	2646.20
Interest on Loan	0.00	0.00	0.00	7.85	35.43
Return on Equity	9653.43	9714.67	9699.24	9903.57	10184.20
Interest on Working Capital	1065.74	1121.10	1178.89	1247.88	1327.19
O&M Expenses	14429.58	15388.29	16410.68	17501.01	18663.78
Total	**27164.67**	**28282.96**	**29420.19**	**30959.76**	**32856.80**

4. Reply to the Petition has been field by the Respondent PSPCL, Respondent UPPCL, Respondent BYPL and Respondent BRPL vide their affidavits dated 15.2.2021, 23.2.2021, 23.7.2021 and 27.10.2021 respectively. The Petitioner has filed its rejoinder to the said replies vide affidavits dated 29.6.2021, 30.6.2021, 30.7.2021 and 8.11.2021 respectively. The Petitioner has also filed certain additional information vide its affidavit dated 30.6.2021 and 13.8.2021 and has also revised the claim for additional capital expenditure. Thereafter, the Petition was heard on 25.2.2022 through virtual conferencing, and the Commission reserved its order in the petition. Based on the submissions and the documents available on record, we proceed for truing-up the tariff of the generating station for the 2014-19 tariff period as stated in the subsequent paragraphs.

Capital Cost

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

"9. Capital Cost:
(3) The Capital cost of an existing project shall include the following:
(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15."

6. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission, after prudence check, in accordance with the regulation, shall form the basis of determination of tariff for existing and new projects.

7. The Commission vide its order dated 12.5.2015 in Petition No. 236/GT/2014, had allowed the closing capital cost of Rs 92085.17 lakh, as on 31.3.2014.

Accordingly, in terms of Regulation 9(3) of the 2014 Tariff Regulations, the capital cost of Rs 92085.17 lakh, has been considered as the opening capital cost as on 1.4.2014, for the purpose of truing-up of tariff of the generating station, for the period 2014-19.

Additional Capital Expenditure

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

> *"14 (3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:*
>
> *(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
>
> *(ii) Change in law or compliance of any existing law;*
>
> *(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*
>
> *(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*
>
> *(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*
>
> *(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
>
> *(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal/lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*
>
> *(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;*
>
> *(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower*

strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station: Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air- conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

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

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

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

9. The projected additional capital expenditure allowed for the period 2014-19 in order dated 12.5.2015 in Petition No. 236/GT/2014 and the actual additional capital expenditure claimed by the Petitioner, in this petition, are as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Projected additional capital expenditure allowed in order dated 12.5.2015 in Petition No. 236/GT/2014	817.19	1730.79	2588.77	4070.86	3750.96
Actual additional capital expenditure claimed in this petition	301.53	863.72	1086.54	3595.40	4441.78

10. The Petitioner has submitted that there are certain capital expenditure, which were not projected earlier, but had been incurred by the Petitioner, due to site specific requirements, for successful and efficient operation of the generating station,

and the same is required to be included as part of the capital base for the purpose of tariff. The additional capital expenditure claimed by the Petitioner, duly supported by Auditor's Certificate, for the period 2014-19, is as under:

(Rs. in lakh)

Sl. No.		**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
A	**Additions being claimed for tariff purpose**					
i	**Additional Capitalization claimed against admitted items**					
	Claimed under Regulation 14(3)(i)	-	-	-	-	-
	Claimed under Regulation 14(3)(ii)	-	-	36.75	-	-
	Claimed under Regulation 14(3)(iii)	2.97	6.73	19.77	87.97	-
	Claimed under Regulation 14(3)(viii)	321.42	453.82	497.91	3840.81	4185.23
ii	**Capitalization claimed against new items**					
	Claimed under Regulation 14(3)(i)	-	53.52	-	-	-
	Claimed under Regulation 14(3)(iii)	-	29.89	-	-	-
	Claimed under Regulation 14(3)(viii)	119.69	547.21	676.52	497.11	962.95
	Sub-total (A)	**444.09**	**1091.17**	**1230.94**	**4425.88**	**5148.18**
B	**Deletions**					
i	Assumed deletions	64.56	176.06	96.40	666.50	617.98
ii	Decapitalization	77.99	51.39	68.15	163.99	88.41
	Sub-total (B)	**142.55**	**227.45**	**164.55**	**830.49**	**706.39**
C	Discharge of undischarged Liabilities (C)	0.00	0.00	20.14	0.00	0.00
D	Reversal of undischarged Liabilities (D)	0.00	0.00	0.00	0.00	0.00
E	**Net additions claimed (E=A-B+C-D)**	**301.53**	**863.72**	**1086.54**	**3595.40**	**4441.78**
2	**Additional capitalization not to be claimed**					
i	Exclusions	100.99	84.45	107.47	113.10	128.08
ii	FERV	0.00	0.00	0.00	0.00	0.00
iii	Inter Unit transfers	0.00	0.00	0.00	0.00	0.00
	Total 2(i+ii+iii)	**100.99**	**84.45**	**107.47**	**113.10**	**128.08**
3	**Deletions**					
i	Exclusions	41.10	508.86	37.22	36.42	6.42
ii	FERV	0.00	0.00	0.00	0.00	0.00
iii	Inter Unit transfers	0.00	0.00	0.00	0.00	0.00
	Total 3(i+ii+iii)	**41.10**	**508.86**	**37.22**	**36.42**	**6.42**

11. The Respondent UPPCL has submitted that the Petitioner has not indicated the year of capitalization, which is a relevant aspect for determination of tariff. However, the Petitioner has furnished the revised Form 9A vide affidavit dated 30.6.2021. Based on the submissions of the parties and after reconciliation, the year-wise admissibility of the additional capital expenditure, under various heads, is discussed in the subsequent paragraphs.

2014-15

12. The additional capital expenditure claimed by the Petitioner, on cash basis, are as under:

Head	**Amount** ***(Rs in lakh)***
Items already allowed (a)	324.40
Items additionally claimed as per actual site requirements (b)	119.69
Sub-total (c)=(a)+(b)	**444.09**
Discharge of liabilities (d)	0.00
Total (c)+(d)	**444.09**

(a) Items already allowed

13. The Petitioner has claimed additional capitalization of Rs. 324.40 lakh in 2014-15, out of which an amount of Rs. 321.42 lakh, is towards works such as, Purchase of Fire Tenders, Purchase of VT pumps, Automatic sewerage disposal system for powerhouse, Purchase of new escorts made crane, Motorized boat, Purchase of Motorized valve along with accessories for cooling water system, Purchase of hospital miscellaneous items, complete replacement of 11kV generator CT of better accuracy class (0.2) in phases, Acoustic enclosure along with Air Duct & Raising of Chimney height as per licensing requirement for 7 nos. DG Sets installed for the generating station and replacement of old buses, under Regulation 14(3)(viii) of the 2014 Tariff Regulations and Rs. 2.97 lakh has been claimed towards Access control system, under Regulation 14(3)(iii) of the 2014 Tariff Regulations.

14. It is noticed that the additional capital expenditure claimed for above assets/ works were allowed, on projection basis, in 2014-15 vide order dated 12.5.2015 in Petition No. 236/GT/2014. Keeping in view the submissions of the Petitioner and on prudence check, we allow the claim for additional capitation of these assets under Regulation 14(3)(iii) and Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding de-capitalization of old assets, has also been considered under 'decapitalization' for the purpose of tariff.

(b) Items additionally claimed as per site requirement under various subclause of Regulation 14(3) of the 2014 Tariff Regulations

Sl. No.	Details of the claim	Regulations	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Horizontal multistage pump 75HP, MAXFLOW, 98HPB6	14(3)(viii)	6.50	**On replacement basis**. Petitioner submitted that the Old pump was purchased during 1975 and already completed its useful life and was creating frequent trouble. Further, the pump is purchased for augmenting of water supply, so as to ensure fulfilment of requirement of fresh water to employees of Salal Power Station. Old asset actually not deleted in books during 2014-15, hence considered as assumed deletion.	Considering the fact that this asset/work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has also been considered.	6.50
2	Horizontal multistage pump 50HP/37KW, Make: MAXFLOW, 98 HPB6	14(3)(viii)	4.15	**On replacement basis.** The item has been purchased due to requirement at site which was not envisaged earlier during the filling of Tariff Petition. Old asset was unserviceable and beyond repair and the		4.15

Sl. No.	Details of the claim	Regulations	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				deletion is considered under assumed deletions.		
3	Horizontal Split Casing (HSC) centrifugal pump 10 HP	14(3)(viii)	1.09	**Replacement**: The new item was purchased due to requirement at site also it is used in ensuring fresh water supply to employees of Salal Power Station. Old asset actually not deleted in books during 2014-15, hence considered as assumed deletion.		1.09
4	Motorcycle 125CC, Super Splendor (02 Nos @ Rs. 53796/- each)	14(3)(viii)	1.07	**On replacement basis**. The motorcycles were purchased as per requirement of CISF for patrolling due to security reasons. However, the gross value of old asset amounting to Rs. 0.37 Lakhs got deleted in the books only in 2015-16. Accordingly, the deletion value has been shown under assumed deletion in 2014-15 and kept under exclusion in 2015-16.	In terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations (as quoted above), the additional capital expenditure claimed are not allowed.	0.00
5	Servo Motor DRG NO. 51021000.	14(3)(viii)	57.63	**On replacement basis**. Items were purchased and capitalized in 2014-15, as the servo motors of U-3 were giving in problem in the working, the piston of the same was damaged/ leaking, As such to avoid generation loss, the same had been replaced with new one. The purchased items have been put	Considering the fact that this asset/work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has been considered as	57.63

Sl. No.	Details of the claim	Regulations	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				in use.	Assumed deletions.	
6	Heavy duty hydraulic power jack for jacking along with (4 No.) pump motor set for HS lubrication system mounted on wheel driven platform and fitted with components.	14(3)(viii)	19.65	**On replacement basis**. The items were purchased and capitalized in 2014-15, as power pack of Hydraulic Jacking arrangement of U#6 had gone non-functional / was beyond economical repair and same was causing lot of problem. To avoid loss of generation, the same was replaced with new one. Newly supplied 1 no. Hydraulic Power Pack & 4 nos. Trolley mounted pump motor sets for HS lubrication system are already installed during maintenance period of 2015-16. Further the survey off of old retrieved Hydraulic power pack is under progress.	Considering the fact that this asset/work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has been considered as Assumed deletions.	19.65
7	Trash Rack for Penstock intake gate at Salal	14(3)(viii)	29.60	**On replacement basis**: During the operation old trash rack which was installed during 1987 requires major repairing / maintenance for smooth operation of machine, since, the old trash racks were badly damaged by hitting of logs and boulders, etc. and the remaining structures were not in the condition to be continued in use. The	Considering the fact that this asset/work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has been considered as Assumed deletions.	29.60

Sl. No.	Details of the claim	Regulations	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				Petitioner submitted that if the trash rack is not replaced the trash shall enters machine and causes damage to under water parts and for repair they have to be removed. Hence new trash racks were purchased to supplement the requirement and capitalized in 2014-15. The purchased Trash racks were replaced with old, damaged Trash racks.		
	Total amount claimed		**119.69**			
	Total amount allowed					**118.62**

15. Based on the above, the total additional capital expenditure of Rs. 443.02 lakh {Rs.324.40+ Rs.118.62} is allowed in 2014-15.

2015-16

16. The additional capital expenditure claimed by the Petitioner, on cash basis, are as under:

Head	**Amount** ***(Rs in lakh)***
Items already allowed (a)	460.55
Items additionally claimed as per actual site requirements (b)	630.62
Sub-total (c)=(a)+(b)	**1091.17**
Discharge of liabilities (d)	0.00
Total (c)+(d)	**1091.17**

(a) Items already allowed

17. The Petitioner has claimed additional capitalization of Rs. 460.55 lakh in 2015-16, out of which an amount of Rs. 453.82 lakh claimed is towards items/ works such as Replacement of 220V, 1000 AH Battery Bank for Stage-I, Renovation and

Modernization of stage-II CO_2 firefighting system, Purchase of two number of inspection vehicle, development of proper drinking water by augmentation of filtration plants, construction of boundary wall around Jyotipuram township of the generating station, Purchase of 245 KV SF_6 Circuit Breaker at Generating Units, Feeder Bays of Stage-1 and Bus Coupler Bay, Purchase of 10 no. 02 HP submersible pumps, purchase of 2 Nos. TATA 407 along with Water Tank Fabrication, Purchase of New Ashok Leyland Make Tipper, Event logger at power house, Automatic weather station, Purchase of 48 V, 100 AH Battery Bank and Generator braking plant along with (16 Nos) brake & jack assembly as per drawing no. SH/020614 consisting complete electrical control panel under Regulation 14(3)(viii) and an amount of Rs. 6.73 lakh has been claimed towards items/works such as Access Control system under Regulation 14(3)(iii) of the 2014 Tariff Regulations.

18. It is noticed that the additional capital expenditure claimed for the above assets/ works were allowed on projection basis, vide order dated 12.5.2015 in Petition No. 236/GT/2014. Keeping in view the submissions of the Petitioner and since the same were allowed vide order dated 12.5.2015, the claim of the Petitioner is allowed under this head, along with the corresponding de-capitalization of old assets for the purpose of tariff.

(b) Items additionally claimed as per site requirement under various sub-clauses of Regulation 14(3) of the 2014 Tariff Regulations

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
1	Digital EPBAX system 96 ports ext. up to 128ports, CORAL DX-2000	14(3)(viii)	2.26	**On replacement basis.** The new item were purchased due to requirement at site Dedicated communication link was required	The additional capital expenditure is of minor nature and therefore **not allowed** in terms of the first proviso to Regulation 14(3) of	0.00

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				between Dam control room and powerhouse control room to monitor and communicate the parameters like water level, gate position and any emergency situation. So new exchange was installed. The scheduled life of Electronic items like EPBAX as per IT disposal policy is 5 years and equipment has completed its useful life.	the 2014 Tariff Regulations.	
2	Ultimate sampling system for moisture in oil measurement	14(3)(viii)	5.73	The 220 kV Generator Transformers at the generating station are 20 to 30 years old now and require continuous monitoring to ascertain their healthiness. To ensure this, a sampling system for moisture in oil measurement has been purchased.	In our view, the additional capital expenditure claimed is in the nature of tools and tackles. Also, considering the fact that the O&M expenses are allowed on normative basis and any savings in turn is retained by the Petitioner, the additional capital expenditure claimed is **not allowed**. The corresponding decapitalization has also not been considered.	0.00
3	Design, supply, Installation, testing & commissioning of waterproof CCTV system for powerhouse	14(3)(viii)	0.99	For security point of view, new waterproof CCTV cameras have been installed in powerhouse. Further, IB has also suggested to install high resolution cameras with zooming function with proper	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Government agencies/ statutory authorities. Accordingly, the same is **allowed**.	0.99

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				monitoring system		
4	TB Collar BHEL Drawing No. 33/1-255-01-77002 with TB Disc, Outer ring, Locking ring, Other accessories	14(3)(viii)	116.14	**On Replacement basis**. Order for purchase of (2nos.) TB Collars were placed to BHEL as looseness in the liner of TB Collar which caused excessive temperature to rise in thrust bearing in Unit-3 and Unit-5. The delivery of the same was given in 2013-14 but during installation of the same, the TB Collars were found to be defective. Hence, both were sent back to M/s BHEL for rectification. After rectification both TB Collars installed in the 2015-16. However, 1st TB Collar were capitalized in 12.10.2013 and second were capitalized on 24.10.2015. Newly supplied TB Collar & TB disc along with its all accessories are already installed during maintenance period in December, 2015.	Considering the fact that these assets/works will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has been considered as Assumed deletions.	116.14
5	Capitalization of land as per award NHPC Vs. Karnail Singh & Others	14(3)(i)	53.52	Land for construction of different component of the generating station was acquired through Govt of India/ State Government in the year 1983. Thereafter the land	The expenditure relates to the construction of different components of the generating station and is in compliance to the directions of the Court. The expenditure on this	53.52

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				outsees filed the case for enhancement of the rate of the acquired land before the district court Udhampur. The learned court has enhanced the amount of the land compensation vide its order dated 15.7.1994. The project deposited the difference amount of the award of the district court amounting to Rs. 53.52 lakh before the District Court, Udhampur vide letter no. NH/ SPS/ M(C)/Land/2016/1027 dated 30.3.2016.	account is therefore **allowed.**	
6	Installation of Bio-Toilet at Kachhariya	14(3)(viii)	7.57	Installation of first time a BIO-TOILET near to water supply systems to Jyotipuram for day to day use by the employee posted at Kachhariya water pumping station. Further, to keep the environmental safeguard and Swachh Bharat Abhiyan requirement.	Since the expenditure is for the benefit of the employees working in remote locations of the project and will facilitate the efficient operation of the plant, the expenditure is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	7.57
7	(18 nos.) Motorised gate valve (125mm) confirm to API 600, class -150 bolted bonnet, OS & Y rising type	14(3)(viii)	31.24	**On replacement basis**. Manual operated valves installed previously were getting damaged/ stuck up due to ageing/ multi handling, which were needed to be replaced. For modernisation /	Considering the fact that these assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding	31.24

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				SCADA implementation even these were required to be replaced with Motorised Gate valves to have proper functioning & feedback.17 Nos. Motorised gate valve (125MM) were purchased & capitalised in 2015-16, The purchased items have been put in use and retrieve items is unserviceable.	decapitalization has been considered as Assumed deletions.	
8	Guide Vanes Drawing No.-02030154104 along with the templates (one set)	14(3)(viii)	316.43	**On replacement basis**. One set of Guide Vanes which was damaged and found beyond economical repair. The new set up guide vane were purchased from M/s BHEL and the same have been installed in the Generating unit for which the capital maintenance were carried out 2015-16. The purchased items have been put in use and retrieved item is unserviceable and is being surveyed off.		316.43
10	Screw pump test 60/46 with TEFC motor, pressure 40 kg/cm2, capacity 540 lpm, 2900 rpm with couplings	14(3)(viii)	47.80	**On replacement basis**. Old OPU Pumps had worned out which was causing problem and beyond economical repairable and got replaced for smooth functioning of Governor OPU System. Order for supply of (OPU) Pumps for Rs. 72.68		47.80

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
				Lakh placed in 2015-16, Out of which 4 set were supplied and capitalized in 2015-16 and remaining parts for Rs. 24.88 lakh supplied and Capitalized in 016-17. The purchased item has been put in use and retrieved item is unserviceable.		
11	LT Electric panel with 02 800 amp. 4 pole EDO Microprocessor release type ACB's & ATS Controller	14(3)(viii)	14.04	The Power Supply to Dam was fed from 2 separate feeders and 2 nos. of DG sets which operated in case of emergency. During the emergency/flood conditions the power supply at Dam should be maintained for operation of gates. There was no change over panel installed at Dam for changeover of both the incomer supply and therefore there was chances for operator to Switch 'ON' both the incomer supply at same time which can further lead to mis-happening / accident. Hence ATS panel were purchased to meet out un-interrupted supply to dam, panel was necessary, hence installed and to avoid any mishap/accident of both incomer supply mixing.		14.04

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
12	(2 nos.) Capacitor Voltage Transformer, 245 kV Ration 220 KV/V3: 110V/V3	14(3)(viii)	5.01	The new item was purchased against replacement of old due to requirement at site which were not envisaged during the filling of tariff petition. At present these 02 no's CVTs are kept as spares to meet eventually.	Considering the additional capital expenditure under this head is in the nature of capital spares, claimed after the cut-off date, the same is **not allowed**. The corresponding decapitalization on account of the same is also **not allowed**.	0.00
13	Slip ring assembly drawing no. 5555.023-c	14(3)(iii)	6.67	These were purchased to replace the old worn-out Slip ring assembly. Newly supplied 01 set Slip ring assembly is already installed during maintenance period. The survey off of 1 set retrieved Slip ring assembly is under progress.	Considering the fact that these assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has been considered as Assumed deletions.	6.67
14	Fencing with Concertina Wire from Right Abutment of RF Dam to CISF Post and near Anchor Block	14(3)(iii)	23.22	The said work was got executed as per the security committee/ IB instruction for security and safety of the major installation.		23.22
	Total amount claimed		**630.62**			
	Total amount allowed					**617.62**

19. Based on the above, the total additional capital expenditure of Rs.1078.17 lakh {Rs.460.55+ Rs.617.62} is allowed in 2015-16.

