CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 314/GT/2018

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

Date of Order: 19th July, 2019

In the matter of

Approval of tariff of Nathpa Jhakri Hydro Electric Power Station (6 x 250 MW) for the period 1.4.2014 to 31.3.2019

And

In the matter of

SJVN Limited
SJVN Corporate Office Complex,
Shanan, Shimla-171006,
Himachal Pradesh **…..Petitioner**

Vs

1. Punjab State Power Corporation Ltd.
The Mall, Patiala – 147001

2. Haryana Power Purchase Center
Vidyut Sadan, Sector VI,
Panchkula - 134009,

3. Delhi Transco Ltd,
Shakti Sadan, Kotla Road
New Delhi -110002

4. Tata Power Delhi Distribution Ltd.
33 kV Sub-station, Hudson Lines,
Kingsway Camp, Delhi – 110019

5. BSES Rajdhani Power Ltd.
2nd Floor, B Block, Nehru Place,
New Delhi 110019

6. BSES Yamuna Power Limited
Shakti Kiran Building, Karkardooma,
Delhi- 110092

7. Ajmer Vidyut Vitran Nigam Ltd.
Old Power House, Hathi Bhata,
Jaipur Road, Ajmer

8. Jaipur Vidyut Vitran Nigam Ltd.
Vidyut Bhawan, Janpath,
Jaipur – 302005

9. Jodhpur Vidyut Vitran Nigam Ltd.
New Power house, Industrial Area,
Jodhpur

10. Himachal Pradesh State Electricity Board Ltd,
Vidyut Bhawan, Kumar House,
Shimla – 171004

11. Power Development Department (J&K),
Government of J&K,
Mini Secretariat, Jammu

12. Power Department,
Union Territory of Chandigarh,
Additional Office Building, Sector 9D,
Chandigarh

13. Uttar Pradesh Power Corporation Ltd.
Shakti Bhawan, 14, Ashoka Road,
Lucknow – 226001

14. Uttranchal Power Corporation Ltd.
Urja Bhawan, Kanwali Road,
Dehradun- 248001

15. Government of Himachal Pradesh,
H.P. Secretariat,
Shimla -171002 **……Respondents**

Parties Present:

Shri Romesh Kapoor, SJVNL
Shri Rajeev Agarwal, SJVNL
Shri Sanjay Kumar, SJVNL
Shri Atul Harkat, SJVNL
Shri R.B.Sharma, Advocate, BRPL
Shri Mohit Mudgal, Advocate, BRPL

ORDER

This petition has been filed by the Petitioner, SJVNL for approval of generation tariff of Nathpa Jhakri Hydroelectric Project (1500 MW) ('the generating station') for the period from 1.4.2014 to 31.3.2019 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 ('the 2014 Tariff Regulations').

Background

2. The generating station located in the State of Himachal Pradesh, is a joint venture between the Government of India and Government of Himachal Pradesh, as a run-of-river project with pondage. The capacity of the generating station is 1500 MW comprising of 6 units of 250 MW each. The dates of commercial operation (COD) of the different units of the generating station are as under:

Units	COD
Unit- 5	6.10.2003
Unit – 6	2.1.2004
Unit – 4	30.3.2004
Unit – 3	31.3.2004
Unit – 2	6.5.2004
Unit – 1 (station)	18.5.2004

3. The Petitioner has entered into PPAs with the Respondents for the capacity generated from the project. The allocation of power from the generating station was notified on 12.5.2014 by the Ministry of Power, Govt. of India.

