CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 322/GT/2018

Coram:
Shri P.K.Pujari, Chairperson
Dr. M.K. Iyer, Member
Shri I.S.Jha, Member

Date of Order: 5th of February, 2020

In the matter of

Approval of tariff of Sewa-II Power Station (120 MW) for the period 2014-19

And

In the matter of

NHPC Ltd
NHPC Office Complex,
Sector-33, Faridabad
Haryana-121003 **…Petitioner**

Vs

1. Punjab State Power Corporation Ltd.
The Mall, Near Kali Badi Mandir,
Patiala – 147001

2. (a) Dakshin Haryana Bijili Vitaran Nigam Ltd.
(b) Uttar Haryana Bijili Vitaran Nigam Ltd
Shakti Bhawan, Sector-6,
Panchkula - 134109

3. Uttar Pradesh Power Corporation Ltd.
Shakti Bhavan, 14, Ashok Marg,
Lucknow – 226001

4. Engineering Department
UT Secretariat, Sector 9D,
Chandigarh-160009

5. BSES-Rajdhani Power Ltd.
BSES Bhawan, Nehru Place,
New Delhi – 110019

6. BSES-Yamuna Power Ltd.
Shakti Kiran Building,
Karkardooma, Delhi-110072

7. Tata Power Delhi Distribution Ltd.
Hudson Lane, Kingsway Camp,
New Delhi-110009

8. Uttaranchal Power Corporation Ltd.
Urja Bhawan, Kanwali Road,
Dehradun-248001

9. Jaipur Vidyut Vitaran Nigam Ltd.
Vidut Bhavan, Janpath, Jyoti Nagar,
Jaipur-302005

10. Jodhpur Vidyut Vitaran Nigam Ltd.
New Power House, Industrial Area,
Jodhpur-342003

11. Ajmer Vidyut Vitaran Nigam Ltd.
Old Power House, Hatthi Bhatta,
Jaipur Road, Ajmer-305001

12. Power Development Department
Government of J&K, New secretariat,
Jammu-180001 **... Respondents**

Parties Present:

Shri Rajiv Shankar Dwivedi, Advocate, NHPC
Shri Piyush Kumar, NHPC
Shri M.G.Gokhale, NHPC
Shri V.N.Tripathi, NHPC
Shri Dhanush C.K, NHPC
Shri R.B.Sharma, Advocate, BRPL & BYPL
Shri Mohit K. Mudgal, Advocate, BRPL & BYPL
Ms. Sanya Sood, Advocate, BRPL & BYPL
Shri Sanjay Srivastava, BRPL

ORDER

The Petitioner, NHPC has filed this petition for approval of tariff of Sewa-II Hydroelectric Project (3 x 40 MW) (hereinafter referred to as 'the generating station') for the period 2014-19, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 ('the 2014 Tariff Regulations').

Background

2. The generating station located at Kathua, in the State of J&K, has been designed as a run of the river scheme with small pondage with the net head of 560

metres. The generating station comprises of three units of 40 MW each, with annual design energy of 533.53 MUs. As per the National Tariff Policy, 13% of the energy generated is to be made available to the home State as free power. The original date of completion of the project as per Govt. of India approval letter No. 26/1/2002-DO (NHPC) dated 9.9.2003, was four 4 years from the date of approval. Accordingly, the expected date of completion of the project was 9.9.2007. The original project cost approved by the Govt. of India as per letter No. 26/1/2002-DO (NHPC) dated 9.9.2003 was ₹66546 lakh, including IDC of ₹6842 lakh at September, 2002 price level with a debt equity ratio of 70:30. As per the Revised Cost Estimate (RCE) submitted to the Govt. of India, the expected date of commercial operation was October 2009, and the anticipated expenditure was ₹101898 lakh at February, 2009 price level. The generating station has been declared under commercial operation as under:

Units	COD
I	29.6.2010
III	2.7.2010
II / Generating Station	24.7.2010

3. The Commission by order dated 6.9.2010 in Petition No. 57/2010 had determined the annual fixed charges of the generating station for the period from 1.3.2010 to 31.3.2014 based on the capital cost of ₹98361.36 lakh (including IDC & FC but excluding un-discharged liability of ₹6674.59 lakh) as on 1.3.2010. Subsequently, the Petitioner filed Petition No. 251/GT/2014 for truing-up of the capital cost as on COD of the units/generating station for the period from 29.6.2010 to 31.3.2014 and for determination of tariff for the period 2014-19. However, the Commission vide its order dated 27.1.2017 disposed of the said petition granting liberty to the Petitioner to approach the Commission, after approval of RCE by the Central Government. Thereafter, by communication dated

3.7.2018, the Petitioner was advised to file tariff petitions in respect of their generating stations, by enclosing (i) Board approval of the actual cost of the Company and (ii) at least one of the documents namely (a) the DIA report or (b) cost approved by CEA/PIB or (c) cost approved by CCEA.

4. In terms of the liberty granted by the Commission vide order dated 27.1.2017 read with the communication dated 3.7.2018, the Petitioner has filed the present petition for determination of tariff of the generating station for the period 2014-19 along with Petition No. 281/GT/2018 for revision of tariff of the generating station for the period from 29.6.2010 to 31.3.2014. The Petitioner has submitted that the Board of Directors of the Petitioner Company in its 417th meeting on 10.8.2018 had approved the RCE of the project at ₹110882 lakh. The Petitioner has also submitted that the completion cost has been worked out as ₹110882 lakh (at July, 2010 Price Level), excluding contingent liabilities of ₹10274 lakh and the same has been appraised by CEA, Standing Committee and PIB, for approval by MOP, GOI. The Commission vide its order dated 5.2.2020 in Petition No. 281/GT/2018 had revised the tariff of the generating station for the period 2010-14 after truing-up exercise, as under:

(₹ in lakh)

	29.6.2010 to 1.7.2010 (One unit)	**2.7.2010 to 23.7.2010** (Two units)	**24.7.2010 to 31.3.2011** (all three units)	**2011-12**	**2012-13**	**2013-14**
Return on Equity	20.68	302.14	5188.93	7539.00	6565.12	7052.24
Interest on Loan	19.37	282.80	4441.38	5960.83	5667.06	5592.74
Depreciation	15.05	219.92	3778.49	5553.38	5635.12	5707.58
Interest on Working Capital	1.38	18.91	319.44	461.94	445.86	461.34
O & M Expenses	5.93	86.57	1539.81	2367.24	2502.65	2645.80
Total	**62.42**	**910.35**	**15268.04**	**21882.39**	**20815.80**	**21459.70**

5. The present petition has been filed by the Petitioner based on the actual capital expenditure as per audited books of accounts for the period 2014-18 and projected additional capital expenditure for 2018-19. Accordingly, the capital cost and the annual fixed charges claimed by the Petitioner for the period 2014-19 are summarised as under:

Capital cost

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost	114285.94	115862.14	116106.84	116129.22	116187.31
Net addition (as per balance sheet)	1267.60	143.47	168.52	45.07	176.86
De-capitalization (as per balance sheet)	0.10	2.00	176.16	5.47	0.00
Discharge of liability (as per balance sheet)	308.70	103.23	30.02	18.49	5.74
Closing Capital Cost	**115862.14**	**116106.84**	**116129.22**	**116187.31**	**116369.91**

Annual Fixed Charges

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5833.14	5875.78	5884.76	5882.73	5891.02
Interest on Loan	5572.82	5030.55	4126.03	3082.77	2661.19
Return on Equity	7280.39	7355.74	7306.03	7357.70	7336.72
Interest on Working Capital	770.28	783.12	785.46	788.29	805.71
O & M Expenses	6157.56	6566.67	7002.96	7468.24	7964.43
Total	**25614.19**	**25611.85**	**25105.24**	**24579.73**	**24659.06**

6. The Petition was heard on 6.2.2019 and the Commission after hearing the parties, vide ROP had sought certain additional information. Thereafter the Petition was heard on 14.5.2019 and Petitioner was directed to file certain additional information. Subsequently, the matter was heard on 27.8.2019 and the Commission, after directing the Petitioner to file additional information, reserved its order in the Petition. In response, the Petitioner has filed the additional information with copy to the Respondents. Reply has been filed by the Respondent UPPCL vide its affidavit dated 31.10.2018 and Respondent BRPL vide affidavit

dated 12.7.2019. Rejoinder to the said replies has been filed by the Petitioner vide its affidavit 7.2.2019 and 24.7.2019 respectively.

Capital Cost

7. 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 this regulation shall form the basis of determination of tariff for existing and new projects. Clause (3) of Regulation 9 provides as under:

> *"9(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) xxxx*
> *(c) xxxx"*

8. The capital cost as on 31.3.2014 considered by the Commission in order dated 5.2.2020 in Petition No. 281/GT/2018 is ₹112981.73 lakh. This has been considered as the opening capital cost as on 1.4.2014 for determination of tariff of the generating station for the period 2014-19.

Additional Capital Expenditure for 2014-19

9. Clause (3) of Regulation 7 of the 2014 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including any additional capital expenditure already admitted upto 31.3.2014 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2014-19.