2016-17

20. The additional capital expenditure claimed by the Petitioner, on cash basis, are as under:

Head	Amount *(Rs in lakh)*
Item already allowed (a)	554.43
Items additionally claimed as per actual site requirements (b)	676.52
Sub-total (c)=(a)+(b)	**1230.94**
Discharge of liabilities (d)	20.14
Total (c)+(d)	**1251.08**

(a) Items already allowed

21. The Petitioner has claimed additional capitalization of Rs. 497.91 lakh in 2016-17, towards items/works such as Developing proper drinking water system by providing and laying 4"/ 6" pipe line from Soo nallah to Jyotipuram Reservoir (wherever required) approx. 4 km, LT Distribution Panel for Dewatering and Drainage system, Installation testing and Commissioning of numerical Generator Transformer protection Relay, Four cylinder mini truck chassis TATA LPT 909 EX/38 with cabin BS IV along with (Maintenance scissor platform (truck mounted)), Purchase of Two Nos. Campers/Tata Sumo, Replacement of ITI Make Telephone Exchange 512 C-Dot with twin set with caller ID, LP Compressor (250 cfm), Inspection Vehicle - Purchase of Two nos Tata Sumo/ Bolero/ Xylo or equivalent, Purchase of 2 nos. of 10 KVA UPS, along with 100 AH Battery Bank, Complete replacement of 245 kV metering CT of better accuracy Class (0.2) at Power House, Construction of boundary wall around Jyotipuram township of the generating station under Regulations 14(3)(viii), an amount of Rs. 19.77 lakh has been claimed towards items /works such as, Access Control system under Regulation 14(3)(iii) and an amount of Rs. 36.75 lakh has been claimed towards items / works such as Planning, design and construction of sewerage treatment plant along with laying of pipes, septic tank and manholes etc. wherever required at the generating station, under Regulation 14(3)(ii) of the 2014 Tariff Regulations.

22. It is noticed that the additional capital expenditure claimed for the above assets/ works were allowed on projection basis vide order dated 12.5.2015 in Petition No. 236/GT/2014. Keeping in view the submissions of the Petitioner and since the same were allowed vide order dated 12.5.2015, the claim of the Petitioner is allowed under this head along with corresponding de-capitalization of old assets for the purpose of tariff.

(b) Items additionally claimed as per site requirement under various subclauses of Regulation 14(3) of the 2014 Tariff Regulations

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
1	(2 Nos) 70 kW submersible pump set 9000 LPM or more at 30-meter head, KSB, KRTK 200-400/804 UNG1-K	14(3)(viii)	88.05	The pumps were purchased as per the guidelines of CEA for flood control. 2 no's Submersible Pump for Rs 88.05 Lakh have been installed for Wall Protection Sump (Stage II) of Power House which is very critical for Power House and same has been capitalized in 2016-17. It has reduced the possibility of power house submergence and also mitigate the break down possibility of submergence of stage II generating units.	Considering the fact that these assets/works will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has been considered under 'Assumed Deletions'.	88.05
2	Screw pump test 60/46 with TEFC motor, pressure 40 kg/cm2, capacity 540 lpm, 2900 rpm with couplings	14(3)(viii)	24.88	**On replacement basis**. Old OPU Pumps had worned out which was causing problem and beyond economical repairable and got replaced for smooth functioning of Governor OPU System. Order for supply of (OPU) Pumps for Rs. 72.68 Lakh placed in 2015-16 out of which 4 set were supplied and capitalized in 2015-16 and		24.88

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				remaining parts for Rs. 24.88 Lakh supplied and Capitalized in 2016-17. The purchased item has been put in use and retrieved item is unserviceable.		
3	DGA Analyser-GE-KELMAN	14(3)(viii)	44.57	The Generator Transformer is critical equipment of Generating Units, which step of the generating Voltage of 11 kV to 220 kV for onward transmission of power to Grid. The healthiness of the GT is essential for smooth operation and power generation. Failure of GT will lead to considerable generation loss to Corporation. The transformers are very old and their assessment of health through oil testing is very much essential. Oil test of GT was regularly carried out through CPRI, NETRA (NTPC). From the test result, they have recommended that oil test be carried out on monthly basis. Further, O&M Division of CO, recommended for repetition of oil test in 15 days interval. Further, Considering the cost involved in repeated test, reliability, obtaining immediate test result to assess the oil condition, one DGA test Kit was purchased.	In our view, the additional capital expenditure claimed is in the nature of tools and tackles. Also, considering the fact that the O&M expenses are allowed on normative basis and any savings in turn is retained by the Petitioner, the additional capital expenditure claimed is **not allowed**. The corresponding decapitalization has also not been considered.	0.00
4	Microprocessor based digital voltage regulation panel along with thyristor panel for excitation system	14(3)(viii)	344.53	**On replacement basis**: Order for supply of complete Excitation System for three units comprising of (3 no.) DVR Panel along with (2no.) Thyristor Panel	Considering the fact that these assets/ works will facilitate the successful and efficient operation of plant, the same	344.53

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				have been placed to M/s BHEL on 10.12.2014 for Rs. 305.64 Lakh but the supply was made by BHEL in 2015-16. However, the order price has been escalated due to change in tax rate and works out to Rs.344.53 lakh. The separate order for the installation, testing commissioning was placed to BHEL for Rs 45.19 lakh (Installation cost capitalised in 2017-18) and work was completed in 2015-16 but the capitalisation done in 2016-17 due to some minor pending punch points. Deletion of 3 nos. Of AVR for Rs.24.96 lakh was done in 2017-18.	is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has been considered as Assumed deletions during 2016-17.	
5	UGB/LGB OIL Coolers Drawing NO.1-261-02-67000C	14(3)(viii)	77.26	**On replacement basis**. One set of each UGB/LGB Oil Coolers was purchased to replace the old worn-out coolers which got choked / damaged beyond technical and economical repair condition. Newly purchased UGB/LGB oil coolers were installed during maintenance period in 2016-17 and the case file for survey off of retrieved items is under progress.	Considering the fact that these assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has also been considered.	77.26
6	MICOM RELAY P343, P343/ P442/ P746	14(3)(viii)	13.03	**Replacement basis:** As per the Guidelines of CEA the old relays have been replaced with new Micom Relay as old have been become obsolete. Newly purchased Micom Relays were installed/ commissioned during 2015-16 & 2016-17 and capitalized in 2016-17.	Since the additional expenditure claimed is on replacement basis and is based on the recommendations of the CEA, we **allow** the expenditure	13.03

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
					claimed. The corresponding decapitalization has been considered as Assumed deletions.	
7	Wireless intelligent fire detection and alarm system admin 1,2 zorawar hospital, fire station 103/719	14(3)(viii)	7.75	As per guidelines of National Building Code 2005 considering occupancy & fire load inside buildings, the items were purchased and installed at Admin building 1,2 zorawar hospital & fire station for automatic detection & early communication of fire in initial stage, so that quick action would be initiated for extinguishment of fire.	In terms of the first proviso to Regulation 14(3) of the 2014 Tariff Regulations (as quoted above), the additional capital expenditure claimed are not allowed.	0.00
8	Fully auto. Capacitance and Tan Delta measuring kit with compensating reactors, megger, model 4110	14(3)(viii)	33.78	The TAN DELTA represents the gross defects and overall dielectric losses in the insulation of electrical equipment like Transformer, Generator, CT, PT etc. to assess the state and quality of the entire electrical insulation, Tan-Delta test is necessary. The test result will indicate the deterioration of insulation at incipient stage and rectification can be done with minimum outage. In case of non-testing, major fault may occur which will lead to considerable down time period as well as Generation loss. The Electrical equipment of the generating station has become old and regular testing is required for availing their services for longer	In our view, the additional capital expenditure claimed is in the nature of tools and tackles. Also, considering the fact that the O&M expenses are allowed on normative basis and any savings in turn is retained by the Petitioner, the additional capital expenditure claimed is **not allowed**. The corresponding decapitalization has also not been considered.	0.00

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				period. The cost of new equipment will be considerably high.		
9	HP DL360 GEN 9 1U 2P 8-CORE rack window server	14(3)(viii)	5.85	As per recommendation of Intelligence Bureau Industrial security report to comply the NHPC Cyber security policy and to better control of computers & users of internet, a domain-client based network was required, hence the Server was purchased and installed for providing internet to authorized users only and to stop un-attended use of LAN which may lead to threaten the security of LAN and ultimately affect the Operation /Scheduling /Reporting of Generating Units.	Considering the fact that the additional expenditure is incurred based on the recommendations of Intelligence Bureau, the same is allowed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.	5.85
10	Tata Tipper LPK-1613/36 BS4, 8.5 CUM	14(3)(viii)	20.52	TATA TIPPER LPK-1613/36 BS4, 8.5 CUM was purchased as per requirement of site for carrying out urgent Civil works viz. transportation of boulders, gabions and other aggregate for departmental works for damaged portion of roads, reservoir, apron of TRT outlet etc. for Power Station.	In our view, the additional capital expenditure incurred by the Petitioner does not directly relate to the operation of the generating station. Hence, the additional capital expenditure claimed is **not allowed**.	0.00
11	Microsoft office STD 2016 SNGL OLP C along with Symantec antivirus solution for mobile/tablet for 3 years	14(3)(viii)	16.30	As per recommendation of IB Industrial security report, to comply the NHPC cyber security policy and guidelines, which states to essentially install the antivirus on all Servers, PCs and Laptops/Tablets, which are being connected to office LAN/Network the antivirus was purchased	Considering the fact that the projected expenditure is based on the recommendations of Intelligence Bureau, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.	16.30

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				and installed to all PCs/Laptops/Tablets/Official Mobiles for the safety/security of the these from the virus and firmware attack and to safe the LAN/Network which is the integral part of Power Station Infrastructure. The policy also states that use of only licenced software's to be used on PCs/Laptops which are being connected to the Network. Non-compliance of these security policy & guideline may lead to threaten the security of LAN and ultimately affect the Operation/ Scheduling /Reporting of Generating Units.		
	Total amount claimed		**676.52**			
	Total amount allowed					**569.89**

23. Based on the above, the total additional capital expenditure of Rs. 1124.32 lakh {Rs.554.43+ Rs.569.89} is allowed in 2016-17.

<u>2017-18</u>

24. The additional capital expenditure claimed by the Petitioner, on cash basis, are as under:

Head	**Amount** *(Rs in lakh)*
Item already allowed (a)	3928.78
Items additionally claimed as per actual site requirements (b)	497.11
Sub-total (c)=(a)+(b)	**4425.88**
Discharge of liabilities (d)	0.00
Total (c)+(d)	**4425.88**

(a) Items already allowed

25. The Petitioner has claimed additional capital expenditure for Rs. 3840.81 lakh in 2017-18, towards items/works such as Restoration of Installed Capacity (2 nos. of Runner), Purchase of mini truck chasis TATA LPT 909 EX/38 with cabin BS IV (Maintenance Scissor Platform (Truck mounted), Microprocessor based Digital Governing System/DVR, New Bay for Captive Power 220 KV switchyard, Developing proper drinking water system with supply of multistage centrifugal pumps (3 Nos.) and electric panels (3 Nos.) of about 400 m head & over 1500 Plum discharge for lifting water from Soo nallah Stage zero up to Bidda reservoir, Replacement of AC Plant at Power House and Restoration of Installed Capacity (Unit-6) under Regulations 14(3)(viii) of the 2014 Tariff Regulations and Rs. 87.97 lakh claimed towards items / works such as, Purchase of high mast lighting and Purchase of two nos Motor Cycle claimed under Regulation 14(3)(iii) of the 2014 Tariff Regulations.

26. It is noticed that the additional capital expenditure claimed for the above assets/ works were allowed on projection basis, vide order dated 12.5.2015 in Petition No. 236/GT/2014. Keeping in view the submissions of the Petitioner and since the same were allowed vide order dated 12.5.2015, the claim of the Petitioner is allowed under this head along with the corresponding de-capitalization of old assets, for the purpose of tariff.

(b) Items additionally claimed as per site requirement under various subclauses of Regulation 14(3) of the 2014 Tariff Regulations

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
1	Trash rack screen size 4360x2450 bottom non-interchangeable section for penstock intake d.no. 21.1/3	14(3)(viii)	51.96	**On replacement basis:** The new (2sets) Trash Racks were purchased due as the old trash rack were damaged due to hitting of boulders, logs, etc. and the remaining	The Petitioner has submitted that the additional capital expenditure under this head is on account of replacement of trash	51.96

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				structures were beyond economical repair. The Old assets are being written off in 2018-19. Newly purchased 2 sets of Trash Racks were installed / Commissioned during maintenance period.	rack of the generating station. In view of this, the additional capital expenditure claimed is **allowed** on replacement basis. The corresponding decapitalization has been considered as Assumed deletions.	
2	Transformer oil cooler for 43.3 MVA, 220/11 kV generator transformer-SN Ind. Drg no SNI/TC/90012	14(3)(viii)	13.92	**On replacement basis:** The transformers which are critical part of Generating Unit, needs to be in healthy condition. One new set of Transformer Oil Coolers for Generator Transformer were purchased as old coolers were heavily damaged/eroded and not reliable for smooth functioning of Unit. The old coolers were not in a condition to be repaired economically. Newly purchased 04 nos. were replaced to maintain uniform/ committed power supply to beneficiaries. The case file for survey off of retrieved items is under progress.	Considering the fact that these assets/works will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has also been considered.	13.92
3	(8 nos.)1600 AMP, 415 V ACB, MAKE C&S MODEL: AH16NRCSMP4.1 ED	14(3)(viii)	27.65	**On replacement basis:** The old ACBs installed had gone obsolete and spares for R&M were not available which forced for replacement of the same. Report from OEM for obsolesce of technology and non-availability attached. Accordingly, the work was awarded and Capitalised in the 2017-18. Write off case for the same is being	In view of the submissions of the Petitioner and keeping in view that the additional capital expenditure incurred is for the efficient operation of the generating station, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has	27.65

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				processed. Newly purchased 08 nos. LT ACB were installed/ commissioned in November 2017.	been considered as Assumed deletions.	
4	Submersible pump motor set with control panel	14(3)(viii)	104.10	As per the Guidelines of CEA (5.1.5.4.6 of CDMP-2017) flood dewatering pump provision in addition to the existing drainage & dewatering system was to be created, hence two submersible pumps in each stage along with panels & piping have been installed in powerhouse. Order was placed in May'2017 and pumps were supplied & commissioned by March 2018. Accordingly capitalised in 2017-18.	Since the expenditure is on replacement basis and is based on the recommendations of the CEA, we **allow** the expenditure claimed.	104.10
5	Construction of shopping complex unit (12 nos. Shop)	14(3)(viii)	100.86	**On replacement basis:** The old shopping complex for Jyotipuram was built in the initial days of the project under construction. The condition of the same building was in very critical and needed to be demolished. Nearest local market, Reasi, is approximately 12 KM away from colony. Such as market complex has been constructed within the colony area to facilitate the staff/staff member of power generating unit. Being in remote this is the only option to meet the day-to-day requirements hence new shopping complex has been constructed after demolishing the old one. The old shopping complex building which	Considering the fact that the expenditure claimed is in the nature of O&M expenses, the claims are **not allowed**. The corresponding decapitalization on account of the same are also not allowed.	0.00

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				was capitalised/ completed in 1972 had become unsafe with passage of time and was beyond economical repair and was demolished. A new shopping complex was constructed in its place. The gross book value of the old shopping complex at time of retrieval was Rs 518506/- and WDV was Rs. 206448/- and the value of sale/demolition was Rs 615001/-.		
6	Toilet for CISF at Dhyangarh	14(3)(viii)	7.75	Newly constructed toilets for CISF barracks was necessitated to meet the need of the security persons who were residing and facing hardship at site. Earlier there was only six numbers toilets available for around 90 CISF personnel deployed at Dhyangarh.		0.00
7	Pneumatic & Hydraulic torque wrench power pack	14(3)(viii)	21.44	The new items were purchased due to requirement at site for timely completion of works, which were not envisaged earlier during the filling of Tariff Petition. These items were purchased since new runner has been supplied from M/s Voith and various coupling bolts sizes are different from older, hence new pneumatic & hydraulic torque wrench alongwith power pack purchased.	Considering the fact that the claimed expenditure are tools and tackles in nature, the additional capital expenditure claimed is **not allowed** under first proviso to Regulation 14(3) of the 2014 Tariff Regulations.	0.00
8	Servo Motor DRG No. 51021000	14(3)(viii)	66.55	The new one set of Servo motors were purchased as old servo motors were giving lot of leakage & slipping/ time	Considering the fact that the asset/ work claimed will facilitate the efficient operation of the plant, the claim	66.55

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				delay in operation due to scoring/ pitting on the inner surface of the Cylinder & piston ring. Accordingly, one set was purchased for Rs.66.55 lakh and was replaced in the consequent maintenance. Servomotor has been purchased as spare and kept for any emergent situation in future.	is **allowed**. However, as the Petitioner has not decapitalized the earlier motor and kept it as a spare, the decapitalization is considered as assumed deletion.	
10	35 KWP Solar PV Power Plant on grid with all accessories complete	14(3)(viii)	57.67	The power station has installed 100 kW Solar PV Grid under National Solar Mission and the entire energy generated by Solar PV is used for self-consumption and electricity expenses payable to J&K has been reduced, which in turn has resulted in the reduction of O&M Expenses. As O&M Expenses are fixed as per actual O&M Expenses, therefore, the benefit of reduced O&M expenses is pass through to beneficiaries till useful life (i.e., 25 years) of Rooftop Solar. Solar plant was commissioned on 14.06.2017, till date 2245423.9 units have been generated with cost saving of Rs 4.63lakhs (approx) It is also clarified that no grant/subsidy has been received from MNRE for funding the scheme.	Considering the nature of the asset claimed, the same is not essential for successful & efficient operation of the plant. Further, the Petitioner has also not justified to how the asset contributes to the successful & efficient operation of the plant. Hence, the expenditure is **not allowed**.	0.00
11	Microprocessor based digital voltage regulation panel (AVR and DVR Installation	14(3)(viii)	45.19	**On replacement basis:** Order for supply of complete Excitation System for three units comprising of (3 no.)	Considering the fact that these assets/works will facilitate the successful and	45.19

Sl. No.	Details of the claim	Regulation	Amount claimed *(Rs in lakh)*	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
	BHEL)			DVR Panel along with (2no.) Thyristor Panel have been placed to M/s BHEL on 10.12.2014 for Rs. 305.64 Lakh but the supply was made by BHEL in 2015-16. However, the Order price has been escalated due to Change in Tax Rate and comes to Rs.344.53 Lakh. The separate order for the installation, testing commissioning was placed to BHEL for Rs 45.19 lakhs (Installation cost capitalised in 2017-18) and work was completed in 2015-16 but the capitalisation of supply was made on 11.1.2017 due to some minor pending punch points. Actual Deletion of 3nos. Of AVR for Rs.24.96 Lakh was done in 2017-18.	efficient operation of plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The corresponding decapitalization has been considered in 2017-18.	
	Total amount claimed		**497.11**			
	Total amount allowed					**309.38**

27. Based on the above, the total additional capital expenditure of Rs. 4238.16 lakh {Rs.3928.78+ Rs.309.38} is allowed in 2017-18.

2018-19

28. The additional capital expenditure claimed by the Petitioner, on cash basis, are as under:

Head	**Amount** ***(Rs in lakh)***
Item already allowed (a)	4185.23
Items additionally claimed as per actual site requirements (b)	962.95
Sub-total (c)=(a)+(b)	**5148.18**
Discharge of liabilities (d)	0.00
Total (c)+(d)	**5148.18**

(a) Items already allowed

29. The Petitioner has claimed additional capitalization of Rs. 4185.23 lakh in 2018-19 towards items/works such as Automation of the Plant for efficient operation & better control with real time monitoring of auxiliary systems (SCADA), Restoration of Installed Capacity, New Bay for Captive Power 220 KV switchyard, Supply, installation & commissioning of 1 No. Goods cum passenger Lift (2000Kg) at Dam top, Developing proper drinking water system.`- Providing and laying 4"/ 6" pipe line from Soo nallah to Jyotipuram Reservoir (where ever required) Approx. 4 KM, Purchase of Penstock Flow meters, and Automation of Drainage and Dewatering Pumps of the generating station under Regulation 14(3)(viii) of the 2014 Tariff Regulations.

30. It is noticed that the additional capital expenditure claimed for the above assets/ works were allowed on projection basis, vide order dated 12.5.2015 in Petition No. 236/GT/2014. Keeping in view the submissions of the Petitioner and since the same were allowed vide order dated 12.5.2015, the claim of the Petitioner is allowed under this head along with the corresponding de-capitalization of old assets for the purpose of tariff.

(b) Items additionally claimed as per site requirement under various subclauses of Regulation 14(3) of the 2014 Tariff Regulations

Sl. No.	Details of the claim	Regulation	Amount claimed (Rs in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
1	Transformer analyser	14(3)(viii)	52.98	The Transformer analyzer is a multifunction kit for condition monitoring of Power Transformer (routine /preventive /breakdown test) i.e., transformer turn ratio,	In our view, the additional capital expenditure claimed is in the nature of tools and tackles. Also, considering the fact that the O&M expenses are allowed on normative basis and any savings in	0.00

Sl. No.	Details of the claim	Regulation	Amount claimed (Rs in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				excitation current, magnetisation balance test, winding resistance test, instrument transformer and circuit breaker, which is time saving and cost effective. The testing shall allow the maintenance team to assess the condition of equipment at an early stage so that suitable action for rectifying minor fault can be carried out in time. This action will result in avoiding major breakdown which may lead to more downtime period and generation loss. As the testing, leads to minimising the down time period, it will save the loss of generation.	turn is retained by the Petitioner, the additional capital expenditure claimed is **not allowed**. The corresponding decapitalization has also not been considered.	
2	2 no. Draft Tube Gate	14(3)(viii)	108.98	As per recommendations of CEA notification dated 20th August 2010, to protect Powerhouse against flooding there is a "Provision of individual hoisting mechanism for draft tube gates of each unit may be considered for quick closing. The draft tube gates shall be capable of closing under unbalanced condition of water pressure." Since only four sets of Draft Tube gates are available earlier, only four units out of six can be closed in case of flooding. With additional two sets purchased; all six units can be closed in case of any emergency.	Since the expenditure is on replacement basis and is based on the recommendations of the CEA, which will facilitate efficient operation of plant, we **allow** the said expenditure under Regulation 14(3)(viii) of the 2014 Tariff Regulations	108.98
3	11kV DG Set (2 Nos.) n35otless than 1020 KVA with STDD accessories, make: SUPERNOVA MODEL NO	14(3)(viii)	304.68	**On replacement basis**: Two no's old DG sets were in use since 1975. The same were completed their useful life. Due to its old age, wear & tear, repeated breakdown occurs. The repairing	Considering the fact that these assets/works will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The	304.68

Sl. No.	Details of the claim	Regulation	Amount claimed (Rs in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
	SP1020			cost has become uneconomical. The DG sets are used in case of non-availability of main auxiliary supply. In case of the main auxiliary supply failure, Generator will be tripped and there will be loss of generation. DG supply helps in black start of Power Station for restoration of Grid. The DG sets are critical equipment and their healthiness leads to reliable operation of Generating Units as well as Grid in case of blackout/Grid collapse.	corresponding decapitalization has been considered as Assumed deletions.	
4	70 KW Submersible pump set 9000 LPM or more at 30 meter head, KSB, KRTK 200-400/804UNG1-K	14(3)(viii)	44.96	Submersible Pump have been installed & capitalized for Wall Protection Sump (Stage II) of Powerhouse to reduce the possibility of Power house submergence and also mitigate the break down possibility of stage II Generating units at Powerhouse. As per the Guidelines of CEA flood dewatering pump provision in addition to the existing drainage & dewatering system was to be created.	Considering the fact that these assets/works will facilitate the successful and efficient operation of plant, and is based on the recommendations of the CEA, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	44.96
5	Design & supply of carbon dust collector	14(3)(viii)	153.29	Old system commissioned in 1987 do not have Carbon Dust Collector due to which machine were frequently tripped. The new system has been installed to minimise tripping of generating machines due to occurrence of Rotor	Considering the fact that the expenditure for asset/work claimed is for successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The decapitalization of the	153.29

Sl. No.	Details of the claim	Regulation	Amount claimed (Rs in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				earth fault created by carbon brush dust of carbon brushes of the excitation system.	old system is considered under assumed deletions.	
6	Brake dust collector system SCADA compatible control panel for ST – I and II	14(3)(viii)	55.14	Old system commissioned in 1987 do not have Brake Dust Collector. The system has been installed to minimise tripping of Generating machines as brake dust fumes mixed with oil get stuck on stator & rotor helping improve the IR and reducing charges of Tripping due to Generator faults. This also helps reducing stocking up of brake pads due to accumulation of brake dust in the hydraulic oil which use to jam/ stuck up the brake.		55.14
7	SITC of electrical panel for operation of motorized valves for cooling line air turbine /auxiliary floor	14(3)(viii)	42.59	The old scheme is comprised of manual valve, there was no provision of electrical panels. Further due to reduction of regular manpower since last two three year, this system was essentially required to avoid generation loss. The system has been installed to minimise operating time for Generator cooling line and back flushing line with minimum manpower to avoid choking of cooling water system and resulting in tripping of generating machine due to rise in temperature.		42.59
8	Renovation & modernization	14(3)(viii)	66.23	**On replacement basis**: The new	Considering the fact that the expenditure for	66.23

Sl. No.	Details of the claim	Regulation	Amount claimed (Rs in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
	of the fire fighting system			system has been installed to replace old firefighting system installed during commissioning, which had gone obsolete and inventory/ spares for its maintenance were not available in market. The system had started to malfunction due to which could have caused excessive loss.	asset/work claimed is for successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The decapitalization of the old system is considered under assumed deletions.	
9	(2nos.) Main 220 V DC Distribution Board – ABB make, dimensions: 2850 x 2300 x 500 with accessories	14(3)(viii)	36.05	**Replacement:** The old DCDB- I &II for Stage 1&2 were commissioned with mother plant were more than 20 years old. DCDB-I was used for control and protection of Generating Units & All Lines DCDB -II was in use for control and protection of Generating Units only. During few past years modernisation and upgradation work carried out in the Powerhouse, Dam, Switchyard. Further SCADA system is being implemented in the Powerhouse. The old DCDBs were having malfunction problem and insufficient to meet the requirement of new schemes, i.e., extra supply lines, redundancy of independent source of DC supply, availing feedback from modules. So, New DCDBs having sufficient	Considering the fact that the expenditure for asset/work claimed is for successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The decapitalization of the old system is considered under assumed deletions.	36.05

Sl. No.	Details of the claim	Regulation	Amount claimed (Rs in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				number of outgoing feeders along with few spare feeders of desired ratings (to ensure overload/ short circuit issues and as per future expansion in SCADA) is required with features for providing arrangement of auto change over & parallel operation of both incoming feeders along with potential free auxiliary contact in MCBs/ MCCBs. As such, New DCDBs were required and purchased accordingly. The new DCDBs as per latest requirement shall increase the reliability of DC supply system and control & protection system of Generator & Transmission lines. This will ensure tripping of Units or Lines whenever there is fault, thereby saving the equipment from heavy damage and long shutdown period. More availability of machines /equipment's will lead to reduced generation loss and more power availability to beneficiaries. Old panels were completely replaced by new ones.		
10	(45 nos.) /198 KV, Disc. CL-III poly. Housed metal oxide surge arr. with ACCS	14(3)(viii)	35.63	**On replacement basis:** The old surge arrestors were showing higher leakage current and were causing malfunction / tripping, the old were supplied along with the mother	Considering the fact that the expenditure for asset/work claimed is for successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(iii) of	35.63

Sl. No.	Details of the claim	Regulation	Amount claimed (Rs in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				plant at time of commissioning. Same was pointed out by O&M technical Inspection team even. Partial Surge arresters have been replaced during maintenance. Old Surge arrestors are being surveyed off. The Old asset actually not deleted in books, hence considered in assumed deletion.	the 2014 Tariff Regulations. The decapitalization of the old system is considered under assumed deletions.	
11	(6nos.) SITC of Generator Standstill Space Heater with SCADA compatible control Panel for stage I&II at SPS	14(3)(viii)	50.01	**On Replacement Basis:** The old space heaters were supplied with mother plant in 1987 which had lived out their life and were worn out and beyond economic repair. The system has been installed to minimise moisture in the generator barrel, as the moisture during standstill condition of machine reduces the IR value of generator winding which leads to excessive dry running of machine after maintenance to attain proper IR before synchronisation of Machine. Case for survey off of the old Space heaters is processed.	Considering the fact that the expenditure for asset/work claimed is for successful and efficient operation of plant, the same is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations. The decapitalization of the old system is considered under assumed deletions.	50.01
12	Construction of Boundary Wall at NHPC land in the area of Gadal Nai Basti Road	14(3)(viii)	12.41	Wall was made to secure the land of corporation in the marketplace. The said NHPC land is located in prime residential area of District Reasi. To protect the costly land from encroachment, the boundary wall was	Since the expenditure incurred by the Petitioner is in the nature of O&M expenses, the claim of the Petitioner is **not allowed.**	0.00

Sl. No.	Details of the claim	Regulation	Amount claimed (Rs in lakh)	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed *(Rs in lakh)*
				constructed.		
	Total amount claimed		**962.95**			
	Total amount allowed					**897.56**

31. Based on the above, the total additional capital expenditure of Rs. 5082.79 lakh {Rs. 4185.23 + Rs. 897.56} is allowed in 2018-19.

Discharge of liabilities

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

(Rs. In lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
0.00	0.00	20.14	0.00	0.00

33. The Petitioner vide its affidavit dated 23.10.2019, has furnished the asset-wise un-discharged liabilities and the liabilities discharged along with Form 16. Accordingly, on prudence check, the assets / items which were allowed and for which the liabilities were yet to be discharged earlier and now discharged are allowed and for those assets which were not allowed, the corresponding discharge of liabilities are also not allowed. Accordingly, the discharge of liabilities during the period 2014-19 is allowed as under:

(Rs. In lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
0.00	0.00	20.14	0.00	0.00

De-capitalization

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

"In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity

respectively in the year such de-capitalisation takes place, duly taking into consideration the year in which it was capitalised."

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
77.99	51.39	68.15	163.99	88.41

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

(Rs. In lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
De-capitalization claimed	77.99	51.39	68.15	163.99	88.41
De-capitalization allowed	**77.99**	**43.91**	**68.15**	**158.91**	**88.41**

Assumed Deletions

37. As per consistent methodology adopted by the Commission in its orders, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff provided that the capitalization of the said asset, is followed by de-capitalization of the gross value of the old asset. However, in certain cases, where the de-capitalization is proposed to be affected during the future years to the year of capitalization of the new asset, the de-capitalization of the old asset for the purpose of tariff, is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed Deletions".

38. The methodology of arriving at the fair value of the de-capitalized asset, i.e. de-escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. In the present petition, the COD year of the generating station is during 1995-96. We have considered the value of asset under consideration, as on COD as 100 and de-escalated it @5% till the year during which additional capital expenditure is claimed against replacement of the same. The amount claimed for additional capital expenditure against this asset is multiplied by the derived ratio from above two values i.e. value in COD year divided by value in additional capitalized year to work out the de-capitalization amount.