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

> *"14 (1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*
>
> *(i) Un-discharged liabilities recognized to be payable at a future date;*

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;

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

(v) Change in law or compliance of any existing law:

14(2) The capital expenditure incurred or projected to be incurred in respect of the new project on the following counts within the original scope of work 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) Deferred works related to ash pond or ash handling system in the original scope of work; and

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

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;

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

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

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

(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets,

report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;

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

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

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

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

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

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

11. The Petitioner, in Form 9C, has submitted the reconciliation of the actual additional capital expenditure claimed as against the capital additions as per books of accounts for the period 2014-18, as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18
Closing Gross Block	110590.44	110835.91	110973.82	111063.20
Less: Opening Gross Block	109182.58	110590.44	110835.91	110973.82
Total additions as per books	1407.86	245.46	137.92	89.38
Net additions pertaining to instant project / Unit / Stage	1407.86	245.46	137.92	89.38
Less: Exclusions (items not	124.81	95.77	16.49	41.74

allowable / not claimed)				
Net additional capital expenditure claimed	1283.05	149.69	121.43	47.64
Less: Assumed Deletion	0.00	0.00	0.00	0.00
Net Additional Capital Expenditure after adjusting assumed deletion	**1283.05**	**149.69**	**121.43**	**47.64**
Un-discharged liability *(as per Form-1)*	15.55	8.21	129.07	5.74
Net additional capital expenditure claimed after excluding the un-discharged liability above	**1267.50**	**141.48**	**(-) 7.64**	**41.90**

12. The year-wise breakup of the actual capital expenditure for 2014-18 and the projected additional capital expenditure for 2018-19 (*including discharge of liabilities and excluding un-discharged liabilities*) claimed by the Petitioner, as per Form1(i), for the period 2014-19, in terms of Regulation 14(3) of the 2014 Tariff Regulations are as under:

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Add: Addition during the year / period	1267.60	143.47	168.52	45.07	176.86	**1801.52**
Less: De-capitalization during the year/ period	0.10	2.00	176.16	5.47	0.00	**183.73**
Add: Discharges during the year / period	308.70	103.23	30.02	18.49	5.74	**466.18**
Net additional capital expenditure	**1576.20**	**244.70**	**22.38**	**58.09**	**182.60**	**2083.97**

13. It is noticed that there is difference of ₹2.28 lakh in the net additional capital expenditure in 2017-18 as per reconciliation of the additional capital expenditure with books of account and the additional capital expenditure claimed as per Form1(i). This is on account of 'assumed deletions' claimed by the Petitioner in 2017-18, which has been dealt with under the head 'Assumed Deletions'.

Submissions of Respondents

14. The Respondent UPPCL has submitted that the RCE recommended by PIB to MOP, GOI is ₹110882 lakh, whereas the Petitioner has shown the total expenditure

of ₹116369.91 lakh in 2018-19. Accordingly, the Respondent has prayed that the Petitioner may be directed to justify the same and submit the revised RCE which would include the cost overrun of ₹54.88 crore. The Respondent BRPL has submitted that the claim for additional capitalization under the provisions of Regulation 14(3) of the 2014 Tariff Regulations are liable to be rejected on prudence check, as the details furnished by the Petitioner are sketchy and do not justify the expenditure incurred by the Petitioner for the following reasons:

(i) Regulation 14(3)(i) deals with the 'liabilities to meet the award of arbitration or for compliance of the order or decree of a Court of Law'. The Petitioner had included the adjustment of various advances made and the claim of State Authorities which is not permissible under this head.

(ii) Regulation 14(3)(iii) deals with the expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies or statutory authorities responsible for national security/ internal security. The Petitioner had included the amount under this head which is not permissible, except installation of CCTV and construction of the boundary wall which has been advised by the CISF.

(iii) Regulation 14(3)(v) deals with any liability for works executed prior to the cut-off date. Under this regulation, the emphasis is that the work is executed before the cutoff date but the liability or part liability is discharged after the cut-off date. In all such cases whether related to contractual disputes or on receipt of the utilization certificate, the Petitioner is required to certify that the work was completed before the cut-off date and the liability or part liability is discharged is discharged now.

(iv) Regulation 14(3)(viii) deals with any necessary expenditure arising out of the damage caused by natural calamities and expenditure necessary for successful and efficient plant operation after the cutoff date. The Petitioner has been claimed additional capitalization under this head. However, there is no whisper of the fact that any damage has been caused by natural calamities and due to geological reasons after the cutoff date due to which additional work has become necessary for successful and efficient plant operation. Accordingly, the claim of the Petitioner under this clause is liable to be rejected.

Rejoinder of Petitioner

15. In response, the Petitioner has clarified that the total expenditure of

₹116369.91 lakh up to the year 2018-19 includes normative IDC of ₹5377.33 lakh and additional capital expenditure in terms of Regulation 14(3). The Petitioner has submitted that it has furnished all documents in accordance with the provisions of the 2014 Tariff Regulations. The Petitioner has further submitted that the actual work in respect of additional capitalization was completed prior to the cut-off date and forms part of the original scope of work of the project for which proper justification has been furnished.

Analysis & Decision

16. It is observed that in terms of Commission's order dated 5.2.2020 in Petition No. 281/GT/2018, an amount of ₹617.58 lakh is only available for consideration of the additional expenditure towards balance works/assets within the original scope of work of the project as on 31.3.2014. As such, the additional capital expenditure including discharge of liabilities for works/assets within the original scope of work of the project claimed for the period 2014-19 shall be restricted to the amount of ₹617.58 lakh. Based on the submissions of the parties and documents available on record, we now examine the additional capital expenditure claimed by the Petitioner, as stated in the subsequent paragraphs.

2014-15

17. The Petitioner has claimed actual additional capital expenditure of ₹1267.60 lakh in 2014-15. Based on the justification furnished, the admissibility of the claim, based on prudence check, is as under:

(₹ in lakh)

Sl. No.	Head of Work / Equipment	Amount claimed	Justification/ Regulation under which claimed	Remarks for admissibility
1	Soiling metaling & black topping of 2 km left bank road	64.42	Work had been approved by the Commission during the period 2009-14 for ₹1 crore. Accordingly, the work was awarded in different packages in 2012 & 2013. An amount of ₹29.66 lakh has already	This work was allowed in 2010-11 by Commission's order dated 6.9.2010 in Petition No.

			been capitalized in 2012-13 and balance amount of ₹64.42 lakh has been capitalized in 2014-15, as per completion of respective packages. The total capital cost works out to ₹94.08 lakh.	57/2010 and Commission's Order dated 5.2.2020 in Petition no. 281/GT/2018. Hence **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. However, considering the nature of expenditure claimed, the same is accounted in the balance limit of the capital cost available within the original scope of work of the project. Accordingly, the balance limit for assets/works within the original scope of work of the project after considering this expenditure works out as ₹553.14 lakh (₹617.56 lakh - ₹64.42 lakh)
2	Adjustment of advance on receipt of utilization certificate from Divisional forest officer, Billawar	5.28	An amounting of ₹10.50 lakh was given to Divisional Forest Officer, Billawar (S023310) on 9.10.2013 & 4.4.2014 as advance for rehabilitation of forest area near PH at Mashka & overhead tunnel. An amount of ₹5.28 lakh & ₹0.64 lakh, have been capitalized in 2014-15 & 2015-16 respectively on receipt of utilisation certificates. The expenditure is within the original scope of work and is part of RCE.	The expenditure claimed is in respect of works within the original scope of work of the project and is within the ceiling limit of the RCE considered by the Commission. Hence, **allowed** Accordingly, the balance cost available in respect of assets/ works within the original scope of work, after considering this expenditure is ₹**547.86lakh** (₹553.14lakh- ₹5.28 lakh)

3	Construction of 16 nos. B type Qtrs for CISF including wiring work & development of area around qtrs.	325.28	An amount of amount of ₹120 lakh was already approved by CERC during 2010-11 (Tariff Period 2009-14). The amount was proposed on estimation basis. Due to delay in tendering process, work was awarded in 2013. The increase in expenditure is based on price discovered through open competitive tendering. After completion of work, actual expenditure of ₹333.85 lakh was capitalized in 2014-15.	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
4	Supply & Installation of Sewage treatment plant for Mashka & Sarthali	32.18	Commission had approved an amount of ₹60 lakh for installation of five STPs at different locations of Power station during 2010-11 (tariff period 2009-14). The work involving supply, erection/ civil-works and construction of sheds for covering STPs was executed in different packages. One STP was purchased & capitalized with an amount of ₹10.89 lakh in 2013-14 (refer item no. B1). For balance 4 STPs, expenditures of ₹34.53 lakh & ₹7.01 lakh have been incurred in 2014-15 & 2015-16 respectively. Total expenditure of ₹52.43 lakh has been incurred against the approval of ₹60.00 lakh.	The expenditure claimed is in respect of works within the original scope of work of the project and is within the ceiling limit of the RCE considered by the Commission. Hence, **allowed** Accordingly, the balance cost available in respect of assets/ works within the original scope of work, after considering this expenditure is ₹514.47 lakh (₹547.86 lakh - ₹32.18 lakh - ₹0.50 lakh - ₹0.71 lakh)
5	Shortcreting work at DAM (difference amount of material issued to contractor)	0.50	The expenditure on account of shortcreting work at dam was within original scope as per RCE. An amount of ₹47.71 lakh has been capitalized during 2013-14 (refer Item C10). Differential amount of ₹0.50 lakh, as per reconciliation of material issued to contractor has been capitalized in 2014-15.	
6	Adjustment of adv. Against utilization certificate of Compensation of water mills located at Dharore & Fatehpur	0.71	An amount of ₹717932/- was given to SDM, Bani, J&K on 5.10.2012 as an advance for compensation of water mills located at Dharore & Fatehpur. The amounts of ₹0.71 lakh & ₹0.01 lakh (have been capitalized in 2014-15 & 2015-16 respectively on receipt of utilization certificates. The expenditure is within of original scope of work and part of RCE.	