39. The Petitioner has claimed additional capital expenditure for certain assets/ works but has not furnished the de-capitalized value of the old and replaced assets/works. In this regard, the Commission in its order dated 26.5.2016 in Petition No. 264/GT/2014 has adopted the following methodology:

> *"It is observed that the petitioner has claimed Rs. 396.50 lakh against the capitalization for Installation of instrumentation system for Dam& Power house, Sliding Ring & Sealing Ring insert along with other accessories for Shaft Seal System, electrical drives for EOT Cranes and encoders for Radial Gates, Up gradation of Air gap and vibration monitoring system, Up gradation of protection system including replacement of numerical/ Electromagnetic relay for power house, Up-gradation of Software of automation i.e. CS-7 system and Up gradation of ARMAC System on replacement basis, during the period 2014-19. The petitioner has not indicated the gross value of the old assets replaced. Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e. escalation rate of 5 % per annum from the COD has been considered in order to arrive at the gross value of old assets in comparison to the cost of new assets. Gross value of the old assets considered for the purpose of tariff in respect of the admitted assets/works has been indicated against individual assets, as in para 15 above. However, the petitioner is granted liberty to furnish the actual gross value of replaced assets at the time of truing up exercise and the same will be considered in accordance with law."*

40. It is observed that the Petitioner, in the present petition, has not furnished the justified de-capitalization value for some of the assets/works as mentioned in the

table below for the years 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 respectively. Accordingly, in terms of the above methodology, the value of 'assumed deletions' considered for the replaced asset for the purpose of tariff is detailed as under:

(Rs. In lakh)

Sl. No.	Details	Additions claimed for new asset on replacement	De-capitalization on value of old asset claimed	Assumed Deletions for old asset allowed
2014-15				
1	Purchase of Two Nos. of Fire Tender	59.84	6.27	23.68
2	Purchase of 08 Nos. VT Pumps.	100.40	15.84	39.73
3	Escorts C-8000 Hyd. Mobile Crane	14.41	8.96	8.96
4	Aluminium Boat with Accessories Fittings (Extra Band)-10 Persons Capacity (500 Kg	11.77	0.84	5.66
6	Replacement of Old Buses No. JK 02B 2338 & JK 02B 2397	41.63	11.92	26.84
8	11 KV Generator CT of better accuracy Class (0.2) in phases	10.47	0.87	4.14
9	Servo motor DRG no. 51021000 (2 nos.)	57.63	8.44	22.81
10	Manual gate valve (350mm) confirm to class -150 (6 nos)	23.92	3.50	9.46
11	Trash rack for penstock intake gate at Salal	29.60	1.68	11.71
12	Horizontal multistage pump 75HP, maxflow, 98HPB6	10.65	5.38	5.38
13	Horizontal Split Casing centrifugal pump	1.09	0.26	0.43
14	Hydraulic power pack for jacking	19.65	0.23	7.78
	Total	**381.06**	**64.18**	**166.59**
2015-16				
1	Purchase of 10 no. 02 HP submersible	3.67	3.43	3.43

Sl. No.	Details	Additions claimed for new asset on replacement	De-capitalization on value of old asset claimed	Assumed Deletions for old asset allowed
	pumps.			
2	Tata JK 14 -3061& 3062 Ambulance	19.29	10.50	10.50
3	Terex Rear Dumper/Tipper JKR 4335 Dhyangarh	14.51	29.78	29.78
4	Stage II CO2 firefighting system	55.08	20.96	20.96
5	Event logger for Powerhouse	30.98	20.76	20.76
6	Tb collar bhel drawing no. 33/1-255-01-77002 with tb disc, outer ring, locking ring, other accessories	116.14	15.10	43.77
7	Slip ring assembly drawing no. 5555.023-c	6.67	1.21	2.51
8	Manual gate valve (125mm) confirm to class -150 (18 nos)	31.24	4.53	11.77
9	Screw pump t3st 60/46 with tefc motor, pressure 40 kg/cm2, capacity 540 lpm,2900 rpm with couplings	47.80	6.81	18.02
10	Modified brake jack assembly along with panel	42.65	4.10	16.07
11	220V, 1000AH Battery Bank for Stage-1	30.17	12.53	12.53
12	Automatic weather Station	3.08	0.00	1.98
13	Guide Vanes Drawing No.-02030154104 along with the templates (one set)	316.43	46.35	119.26
	Total	**717.72**	**176.06**	**311.35**
2016-17				
1	Telephone Exchange 512 C-Dot	58.09	32.37	32.37
2	LP Compressor	25.80	0.06	9.26
3	Tata sumo	13.54	4.02	5.91
4	Online ups for Powerhouse min ELS 2007200160 dt 04/12/2 ES 2001 & ES-2003	6.34	1.01	4.29
5	245 KV CT 5-CorE (current Transformer)	95.50	14.91	34.28

Sl. No.	Details	Additions claimed for new asset on replacement	De-capitalization on value of old asset claimed	Assumed Deletions for old asset allowed
6	Microprocessor based digital voltage regulation panel along with thyristor panel for excitation system	344.53	24.96	123.67
7	Micom relay p343, p343/p442/p746	13.03	10.91	10.91
8	410704/ UGB/LGB oil coolers drawing no.1-261-02-67000c	77.26	0.00	27.73
10	410714/ Screw Pump T3ST 60/46 with TEFC Motor, Pressure 40 KG/CM2, capacity 540 LPM,2900 RPM with Couplings	24.88	0.00	8.93
11	411201/ Proper Drinking water system at Salal Power Station - Developing proper drinking water system`-Providing and laying 4"/ 6" pipe line from Soo nallah to Jyotipuram Reservoir (wherever required) Approx. 4 KM	38.35	0.00	13.77
12	410713/ LT Distribution panel for De-watering and Drainage system	16.50	0.00	5.92
	Total	**713.81**	**88.24**	**277.03**
2017-18				
1	One runner against Restoration of Installed Capacity	1679.20	121.43	574.03
2	One runner against Restoration of Installed Capacity	3.62	176.75	
3	One runner against Restoration of Installed Capacity	910.72	108.66	311.33
4	Hero honda splender plus, jk-14a-4808 (col. Black)" "ch.06 b16c17514, en.06b15	2.83	0.48	1.65
5	Modified brake jack assembly along with panel	42.65	4.12	14.58
6	Digital Governing	535.90	247.42	247.42

Sl. No.	Details	Additions claimed for new asset on replacement	De-capitalization on value of old asset claimed	Assumed Deletions for old asset allowed
	System			
7	Trash rack screen size 4360 x2450 bottom non-interchangeable section for Penstock intake D.NO. 21.1/3	51.96	3.36	17.76
8	Transformer oil cooler for 43.3 mva, 220/11 kv Generator Transformer-sn ind. Drg no sni/tc/90012	13.92	0.00	4.76
9	(8 nos.)1600 Amp, 415 v ACB	27.65	2.71	9.45
10	410714/ servo motor Drg No. 51021000	66.55	0.00	22.75
11	410709/ Replacement of AC Plant at Power House	95.95	0.00	32.80
12	410701/Micro Processor based Digital Voltage regulation panel (AVR and DVR Installation BHEL)	45.19	0.00	15.45
	Total	**3472.54**	**664.93**	**1252.00**
2018-19				
1	One runner against Restoration of Installed Capacity	2518.85	105.57	820.06
2	One runner against Restoration of Installed Capacity		182.28	
3	One runner against Restoration of Installed Capacity		197.76	
4	Supply, installation & commissioning of 1 No. Goods cum passenger Lift (2000Kg) at Dam top	84.96	10.68	27.66
5	Drinking Water System	257.93	18.77	83.97
6	STP (Drinking water system)	10.72	2.06	3.49
7	11KV DG set (2NOS.) 875 KVA	304.68	49.50	99.20
8	(2nos.) Main 220V DC Distribution Board - ABB make, Dimensions:	36.05	5.27	11.74

Sl. No.	Details	Additions claimed for new asset on replacement	De-capitalization on value of old asset claimed	Assumed Deletions for old asset allowed
	2850X2300X500with accessories			
9	198 KV, Disc. CL-III Poly. housed metal Oxide Surge Arr. with Accs (45nos.)	35.63	23.46	23.46
10	Generator Standstill Space Heater	50.01	4.66	16.28
11	Fire Fighting system	66.23	17.97	21.56
	Total	**3365.06**	**617.98**	**1107.43**

Exclusions

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Exclusions in Additions	100.99	84.45	107.47	113.10	128.08
Exclusions in Deletions	41.10	508.86	37.22	36.42	6.42
Net Exclusions claimed	59.89	(-)424.41	70.25	76.67	121.66

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

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

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

43. The Petitioner has de-capitalized following amounts in books of accounts pertaining to minor assets such as computers, office equipment, furniture, ladders,

pumps, etc., as these are not in use on account of their becoming unserviceable/obsolete and also deletion on account of inter-unit transfer of minor assets, as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Consumption of capital spares (deletion not claimed/Under exclusion category)	0.00	505.09	0.00	0.00	0.00
Additions kept under Exclusions	0.00	0.00	0.00	0.00	0.00
Deletion under exclusion category (deletion for minor assets /tools /tackles etc. which are not considered for additional capitalization)	41.10	3.76	37.22	36.42	6.42
IUT Transfer	0.00	0.00	0.00	0.00	0.00
Inter head adjustments	0.00	0.00	0.00	0.00	0.00
Total	**41.10**	**508.86**	**37.22**	**36.42**	**6.42**

44. It is observed that the expenditure on capital spares are not allowed to be capitalized after the cut-off date, in terms of the 2014 Tariff Regulations. While the recovery of expenditure on capital spares is allowed through O&M expenses, on consumption, the recovery of additional expenditure, on minor assets, beyond the cut-off date, is neither allowed to be capitalized, nor is permissible under the O&M expenses. Accordingly, the claim of the Petitioner for exclusion of negative entries arising out of de-capitalization of capital spares is justifiable, provided that the decapitalized spares are the ones which were not considered in the capital base for the purpose of tariff in the year of capitalization. On verification of the details in the petition filed by the Petitioner in this petition, it is observed that capital spares decapitalized in books during the period 2014-19, are the ones which were allowed in the capital cost for the purpose of tariff. In other words, positive entries arising out of their purchase were also part of tariff. In view of the above discussion, the amount of Rs. 505.09 has been disallowed for the purpose of tariff. The exclusion of negative entries arising due to inter-head adjustments is also allowed as the positive

adjustments have also been excluded/ ignored. The Petitioner has linked the details of the items claimed under exclusions and the same are in order.

45. Based on the above, the exclusion in deletions allowed for the purpose of tariff is as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
(-)41.10	(-)3.76	(-)37.22	(-)36.42	(-)6.42

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

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Capitalization against works projected and allowed for additional capital expenditure	324.40	460.55	554.43	3928.78	4185.23
Not projected/not allowed but capitalized due to actual site requirements	118.62	617.62	569.89	309.38	897.56
Total additions allowed (a)	**443.02**	**1078.17**	**1124.32**	**4238.16**	**5082.79**
Deletions allowed (b)	(-)77.99	(-)43.91	(-)68.15	(-)158.91	(-)88.41
Assumed deletions considered (c)	(-)166.59	(-) 311.35	(-) 277.03	(-) 1252.00	(-) 1107.43
Total additional capital expenditure allowed (d)=(a)+(b)+(c)	**198.43**	**722.91**	**779.14**	**2827.25**	**3886.95**
Exclusions adjustment (e)	0.00	(-)505.09	0.00	0.00	0.00
Add: Liability discharged during the year (f)	0.00	0.00	20.14	0.00	0.00
Additional capital expenditure allowed (g)=(d)+(e)+(f)	**198.43**	**217.82**	**799.28**	**2827.25**	**3886.95**

Capital cost allowed for the period 2014-19

47. The Commission vide its order dated 12.5.2015 in Petition No.236/GT/2014 had allowed the opening capital cost of Rs. 92085.17 lakh, as on 31.3.2014. The same is considered as the opening capital cost, as on 1.4.2014. Accordingly, the capital cost allowed for the 2014-19 tariff period is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost (a)	92085.17	92283.60	92501.42	93300.70	96127.95
Net additional capital expenditure allowed during the year/ period (b)	198.43	217.82	799.28	2,827.25	3,886.95
Closing Capital Cost (a)+(b)	**92283.60**	**92501.42**	**93300.70**	**96127.95**	**100014.91**

Debt Equity Ratio

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

> *"19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*
>
> *Provided that: i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
>
> *ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
>
> *iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.*
>
> *Explanation.-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*
>
> *(2) The generating company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*
>
> *(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt;equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.*
>
> *(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.*
>
> *(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination*

of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

49. Gross normative loan and equity amounting to Rs.43405.03 lakh and Rs.48680.14 lakh, respectively, as on 31.3.2014, as considered in order dated 12.5.2015 in Petition No.236/GT/2014 has been considered as the normative loan and equity as on 1.4.2014. The normative debt equity ratio of 70:30 has been considered for the admitted additional capital expenditure. The opening and closing debt and equity is as under:

Asset	As on 1.4.2014		Net Additional Capitalization during 2014-19				As on 31.3.2019	
			Additional Capital Expenditure		De-capitalization			
	Amount	%	Amount	%	Amount	%	Amount	%
Debt	43405.03	47.14	8390.62	70.00	2023.47	49.88	49772.18	49.76
Equity	48680.14	52.86	3595.98	30.00	2033.39	50.12	50242.73	50.24
Total	**92085.17**	**100.00**	**11986.60**	**100.00**	**4056.86**	**100.00**	**100014.91**	**100.00**

Return on Equity

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

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

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

Provided that:

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

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

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

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

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

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

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

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

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

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

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

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

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity (A)	48680.14	48689.37	48581.70	48750.85	49315.81
Addition due to additional capitalization (B)	132.90	323.45	337.30	1271.45	1524.84
Addition due to un-discharged liability (C)	0.00	0.00	6.04	0.00	0.00
Less: Decapitalization (D)	123.67	431.12	174.19	706.49	597.92
Closing Equity (E)= (A)+(B)+(C)-(D)	48689.37	48581.70	48750.85	49315.81	50242.73
Average Equity (F)=(A+E)/2	48684.76	48635.54	48666.28	49033.33	49779.27
Base Rate (%) (G)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate (%) (H)	20.961%	21.342%	21.342%	21.342%	21.549%
Effective ROE Rate (%) (I)	19.610%	19.705%	19.705%	19.705%	19.758%
Return on Equity (J)= (F)*(I)	**9547.08**	**9583.63**	**9589.69**	**9662.02**	**9835.39**

Interest on Loan

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

> *"26. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*
>
> *(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*
>
> *(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of Decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalization of such asset*
>
> *(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*
>
> *(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered: Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered*
>
> *(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*
>
> *(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such refinancing shall be borne by the*

beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

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

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

54. Regulation 26(5) of the 2014 Tariff Regulations provides for consideration of actual loan portfolio at the beginning of each year for computation of weighted average rate of interest. Accordingly, the weighted average rate of interest has been worked out on the basis of the actual loan portfolio of the respective year applicable to the project. The repayment for the period 2014-19 has been considered equal to the depreciation allowed for the respective years. Interest on loan has been calculated on the normative average loan of the year by applying the last available weighted average rate of interest as the loan is already repaid. Accordingly, Interest on loan is worked out as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Gross Normative Loan (A)	43405.03	43594.24	43919.73	44549.86	46812.15
Cumulative repayment of loan upto previous year (B)	43405.03	43594.24	43919.73	44549.86	45949.17
Net Loan Opening (C)=(A)-(B)	0.00	0.00	0.00	0.00	862.98
Net Addition due to additional capital expenditure (D)	189.20	325.49	630.13	2262.29	2960.03
Repayment during the year (E)=Depreciation	326.12	821.94	834.60	2243.63	2565.78
Cumulative repayment adjustment on a/c of de-capitalization (F)	136.92	496.45	204.47	844.33	710.96
Net Repayment (G)=(E)-(F)	189.20	325.49	630.13	1399.31	1854.81

	2014-15	2015-16	2016-17	2017-18	2018-19
Net Loan Closing (H)= (C+D-G)	0.00	0.00	0.00	862.98	1968.20
Average Loan(I)=(C+H)/2	0.00	0.00	0.00	431.49	1415.59
Weighted Average Rate of Interest of loan (J)	7.42%	7.42%	7.42%	7.42%	7.42%
Interest on Loan (K=I*J)	**0.00**	**0.00**	**0.00**	**32.02**	**105.04**

Depreciation

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

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

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

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

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

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

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

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

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

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

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

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

56. The weighted average rate of depreciation has been calculated by the Petitioner in accordance with Regulation 27 of the 2014 Tariff Regulations. Accordingly, depreciation has been worked out as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Average gross block (A)	92184.39	92392.51	92901.06	94714.33	98071.43
Land Value (B)	106.35	106.35	106.35	106.35	106.35
Depreciable Value (C=(A-B)*90%)	82870.23	83057.55	83515.24	85147.18	88168.57
Remaining Depreciable Value at the beginning of the year (D=C-Cum Dep at 'I' at the end of previous year)	32201.66	30513.29	29433.22	29167.25	30789.33
Balance useful Life (E)	16.00	15.00	14.00	13.00	12.00
Depreciation (F=D/E)	**2012.60**	**2034.22**	**2102.37**	**2243.63**	**2565.78**
Cumulative Depreciation at the end of the year (G=F+ Cum Dep at 'I' at the end of previous year)	52681.17	54578.47	56184.40	58223.56	59945.01
Less: Depreciation adjustment on account of de-capitalization (H)	136.92	496.45	204.47	844.33	710.96
Cumulative Depreciation at the end of the year (I)*	**52544.25**	**54082.03**	**55979.93**	**57379.24**	**59234.05**

**Cumulative Depreciation as on 31.3.2014 is 50668.57 lakh*

Operation & Maintenance Expenses

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

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

(Rs. in lakh)

2014-15	***2015-16***	***2016-17***	***2017-18***	***2018-19***
14429.58	*15388.29*	*16410.68*	*17501.01*	*18663.78*

58. The generating station is in operation for three or more years as on 1.4.2014. Accordingly, the year-wise O&M expenses claimed is allowed in terms of Regulation 29(3)(a) of the 2014 Tariff Regulations.

<u>Additional O&M expenses</u>

Impact of Goods & Services Tax

59. The Petitioner has also claimed reimbursement of additional tax paid due to implementation of GST in respect of generating station as additional O&M expenses and for this purpose, it has prayed for relaxation of the provisions of Regulation 29(3) in exercise of the powers under Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. The Petitioner has further submitted that the implementation of GST is a "change in law" event and the impact of the same should be passed through in tariff. As such, the tax paid in O&M expenses of plants (service portion) is claimed over and above the O&M expenses of the respective power stations. The Petitioner has submitted that it had filed Petition No. 133/MP/2019, which was disposed of by the Commission vide its order dated 22.8.2019, granting liberty to the Petitioner to raise the claim for reimbursement of additional tax on O&M expenses due to implementation of GST Act, 2017 along with the truing up petition for the 2014-19 tariff period. The additional impact of GST in 2017-18 (1.7.2017 to 31.3.2018) and 2018-19 as submitted by the Petitioner, duly certified by statutory auditors, are as under:

Additional Impact of GST on O&M Expenses (in Rs.)			
2017-18	**2018-19 (1.4.2018 to 31.12.2018)**	**2018-19 (1.1.2019 to 31.3.2019)**	**Total**
28102396	32333566	11539963	71975925

60. It is observed that the Petitioner vide affidavit dated 1.7.2022 has submitted the following details towards impact of GST:

Particulars	**Additional Impact of GST on O&M Expenses (in Rs.)**		
	2017-18	**2018-19**	**Total**
1. Additional Impact on Security Services CISF	23137893	33658792	56796685
2. Additional GST impact on works awarded in pre –GST period but executed in post GST period forming part of O&M Expenses – R&M / Manpower and other work	1128389	414099	1542488
3. Additional GST impact on supply order awarded in pre-GST period but executed in post GST period forming part of O&M expenses	59937	-	59937
4. Additional GST impact on work awarded & execution in post GST period vis-à-vis in case work would have been awarded in pre-GST period forming part of O&M expenses R&M/Manpower and other works	290040	3438029	3728069
5. Additional GST impact on supply order awarded & executed in post-GST period vis-à-vis in case work would have been awarded in pre-GST period forming part of O&M expenses	-	-	-
6. Additional GST impact on RO/CO Management Expenses,	1277915	2430942	3708857
7. Additional GST Impact other services like Insurance etc.	2208221	3931662	6139883
Total	**28102396**	**43873529**	**71975925**

61. The Petitioner has submitted that Service Tax was first introduced in 1994 through Finance Act, 1994 and as per Section 64 (1) of Finance Act, 1994, Service Tax was applicable to the whole of India except the State of J& K and therefore, any services rendered within the State of Jammu and Kashmir, either by a person residing within the State or outside the State, was not leviable to Service Tax. It has accordingly submitted that Service Tax was not leviable/payable in Pre-GST Regime on Security Services received by the units of the Petitioner, located in the State of J&K. The Petitioner has further submitted that as per the provisions of J&K General

Sales Tax Act, 1962 and the Rules framed thereunder, Security Services do not fall within the definition of goods or services, as defined in Section 2(h) of the said Act. It has therefore submitted that Security Services were not eligible to any tax i.e. WCT under Jammu and Kashmir General Sales Tax Act, 1962 or Service Tax in the State of J&K in pre-GST Regime, but with the introduction of GST w.e.f. 8.7.2017 in the State of J&K, Security Services are being subjected to GST @18%.

62. The matter has been considered. It is observed that the Petitioner has claimed a total amount of Rs. 719.76 lakh towards impact of GST. It is observed that the Commission while specifying the O&M expense norms for the 2014-19 tariff period had considered taxes to form part of the O&M expense calculations and, accordingly, had factored the same in the said norms. This is evident from paragraph 49.6 of the SOR (Statement of Objects and Reasons) to the 2014 Tariff Regulations, which is extracted hereunder:

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

63. Further, the escalation rates considered in the O&M expense norms under the 2014 Tariff Regulations is only after accounting for the variations during the past five years of the 2014-19 tariff period, which in our view, takes care of any variation in taxes also. It is pertinent to mention that in case of reduction of taxes or duties, no reimbursement is ordered. In this background, we find no reason to allow the prayer of the Petitioner to allow the additional O&M expenses towards payment of GST, in respect of works (in sl Nos. 2 to 7 of the table under para 60 above) which form part of O&M of the generating station.

64. It is however noticed that the claim of the Petitioner, in the table under paragraph 60 above, also includes the impact of GST on Security Services for Rs 231.38 lakh in 2017-18 and Rs 336.59 lakh in 2018-19 on the ground that in terms of the provisions of J&K General Sales Tax Act, 1962 and Rules framed thereunder, Security Services were not falling in the definition of goods or services as defined in Section 2(h) of the said Act and therefore, the same were not eligible to any tax i.e. WCT under Jammu and Kashmir General Sales Tax Act, 1962 or Service Tax in the State of J&K in pre-GST Regime and with the introduction of GST w.e.f. 8.7.2017 in J&K, Security Services are being subjected to GST @18%. It is evident from the above that no service tax was applicable on the Security Services prior to 8.7.2017 in the State of J&K, so the same were also not factored in, while fixing the O&M expense norms for this generating station located in J&K. However, due to implementation of GST on Security Services from 8.7.2017, the Petitioner has been obligated to pay GST on Security Services. Accordingly, we allow the impact of GST on Security Services, as claimed by the Petitioner, as under:

(Rs. in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
-	-	-	231.38	336.59

Impact of Wage Revision

65. it is noticed that the Petitioners claim for recovery of impact of wage revision of the Petitioners employees and deputed employees of Kendriya Vidyalaya (KV) / Dayanand Anglo Vedic (DAV) & Central Industrial Security Force (CISF) in respect of this generating station for the period from 1.1.2016 to 31.3.2019 was examined, considered and disposed of by the Commission vide its order dated 10.11.2022 in Petition No. 234/MP/2019. Hence, the claim under this head, has not been

considered/ allowed in this order.

Capital Spares

66. The last proviso to Regulation 29(2) of the 2014 Tariff Regulations provides as under:

> *"Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization".*

67. In terms of the above proviso, capital spares consumed are admissible separately, at the time of truing up of tariff, based on the details furnished by the Petitioner. The capital spares (not forming part of capital cost) claimed by the Petitioner are as under:

(Rs. in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
0.00	0.00	23.03	10.83	0.00

68. The Respondent BRPL and Respondent TPDDL have submitted that there is no provision to capitalize the capital spares in respect of hydro power stations in the 2014 Tariff Regulations and therefore, the claim of the Petitioner has no basis. The Respondent, UPPCL has submitted that the Petitioner has failed to submit the necessary details, substantiating that the same are not part of repair and maintenance expenditure of the power station. In response, the Petitioner has submitted that the Commission had not considered capital spares as part of the O&M expenses, while notifying the O&M expense norms for the period 2014-19 and hence the consumption of capital spares has been claimed.

69. We have examined the list of spares furnished by the Petitioner. It is pertinent to mention that the term 'capital spares' has not been defined in the 2014 Tariff

Regulations. The term capital spares, in our view, is a piece of equipment, or a spare part, of significant cost that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt. Keeping in view the principle of materiality and to ensure standardized practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs.1.00 lakh, on prudence check of the details furnished by the Petitioner in the Petition, has been considered for the purpose of tariff. Based on this, the details of capital spares consumption allowed for the period 2014-19 is summarized as under:

(Rs. in lakh)

	2016-17	**2017-18**
Total capital spares claimed on consumption basis	23.03	10.83
Less: Value of capital spares below Rs.1.00 lakh disallowed on individual basis	0.84	0.00
Net total value of capital spares considered	**22.18**	**10.83**

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

(Rs. in lakh)

	2016-17	**2017-18**
Net total value of capital spares considered	22.18	10.83
Less: Salvage value @ 10%	2.22	1.08
Net capital spares allowed	**19.96**	**9.75**

Interest on Working Capital

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

"28. Interest on Working Capital: (1) The working capital shall cover

(c) Hydro generating station including pumped storage Hydro Electric generating Station and transmission system including communication system:

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

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

(iii) Operation and maintenance expenses for one month."

Working capital for Receivables

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
4508.75	4687.28	4883.25	5155.79	5474.01

Working capital for Maintenance Spares

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
2164.44	2308.24	2464.60	2661.32	2850.06

Working capital for O&M Expenses

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1202.47	1282.36	1369.22	1478.51	1583.36

Rate of Interest on Working Capital

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

"Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system

or element thereof, as the case may be, is declared under commercial operation, whichever is later."

76. In terms of the Regulation 28(1)(c) of the 2014 Tariff Regulations, interest on working capital is worked out as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working capital for O&M Expenses (one month)	1202.47	1282.36	1369.22	1478.51	1583.36
Working capital for Maintenance Spares @15% of O&M expenses	2164.44	2308.24	2464.60	2661.32	2850.06
Working capital for Receivables	4508.75	4687.28	4883.25	5155.79	5474.01
Total working capital	**7875.65**	**8277.88**	**8717.07**	**9295.62**	**9907.43**
Rate of Interest on Working Capital (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	**1063.21**	**1117.51**	**1176.80**	**1254.91**	**1337.50**

Annual Fixed Charges

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

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2012.60	2034.22	2102.37	2243.63	2565.78
Interest on Loan	0.00	0.00	0.00	32.02	105.04
Return on Equity	9547.08	9583.63	9589.69	9662.02	9835.39
O&M Expenses	14429.58	15388.29	16430.64	17742.14	19000.37
Interest on Working Capital	1063.21	1117.51	1176.80	1254.91	1337.50
Total	**27052.48**	**28123.66**	**29299.51**	**30934.72**	**32844.07**

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

Normative Annual Plant Availability Factor (NAPAF)

78. Clause (4) of Regulation 37 of the 2014 Tariff Regulations provides for the Normative Annual Plant Availability Factor (NAPAF) for hydro generating stations already in operation. In terms of this regulation, the NAPAF of 60% is allowable for the generating station. However, the Respondent PSPCL has submitted that as per the past data for the period 2014-19, the generating station has achieved much

higher PAF consistently, and therefore, fixing of NAPAF at 60% is relatively low and unfair as it adds burden on the beneficiaries, as over declaring the availability, entitles the Petitioner for incentive. Accordingly, the Respondent has submitted that the NAPAF norm may be revised or the incentive of the generating station may be revised by either putting a restriction on the incentive payments by capping them to 5% of NAPAF or the same be restricted to a maximum of 25 paisa per unit or actual capacity charges payable to company per Kwh, whichever is less or in the alternative, the NAPAF of the Petitioner's generating plant may be set to the extent of 75% and allow the recovery of excess incentive paid to the Petitioner by Respondent PSPCL. The Petitioner has clarified that the normative PAF was specified by the Commission based on the past performance of the plant and considering the fact that the performance of the generating station was affected by silt. It has also stated that if the Commission considers the revising the incentive to be paid by capping the incentive to be paid to the generating station or by revising the NAPAF of the generating station, as per its actual performance, by exercising its power to relax under Regulation 54 of the 2014 Tariff Regulations, the same would create an environment of regulatory uncertainty. It has further submitted that if the Commission restricts the incentive payable to the generating station, there would not be enough motivation for the generating companies, to push their machine to achieve better availability. The Petitioner has also pointed out that the Commission, while notifying the 2014 Tariff Regulations, has taken a balanced approach by keeping the liability of loss incurred or incentive earned due to actual PAF being less than or more than NAPAF respectively for the generating company and the liability of loss incurred or benefits earned (in terms of secondary energy) due to energy generated being less than or more than Design Energy onto beneficiary Discoms.

79. The matter has been examined. As stated, the Commission has notified the NAPAF of 60% for the generating station under Regulation 37(4) of the 2014 Tariff Regulations, after extensive stakeholder consultations and the data on record. In this background, the submissions of the Respondent PSPCL, if accepted, would amount to review of the said regulation, which is not permissible in tariff determination proceedings. Accordingly, NAPAF of 60% as claimed by the Petitioner, which is in accordance with the said Regulations, is allowed.

Design Energy (DE)

80. The Commission in its order dated 12.5.2015 in Petition No. 236/GT/2014 had considered the annual Design Energy (DE) of 3082 Million units (MU) for this generating station. Accordingly, the same has been considered for this generating station for the 2014-19 tariff period as per month-wise details as under:

Months	Design Energy (MU)
April	189.52
May	324.94
June	471.9
July	487.70
August	487.70
September	424.30
October	229.61
November	128.63
December	94.57
January	60.69
February	68.97
March	113.47
Total	**3082.00**

81. The difference between the annual fixed charges recovered by the Petitioner in terms of order dated 12.5.2015 in Petition No. 236/GT/2014 and the annual fixed charges determined by this order shall be adjusted in terms of the provisions of Regulation 8(13) of the 2014 Tariff Regulations.

DETERMINATION OF TARIFF FOR THE 2019-24 TARIFF PERIOD

82. The Petitioner, in this petition, has also sought determination of tariff of the generating station for the 2019-24 tariff period, in terms of the provisions of the 2019 Tariff Regulations. Accordingly, the annual fixed charges claimed by the Petitioner for the period 2019-24 is as under:

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	2038.30	2168.58	2268.97	2382.21	2532.63
Interest on Loan	43.83	15.37	0.00	0.00	0.00
Return on Equity	9802.34	9918.86	9993.73	10075.20	10180.07
O&M Expenses	1199.69	1251.55	1304.84	1361.08	1420.78
Interest on WC	21712.86	22747.90	23832.28	24968.36	26158.58
Total	**34797.01**	**36102.26**	**37399.82**	**38786.85**	**40292.06**

Capital Cost

83. 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 provides as under:

> *"The Capital cost of an existing project shall include the following:*
>
> *(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
>
> *(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
>
> *(c) Capital expenditure on account of renovation and modernization as admitted by this Commission in accordance with these regulations;*
>
> *(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
>
> *(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
>
> *(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT)*

scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries…."

84. The Petitioner vide Form-1i of the petition, has claimed capital cost as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	102570.01	105010.07	106781.70	107839.58	109780.11
Add: Addition during the year / Period	2538.74	1989.31	1255.72	2146.53	2019.32
Less: De-capitalisation during the year/period	98.68	217.68	197.85	206.00	237.57
Add: Discharges during the period	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost	**105010.07**	**106781.70**	**107839.58**	**109780.11**	**111561.86**

85. As stated above, the Commission in paragraph 47 of this order had allowed the closing capital cost of Rs. 100014.91 lakh, as on 31.3.2019. Accordingly, in terms of Regulation 19(3) of the 2019 Tariff Regulations, the capital cost of Rs. 100014.91 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 period 2019-24.

Discharge of liabilities

86. The Petitioner has not claimed any discharge of liabilities during the period 2019-24. However, the Petitioner is directed to submit the reconciliation statement, showing the details of any such liabilities, as per balance sheet for the period 2019-24, duly certified by auditor. The Petitioner shall also furnish the break-up of the discharges included in the liabilities discharged within the original scope of work and other than the original scope of work of the project, at the time of truing-up of tariff.

Additional Capital Expenditure

87. Clause (2) of Regulation 9 of the 2019 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including additional capital expenditure already admitted and incurred up to

31.3.2019 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the 2019-24 tariff period along with the true up for the 2014-19 period in accordance with the 2014 Tariff Regulations.

88. 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.*

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

> *26. Additional Capitalization beyond the original scope*
>
> *(1) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be*

incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:

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

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

(c) Force Majeure events;

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

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

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

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

(2) In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-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.

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

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Capital Cost as on 31.3.2019 i.e.: Rs. 102570.01					
Regulation 25(1)(a)	0.00	0.00	0.00	0.00	0.00
Regulation 25 (2)(a)	0.00	25.96	44.77	768.19	132.16
Regulation 25(2)(b)	89.68	0.00	0.00	0.00	0.00
Regulation 25(2)(c)	195.00	166.52	2503.99	1378.34	1508.87
Regulation 25(2)(d)	515.00	0.00	0.00	0.00	0.00
Regulation 26(1)(a)	495.00	328.18	235.01	0.00	0.00
Regulation 26(1)(b)	0.00	0.00	0.00	0.00	0.00
Regulation 26(1)(d)	21.06	0.00	0.00	0.00	0.00
Total projected additional capital expenditure to be incurred	**1315.74**	**520.66**	**2783.77**	**2146.53**	**1641.03**

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

2019-20

92. The Petitioner has claimed total projected additional capital expenditure of Rs.1315.74 lakh in 2019-20 under the provisions of Regulations 25 and 26 of the 2019 Tariff Regulations, which are discussed below:

Sl. No.	Regulation		Amount *(Rs. in lakh)*
1	25(2)(b)	Replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions	89.68
2	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	195.00
3	25(2)(d)	The replacement of such asset or equipment has otherwise been allowed by the Commission	515.00
4	26(1)(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	495.00
5	26(1)(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	21.06
	Total projected additional capital expenditure (as per Form 9A)		**1315.74**

(a) Claims under Regulation 25(2)(b) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount Allowed
Purchase of 11 KV SF6 breaker Panel against replacement of old 11 KV MOCB Panel	89.68	Petitioner has submitted that the Commission has allowed Rs. 80 Lakh in 2015-16 vide its order dated 12.5.2015 in Petition No. 236/GT/2014 for procurement of 11kV SF6 breaker panel was deferred as the same could not be purchased through tender as only one manufacturer was available for SF6 breaker. Thereafter the case was reprocessed considering 11kV VCB breaker & Panels and same	It is noticed that the additional capital expenditure claimed for the asset/ work was earlier allowed vide order dated 12.5.2015 in Petition No. 236/ GT/2014 for Rs. 80.00 lakh in 2015-16. As the additional capital expenditure claimed for this asset/works	89.68

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount Allowed
		were supplied and commissioned in 2019-20. Cost escalation on account of delay in tendering process and change in technical specification.	during the earlier tariff period had been allowed, we **allow** the expenditure claimed in 2019-20.	
Total amount claimed	**89.68**			
Total amount allowed				**89.68**

(b) Claims under Regulation 25(2)(c) of the 2019 Tariff Regulations

(Rs in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount allowed
Supply Installation and commissioning of panels for remote operation of radial, silt, penstock and dam gates at Salal Power Station.	195.00	The generating station is the one of the oldest, commissioned in 1987. The control systems / panels of the Gates have been installed and commissioned at the time of commissioning of dam. Since these panels are obsolete and also each year manpower is being reduced. These control systems / panels are required to be replaced and updated for compatible with new SCADA System installed in Salal Power Station. Copy of Dam safety report attached.	It is evident from the Petitioner's submission that the claim is for replacement of the equipment as it is considered necessary for the efficient functioning of plant. In view of this, the additional capital expenditure claimed is **allowed**. The corresponding decapitalization has been considered under assumed deletion.	195.00
Total amount claimed	**195.00**			
Total amount allowed				**195.00**

(c) Claims under Regulation 25(2)(d) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount allowed
Flap Type Gate	515.00	Petitioner has submitted that the Commission had allowed for modification in existing gate for flap arrangement of Gate no. 11 for avoiding the loss of generation on account of chocking due to trash during peak season. But during the technical consultations with D&E div., CO, it was finalised to install the new Radial Gate with flap type arrangement for Gate no. 12. Accordingly, LOA amounting to Rs.398.28 lakh was placed on 28.4.2018. In due course old Radial gate was dismantled and new Radial Gate with flap type arrangement was installed for Gate no. 12 but not yet commissioned. For meeting all technical requirement as well as safety norms, several arrangement including replacement / modifications in existing rope drum hoist was proposed / needed and accordingly the work is being taken up, resulting to increase in Financial Implication also. Dam Safety Team report enclosed.	It is noticed that the additional capital expenditure claimed for the asset/ work was earlier allowed vide order dated 12.5.2015 in Petition No. 236/GT/2014 for Rs. 200.00 lakh 2017-18. As the additional capital expenditure claimed for this asset/works had already been allowed earlier, we **allow** the expenditure claimed. The corresponding de-capitalization for Rs159.68 lakh has also been allowed as 'assumed deletion, which is subject to truing-up	515.00
Total amount claimed	**515.00**			
Total amount allowed				**515.00**

(d) Claims under Regulation 26(1)(a) of the 2019 Tariff Regulations

(Rs in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Planning, Design and construction of Bachelor accommodation for executives at Salal Power Station	495.00	Petitioner has submitted that the Commission has allowed Rs 318.00 Lakhs in 2017-18 vide its order dated 12.5.2015 in petition no. 236/GT/2014 for construction of new bachelor accommodation.	It is noticed that the additional capital expenditure claimed for the asset/ work was earlier allowed vide order dated 12.5.2015 in petition no. 236/GT/2014 for Rs.	495.00

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		Work was awarded in December 2017; Work is completed in 2019-20 for Rs. 495 lakh. Cost increased due to deviations envisaged during construction stage/finishing works as per site condition & requirement thereof. The delay in work was on account of Hiring of architect for planning & designing of Bachelor accommodation, delay in tendering process & change of location/ site of the bachelor accommodation.	495 lakh 2017-18. As the additional capital expenditure claimed for this asset/works had already been allowed earlier, we **allow** the expenditure claimed.	
Total amount claimed	**495.00**			
Total amount allowed				**495.00**

(e) Claims under Regulation 26(1)(d) of the 2019 Tariff Regulations

(Rs in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Admissibility	Amount Allowed
X-ray Baggage machines security	21.07	The generating station is under security threat as per information received from IB, Home ministry, Power ministry etc. Security arrangements are requirement of the day as stressed by the IB and Power Ministry vide their letter dated 29.2.2019. Hence, a x-ray baggage scanning machine has been purchased and installed in Power House & Admin building.	As the expenditure is related to the security and safety of the generating station, and is based on the advice of the CISF (which is a statutory agency), which has been furnished by the Petitioner, the expenditure claimed is **allowed**	21.06
Total amount claimed	**21.07**			
Total amount allowed				**21.06**

93. Based on the above, the total additional expenditure of Rs. 1315.74 lakh (Rs. 89.68 + Rs 195.00 + Rs 515.00 + Rs.495.00 + Rs. 21.06) is allowed in 2019-20.