7	Claim for compensation beyond the original completion of contract	797.98	The E&M works of Sewa-II (Major Contract: Lot-IV) was awarded to M/S. BHEL on 23.6.2004 with completion period of 38 months i.e. the work was to be completed before 22.8.2007. Due to unavoidable reasons, delay occurred in completion of the project and the project was finally commissioned on 24.7.2010. On account of delay, M/s BHEL has raised the following claims:- a) Insurance claim along with overhead of ₹1,1802,429/- b) Bank guarantee charges along with 10% overhead charges ₹6,63,293/- c) Compensation for extended period for ₹4,03,14,436 ii) Warrantee charges for supply contract & erection contract ₹6,13,72,075/-. Total consolidated claim raised by the contractor was for ₹11,41,52,233/-.After deliberations of various committees, claim amounting to ₹7,99,97,337/- has been found payable, as per contract provisions and paid to BHEL after approval of management in December-2014. The expenditure on account of this item is a part of RCE.	Since the time overrun in case of this generating station has been condoned in order dated 5.2.2020 in Petition No. 281/GT/2018, the expenditure is **allowed.** The expenditure allowed is accounted within the balance capital cost limit for assets/works within the original scope of work of the project. The balance amount available in respect of assets/ works within the original scope of work, after considering the claims in 2014-15 under this head is ₹514.47 lakh. Accordingly, the expenditure allowed for this asset/work is restricted to ₹514.47 lakh. As such, the balance expenditure available in respect of assets/ works within the original scope of work is **'nil'**.

8	Connecting Dam & valve house with Power House, through Telemetry & VSAT	2.75	In Sewa-II Power Station, Distances of Dam-Site & Valve-house from Power-house are approx 45km and 25 km respectively. Monitoring/ Data acquisition of various parameters from both the locations (for example reservoir-level, BFV-open/close status, BFV OPU status etc.) is very important for smooth O&M of Power-plant. Earlier data from dam was obtained through telephone, while data from Valve-house was obtained through OFC and frequent problems were faced in getting the data. For reliable, real-time & accurate collection of data automatically, 2 data-links for each site were considered necessary. Accordingly, new VSAT and telemetry links were planned for Dam, while additional telemetry link in addition to existing OFC was planned for Valve-house. The work/ required purchases have been executed in phased manner and accordingly expenditures of ₹2.75 lakh, ₹7.62 lakh & ₹4.77 lakh have been incurred in 2014-15, 2015-16 & 2016-17 respectively.	Considering the fact that the 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
9	LA Analyzer	5.46	Switchyard of Sewa-II Power Station is out-door type and it faces abnormal/ heavy thunderstorms and lightening frequently. Lightening arrestors installed at Switchyard, Transformer and Generators play an important role in protecting the power evacuation and generating equipment. By the help of LA Analyzer, Residual life assessment of Metal Oxide (ZnO) arrestors can be checked by measuring the resistive and current leakage values. This helps in timely replacement of weak LAs to avoid forced outages/ breakdowns. Accordingly, LA Analyzer has been purchased during the financial year 2014-15.	As the expenditure is in the nature of tools and tackles, the capitalization of the same is **not allowed**

10	Hydraulic Power pack	5.78	In Sewa-II Power Station, dismantling/ assembly of thrust-collar require hydraulic-power pack of high-capacity. During major machine maintenance, such equipment is required. Earlier, this equipment was taken on loan-basis from Uri-I Power Station, at the time of major machine maintenance. However due to long distance and concurrent maintenance periods, problems were being faced. So, for keeping such equipment readily available at site, Hydraulic Power Pack of required specifications has been purchased in year 2014-15. The purchase of the item shall help in reducing maintenance-period and increasing machines availability.	As the expenditure is in the nature of tools and tackles, the capitalization of the same is **not allowed**
11	Video conferencing facility and up gradation of CCTV between: i) Sewa-II Dam & power house. ii) Sewa-II Power Station & CO Faridabad	7.33	For improving the efficiency and performance of power station by better co-ordination between critical locations of Power-Station (i.e. Dam & Power-house) with Corporate Office, video conferencing facility was planned in the Power Station. Meanwhile, CISF Security Audit Team visited Sewa-II Power Station and recommended for additional CCTVs along with installation of large monitors in CISF Control Room and Dam Area. Purchases of the required items have been made, by combining and optimizing the requirement of various items, in phased manner. The work/ required purchases have been executed in phased manner and accordingly expenditures of ₹10.62 lakh & ₹7.79 lakh have been incurred in 2014-15 & 2015-16 respectively.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tarff Regulations

12	Steel Cable Drums & Temporary shed for storage of cables	8.57	After commissioning of Power Station, BHEL had handed over cables of various types, as initial spare. Most of the cable was given in wooden drums. The drums got decayed, due to weather effect. For proper storage and usability of the cables, steel cable-drums and store-shed were needed. So, the same have been purchased/ constructed in phased manner. Expenditures of ₹8.57 lakh, ₹2.55 lakh & ₹5.75 lakh have been incurred in 2014-15, 2015-16 & 2017-18 respectively.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tarff Regulations
13	Sirens of various capacities, for fore-warning downstream local people along river banks about release of water from dam/ powerhouse	7.19	After Beas River Tragedy on 8th June 2014, resulting in drowning of 24 students (6 female and 18 male) because of releasing of river water from the Larji hydroelectric project, guidelines were received from various authorities to install additional sirens along the river bank, for warning the inhabitants about release of water. Accordingly, additional sirens of various types have been purchased and installed for safety of local people, in phased manner. Expenditures of ₹8.00 lakh & ₹4.79 lakh have been incurred in 2014-15 & 2015-16 respectively.	Considering the fact that the asset is required for purpose of safety & security, the same is **allowed** under Regulation 14(3) (iii) of the 2014 Tarff Regulations
14	3 nos Microtek 5 KVA online UPS with 120 minutes battery backup (15 nos. SMF batteries)	4.17	Earlier there was no UPS for giving emergency control-power-supply at Dam Control Room and in case of power-failure, DG was started to give power-supply. However, the start of DG Sets takes time and due to intervening period's power outage, the various sensitive dam control/ monitoring equipment (PLCs, gate position indicators, reservoir level monitors etc.) were experiencing various problems. For safety of these instruments, better monitoring as well as to provide emergency lighting, UPS-3 Nos of required capacity for dam-site (2 for dam-control-room and 1 for SFT Gate-opening-chamber) have been purchased & installed.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tarff Regulations
	Total amount claimed	**1267.60**		
	Total amount allowed			**972.87**

The above claimed amount of ₹1267.60 lakh includes an amount of ₹901.07 lakh allowed for works/ assets within the original scope of work of the project, an amount of ₹355.29 lakh allowed for assets / works other than within the original scope of work and ₹11.24 lakh disallowed in respect of assets/ works other than within the original scope of work of the project. As mentioned in para 16 above, an amount of ₹617.58 lakh is available for assets / works within the original scope of work of the project for the period 2014-19. Accordingly, the additional capital expenditure of ₹901.07 lakh allowed for assets / works within the original scope of work of the project is restricted to ₹617.58 lakh in 2014-15. Further, the additional capital expenditure claimed during the period 2015-19 in respect of assets / works within the original scope of work of the project is not considered / allowed, as the ceiling limit for this expenditure had been exhausted in the year 2014-15. Accordingly, the total additional capital expenditure of ₹972.87 lakh (₹617.58 lakh + ₹355.29 lakh) is allowed in 2014-15.

2015-16

18. The Petitioner has claimed actual additional capital expenditure of ₹143.47 lakh in 2015-16. Based on the justification furnished, the admissibility of the claim, based on prudence check, is as under:

(₹ in lakh)

Sl. No.	**Head of Work / Equipment**	**Amount claimed**	**Justification/**	**Remarks for admissibility**
1	Supply & Installation of Sewage treatment plant for Mashka & Sarthali	7.01	Commission had approved an amount of ₹60 lakh for installation of five STPs at different locations of Power Station during 2010-11 (Tariff Period 2009-14). The work involving supply, erection/ civil-works and construction of sheds for covering STPs was executed in different packages. One STP was purchased & capitalized with an amount of ₹10.89 lakh in 2013-14 (refer item no. B1). For	As stated earlier, the expenditure towards works/ assets within the original scope of work of the project had been exhausted during the year 2014-15. Accordingly, the claim of the Petitioner for this year is **not allowed.**

			balance 4 STPs, expenditures of ₹34.53 lakh & ₹7.01 lakh have been incurred in 2014-15 & 2015-16 respectively. Total expenditure of ₹52.43 lakh has been incurred against Commission approval of ₹60.00 lakh.	
2	Adjustment of advance on receipt of utilization certificate	0.64	An amounting of ₹10.50 lakh was given to Divisional Forest Officer, Billawar (S023310) on 9.10.13 & 4.4.14 as advance for rehabilitation of forest area near PH at Mashka & overhead tunnel. An amount of ₹5.28 lakh & ₹0.64 lakh, (Total: ₹5.92 lakh) have been capitalized in 2014-15 & 2015-16 respectively on receipt of utilization certificates. The expenditure is within of original scope of work and part of RCE.	As stated, the expenditure towards works/ assets within the original scope of work of the project had been exhausted during the year 2014-15. Accordingly, the claim of the Petitioner for this year is **not allowed**.
3	Adjustment of adv. Against utilization certificate of Compensation of water mills located at Dharore & Fatehpur	0.01	An amount of ₹717932/- was given to SDM, Bani, J&K on 5.10.2012 as an advance for compensation of water mills located at Dharore & Fatehpur. The amounts of ₹0.71 lakh & ₹0.01 lakh (Total: ₹0.72 lakh till date) have been capitalized in 2014-15 & 2015-16 respectively on receipt of utilization certificates. The expenditure is within of original scope of work and part of RCE.	
4	Channelizing of the drain water to prevent against scouring of power house road including aesthetic work	21.39	A drain/ nallah runs along the boundary of the power-house. The water-inflow in this nallah is very high and the water used to erode road around power-house boundary. This erosion was affecting electric-lines poles and cabling, resulting in sporadic short-circuit-faults also. For safety of essential infrastructure and staff, this work was planned as part of original scope of the power station. However, due to local problems, the execution of the work got delayed and finally completed in 2015-16, against Annual-Plan Budget. The work is part of RCE.	

5	Connecting Dam & valve house with Power House, through Telemetry & VSAT	2.81	In Sewa-II Power Station, Distances of Dam-Site & Valve-house from Power-house are approx 45km and 25 km respectively. Monitoring/ Data acquisition of various parameters from both the locations (for example reservoir-level, BFV-open/close status, BFV OPU status etc.) is very important for smooth O&M of Power-plant. Earlier data from dam was obtained through telephone, while data from Valve-house was obtained through OFC and frequent problems were faced in getting the data. For reliable, real-time & accurate collection of data automatically, 2 data-links for each site were considered necessary. Accordingly, new VSAT and telemetry links were planned for Dam, while additional telemetry link in addition to existing OFC was planned for Valve-house. The work/ required purchases have been executed in phased manner and accordingly expenditures of Rs 2.75 lakh, Rs 7.62 lakh & Rs 4.77 lakh have been incurred in 2014-15, 2015-16 & 2016-17 respectively.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations
6	Steel Cable Drums & Temporary shed for storage of cables	2.55	After commissioning of Power Station, BHEL had handed over cables of various types, as intial spare. Most of the cable was given in wooden drums. The drums got decayed, due to weather effect. For proper storage and usability of the cables, steel cable-drums and store-shed were needed. So, the same have been purchased/ constructed in phased manner. Expenditure of ₹8.57 lakh, ₹2.55 lakh & ₹5.75 lakh have been incurred in 2014-15, 2015-16 & 2017-18 respectively.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations

7	Sirens of various capacities, for fore-warning downstream local people along river banks about release of water from dam/ powerhouse	4.61	After Beas River Tragedy on 8th June 2014, resulting in drowning of 24 students (6 female and 18 male) because of releasing of river water from the Larji hydroelectric project, guidelines were received from various authorities to install additional sirens along the river bank, for warning the inhabitants about release of water. Accordingly, additional sirens of various types have been purchased and installed for safety of local people, in phased manner. Expenditures of ₹8.00 lakh & ₹4.79 lakh have been incurred in 2014-15 & 2015-16 respectively.	Considering the fact that the assets is required for purpose of safety & security, the same is **allowed** under Regulation 14(3) (iii) of the 2014 Tariff Regulations
8	Video conferencing facility and up gradation of CCTV between: i) Sewa-II Dam & power house. ii) Sewa-II Power Station & CO Faridabad	7.79	For improving the efficiency and performance of power station by better co-ordination between critical locations of Power-Station (i.e. Dam & Power-house) with Corporate Office, video conferencing facility was planned in the Power Station. Meanwhile, CISF Security Audit Team visited Sewa-II Power Station and recommended for additional CCTVs along with installation of large monitors in CISF Control Room and Dam Area. Purchases of the required items have been made, by combining and optimizing the requirement of various items, in phased manner. The work/ required purchases have been executed in phased manner and accordingly expenditures of ₹10.62 lakh & ₹7.79 lakh have been incurred in 2014-15 & 2015-16 respectively.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations
9	Dams and Barrages WCST Re-imbursement to GIL--Srinivasa (Joint Venture), out of confirm liability	59.79	The civil works for construction of diversion-tunnel, coffer-dam, concrete gravity dam, desilting chamber, HRT and associated works of Sewa-II (Major Contract: Lot-I) was awarded to GIL-Srinivasa (JV). Due to contractual disputes under arbitration an amount of ₹59.79 lakh for was kept under contingent liability as on 31.10.2015 WCST payment. To discharge statutory liability of	Since the expenditure incurred is towards release of payments based on liability incurred due to contractual disputes, the same is allowed under Regulation 14(3) (v) of the 2014 Tariff Regulations. However, the Petitioner is directed to certify on affidavit that

			WCST, payment amounting to ₹59,79,237/- has processed in Nov-2015.	the claim does not part of the approved RCE.
10	36 KV, 630A, Feeder panel completed including VCB trolley	19.28	In the 33KV Panel-Room, three 33 kV breakers (Local Supply-1 from Chamera-I, Local Supply-2 from Sewa-III and Grid-supply from Station Auxiliary Transformer) are installed. However, problems have been observed in these breakers. To minimize downtime/ problems, one additional 33 kV breaker has been purchased from BHEL as stand-by breaker and installed in the 33KV room, so that in case of problem in any of the installed breakers, lines can be shifted to stand-by breaker.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations
11	Portable battery operated rechargeable welding machine	0.43	Sewa-II Power Station is widely spread with many sites and in many of the locations of electric-lines, roads, penstock etc there is no LT supply and we used to face problems in executing maintenance works requiring welding. Accordingly, one portable battery-operated welding set has been purchased, so that required maintenance works can be carried out smoothly.	As the expenditure is in the nature of tools and tackles, the capitalization of the same is **not allowed**
12	Mahindra Bolero SLX (AC)	7.69	Old & used vehicle no HP-47-3350 (Object ID-9801020001) was purchased by the project in 2005. This old & used vehicle was replaced with new vehicle No MAHINDRA BOLERO SLX (AC) Regn. No. JK08E6470. The old vehicle HP-47-3350 has been de-capitalized in 2015-16	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations. However, the de-capitalization of old assets is considered under 'Deletions'.
13	TATA LPT 1109 EX	9.48	Old & used vehicle no. JK02C-9720 (Object ID-9821030001) taken over from JKPDC. The gross block on COD of old vehicle was ₹43188. This old & used vehicle is replaced with new vehicle Tata Truck LPT 1109 EX (Regn No. JK08E3761). The old vehicle NoJK02C-9720 has been de-capitalized in 2015-16. Refer item no.6 of Form-9B(i).	
	Total amount claimed	**143.47**		
	Total amount allowed			**114.00**

As such, the total additional capital expenditure of ₹114.00 lakh is allowed for assets / works other than within the original scope of work in 2015-16.