2020-21

94. The Petitioner has claimed projected additional capital expenditure of Rs.520.66 lakh in 2020-21, under the provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations, which are discussed under:

Sl. No.	Regulations		Amount *(Rs. in lakh)*
1	25(2)(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	25.96
2	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	166.52
3	26(1)(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;	328.18
5	**Total additional capital expenditure claimed as per Form 9A**		**520.66**

(a) Claims under Regulation 25(2)(a) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Purchase of four nos. HP air compressors against replacement of existing four nos. HP air compressors in powerhouse.	20.35	**Replacement Basis**: All four HP compressors installed in powerhouse for operation of Governing systems and Guide vane servomotor were installed with mother plant at time of commissioning i.e., 1987 and are now giving regular troubles as being very old. Hence 04 nos. compact efficient HP air compressors are required to be purchased against replacement of existing four nos. HP compressors are required for efficient	It is evident from the Petitioner's submission that the claim is for replacement of equipment as considered necessary for the functioning of plant. In view of this, the additional capital expenditure claimed is allowed. Further the Petitioner has also submitted gross block of the decapitalized asset and as considered as	20.35

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		operation of generating units.	decapitalization.	
Compression Testing Machine	5.61	**Replacement Basis**: Existing Machine was installed in 1987 during commissioning of quality control laboratory and is not reliable for testing of high strength concrete. Dam Safety Team has taken the note of the same and has recommended for purchase of new machine against the existing one.		5.61
Total amount claimed	**25.96**			
Total amount allowed				**25.96**

(b) Claims under Regulation 25(2)(c) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Replacement of Two nos. of submersible pumps for dam foundation & shear zone gallery	19.67	**Replacement Basis**: These pumps which were installed in 1985 in dam gallery are facing frequent breakdown and are beyond economical repair well as obsolete. Two nos. submersible pumps are to be purchased against the replacement of old VT pumps.	It is evident from the Petitioner's submission that the claim is for replacement of equipment as considered necessary for the functioning of plant. In view of this, the additional capital expenditure claimed is **allowed**. The corresponding decapitalization is considered under assumed deletion.	19.67
Replacement of 11kV	26.85	The old CTs are the ones that were installed with mother plant & are in	It is evident from the Petitioner's	26.85

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Generator CT 54 nos. with CT Ratio of 7500/5Amp & 17 nos. with CT Ratio of 4000/5 Amp		use since commissioning i.e., 1987 and their insulation has aged. The Current Transformers (CT) installed with mother plant has accuracy class of 1, and the insulation of the CT has weakened after operating for almost 20-30 years. Due to weakening of insulation, the failure of CT cannot be ruled out in future. Failure of protection class CT will lead to maloperation of sensitive numerical protection relay and unwanted tripping of Units/lines and loss of generation. The CT of 0.2S accuracy class is highly precise item. So, in order to adhere the guidelines of CEA, measuring C.T. of 0.2S Class needs to be installed in the Generator. To match with the latest technology and replacement of less accuracy CT, new CT having high accuracy are proposed to be purchased.	submission that the claim is for replacement of equipment as considered necessary for functioning of plant. In view of this, the additional capital expenditure claimed is allowed. Further the Petitioner has also submitted gross block of the asset decapitalized and the same has been considered as de-capitalization.	
Replacement of Instruments for concrete Dam & Rockfill dam against installed instruments.	120.00	**Replacement Basis:** Various instruments such as Electric - piezometers, joints meters, earth pressure cells, twin tube piezometers, plumb lines are installed at different locations of Dam structure during commissioning 1987 which are very old and most of the instruments are not in working condition. Installed instruments are mechanical in nature, hence the data is not accessible from remote end. Since SCADA has been implemented in Salal Power Station, instrumentations compatible with SCADA are necessary for installation against already installed instruments for smooth operation & maintenance of dam as well as maintaining proper records. The same has already been directed by Dam safety team in Inspection report.		120.00
Total amount claimed	**166.52**			
Total amount allowed				**166.52**

(c) Claims under Regulation 26(1)(a) and 26(1)(b) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Planning, design and construction of sewerage treatment plant along with laying of pipes, septic tank and manholes etc. wherever required at generating station.	194.37	The Petitioner has submitted that the Commission has allowed Rs. 225 lakh in 2016-17 vide its order dated 12.5.2015 in Petition No. 236/GT/2014 for the statutory compliance of pollution control as per the directions of the J&K state pollution control Board as regards connection of STP facility. Accordingly Planning, design and construction of sewerage treatment plant along with laying of pipes, septic tank and manholes etc. wherever required at generating station, complete treatment of sewerage was allowed. 3 nos STP of total installed capacity of 130KLD was capitalized in 2016-17 for Rs 36.75 lakh. In 2nd phase, Septic tank and STP platform has been constructed and capitalized for Rs.10.72 lakh in 2018-19. In 3rd phase Planning, Design and construction of STP along with laying of pipeline was executed with consultation with specialized agency and laying of sewerage pipeline and installation of 200KLD STP was completed & operational from Oct' 2020. Therefore, amount of Rs 194.37 lakhs and Rs 17.00 Lakhs in 2020-21 & 2021-22 has been capitalized respectively. Total expenditure Rs 258.84 Lakhs Delay is on account of delay in finalisation of Technical specifications and Tendering	It is noticed that the additional capital expenditure claimed for the asset/ work was earlier allowed vide order dated 12.5.2015 in Petition No. 236/GT/2014 for Rs. 225 lakh in 2016-17 under Regulation 14(3)(ii) of the 2014 Tariff Regulations. As the additional capital expenditure claimed for this asset/works had already been allowed during the earlier tariff period (under change in law event), we **allow** the expenditure claimed, under Regulation 26(1)(b) of the 2019 Tariff Regulations.	194.37

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		process and Lockdown due Corona Pandemic. Cost increased due to increase in PCC & RCC work of STP tanks (as per design drawing) which was less in estimate. Further, fencing/barricading work of plant area and cover up open RCC tanks of STP work was not envisaged earlier.		
Single phase Capacitor Voltage Transformer, 220 kV, ratio 220 kV /110 V	133.81	As per the CEA/NRPC norms it is mandatory to install CVT in each phase of the transmission line. There is provision for one no. CVT for each phase of the transmission line for voltage measurement in all six lines but presently there is only one CVT in each line. In case of failure of CVT in one phase, the voltage measuring function and protection of line shall be disabled. Further, also as per statutory requirement, metering input shall be from CVT of latest accuracy class, instead of from Bus VT and CVTs should be healthy round the clock, so that real time data can be available to RLDCs. As such, 12 more CVT for six lines required to be purchased for efficient operation of generating station.	It is evident that the additional capital expenditure claimed is for compliance to the existing law (CEA Regulations, 2010). In view of this, the additional capital expenditure claimed is allowed under Regulation 26(1)(a) of the 2019 Tariff Regulations. The de-capitalization amount submitted by the Petitioner has also been considered.	133.81
Total amount claimed	**328.18**			
Total amount allowed				**328.18**

95. Based on the above, the total additional expenditure of Rs.520.66 lakh (Rs 25.96 lakh + Rs. 166.52 lakh + Rs 328.18 lakh) is allowed in 2020-21.

2021-22

96. The additional capital expenditure claimed under the various provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations in 2021-22, which are discussed below:

Sl. No.	Regulations		Amount *(Rs in lakh)*
1	25(2)(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	44.77
2	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	2503.99
3	26(1)(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;	235.01
	Total additional capital expenditure claimed (as per Form 9A)		**2783.77**

(a) Claims under Regulation 25(2)(a) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Purchase of One number of motor boat	19.00	This is a replacement item. The existing boat were purchased at Salal power station in 2004 and are not in working condition. These motorboats play a very important role in topographical survey of Dam & Plunge pool and cleaning of trash at penstock gates. Therefore, one motorboat is required to be purchased against re-placement of existing boat for the power station.	Since the assets/ works are related to the safety & security in the operation of the plant, the expenditure is **allowed**. The corresponding de-capitalization is also allowed.	19.00
Purchase of Motor Operating Mechanism (MOM) for 245 KV Isolators at	25.77	This is a replacement item. The existing 245 kV isolators were installed during commissioning of Power Station in 1987. It is observed that auxiliary contacts of existing isolators	It is evident from the Petitioner's submission that the claim is for replacement of the equipment, as it is considered necessary for the efficient	25.77

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Switchyard		are not working properly because of ageing, rusting and corrosion. The gearbox of some isolators at times slips/jams which may bring the isolator in standstill at any position. The Motor Operating Mechanism (MOMs) is required to be replaced for proper operation and avoid problem in existing equipment. Further, Subsequent to implementation of SCADA proper functioning of auxiliary contacts are very crucial as isolators are being operated from remote. Further operation of LBB and Busbar protection also depends on the feedback of isolators from MOM. As such, it is proposed to procure and install Motor operated mechanism for 245kV isolator and earth switch.	functioning of plant. In view of this, the additional capital expenditure claimed is **allowed.** The Petitioner has also submitted the gross block of the asset and the same has been considered towards de-capitalization.	
Total amount claimed	**44.77**			
Total amount allowed				**44.77**

(b) Claims under Regulation 25(2)(c) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Automation of Plant for efficient operation and better Control with real time monitoring	309.00	The Petitioner has submitted that the Commission has allowed Rs 1024.30 Lakh (Rs 404.30 lakhs in 2017-18 and Rs. 620 lakh in 2018-19) vide its order dated 12.5.2015 in Petition No. 236/GT/2014. The generating station is one	It is noticed that the additional capital expenditure claimed for the asset/ work was earlier allowed vide order dated 12.5.2015 in Petition No. 236/ GT/ 2014 for Rs. 404.30	309.00

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
of Auxiliaries System (SCADA)		of the oldest, commissioned in 1987. The control protection system is ones installed during the commissioning period. During that time SCADA was not available and all old systems of auxiliaries were not seamless and integrated to monitor centrally. Accordingly, the proposal for upgradation for seamless integration in SCADA system took quite time and the same has been awarded in June '2017. M/s ABB has implemented the SCADA in all the 06 generating Units during 2018-19. The contract price of works was 1196.74 Lakhs. The amount increased due to inclusion of Generator protection relay which were needed to communicate on IEC 61850. An amount of Rs 887.74 lakhs capitalised in 2018-19. Balance works viz. LTA Controller, common controller etc. shall be completed in 2021-22. As no significant progress was done due to J&K state bifurcation after Aug'2019 and Covid-19 pandemic in 2020-21.	lakh in 2017-18 and Rs. 620.00 lakh in 2018-19. As the additional capital expenditure claimed for this asset/works had already been allowed during the earlier tariff period, we **allow** the expenditure claimed. The corresponding de-capitalization amounting to Rs. 82.77 lakh is also allowed as assumed deletions. This is subject to truing-up.	
220 V / 60 A Float cum 220 V / 120 A boost battery charger (Main & Standby)	15.34	The Petitioner has submitted that the Commission has allowed Rs 9.36 lakh in 2016-17 vide its order dated 12.5.2015 in petition no. 236/GT/2014 for replacement of existing Battery charger of Stage I was installed in 2002 and has become obsolete as its spare parts are not available in the market and required to be replaced by new one. Obsolesce certificate from the OEM is	It is noticed that the additional capital expenditure claimed for the asset/ work was earlier allowed vide order dated 12.5.2015 in Petition No. 236/ GT/ 2014 for Rs. 9.36 lakh in 2016-17. As the additional capital expenditure claimed for this asset/works had already been allowed during the earlier tariff	15.34

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		attached. DC system is critical part of Generating Unit. DC supply is required in all Units & auxiliaries of Powerhouse, Switchyard & Dam for their control and protection system. DC system is the lifeline of power station for protection system. The order for Rs.14.50 Lakh was placed on 31.03.2017 for supply of 220V & 48 Battery charger but the firm has not supplied, and award is under cancellation. New revised work/ tender shall be floated and asset is likely to be commissioned in year 2021-22 as the requirement is still required necessary as not fulfilled. Delay is on account of Corona /Covid pandemic.	period, we **allow** the expenditure claimed. The Petitioner has also submitted the gross block of the asset and the same has been considered towards de-capitalization.	
Battery Charger 48 V, 200 AH, 20+40 A Float Cum Boost Charger	8.85	The Petitioner has submitted that the Commission has allowed Rs 4.48 Lakh in 2016-17 vide its order dated 12.05.2015 in petition no. 236/GT/2014 for existing Battery charger was installed in 2002 and its spare parts are not available in the market. As the 48 V DC system is used in PLCC and essential for protection system of lines, 1 no. The NRPC in its recommendation stated that, there shall be redundancy in the 48V DC supply. As such, one more 48V battery bank is required. For charging the Battery Bank, 48V charger is required to be purchased. (NRPC recommendation is attached). The order for Rs.14.50 Lakh was placed on 31.03.2017 for supply of 220V & 48 Battery charger but the firm has not supplied and award is under	It is noticed that the additional capital expenditure claimed for the asset/ work was earlier allowed vide order dated 12.5.2015 in Petition No. 236/GT/2014 for Rs. 4.48 lakh in 2016-17. As the additional capital expenditure claimed for this asset/works had already been allowed during the earlier tariff period, we **allow** the expenditure claimed The Petitioner has also submitted the gross block of the asset and the same has been considered towards de-capitalization.	8.85

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		cancellation. New revised work/ tender shall be floated and asset is likely to be commissioned in year 2021-22 as the requirement is still required necessary as not fulfilled. Delay is on account of Corona /Covid pandemic.		
Purchase of Goods Cum Passenger elevator against existing elevator in power house	61.00	This is a replacement item. The existing elevator was installed in 2003-04. Due to aging and extensive use for movement of manpower and tools & tackles especially during annual/ capital maintenance of generating units, the elevator has undergone substantial wear & tear. Thereby, elevator was giving problem regularly. The service engineer called for rectification of fault and restoration of elevator, but the elevator service could not restore. Further, OEM of elevator ECE vide its letter declared that the existing elevator model has become obsolete. (Obsolesce declaration from M/s ECE attached). Replacement of Elevator is required for easy movement of manpower and machine. This will minimise the maintenance period and machine shutdown period and early restoration.	It is evident from the Petitioner's submission that the claim is for replacement of equipment as considered necessary for efficient functioning of plant. In view of this, the additional capital expenditure claimed is **allowed**. The Petitioner has also submitted gross block of the asset and the same has been considered towards de-capitalization.	61.00
Purchase of 10 nos. energy efficient submersible Pumps and Accessories for Salal Power Station and required Automation	709.80	This is a replacement item. The existing 10 225 HP pumps (VT pumps) installed with mother plant for dewatering and drainage sumps at various locations of Dam (2 nos.) and Power House (8 nos.), are very old. The existing old VT pumps have long shaft which leads to vibration and frequent problems. These pumps are	It is evident from the Petitioner's submission that the claim is for replacement of equipment as considered necessary for efficient functioning of plant. In view of this, the additional capital expenditure claimed is **allowed**. The Petitioner has also submitted	709.80

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		in frequent operation to control the seepage of water & dewatering of units during maintenance period in main power plant. In case these pumps are not operated timely/properly, it may lead to flooding in powerhouse apart from affecting the maintenance of the units during lean period due to inability of dewatering of the units. The complete overhauling of these pumps requires minimum 7- 10 days. Apart from high repair cost, more number of labours are required for the overhauling/repair of these pumps which has been drastically reduced in past 3-4 years due to superannuation of staff from power station. Therefore, these VT pumps need to be replaced with equivalent capacity efficient submersible pumps currently available in the market, so that dewatering of the seepage water can be done timely to avoid any flooding situation due to the same without causing any hindrance of work in power station.	gross block of the asset and the same has been considered towards de-capitalization.	
Restoration of installed capacity: Purchase of 2 nos. modified Spare runners	1400.00	**Spare Runners**: The generating station have six Generating units of 115 MW each. The Commission vide its order dated 12.05.2015 in petition no. 236/GT/2014 has approved replacement of old Runners with Modified Runners for restoration of Installed Capacity, all Runners are been replaced during 2017-18& 2018-19 and has achieved Installed Capacity of 690 MW. Further,	It is noticed that the additional capital expenditure for the asset/ work was allowed vide order dated 12.5.2015 in Petition No. 236/GT/2014 during the period. It is further noticed that the Commission had approved the capitalization of a spare runner during the	0.00