2016-17

19. The Petitioner has claimed actual additional capital expenditure of ₹168.52 lakh in 2016-17. Based on the justification furnished, the admissibility of the claim, based on prudence check, is as under:

(₹ in lakh)

Sl. No	Head of Work / Equipment	Amount claimed	Justification	Remarks for admissibility
1	Arbitration award in f/o Abdul Rashid Mallick for the work - Rock Cutting to adit-II road from RD-840-1435 mtrs.	9.10	The work "Rock Cutting to Adit-II Road from RD-840 to 1435Mts" was awarded in f/o Abdul Rashid Malik for ₹831460/- vide Order No. NH/Sewa-II/ Mgr (C)/ DBII/ 02/ 1020 dated 5.6.2002. Due to some dispute, the contractor filed the case with Arbitrator. After due proceedings, the sole arbitrator awarded in favour of Abdul Rashid Malik for ₹1331581/-. Out of ₹1331581/- ₹909759 was pertaining up to COD and the same has been capitalized. Balance amount has been charged to O&M expenses.	As the expenditure limit in respect of works/assets within the original scope of work of the project has been exhausted in 2014-15, the claim of the Petitioner has **not been allowed.**
2	Executive Field Hostel	136.22	Temporary Field hostel of 24 rooms was fabricated during construction period of the project in June 2003 and had already completed the useful life. The condition of rooms of aforesaid Field Hostel was not healthy. Accordingly, old temporary field hostel has been dismantled & de-capitalized (Refer item no. 1 of Form-9B(i). For replacement of temporary field hostel, new permanent Executive Field Hostel of 12 sets has been constructed.	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. However, the de-capitalization of old assets has been considered under 'Deletions'.
3	Connecting Dam & valve house with Power House,	4.77	In Sewa-II Power Station, Distances of Dam-Site & Valve-house from Power-house are	Considering the fact that the asset/ work will facilitate the

	through Telemetry & VSAT		approx 45km and 25 km respectively. Monitoring/ Data acquisition of various parameters from both the locations (for example reservoir-level, BFV-open/close status, BFV OPU status etc.) is very important for smooth O&M of Power-plant. Earlier data from dam was obtained through telephone, while data from Valve-house was obtained through OFC and frequent problems were faced in getting the data. For reliable, real-time & accurate collection of data automatically, 2 data-links for each site were considered necessary. Accordingly, new VSAT and telemetry links were planned for Dam, while additional telemetry link in addition to existing OFC was planned for Valve-house. The work/ required purchases have been executed in phased manner and accordingly expenditures of ₹2.75 lakh, ₹7.62 lakh & ₹4.77 lakh have been incurred in 2014-15, 2015-16 & 2016-17 respectively	successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
4	Electrically operated 5 ton winch reversible completed with motor(10/15HP),	**6.76**	For various maintenance works in Dam-area, like radial gates repair, stop logs removal, removal of big wooden logs from intake, requirement of winch has been felt. The winch can be used both for pulling & lifting. So, this critical equipment (portable 5 ton winch) has been purchased for Dam-Maintenance works.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations.

5	Hand held moisture in oil meter completed with all accessories	3.16	Sewa-II Power Station is having oil-filled transformers of various capacities (e.g. 50 MVA-132/11KV Step up Generator Transformers, 10MVA-132/33KV Station Auxiliary Transformer, Unit Auxiliary Transformers, Station Service Transformers etc. The vital media used in these transformers is oil for cooling and insulation. The life/ reliability of transformers depend upon the healthiness of transformer oil. One of the main parameters to know the health of oil is its moisture content (i.e. moisture in oil in terms of water activity).The activity directly indicates, whether there is a risk of free water formation. In view of this PPM Test Kit has been purchased during financial year 2016-17 to monitor the health of the various oil-based transformers.	As the expenditure is in the nature of tools and tackles, the capitalization of the same is **not allowed**
6	Portable true channel vibration data collector cum analyser along with accessories (ADASH/4400VA4).	0.70	Online vibration monitoring system is installed in all the three generating Units of Sewa-II, to monitor the online values of vibrations. In existing system, facility of vibrations analysis, for balancing-purpose, is not available. Similarly, to cross check the values as obtained by the online system of the generating units and measuring the vibration of other rotating machines of the power house, there was no separate portable vibration system analyzer in Sewa-II Power Station. Vibrations analysis is very important aspect of Hydro-stations. Accordingly, one Portable Vibration Spectrum Analyzer is purchased in Financial Year 2016-17. Instrument being portable, can be used for vibrations-analysis and balancing of all the three Units and other rotating machinery.	As the expenditure is in the nature of tools and tackles, the capitalization of the same is **not allowed**
7	Silicagel conditioner power 5 kw cap 25kg temp 50 degree to 150 degree c with automatic 24hrs time	0.60	Sewa-II Power Station having a number of Generator Transformers, Station Auxiliary Transformer, Unit Auxiliary Transformer , Station Service Transformers and Oil Pressure Units for the operation of 3x40	As the **e**xpenditure is in the nature of O&M expenses, the same is **not allowed**

			MW Power House. Silica gel breather units are being used in these equipment to stop the absorption of moisture. Absorption of moisture by these equipment may be cause of generators' breakdown. To avoid this, time to time Dry Silica Gel is being replaced. The Silica gel has a quality that it can be re-used after drying/ de-moisturizing. For effective drying/ de-moisturizing of Silica Gel Conditioner/ Recharging-Unit has been purchased during financial year 2016-17.	
8	Additional submersible pumps for dam drainage gallery with starter panels	6.49	Presently four submersible pumps are installed in dam drainage gallery. There were no standby pumps. Number of times, two pumps got break-down simultaneously and dam drainage gallery was having only 2 pumps, till repair/ restoration of the faulty pumps, resulting in lesser system-safety. Rewinding/ repairing of these pumps take considering time because of remote location and limited availability of spares in nearby markets. For safety of the system, additional 2 submersible pumps with starter panels have been purchased in phased manner and expenditures of ₹6.49 lakh (cost of 2 pumps + 1 panel) and ₹0.56 lakh (cost of 1 panel) have been incurred/ capitalized in 2016-17 and 2017-18 respectively.	As the expenditure is in the nature of spares, the same is **not allowed**
9	Licenses of updated softwares/ anti-virus	0.72	Updated Licenses software and anti-virus were purchased for upgradation of system.	Since the asset is minor in nature, the expenditure is **not allowed**
	Total amount claimed	**168.52**		
	Total amount allowed			**147.75**

As such, the total additional capital expenditure of ₹147.75 lakh is allowed for assets / works other than within the original scope of work in 2016-17.

2017-18

20. The Petitioner has claimed actual additional capital expenditure of ₹45.07 lakh in 2017-18. Based on the justification furnished, the admissibility of the claim, based on prudence check, is as under:

(₹in lakh)

Sl. No.	Head of Work / Equipment	Amount claimed	Justification	Remarks for admissibility
1	Supply and installation Hydro-static additional HSLS system for all three units	15.33	In Sewa II Power Station, each generating unit was having only one Hydro-Static Lubrication System (also known as thrust bearings oil-pumping system) for creating oil film between thrust-bearing-pads and rotor-mirror-disk, required at the time of starting and stopping of the machine. This is very essential auxiliary equipment associated with Unit and many a times, synchronization of units had got delayed due to failure of the existing system. So, standby system has been installed. Total expenditure incurred on the supply & installation is ₹19.67 lakh & ₹2.3 lakh during 2017-18 & 2018-19 respectively.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations.

2	Construction of permanent 06 nos. (six) office room in place of Temp. Office room including internal electrical works	14.17	During the construction period of Sewa-II Power Station, 06 no. temporary office rooms were constructed. Due to completion of useful life, conditions of all the 06 no. temporary rooms had deteriorated and officers/ workers using these rooms were facing lot of problems. For the safety of men and material, permanent structure was required. Accordingly, old temporary office-rooms have been dismantled. In place of temp. office rooms, new permanent office rooms have been constructed.	Since the expenditure is for the benefit of the employees working in remote area and will facilitate the efficient and successful operation of the generating station, the expenditure claimed is **allowed** under Regulation 14(3) (viii). The Petitioner has submitted that Temporary Office rooms are being replaced by construction of permanent new office room. In absence of de-capitalization value of old asset, the deletion of old asset as considered by the petitioner is considered under 'Assumed Deletions. However, the Petitioner is directed to submit the actual de-capitalized value of the replaced asset at the time of truing up of tariff.
3	Steel Cable Drums & Temporary shed for storage of cables	5.75	After commissioning of Power Station, BHEL had handed over cables of various types, as initial spare. Most of the cable was given in wooden drums. The drums got decayed, due to weather effect. For proper storage and usability of the cables, steel cable-drums and store-shed were needed. So, the same have been purchased/ constructed in phased manner. Expenditures of ₹8.57 lakh, ₹2.55 lakh & ₹5.75 lakh have been incurred in 2014-15, 2015-16 & 2017-18 respectively.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
4	CCTV System for Arms & Ammunition Building of CISF Sewa-II P.S. including installation charges	1.34	CISF had requested for installation of CCTV in its Quarter Guard Building (Arms & Ammunition Store). Considering safety/ security aspects, the work has been done.	Considering the fact that the assets is required for purpose of safety & security, the expenditure is **allowed** under Regulation 14(3) (iii) of the 2014 Tariff Regulations

5	Operator work station (OWS) of SCADA System	3.71	The SCADA System of Sewa-II Power Station was installed by BHEL in 2010 as part of major package. All the installed SCADA work-stations are part of mother plant and some of the OWS were giving frequent troubles. To maintain the performance of the power-station, these work stations needs to be replaced in phased manner. Accordingly, 4 OWS have been replaced with new ones. The case for write-off of old OWS is in process. Assumed deletion entry made in Form 9B(i) in 2017-18.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations. Assumed Deletion of old asset is considered under 'Deletions'. However, the Petitioner is directed to submit the actual de-capitalized value of the replaced asset at the time of truing up of tariff.
6	Servers & network-storage IT equipment	4.21	Some critical IT equipment like servers for creating network domains & network-storage-systems, for back-up have become essential/ routine of every modern office. However, our office IT infrastructure was not having these facilities. Accordingly to strengthen IT infrastructure, expenditures of ₹4.21 lakh and ₹0.56 lakh have been incurred in 2017-18 and 2018-19 respectively.	Since the asset is minor in nature, the expenditure is **not allowed**
7	Additional submersible pumps for dam drainage gallery with starter panels	0.56	Presently four submersible pumps are installed in dam drainage gallery. There were no standby pumps. Number of times, two pumps got break-down simultaneously and dam drainage gallery was having only 2 pumps, till repair/ restoration of the faulty pumps, resulting in lesser system-safety. Rewinding/ repairing of these pumps take considering time because of remote location and limited availability of spares in nearby markets. For safety of the system, additional 2 submersible pumps with starter panels have been purchased in phased manner and expenditures of ₹6.49 lakh (cost of 2 pumps + 1 panel) and ₹0.56 lakh (cost of 1 panel) have been incurred/ capitalized in 2016-17 and 2017-18 respectively.	As the expenditure is in the nature of spares and not allowed after the cut-off date, the same is **not allowed**.

	Total amount claimed	45.07		
	Total amount allowed			40.30

As such, the total additional capital expenditure of ₹40.30 lakh is allowed in 2017-18.

2018-19

21. The Petitioner has claimed projected additional capital expenditure of ₹176.86 lakh in 2018-19. Based on the justification furnished, the admissibility of the claim, based on prudence check, is as under:

(₹in lakh)

Sl. No.	Head of Work / Equipment	Amount claimed	Justification	Remarks for admissibility
1	Supply and installation additional Hydro-Static Lubrication system for all three units	2.30	In Sewa II Power Station, each generating unit was having only one Hydro-Static Lubrication System (also known as thrust bearings oil-pumping system) for creating oil film between thrust-bearing-pads and rotor-mirror-disk, required at the time of starting and stopping of the machine. This is very essential auxiliary equipment associated with Unit and many a times, synchronisation of units had got delayed due to failure of the existing system. So, standby system has been installed. Total expenditure incurred on the supply & installation is ₹19.67 lakh & ₹2.3 lakh during 2017-18 & 2018-19 respectively.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
2	Servers & network-storage IT equipment	0.56	Some critical IT equipment like servers for creating network domains & network-storage-systems, for back-up have become essential/ routine of every modern office. However, our office IT infrastructure was not having these facilities. Accordingly to strengthen IT infrastructure, expenditures of ₹4.21 lakh and ₹0.56 lakh have been incurred in 2017-18 and	Since the asset is minor in nature, the expenditure is **not allowed**

			2018-19 respectively.	
3	Construction of Boundry Wall at CISF Complex (KCT Camp) at Khairi	20.00	As per the safety requirements of CISF (as pointed out by IB for CISF Camp), construction of boundary wall is very essential in place of chain-link fencing. As project is located in J&K Region, considering safety/ security aspects, the expenditure for the work has been proposed.	Considering the fact that the assets are required for purpose of safety & security, the expenditure is **allowed** under Regulation 14(3) (iii) of the 2014 Tariff Regulations. However, the Petitioner is directed to submit documents for the claim in compliance with Regulation 14(3) (iii) of the 2014 Tariff Regulations, at the time of truing up of tariff.
4	Construction of Boundry Wall near VIP Guest House, Mashka	20.00	As project is located in J&K Region, considering the safety and security of the residents of Sewa Vihar Colony and VIP Guest House and to avoid un-authorized encroachment, construction of boundary wall is very essential on land of NHPC situated near to VIP Guest House. Accordingly, the expenditure for the work has been proposed.	
5	Fore warning system at Dam	17.00	The AWL (Automatic water level recorder) is proposed to be installed in the upstream of Sewa-II Dam, i.e. in the upper reach of river Sewa (approx 16 kms from reservoir). The instrument so installed will intimate the dam control room about the sudden rising / falling of water level in the river 16 kms upstream of Dam. Hence Automatic water level recorder will act as Forewarning system. This will give sufficient time for the prompt decision/actions for reservoir operations i.e. maintaining the safe reservoir levels and prevent any mishaps	

6	Purchase of 250 KVA DG set	21.00	There is one 250KVA DG set installed at Dam (Gatti) which is used to feed the essential electrical loads, in case of failure of 11 KV line/ main power supply. However, in case of failure of DG set due to any reason, there is no standby alternative DG available at Dam (Gatti). The installed DG at Dam is of 2009 model and it gives problems, sometimes. Due to remote location, the rectification work may also take some time. Considering criticality of power-supply for Dam Gates Operation & Dam-Gallery-Drainage, another 250KVA DG set as an additional source of electrical power is required to be installed at Dam, at the earliest. Considering safety/ security aspects, the budget for the work has been got approved from the Board in BE: 2018-19.	Considering the fact that the assets is required for purpose of safety & security, the expenditure is **allowed** under Regulation 14(3) (iii) of the 2014 Tariff Regulations
7	Installation of 2 Strong Motion Accelerographs at Dam	35.00	As per recommendations of Dam Safety Team, 2 additional strong motion accelerographs are to be installed at Dam. Rooms for installation of Strong Motion accelerographs have been constructed in 2017-18, while purchase & installation of SMAs is being done in 2018-19 at a cost of ₹35.00 lakh.	Considering the fact that the asset is required for purpose of safety & security, the expenditure is **allowed** under Regulation 14(3) (iii) of the 2014 Tariff Regulations. However, the petitioner is directed to submit documentary evidence in support of its claim in compliance with Regulation 14(3) (iii) of the 2014 Tariff Regulations at the time of truing up of tariff

8	Fire Alarm System for various panels located in Power-machine-hall and nearby Administrative Building	17.00	In 2017-18, a minor fire-incident occurred in Metering & Synchronization Panel of Unit Control Board of Unit#3, resulting in outage of the machine for approx one week. At present, there are no smoke-detectors in the panels. Considering criticality of the panels, a fire-alarm system to cover various panels of the machine hall has been recommended by the fire-incident analysis committee. Further, there is no fire alarm system installed at administrative building also. Safety Auditors have recommended for installation of fire alarm system at Administrative Building. Similarly, Safety auditors have recommended for installation of hydrogen-sensor-system for battery-room. For compliance of safety-related instructions, the required purchases/ works shall be done in 2018-19.	Considering the fact that the asset is required for purpose of safety & security, the expenditure is **allowed** under Regulation 14(3)(iii) of the 2014 Tariff Regulations.
9	Drilling of 2nos Bore Well with submersible Pump	15.00	The water supply to the Sarthali colony is from the pipe line from nallah. The water supply is disrupted during the rainy season and also the water quality is poor and unhygienic during the rainy season due to high silt and sand content. In order to get regular water supply and good quality water the bore wells are essential.	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.

10	Purchase of 2 nos. portable high head dewatering pumps for emergency usage in Dam	6.00	The dam-gallery of Sewa-II Power Station is located at EL-1156m, while its Full Reservoir Level is 1197.5m. The approx seepage observed in Dam Gallery during monsoon season is around 150 lpm. For pumping-out the same, six dewatering-pumps (4 installed and 2 stand by) are available in dam-gallery drainage-sump. However, in some other plants, flooding of dam-gallery has observed, wherein the dam-gallery has been drained with help of portable dewatering pumps. Such high head pumps are not available at present. Accordingly for safety of plant & vital structures, purchase of Portable Dewatering Pumps - 2 Nos, of required head is being done in 2018-19.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations.
11	Purchase of new MIV door-seal on replacement basis	10.00	One door-seal of MIV had become unserviceable and de-capitalized in 2016-17 For replacement of the same, order for new door-seal has already been placed on BHEL and delivery is expected in 2018-19.	Considering the fact that the asset/ work will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The de-capitalization of old assets is considered under 'Deletions'.
12	Purchase & installation of CCTV Cameras for Administrative Office Building & Colony	13.00	At present there no CCTV cameras in office and township area. As project is located in J&K region, for safety and security of offices & Township, CCTV cameras are proposed to be installed during 2018-19.	Considering the fact that the asset is required for purpose of safety & security, the expenditure is **allowed** under Regulation 14(3) (iii) of the 2014 Tariff Regulations. However, the Petitioner is directed to submit documentary evidence in support of its claim in compliance with Regulation 14(3) (iii) of the 2014 Tariff Regulations.
	Total amount claimed	**176.86**		
	Total amount allowed			**176.30**

As such, the total projected additional capital expenditure of ₹176.30 lakh is allowed in 2018-19.