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		as per the Commission's order dated 30.05.2011 in petition no 60/2010, one spare Runner was allowed for capitalization as one runner is sufficient for 3-4 units, as there are 06 units in Salal Power Station two runners are proposed to be purchased during 2019-24. Old runners available at Salal PS are of no use and no modified spare runner is available at site. Salal is a run-off river plant and is in Silt prone area, so in order to carry out the maintenance and to cater any exigency during monsoon season, two modified spare runners are required to be purchased against replacement of the existing ones, so that there shall be no loss of generation during high inflow season in case Runner gets damaged due to high silt or any other reasons beyond control of Generator.	period 2009-14. Further, the Commission had already allowed one spare runner as additional capital expenditure in its order dated 30.5.2011 in Petition No 60/2010. Therefore, the claimed asset is as additional spare. As per Regulation 35(2)(c) of the 2019 Tariff Regulations, capital spares are to be allowed separately, on actual consumption basis, as part of the O&M expenses. Accordingly, the asset claimed by the Petitioner under this head, is **not allowed.** However, the Petitioner is granted liberty to analyse and claim the assets along with proper details/ justification at the time of truing up of tariff. In case, these assets forms part of the additional capital expenditure, then the same may be claimed under Regulation 25 or Regulation 26 of the 2019 Tariff Regulations. In case, the asset is actually consumed as capital spares, then the same may be claimed under Regulation 35(2)(c) of the 2019 Tariff Regulations, as part of the O&M expenses. In view of the above, the	

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
			corresponding decapitalization is also **not allowed.**	
Total amount claimed	**2503.99**			
Total amount allowed				**1103.99**

(c) Claims under Regulation 26(1)(a) and 26(1)(b) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Planning, design and construction of sewerage treatment plant along with laying of pipes, septic tank and manholes etc. wherever required at generating station.	17.00	The Petitioner has submitted that the Commission has allowed Rs. 225 Lakh in 2016-17 vide its order dated 12.5.2015 in Petition No. 236/GT/2014 for the statutory compliance of pollution control as per the directions of the J&K state pollution control Board as regards connection of STP facility. Accordingly Planning, design and construction of sewerage treatment plant along with laying of pipes, septic tank and manholes etc. wherever required at generating station, complete treatment of sewerage was allowed. 3 nos STP of total installed capacity of 130KLD was capitalized in 2016-17 for Rs 36.75 lakh. In 2nd phase, Septic tank and STP platform has been constructed and capitalized for Rs.10.72 lakh in 2018-19. In 3rd phase Planning, Design	It is noticed that the additional capital expenditure claimed for the asset/ work was earlier allowed vide order dated 12.5.2015 in Petition No. 236/GT/2014 for Rs. 225 lakh in 2016-17 under Regulation 14(3)(ii) of the 2014 Tariff Regulations. As the additional capital expenditure claimed for this asset/works had already been allowed, during the earlier tariff period under change in law event, we **allow** the expenditure claimed under Regulation 26(1)(b) of the 2019 Tariff Regulations.	17.00

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		and construction of STP along with laying of pipeline was executed with consultation with specialized agency and laying of sewerage pipeline and installation of 200KLD STP was completed & operational from Oct' 2020. Therefore, amount of Rs 194.37 lakhs and Rs 17.00 Lakhs in 2020-21 & 2021-22 has been capitalized respectively. Total expenditure Rs 258.84 Lakhs Delay is on account of delay in finalisation of Technical specifications and Tendering process and Lockdown due Corona Pandemic. Cost increased due to increase in PCC & RCC work of STP tanks (as per design drawing) which was less in estimate. Further, fencing/barricading work of plant area and cover up open RCC tanks of STP work was not envisaged earlier.		
40 Ton Gantry crane for Draft Tube Gates.	218.01	As per CEA norms, dedicated rope drum Hoist is required for each Draft Tube Gate. Since only one no. 45 Ton Gantry crane (35 years old) is installed for the operation of 12 nos. of Draft Tube gates, which is always very risky particularly during the Monsson season when the river discharge is high at Salal Power Station, one no. additional 45 Ton Gantry is required so as to provide smooth / reliable	As it is evident that the additional capital expenditure claimed is for compliance to the existing law (CEA Regulations, 2010), the additional capital expenditure claimed is allowed under Regulation 26(1)(a) of the 2019 Tariff Regulations. The de-capitalization amount as submitted by the Petitioner is also considered.	218.01

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		and risk-free operation of generating units of power station.		
Total amount claimed	**235.01**			
Total amount allowed				**235.01**

97. Based on the above, the total additional expenditure of Rs.1383.77 lakh (Rs 44.77 lakh + Rs 1103.99 lakh + Rs.235.01 lakh) is allowed in 2021-22.

<u>2022-23</u>

98. The additional capital expenditure claimed under the provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations is discussed below:

(Rs. in lakh)

Sl. No.	Regulations		Amount *(Rs in lakh)*
1	25(2)(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	768.19
2	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	1378.34
	Total additional capital expenditure claimed as per Form 9A		**2146.53**

(a) Claims under Regulation 25(2)(a) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Complete refurbishment of Silt Excluder Gallery Gates (06 nos. service gates & 06 nos. Emergency gates)	768.19	The generating station is the one of the oldest as well as the biggest Power Station commissioned in 1987. The under-Spillway sluice Gates of the Dam has been plugged because of the Indus water treaty. Now, due to plugging of the said gates, the performance of the power station totally depend upon	Since the assets/ works are related to the safety & security in the operation of the plant, the expenditure claimed is **allowed**. The corresponding de-capitalization is also allowed.	768.19

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		the Silt Excluder Gallery Gates (i.e. 6 nos. service gates & 6 nos. Emergency gates) during monsoon period. These Gates have been installed and commissioned at the time of commissioning of dam i.e. 35 years old. Now the condition of these gates including hydraulic Cylinder, power packs and 2nd stage Embedded parts etc. which are embedded in the concrete has deteriorated badly, which are not giving desired result and gates are always not aligned at their position. Existing gates and its hoist are damaged and requires replacement. To avoid the generation loss & for efficient operation of generating station, the replacement of 2nd embedded parts, Hydraulic cylinders, power packs, piping's and Skin plates of Gates are essentially required.		
Total amount claimed	**768.19**			
Total amount allowed				**768.19**

(b) Claims under Regulation 25(2)(c) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Replacement of Tata P&H crane 670 TC (70 Ton Capacity) Truck mounted crane.	436.97	The Petitioner has submitted that the Commission has allowed Rs. 436.97 lakh in 2017-18 vide its order dated 12.5.2015 in Petition No. 236/GT/2014 for replacement of existing Tata	It is noticed that the additional capital expenditure claimed for the asset/ work was earlier allowed vide order dated	436.97

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		P&H 670 TC having a capacity Crane of 70MT. After fixing of technical specification, the tender could not be finalised, therefore with consultation with CEP division, corporate office , Technical specification has been revised and again tender has been floated. Purchase is expected to be completed in 2022-23. Delay is due to revision in technical specifications, Corona lockdown.	12.5.2015 in Petition No. 236/GT/2014 for Rs. 436.97 lakh in 2017-18. As the additional capital expenditure claimed for this asset/works had already been allowed, during the earlier tariff period, we **allow** the expenditure claimed. The corresponding decapitalization is also allowed.	
Replacement of existing Excitation System of Stage I (U # 1,2 &3)	331.06	The item proposed to be modified as replacement of existing Excitation System of Stage-I (Units- 1,2 &3). The existing excitation system was installed and commissioned in 1987 & its retrofitting /replacement is essentially required due to obsolescence & to avoid unit outage / generation loss due to lack of spares / ageing of electronic components of the existing excitation system. M/s BHEL who is the OEM of excitation system, suggested in the Minutes of minute to replace the existing model by new upgraded model. Further, BHEL has declared the spare as obsolete it its mail/letter dated (Appendix 15) The new system shall be reliable, fault free and prevent loss of generation.	It is evident from the Petitioner's submission that the claim is for replacement of the equipment, as it considered necessary for efficient functioning of plant. In view of this, the additional capital expenditure claimed is **allowed**. The Petitioner has also submitted the gross block of the asset and the same has been considered towards de-capitalization.	331.06
Renovation & modernization of EOT Cranes	610.31	This is a replacement item. The existing EOT is very old commissioned in 1987 and fitted with old control and power supply system having	It is evident from the Petitioner's submission that the claim is for replacement of the	610.31

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		huge inefficient resistance boxes and exposed busbars which compromise safety of operator. It lacks VVVF drives based efficient operation as per latest technology. Due to the frequent operation of theses EOT cranes, a lot of problems are experienced in electrical systems during operations. There is wear and tear in maximum moving hardware systems such as gearbox, wheels, bearings, greasing lines which need to be repaired/replaced with new modified system. Most of the spares of the existing EOT crane are not available in the market and the same need to be purchased/manufactured on sample basis which takes time and extra cost. In order to attend to any eventuality and regular maintenance of generating units, healthy condition of the EOT is required on priority basis otherwise it may cause delay in attending any critical/regular maintenance of unit which may lead to generation loss. This will directly affect the beneficiaries.	equipment, as it considered necessary for efficient functioning of plant. In view of this, the additional capital expenditure claimed is **allowed**. The Petitioner has also submitted the gross block of the asset and the same has been considered towards de-capitalization.	
Total amount claimed	**1378.34**			
Total amount allowed				**1378.34**

99. Based on the above, the total additional expenditure of Rs. 2146.53 lakh (Rs 768.19 lakh + Rs. 1378.34 lakh) is allowed in 2022-23.

2023-24

100. The additional capital expenditure claimed under the provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations is discussed below:

(Rs in lakh)

Sl. No.	Regulations		Amount *(Rs in lakh)*
1	25(2)(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	132.16
2	25(2)(c)	The replacement of such asset or equipment is necessary on account of obsolescence of technology	1508.87
4	**Total Claimed**		**1641.03**

(a) Claims under Regulation 25(2)(a) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Purchase of 8 nos. of UGB & LGB Coolers each	7.93	The tubes of UGB and LGB coolers installed with mother plant in 1987 are chocked due to calcification & aging and the repair is uneconomical. 8 nos. of UGB & LGB coolers each are required to be purchased against replacement of existing ones.	It is evident from the Petitioner's submission that the claim is for replacement of equipment is considered necessary for the functioning of plant. As the old asset has completed its useful life, the additional capitalization is for replacement of the old asset. In view of this, the additional capital expenditure claimed is **allowed** along with its decapitalization.	7.93
Stator Air Coolers	77.31	The repair of existing coolers installed with mother plant in 1987 is uneconomical, as lot of tubes are chocked due to calcification & aging. One set comprising of 8 number stator coolers are required	It is evident from the Petitioner's submission that the claim is for replacement of equipment and is considered necessary for the efficient functioning of plant. As the old asset has completed its useful life, the additional	77.31

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		to be purchased against replacement of existing ones.	capitalization is for replacement of the old asset. In view of this, the additional capital expenditure claimed is **allowed.**	
Inspection Vehicle - Purchase of two nos. Innova or equivalent- Electrically Operated	46.92	The Global automobile industry is seeing a major shift towards e-mobility over the past decade. India also has big plans for the emerging Electric Vehicles and its technologies in the country. Accordingly, It is proposed to purchase two no of Electric vehicle for the movement of VIP/HOP. This will encourage electric vehicle use which is also enquired for environment protection.	Since the expenditure claimed is in the nature of O&M expenses, the same is **not allowed.** The corresponding decapitalization has also not been considered.	0.00
Total amount claimed	**132.16**			
Total amount allowed				**85.24**

(b) Claims under Regulation 25(2)(c) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Replacement of old ventilation ducts & associated auxiliaries of ventilation system	121.37	This is a replacement item. The existing ventilation system was commissioned in 1987 and is damaged in many areas of power station on account of prolonged use. Therefore, proper ventilation is being affected in the far end underground areas such as Generator floor, Turbine floor and draft tube gallery due to leakage in the system. Thus, fresh air is not reaching these areas which affects health of personnel's working in power station. The welding and other harmful gases are not properly exhausted from the underground area of the power house. Also, in the event of current pandemic situation, proper ventilation is very essential for curbing spread of epidemic amongst the workers which in turn may affect their health and efficiency. This in turn will create hurdle in meeting the maintenance/ operation targets leading to loss of generation due to inefficiency of working personnel. This will result to loss of generation to the beneficiaries.	It is evident from the Petitioner's submission that the claim is for replacement of equipment as considered necessary for the efficient functioning of plant. In view of this, the additional capital expenditure claimed is **allowed**. The Petitioner has also submitted the gross block of the asset and the same has been considered towards de-capitalization.	121.37
Automatic Weather station	8.86	Existing Automatic weather station is not working properly, and data logger is compatible only with Windows Vista and incompatible with latest windows / systems due to old software / application. Dam safety team has also suggested for taking necessary action in this regard. Hence new automatic weather station is necessary for purchase against the existing one.	Since the assets/ works are related to the safety & security in the operation of the plant, the expenditure is **allowed**. The Corresponding decapitalization as claimed by the Petitioner is also allowed.	8.86
Hydraulically operated Trash Rack cleaning Machine	1204.00	This is a replacement item. The existing Trash Rack Cleaning Machine is wire rope operated which cannot create pressure during downward motion and gets stuck in trash. Therefore, it is suggested that new Trash Rack Cleaning Machine which is operated through hydraulic	It is evident from the Petitioner's submission that the claim is for replacement of equipment as considered necessary for	1204.00

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		pressure is to be installed which can overcome this problem. Since, the trash racks gets choked in monsoon period due to trash, the installation of new trash rack cleaning machine can clear the trash rack and therefore reducing outages and increase the generation.	efficient functioning of plant. In view of this, the additional capital expenditure claimed is allowed. The Petitioner has also submitted gross block of the asset and the same has been considered towards de-capitalization.	
Central Greasing and lubrication Systems for six Turbine	174.64	This is a replacement item. The existing system is very old commissioned in 1999 and obsolete and is not working properly. Existing CGLS are facing frequent troubles and its spares parts are not available in the markets. The spares of said CGLS are obsolete in nature. Therefore, the wear and tear of the bushes of guide vanes will be increased which will lead to enhancement of maintenance cost of the bushes and bearing body of guide vanes which in turn will increase cost of maintenance and will affect the beneficiaries.	It is evident from the Petitioner's submission that the claim is for replacement of equipment as it considered necessary for efficient functioning of plant. In view of this, the additional capital expenditure claimed is allowed. The Petitioner has also submitted gross block of the asset and the same has been considered towards de-capitalization.	174.64
Total amount claimed	**1508.87**			
Total amount allowed				**1508.87**

101. Based on the above, the total additional expenditure of Rs. 1594.11 lakh (Rs. 85.24 lakh + Rs. 1508.87 lakh) is allowed in 2023-24.

De-capitalization

102. The Petitioner has claimed the de-capitalization, as per Form 9Bi, as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
98.68	38.43	294.11	206.00	193.85

103. The Petitioner has submitted the year of 'put to use' of the de-capitalized assets and accordingly, the de-capitalization value of the assets has been calculated. The total de-capitalization considered and allowed for the assets/works during the period 2019-24, as dealt with in the relevant paragraphs relating to the additional capital expenditure allowed are summarized below:

(Rs in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
98.68	38.43	118.06	206.00	190.33

Assumed Deletions

104. As per consistent methodology adopted by the Commission in its orders, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff provided that the capitalization of the said asset, is followed by de-capitalization of the gross value of the old asset. However, in certain cases, where the de-capitalization is proposed to be affected during the future years to the year of capitalization of the new asset, the de-capitalization of the old asset for the purpose of tariff, is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed Deletions".

105. The methodology of arriving at the fair value of the de-capitalized asset, i.e. de -escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. In the

present petition, the COD year of the generating station is during 1995-96. We have considered the value of asset under consideration, as on COD as 100 and de-escalated it @5% till the year during which additional capital expenditure is claimed against replacement of the same. The amount claimed for additional capital expenditure against this asset is multiplied by the derived ratio from above two values i.e. value in COD year divided by value in additional capitalized year to work out the de-capitalization amount.

106. The Petitioner has claimed additional capital expenditure for certain assets/ works, but has not furnished the de-capitalized value of the old, replaced assets/works. In this regard, the Commission in its order dated 26.5.2016 in Petition No. 264/GT/2014 has adopted the following methodology:

> *"It is observed that the petitioner has claimed Rs. 396.50 lakh against the capitalization for Installation of instrumentation system for Dam& Power house, Sliding Ring & Sealing Ring insert along with other accessories for Shaft Seal System, electrical drives for EOT Cranes and encoders for Radial Gates, Up gradation of Air gap and vibration monitoring system, Up gradation of protection system including replacement of numerical/ Electromagnetic relay for power house, Up-gradation of Software of automation i.e. CS-7 system and Up gradation of ARMAC System on replacement basis, during the period 2014-19. The petitioner has not indicated the gross value of the old assets replaced. Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e. escalation rate of 5 % per annum from the COD has been considered in order to arrive at the gross value of old assets in comparison to the cost of new assets. Gross value of the old assets considered for the purpose of tariff in respect of the admitted assets/works has been indicated against individual assets, as in para 15 above. However, the petitioner is granted liberty to furnish the actual gross value of replaced assets at the time of truing up exercise and the same will be considered in accordance with law."*

107. It is observed that the Petitioner, in the present petition, has not furnished the justified de-capitalization value for some of the assets/works as mentioned in the table below for the years 2019-20 and 2021-22 respectively. Accordingly, in terms of the above methodology, the value of 'assumed deletions' considered for the replaced asset for the purpose of tariff is detailed as under:

(Rs. In lakh)

Sl. No.	Details	Additions claimed for new asset on replacement	De-capitalization on value of old asset claimed	Assumed Deletions for old asset allowed
2019-20				
1	410601 Flap Type Gate	515.00	0.00	159.68
2021-22				
1	410711 Automation of Plant for efficient operation and better Control with real time monitoring of Auxiliaries System (SCADA)	309.00	0	82.77

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

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

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Additional capital expenditure allowed (a)	1315.74	520.66	1383.77	2146.53	1594.11
Less: De-capitalisation considered (b)	258.36	38.43	200.82	206.00	190.33
Net additional capital expenditure allowed (c)=(a)-(b)	**1057.38**	**482.23**	**1182.95**	**1940.53**	**1403.78**

Capital cost allowed

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

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	100014.91	101072.28	101554.51	102737.46	104677.99
Net Additional capital expenditure allowed during the year/ period	1057.38	482.23	1182.95	1940.53	1403.78
Closing Capital Cost	**101072.28**	**101554.51**	**102737.46**	**104677.99**	**106081.77**

Debt-Equity Ratio

110. 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."