22. Based on the above, the additional capital expenditure allowed for the period 2014-19 is as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Expenditure allowed for assets/works under original scope of the project (a)	617.58	0.00	0.00	0.00	0.00
Discharge of liabilities considered for assets/works under original scope (d)	0.00	0.00	0.00	0.00	0.00
Expenditure allowed for assets/works other than of original scope of the project (c)	355.29	114.00	147.75	40.30	176.30
Total additional capital expenditure allowed (d)=(a)+(b)+(c)	**972.87**	**114.00**	**147.75**	**40.30**	**176.30**

De-capitalization

23. Regulation 14(4) of the 2014 Tariff Regulations provides as under:

> *"In case of de-capitalization 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-capitalization shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalization takes place, duly taking into consideration the year in which it was capitalized."*

24. The Petitioner has claimed de-capitalization of the following amounts towards the deletion of old assets such as telephone telex machines, fixed assets of minor value, aesthetic work near Power house, Office buildings, permanent field hostel at Mashka, quarter guard building and wiring for CISF transit camp and field hostel, residential building, buildings, Shed for STP at KCT camp, Land for c/o residential quarters, vehicle, adjustment of cost of land taken from JKPC., wheel dozer, capital spares, capital spares transfer to inventory as per circular dated 3.2.2017, transit camp and field hostel, old operator work station of SCADA system:

(₹in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
0.10	2.00	176.16	5.47	0.00

25. It is observed that the deletion of ₹5.47 lakh by the Petitioner in 2017-18 includes 'assumed deletion' of ₹2.28 lakh indicated as replacement value of 'Old Operator Work Station (OWS) of SCADA system'. The said amount of ₹2.28 lakh is considered as 'assumed deletions' in the para below. Excluding the 'assumed deletion' of ₹2.28 lakh in 2017-18, the de-capitalisation of assets which are not in use/ unserviceable and the deletion of capital spares claimed due to transfer to inventory, is allowed in terms of the above regulation for the purpose of tariff as under:

(₹in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
0.10	2.00	176.16	3.19	0.00

Assumed Deletions

26. As per consistent methodology adopted by the Commission, 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 the de-capitalization of the original value of the old asset. However, in certain cases where de-capitalization is affected in books during the following years, to the year of capitalization of new asset, the de-capitalization of the old asset for the purpose of tariff is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed deletion". Further, in absence of the gross value of the asset being de-capitalized, the same is calculated by de-escalating the gross value of new asset @ 5% per annum till the year of capitalization of the old asset.

27. It is observed that Petitioner has claimed amounts of ₹14.17 lakh and ₹3.71 lakh for Construction of new office rooms and Capitalisation of Operator Work Station (OWS) of SCADA system respectively in 2017-18 on 'replacement basis'. The petitioner has however not provided the de-capitalization value of old assets which are replaced against the claim of Construction of new office rooms. Further, the Petitioner has indicated an amount of ₹2.28 lakh as the de-capitalization value of old assets which are being replaced against the claim of new Operator Work Station (OWS) of SCADA system. These amounts have not been considered as the assumed deletion value for old assets which is to be worked out as per the methodology adopted by the Commission. Based on the said methodology, the assumed deletions considered in 2017-18 are as under:

(₹ in lakh)

Asset claimed in 2017-18	Assumed deletion considered
Construction of new office rooms at Sl. No. 2	10.07
Operator Work Station (OWS) of SCADA system at Sl. No. 5	2.64
Total assumed deletion considered	**12.71**

Exclusions (additions/deletions incurred, capitalized in books but not to be claimed for tariff purpose) as per reconciliation with books of account

28. The following is the year-wise net expenditure which has been excluded by the Petitioner in Form 9C, as per reconciliation with books of account:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18
124.81	95.77	16.49	41.74

29. The above exclusion is on accrual basis. The exclusions in additions and deletions claimed on actual basis are as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18
Additional capitalisation not to be claimed	142.94	108.09	36.60	48.62
Deletion not considered for tariff	18.11	12.32	20.11	6.88
Net exclusions claimed*	**124.83**	**95.77**	**16.49**	**41.74**

**The difference is due to rounding off.*

Exclusions in additions (capitalized in books but not to be considered for tariff purpose) as per (Form 9D) of the petition

30. The exclusions claimed by the Petitioner also include expenditure on additions capitalized in books of accounts, but not to be claimed for the purpose of tariff as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18
142.94	108.09	36.60	48.62

31. It is noticed that the above expenditure is in respect of assets namely Capital Spares, minor assets such as Furniture Fixtures, I.T. Equipment, Computers, Other equipment, Inter Unit Transfer of miscellaneous assets of minor value, Inter Head Adjustment, etc. The expenditure incurred on procurement of minor assets and procurement of capital spares claimed after the cut-off date has not been allowed for the purpose of tariff 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 for the purpose of tariff.

Exclusions in deletions (de-capitalized in books but not to be considered for tariff purpose) as per (Form 9B(ii)) of the petition

32. The petitioner has de-capitalized the following amounts in books of accounts and kept the same under exclusion for the purpose of tariff:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18
18.11	12.32	20.11	6.88

33. It is noticed that the deletions made above is in respect of assets such as capital spares, fixed assets of minor value, minor assets such as telephone telex machines, other EDP equipment, furniture & fixture, computer items, photocopy/duplicating machines, air conditioner, Inter unit transfer of assets of

minor value, Hydro mechanical works-dams and barrages, inter-head adjustment etc.

34. The negative entries corresponding to de-capitalization of capital spares can be excluded/ignored for the purpose of tariff, provided the de-capitalized spares are the ones which are not in the capital base for the purpose of tariff i.e. they were procured after the cut-off date and disallowed for the purpose of tariff. It is observed from the above that the spares were procured after the cut-off date. As such, the negative entry corresponding to the de-capitalization of capital spares has been allowed to be excluded/ignored for the purpose of tariff as de-capitalized spares do not form part of the capital base for the purpose of tariff. However, the Petitioner is directed to link the exclusions claimed in deletions at the time of truing up of tariff for 2014-19.

35. Also, the negative entries arising out of de-capitalization of minor assets may be excluded/ ignored for the purpose of tariff as the corresponding positive entries for purchase of minor assets are not being allowed for the purpose of tariff after the cut- off date. It is observed that the Commission in its order dated 7.9.2010 in Petition No.190/2009 has observed the following:

> *"20. After careful consideration, we are of the view that the cost of minor assets originally included in the capital cost of the projects and replaced by new assets should not be reduced from the gross block, if the cost of the new assets is not considered on account of implication of the regulations. In other words, the value of the old assets would continue to form part of the gross block and at the same time the cost of new assets would not be taken into account. The generating station should not be debarred from servicing the capital originally deployed on account of procurement of minor assets, if the services of those assets are being rendered by similar assets which do not form part of the gross block."*

36. However, on scrutiny of the details, it is observed that the Petitioner has claimed exclusion of negative entry of ₹2.86 lakh, under the head "Hydro Mechanical Works-Dams and Barrages'' in 2015-16. The Petitioner has submitted

that this de-capitalisation is as per Indian Accounting Standard requirement. As per claim of the Petitioner, it is noticed that the asset is capitalised as on the COD of the generating station and is in the capital base of the project. As such, the exclusion/ignoring of this negative entry is not allowed for the purpose of tariff in 2015-16. In view of the above, the exclusions in deletion allowed are as under:

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18
Exclusions in deletions allowed	18.11	9.46	20.11	6.88
Exclusions in deletions not allowed	0.00	2.86	0.00	0.00

37. Accordingly, the total exclusions (net) allowed for the purpose of tariff is as under:

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18
Exclusions in addition allowed	142.94	108.09	36.60	48.62
Exclusion in deletion allowed	18.11	9.46	20.11	6.88
Net Exclusion	124.83	98.63	16.49	41.74

Discharges/Reversal of liabilities during 2014-19

38. The Petitioner has claimed the following discharges/reversal of liabilities during the period 2014-19:

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Discharge of liabilities	308.70	103.23	30.02	18.49	5.74
Reversal of liabilities	0.09	0.00	0.00	0.06	0.00
Total	**308.79**	**103.23**	**30.02**	**18.55**	**5.74**

39. The year-wise reversals of liabilities have not been allowed. Since the additional capital expenditure for assets / works under the original scope of work has already been restricted in 2014-15, the year-wise discharge of liabilities during 2014-19 have not been allowed in absence of the break-up of such discharge of liabilities whether under original scope of work or beyond the original scope of work. The Petitioner is directed to submit the reconciliation statement showing details of such liabilities as per balance sheet for the period 2014-19, duly

certified by Auditor and also furnish the break-up of discharges included in the liabilities discharged within the original scope of work or other than within the original scope of work of the project, at the time of truing-up of tariff.

40. Based on the above discussions, the additional capital expenditure allowed for the purpose of tariff for 2014-19 is summarized as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Addition	972.87	114.00	147.75	40.30	176.30
Less: Deletion	0.10	2.00	176.16	3.19	0.00
Less: Assumed Deletion	0.00	0.00	0.00	12.71	0.00
Less: Exclusion in Deletion not allowed	0.00	2.86	0.00	0.00	0.00
Add: Discharge of Liabilities	0.00	0.00	0.00	0.00	0.00
Net additional capital expenditure **allowed**	**972.77**	**109.14**	**(-) 28.41**	**24.40**	**176.30**

Capital Cost for 2014-19

41. Accordingly, the capital cost allowed for the purpose of tariff of the generating station for the period 2014-19 is as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	112981.73	113954.50	114063.64	114035.23	114059.63
Additional Capitalization allowed	972.77	109.14	(-) 28.41	24.40	176.30
Closing Capital Cost	**113954.50**	**114063.64**	**114035.23**	**114059.63**	**114235.93**

Debt Equity Ratio

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

> *"(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-equtiy 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 te Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation 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 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 modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

Accordingly, the debt-equity ratio of 70:30 has been considered for the purpose of tariff.