111. Gross normative loan and equity amounting to Rs. 49772.18 lakh and Rs.50242.73 lakh, respectively, as on 31.3.2019, as considered in paragraph 52 above, has been considered as normative loan and equity as on 1.4.2019. The normative debt equity ratio of 70:30 has been considered for the admitted additional capital expenditure. The opening and closing debt and equity is as under:

Asset	As on 1.4.2019		Net additional capitalization during 2019-24				As on 31.3.2024	
			Additional Capital Expenditure		De-capitalization			
	Amount	%	Amount	%	Amount	%	Amount	%
Debt	49772.18	49.76	4872.56	70.00	446.13	49.91	54198.61	51.09
Equity	50242.73	50.24	2088.24	30.00	447.81	50.09	51883.16	48.91
Total	**100014.91**	**100.00**	**6960.81**	**100.00**	**893.94**	**100.00**	**106081.77**	**100.00**

Return on Equity

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

"30. Return on Equity

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

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

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

Provided further that:

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

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

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

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

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

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

31. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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

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

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

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

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

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

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the

income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis."

113. The Return on Equity (ROE) for the existing asset base and the additional capital expenditure allowed in this order for asset/work, within the original scope of work has been calculated by grossing up of base RoE, at MAT rate of 17.472%, as submitted by the Petitioner. Further, based on the additional capital expenditure which are beyond the original scope and allowed in this order, ROE has been calculated, considering the weighted average rate of interest of the relevant year. Accordingly, RoE has been worked out and allowed as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Equity (A)	50242.73	50353.45	50450.29	50698.86	51239.82
Addition due to additional capitalization within the original scope of work (B)	**239.90**	**116.06**	**349.73**	**643.96**	**478.23**
Less: Decapitalization allowed (C)	129.18	19.22	101.16	103.00	95.25
Closing Equity (D)=(A)+(B)-(C)	50353.45	50450.29	50698.86	51239.82	51622.80
Average Equity (E)=(A+D)/2	50298.09	50401.87	50574.57	50969.34	51431.31
Base rate (%) (F)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax rate (%) (G)	17.472%	17.472%	17.472%	17.472%	17.472%
Effective ROE rate (%) (H)	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity within the original scope of work (I)=(E)*(H)	**9446.99**	**9466.48**	**9498.92**	**9573.06**	**9659.83**
Addition due to additional capitalization beyond original scope of work					
Opening Equity (J)	0.00	154.82	194.96	260.36	260.36
Addition due to Capitalization beyond scope of work (k)=(B)-(C)	154.82	40.14	65.40	0.00	0.00
Closing Equity (L)=(J)+(K)	154.82	194.96	260.36	260.36	260.36
Average Equity (M)=(J+L)/2	77.41	174.89	227.66	260.36	260.36

	2019-20	2020-21	2021-22	2022-23	2023-24
Rate of return for additional capitalization beyond original scope (i.e. weighted average rate of interest approved by the Commission) (%) (N)	7.42%	7.42%	7.42%	7.42%	7.42%
Effective Tax rate (%) (O)	17.472%	17.472%	17.472%	17.472%	17.472%
Effective ROE rate (%) (P)	8.991%	8.991%	8.991%	8.991%	8.991%
Return on equity for additional capitalization beyond original scope (Q)=(M)*(P)	6.96	15.72	20.47	23.41	23.41
Total Return on Equity (R)=(Q)+(I)	**9453.95**	**9482.20**	**9519.39**	**9596.47**	**9683.24**

Interest on Loan

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

"32. Interest on loan capital:

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

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

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

115. The salient features for computation of interest on loan are summarized below:

a) The gross normative loan as on 31.3.2019 has been considered as on 1.4.2019;

b) Cumulative repayment as on 31.3.2019 has been considered as on 1.4.2019;

c) The repayments for the respective years of the period 2019-24 has been considered equal to the depreciation allowed for that year;

d) Interest on loan has been calculated on the normative average loan of the year by applying the last weighted average rate of interest approved by the Commission .

116. Accordingly, Interest on loan has been worked out as under:

(Rs in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross opening loan (A)	49772.18	50564.02	50909.27	51778.25	53177.82
Cumulative repayment of loan upto previous year (B)	47803.99	49596.94	50909.27	51778.25	53177.82
Net Loan Opening (C)=(A)-(B)	1968.20	967.09	0.00	0.00	0.00
Net Addition due to additional capital expenditure (D)	791.84	345.25	868.98	1399.57	1020.80
Repayment during the year (E)	1947.47	1335.86	994.75	1530.60	1143.76
Cumulative repayment adjustment on a/c of de-capitalization (F)*	154.51	23.53	125.78	131.02	122.96
Net Repayment (G)=(E)-(F)	1792.95	1312.33	868.98	1399.57	1020.80
Net Loan Closing (H)= (C+D-G)	967.09	0.00	0.00	0.00	0.00
Average Loan(I)=(C+H)/2	1467.64	483.54	0.00	0.00	0.00
Weighted Average Rate of Interest of loan (J)	7.42%	7.42%	7.42%	7.42%	7.42%
Interest on Loan (K=I*J)	**108.90**	**35.88**	**0.00**	**0.00**	**0.00**

Depreciation

117. 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."

118. Accordingly, the cumulative depreciation amounting to Rs.59234.05 lakh, as on 31.3.2019, has been considered for the purpose of tariff. The COD of the generating station is 1.4.1995. The project has completed 12 years of commercial operation in 2007-08 and the remaining depreciable value has been spread over the balance useful life of the generating station from 2008-09 onwards. In terms of the 2014 Tariff Regulations, the useful life of a hydro generating station was 35 years. However, the 2019 Tariff Regulations stipulates that the useful life of a hydro generating station is 40 years. Accordingly, the balance useful life of the generating station as on 1.4.2019, has been considered as 16 years in line with the 2019 Tariff Regulations. Accordingly, depreciation has been computed as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Average gross block (A)	100543.59	101313.40	102145.98	103707.72	105379.88
Land Value (B)	106.35	106.35	106.35	106.35	106.35
Depreciable Value (C=(A-B)*90%)	90393.52	91086.34	91835.67	93241.24	94746.18
Remaining Depreciable Value at the beginning of the year (D=C-Cum Dep at 'I' at the end of previous year)	31159.47	30059.34	28828.24	28300.42	27759.43
Balance useful Life (E)	16.00	15.00	14.00	13.00	12.00
Depreciation (F)	**1947.47**	**2003.96**	**2059.16**	**2176.96**	**2313.29**
Cumulative Depreciation at the end of the year (G=F+ Cum Dep at 'I' at the end of previous year)	61181.52	63030.96	65066.59	67117.77	69300.03
Less Adjustment on Account of Decapitalization (H)	154.51	23.53	125.78	131.02	122.96
Cumulative Depreciation at the end of the year (I)*=(G)-(H)	**61027.00**	**63007.43**	**64940.82**	**66986.75**	**69177.07**

**Cumulative Depreciation as on 31.3.2019 is Rs. 59234.05 lakh*

Operation & Maintenance Expenses

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

(2) Hydro Generating Station: (a) Following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 1.4.2019:

(Rs. in Lakh)

Particulars	***2019-20***	***2022-21***	***2021-22***	***2022-23***	***2023-24***
Salal	*19207.75*	*20123.29*	*21082.48*	*22087.39*	*23140.19*

120. The Petitioner has claimed total O&M expenses as under;

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Normative O&M expenses Regulation 35(2)(a) of the 2019 Tariff Regulations (a)	19207.75	20123.29	21082.48	22087.39	23140.19
Impact of pay revision of NHPC staff (b)	1987.14	2081.92	2181.23	2285.28	2394.28
Impact of pay revision of KV Staff (c)	58.32	61.10	64.01	67.06	70.26
Impact of Goods & Service Tax (d)	459.66	481.59	504.56	528.63	553.84
Total additional O&M Expenses (a+b+c+d)	**21712.86**	**22747.90**	**23832.28**	**24968.36**	**26158.58**

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

period 2019-24. Accordingly, the allowable impact of pay revision and GST, in addition to normative O&M expenses allowable, in accordance with Regulation 35(2)(a) of the 2019 Tariff Regulations are dealt in the following paragraphs.

Additional O&M expenses

122. The Petitioner has claimed additional O&M expenses on account of the impact of pay revision of NHPC staff and KV staff and impact of GST as under:

(Rs. in lakh)

Period	2019-20	2020-21	2021-22	2022-23	2023-24
Impact of pay revision of NHPC staff (a)	1987.14	2081.92	2181.23	2285.28	2394.28
Impact of pay revision of KV Staff (b)	58.32	61.10	64.01	67.06	70.26
Impact of Goods & Service Tax (c)	459.66	481.59	504.56	528.63	553.84

Impact of pay revision of NHPC staff

123. The Petitioner has claimed expenditure of Rs.1987.14 lakh as additional O&M expenses in 2019-20, due pay revision of the Petitioners staff, based on impact of pay revision of Petitioners staff during the year 2018-19. In this regard, it is pertinent to mention that in Petition No. 234/MP/2019 filed by the Petitioner seeking recovery of the additional O&M expenses for the generating station due to impact of wage/ pay revision for the 2014-19 tariff period, the Commission vide its order dated 10.11.2022 had allowed an amount of Rs. 1896.66 lakh as impact of wage revision in 2018-19. As such, the impact of wage revision in 2019-20 (after escalating @ 4.77% the above amount allowed in 2018-19) works out to Rs. 1987.14 lakh. Accordingly, the claim of the Petitioner for Rs 1987.14 lakh in 2019-20, is considered and the same is thereafter escalated @4.77% per annum, during the relevant years of the period 2019-24 and allowed as additional O&M expenses, due to impact of pay revision of the Petitioner's staff subject to true up as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1987.14	2081.92	2181.23	2285.28	2394.28

Impact of pay revision of KV staff

124. As regards the claim of Petitioner towards the impact of pay revision of KV staff, it is pertinent to mention that the Commission in its order dated 10.11.2022 in Petition No. 234/MP/2019, had allowed an amount of Rs. 85.30 lakh, as impact of wage revision of KV staff, in 2018-19. As such, the impact of wage revision in 2019-20 (after escalating @ 4.77% on the above allowed amount in 2018- 19) works out to Rs. 89.37 lakh. Accordingly, the claim of the Petitioner for Rs 58.32 lakh in 2019-20, is considered (being lower) and the same is thereafter escalated @4.77% per annum for the relevant years of the period 2019-24, and is accordingly allowed as additional O&M expenses due to pay revision of KV staff subject to true up as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
58.32	61.10	64.01	67.06	70.26

Impact of Goods & Service Tax

125. The Petitioner has claimed impact of GST on the basis of the actual impact due to GST incurred in 2018-19. It is noticed that the Petitioner has submitted the total impact of GST amount of Rs. 719.76 lakh for the period from 1.7.2017 to 31.3.2019, based on actual audited accounts for 21 months (Rs 281.02 lakh in 2017-18 and Rs. 438.73 lakh in 2018-19). On scrutiny of above details, it is noticed that the claim of Petitioner also includes impact of GST on security expenses. As per Regulation 35(2)(d) of the 2019 Tariff Regulations, Security Expenses shall be allowed separately after prudence check. As such, based on the actual audited GST for the period from 1.7.2017 to 31.3.2019, the same has been normalized (excluding impact on security expenses of Rs. 567.97 lakh) and amount of Rs. 90.88 lakh has been

worked out for 2019-20 (after escalating @ 4.77%). Accordingly, the base value of 2019-20 has been escalated @4.77% and the GST impact has been worked out and allowed for the 2019-24 tariff period, as per note under Regulation 35(2)(a) of the 2019 Tariff Regulations as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
95.21	99.75	104.51	109.50	114.72

Security Expenses

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

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

127. The Petitioner has also claimed Security expenses as part of O&M expenses in terms of Regulation 35(2)(d) of the 2019 Tariff Regulations. Further, the Petitioner has submitted that based on the actual security expenses incurred during 2018-19, year-wise escalation rate of 4.77% has been considered to arrive at the security expenses for the 2019-24 tariff period. Accordingly, the estimated security expenses claimed by the Petitioner are as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2314.03	2424.41	2540.05	2661.21	2788.15

128. The Petitioner has claimed actual security expenses of Rs.2208.68 lakh in 2018-19 and has escalated the same at the rate of 4.77%, to work out the projected security expenses from 2019-20 onwards. Considering the security requirements of the generating station, we allow the projected security expenses as claimed by the Petitioner for the 2019-24 tariff period. The Petitioner is however, directed to submit the actual security expenses incurred, duly audited, at the time of truing up of tariff.

Accordingly, the estimated security expenses allowed during 2019-24 has been allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2314.03	2424.41	2540.05	2661.21	2788.15

Capital Spares

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

Summary of O&M expenses

130. Accordingly, the O&M expenses allowed for the generating station is summarized as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses Regulation 35(2)(a) of the 2019 Tariff Regulations (a)	19207.75	20123.29	21082.48	22087.39	23140.19
Impact of pay revision of NHPC staff (b)	1987.14	2081.92	2181.23	2285.28	2394.28
Impact of pay revision of KV Staff (c)	58.32	61.10	64.01	67.06	70.26
Impact of Goods & Service Tax (d)	95.21	99.75	104.51	109.50	114.72
Total O&M Expenses allowed (a+b+c+d)	**21348.41**	**22366.06**	**23432.23**	**24549.23**	**25719.45**
Security Expenses allowed separately	2314.03	2424.41	2540.05	2661.21	2788.15

Interest on Working Capital

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

> *"34. Interest on Working Capital: (1) The working capital shall cover*
>
> *(c) For Hydro generating station (Including Pumped Storage Hydro Generating Station) and transmission system:*

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

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

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

Working capital for Receivables

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
4472.58	4621.21	4769.75	4952.53	5132.14

Working capital for Maintenance Spares

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
3549.37	3718.57	3895.84	4081.57	4276.14

Working capital for O&M expenses

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1971.87	2065.87	2164.36	2267.54	2375.63

Rate of Interest of working Capital

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

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

136. In terms of Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital shall be considered as 12.05% (i.e. One-year SBI MCLR of 8.55% as on 1.4.2019 plus 350 bps) for the tariff period 2019-24. Further, the aforesaid rate of interest is subject to truing up based on one-year SBI MCLR as on 1st April of the respective years of 2019-24 tariff period. The tariff of the generating station is being determined in the year 2022-23 and one-year SBI MCLR as on 1.4.2020 (i.e. 7.75%),1.4.2021 (i.e. 7%) and 1.4.2022 (i.e.7%) is available. Hence, in order to safeguard against additional interest burden due to excess/ under recovery of tariff, we deem it prudent to consider the rate of interest on working capital for the year 2019-20 as 12.05%, for 2020-21 as 11.25% (i.e. One year SBI MCLR of 7.75% as on 1.4.2020 plus 350 bps) for 2021-22 as 10.50% (i.e. One year SBI MCLR of 7.00% as on 1.4.2021 plus 350 bps) and for the period 2022-24 as 10.50% (i.e. One year SBI MCLR of 7% as on 1.4.2022 plus 350 bps), subject to truing up. Accordingly, interest on working capital is computed as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Working capital for O&M expenses, including security expenses forone month	1971.87	2065.87	2164.36	2267.54	2375.63
Working capital for Maintenance Spares @15% of O&M expenses	3549.37	3718.57	3895.84	4081.57	4276.14
Working capital for Receivables, equivalent to 45 days of AFC	4472.58	4621.21	4769.75	4952.53	5132.14
Total Working capital	**9993.82**	**10405.65**	**10829.95**	**11301.63**	**11783.92**
Rate of interest (%)	12.050	11.250	10.500	10.500	10.500
Interest on Working capital for	**1204.26**	**1170.64**	**1137.14**	**1186.67**	**1237.31**

Annual Fixed Charges

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

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1947.47	2003.96	2059.16	2176.96	2313.29
Interest on loan	108.90	35.88	0.00	0.00	0.00
Return on Equity	9453.95	9482.20	9519.39	9596.47	9683.24
O&M Expenses	21348.41	22366.06	23432.23	24549.23	25719.45
Security Expenses	2314.03	2424.41	2540.05	2661.21	2788.15
Interest on Working capital	1204.26	1170.64	1137.14	1186.67	1237.31
Total	**36377.01**	**37483.15**	**38687.98**	**40170.54**	**41741.44**

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

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

Normative Annual Plant Availability Factor (NAPAF)

139. Clause (A)(4) of Regulation 50 of the 2019 Tariff Regulations provides for the Normative Annual Plant Availability Factor (NAPAF) for hydro generating stations already in operation. As per above Regulation, NAPAF of 64% is allowed for the instant generating station.

140. The Respondent PSPCL has submitted that as per the past data for the 2014-19 tariff period, the generating station has achieved much higher PAF consistently, and therefore, fixing the NAPAF at 64%, is relatively low and unfair as it adds burden on the beneficiaries as over declaring the availability entitles the Petitioner for incentive. The Petitioner has clarified that the normative PAF for the generating station, was specified by the Commission, based on the past performance of the plant and considering the fact that the performance of the generating station was affected by silt.

141. The matter has been examined. As stated, the Commission has notified the NAPAF of the generating station as 64% under Regulation 50(A)(4) of the 2019 Tariff Regulations, after extensive stakeholders' consultations. The submissions of

the Respondent PSPCL, if accepted, would amount to review of the said regulation, which is not permissible in the tariff determination proceedings. Similar contention of the Respondent in respect of the period 2014-19 has been rejected in paragraph 79 of this order. Accordingly, the NAPAF of 64%, as claimed by the Petitioner, which is in accordance with Regulation 50 (A) (4) of the 2019 Tariff Regulations, is allowed.

Design Energy (DE)

142. The Commission in its order dated 12.5.2015 in Petition No. 236/GT/2014 had considered the annual Design Energy (DE) of 3082 Million units (MU) for this generating station. Accordingly, the same has been considered for this generating station for the 2019-24 tariff period as per month-wise details as under:

Months	Design Energy (MU)
April	189.52
May	324.94
June	471.9
July	487.70
August	487.70
September	424.30
October	229.61
November	128.63
December	94.57
January	60.69
February	68.97
March	113.47
Total	**3082.00**

Application Fee and Publication Expenses

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

144. Similarly, RLDC fees & charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2015, shall be recovered from the beneficiaries. In addition, the Petitioner is entitled recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2019 Tariff Regulations.

145. Petition No. 229/GT/2020 is disposed of in terms of the above.

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