Return on Equity

43. 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."

44. 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."

45. In line with the above regulations, grossing up of base rate has been done with

the MAT Rate of the year 2013-14. The Petitioner is however directed to submit the effective tax rates along with the tax Audit report for the period 2014-19 at the time of truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations. Accordingly, Return on Equity has been computed as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	33894.52	34186.35	34219.09	34210.57	34217.89
Addition due to additional capitalization	291.83	32.74	(-) 8.52	7.32	52.89
Closing Equity	34186.35	34219.09	34210.57	34217.89	34270.78
Average Equity	34040.43	34202.72	34214.83	34214.23	34244.33
Return on Equity (Base Rate)	16.500%	16.500%	16.500%	16.500%	16.500%
Tax rate for the year	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	20.876%	20.876%	20.876%	20.876%	20.876%
Return on Equity (Pre Tax)	**7106.28**	**7140.16**	**7142.69**	**7142.56**	**7148.85**

Interest on Loan

46. 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 re-financing 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.

47. The Petitioner has submitted that in order to reduce the rate of interest on loan, it has undertaken re-financing of loan in terms of Regulation 26 (7) of 2014 Tariff Regulations. It has also submitted that in terms of the said regulation, the benefit of re-financing is to be shared between the generating company and beneficiaries in the ratio of 1:2. The Petitioner has also stated that the refinancing charges are to be passed on to beneficiaries on actual basis. The Petitioner has furnished the detailed calculation of the benefit in Annexure-VIII of the petition and has clarified that the share of Petitioner due to refinancing shall be recovered over and above the annual fixed charges through separate bills, after approval of same. In view of the submissions of the Petitioner, the benefit of re-financing of loan shall be shared between the generating company and beneficiaries in the ratio of 1:2 as per Regulation 26(7) of 2014 Tariff Regulations. In case of any dispute, the parties are at liberty to make an application in accordance with Regulation 26(9) of the 2014 Tariff Regulations.

48. The salient features for computation of interest on loan are as under:

i) The opening gross normative loan as on 1.4.2014 has been arrived at in accordance with Regulation 26 of the 2014 Tariff Regulations.

ii) The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project, after refinancing.

iii) The repayment for the year of the tariff period 2014-19 has been considered equal to the depreciation allowed for that year.

iv) The interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest.

49. Accordingly Interest on loan has been calculated as under:

(₹ in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Gross Normative Loan	79087.21	79768.15	79844.55	79824.66	79841.74
Cumulative Repayment up to previous year	20909.55	26661.28	32436.99	38216.91	43992.75
Net loan opening	58177.66	53106.87	47407.56	41607.75	35848.99
Repayment during the year	5751.73	5775.71	5779.93	5775.83	5783.06
Addition due to Additional Capitalization	680.94	76.40	(-) 19.89	17.08	123.41
Net loan closing	53106.87	47407.56	41607.75	35848.99	30189.34
Average loan	55642.26	50257.21	44507.65	38728.37	33019.17
Weighted average rate of interest on loan	9.856%	9.801%	9.061%	7.769%	7.855%
Interest on loan	**5484.18**	**4925.94**	**4032.71**	**3008.68**	**2593.62**

Depreciation

50. 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.

51. The weighted average rate of depreciation of 5.069%, 5.066%, 5.068%, 5.064% and 5.066% calculated as per the 2014 Tariff Regulations, has been considered for calculation of depreciation for the years 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 respectively. Accordingly, depreciation has been computed as follows:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	112981.73	113954.50	114063.64	114035.23	114059.63
Additional Capitalization	972.77	109.14	(-) 28.41	24.40	176.30
Closing Gross Block	113954.50	114063.64	114035.23	114059.63	114235.93
Average Gross Block	113468.11	114009.07	114049.43	114047.43	114147.78
Rate of Depreciation	5.069%	5.066%	5.068%	5.064%	5.066%
Depreciable Value	102121.30	102608.16	102644.49	102642.68	102733.00
Remaining Depreciable Value	81211.75	75946.90	70208.91	64486.12	58806.73
Depreciation	**5751.73**	**5775.71**	**5779.93**	**5775.83**	**5783.06**

O&M Expenses

52. Regulation 29(3)(a) of the 2014 Tariff Regulations provides the O&M expense norms for hydro generating stations which have been operational for three years or more as on 1.4.2014. The Petitioner has claimed O&M expenses for the period 2014-19 as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
6157.56	6566.67	7002.96	7468.24	7964.43

53. The Respondent UPPCL vide its reply affidavit dated 31.10.2018 has submitted that the Petitioner has claimed actual O&M expenses, instead of normative O&M expenses and thus an excess O&M expenses of ₹187.73 crore has been claimed. The Respondent has pointed out that the normative values of O&M expenses have been calculated by the Petitioner by escalating the O&M charges of 2013-14 i.e. ₹2662.03 lakh by 6.64% annually. Accordingly, the Respondent has requested to allow only normative O&M expenses and disallow the excess amount of ₹187.72 crore. In response, the Petitioner has submitted as under:

> *"Based on actual O&M Expenses for the period 2010-11 to 2012-13, Hon'ble Commission has allowed normative O&M for the period 2014-19 and same has been mentioned in regulation 29(3)(a) of CERC Tariff Regulations'2014. In present petition same O&M Expenses as mentioned in regulation 29(3)(a) are considered. Hence, the contention of respondent to is baseless."*

54. The COD of the generating station is 24.7.2010. As such, the generating station is in operation for more than 3 years as on 1.4.2014. Hence, in terms of Clause 3(a)

of Regulation 29 of the 2014 Tariff Regulations, the year-wise O&M expenses considered for the generating station for the period 2014-19 is worked out and allowed as claimed by the Petitioner.

Interest on Working Capital

55. 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 hydroelectric generating Station and transmission system including communication system:*
>
> *(i) Receivables equivalent to two months of fixed cost;*
>
> *(ii) Maintenance spares @ 15% of operation and maintenance expense specified in regulation 29; and*
>
> *(iii) Operation and maintenance expenses for one month."*

56. 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."*

57. In line with the above regulations, Interest on working capital has been calculated as follows:

(₹in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Maintenance Spares	923.63	985.00	1050.44	1120.24	1194.66
O&M expenses	513.13	547.22	583.58	622.35	663.70
Receivables	4210.35	4196.99	4122.57	4029.08	4047.88
Total	5647.12	5729.21	5756.59	5771.67	5906.25
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	**762.36**	**773.44**	**777.14**	**779.18**	**797.34**

Annual Fixed Charges

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

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	7106.28	7140.16	7142.69	7142.56	7148.85
Interest on loan	5484.18	4925.94	4032.71	3008.68	2593.62
Depreciation	5751.73	5775.71	5779.93	5775.83	5783.06
Interest on Working Capital	762.36	773.44	777.14	779.18	797.34
O & M Expenses	6157.56	6566.67	7002.96	7468.24	7964.43
Total	**25262.12**	**25181.92**	**24735.42**	**24174.49**	**24287.30**

Normative Annual Plant Availability Factor (NAPAF)

59. In terms of Regulation 37(4) of 2014 Tariff Regulations, NAPAF of 85% has been considered for the generating station for the period 2014-19.

Design Energy

60. CEA has approved the annual Design Energy (DE) of the generating station as 533.53 MU. Accordingly, the same has been considered for the generating station for the period 2014-19 as detailed under:

Months		Design Energy (MUs)
April	I	22.59
	II	17.13
55.93	III	16.21
May	I	14.13
	II	12.35
39.01	III	12.53
June	I	27.36
	II	27.36
81.92	III	27.20
July	I	26.73
	II	19.86
76.69	III	30.10
August	I	27.36
	II	27.36
84.82	III	30.10
September	I	17.78
	II	13.61
40.90	III	9.51
October	I	7.05
	II	7.45
21.36	III	6.86
November	I	5.31
	II	4.89
14.66	III	4.46

December	I	4.00
	II	3.94
11.70	III	3.76
January	I	3.55
	II	3.28
9.72	III	2.89
February	I	3.81
	II	5.47
22.61	III	13.33
March	I	16.75
	II	27.36
74.21	III	30.10
Total		**533.53**

61. The Petitioner has sought the reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The Petitioner has deposited the filing fees for the period 2014-19 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The Petitioner has also submitted that it has incurred charges towards publication of the tariff petition in the newspapers. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations, the Petitioner is entitled to recover filing fees and the expenses incurred on publication of notices directly from the respondents on production of documentary proof, directly recovered from the respondent beneficiaries on pro rata basis. Excess amount, if any, shall be adjusted against the petition to be filed for the next tariff period.

62. The annual fixed charges approved for the period 2014-19 as above are subject to revision based on the truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations.

63. Petition No. 322/GT/2018 is disposed of in terms of the above.

Sd/-	***Sd/-***	***Sd/-***
(I.S.Jha)	**(Dr M.K. Iyer)**	**(P.K.Pujari)**
Member	**Member**	**Chairperson**