4. The project was originally approved by the Central Government vide Ministry of Energy, Department of Power, letter dated 5.4.1989 at an estimated cost of ₹167802 lakh, including IDC of ₹20602 lakh (September 1988 price level) with the completion schedule of March, 1996 including 1½ years for infrastructure works which were under development. The first Revised Cost Estimate (RCE-I) was approved by the Central Government vide Ministry of Power letter dated 24.6.1993 for ₹433795 lakh, including IDC of ₹64869 lakh with the revised commissioning schedule of December, 1998. The second Revised Cost Estimate (RCE-II) was approved by the Central Government vide Ministry of Power letter dated 10.5.1999 at an estimated cost of ₹766631 lakh, including IDC of ₹173479 lakh (June, 1998 price level) with the commissioning schedule of March 2002. The third Revised Cost Estimate (RCE-III) was approved by the Central Government vide Ministry of Power letter dated 14.8.2007 at the cost of

₹818771 lakh, including IDC of ₹195181 lakh, but excluding an expenditure of ₹14500 lakh which had already been incurred as advances to contractors on account of extension of time (EOT), Dispute Review Board (DRB) and other claims in respect of major civil works. The fourth Revised Cost Estimates (RCE-IV) was approved by the Central Government vide Ministry of Power letter dated 21.8.2018 at the cost of ₹857528 lakh, including cost overrun of ₹38757 lakh. Further, the Petitioner has been directed to approach the MOP for fresh approval in respect of settlement of pending claims/ contingent liabilities amounting to ₹352.52 crore as on 31.3.2018. Subsequently, the Commission vide its order dated 22.5.2019 in Petition No. 309/GT/2018 had determined the tariff of the generating station for the period 2009-14 and allowed capital cost of ₹877307.50 lakh as on 31.3.2014 which includes ₹853405.45 lakh towards assets/ works under the original scope of works upto the period 31.3.2014 and ₹13515.86 lakh over and above RCE-IV cost for assets/ works which have become necessary for efficient operation of the plant during the periods 2004-09 & 2009-14 and ₹10386.19 lakh for interest/ OFC allowed during 2004-09. The annual fixed charges approved by the said order are as under:

(₹in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Return on Equity	75559.50	79263.55	79972.38	81368.83	86359.15
Interest on Loan	16318.49	13179.48	9603.05	5134.07	1339.30
Depreciation	43074.75	43918.72	44494.87	44596.49	44669.93
Interest on Working Capital	4013.70	4111.77	4136.63	4151.49	4259.11
O & M Expenses	24009.60	25382.95	26834.86	28369.81	29992.56
Total	**162976.05**	**165856.47**	**165041.80**	**163620.69**	**166620.05**

5. The Petitioner in this petition has prayed for determination of annual fixed charges of the generating station for the period 2014-19 in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the capital cost and annual fixed charges claimed by the Petitioner for the period 2014-19 are as under:

Capital cost

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	889383.00	892538.72	894188.73	902207.11	905783.51
Add: Addition during the year/ period	3757.04	1962.25	8444.16	3827.19	18376.47
Less: Decapitalisation during the year/period	601.32	312.23	425.78	250.79	4040.33
Closing Capital Cost	**892538.72**	**894188.73**	**902207.11**	**905783.51**	**920119.64**

Annual fixed charges

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	89521.48	90105.81	90410.03	90774.86	91577.97
Interest on Loan	49.66	101.92	110.58	121.29	194.63
Depreciation	45398.14	45506.29	45727.40	11686.35	12176.64
Interest on Working Capital	4542.96	4655.47	4769.46	4103.01	4250.12
O & M Expenses	25998.86	27725.18	29566.13	31529.32	33622.87
Total	**165511.10**	**168094.67**	**170583.60**	**138214.83**	**141822.23**

6. In compliance with the directions of the Commission, the Petitioner has filed additional information with copy to the Respondents. Replies to the Petition have been filed by the Respondents, BRPL and UPPCL vide their affidavits dated 14.11.2018 and 6.12.2018 respectively. The Petitioner has filed its rejoinder to the said replies. The Commission after hearing the parties on 15.11.2018 reserved its order in the Petition. Based on the submissions of the parties and the documents available on record and on prudence check, we proceed to determine the tariff of the generating station for the period 2014-19 as stated in the subsequent paragraphs.

Analysis and Decision

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 Commission in its order dated 22.5.2019 in Petition No. 309/GT/2018 had approved the closing capital cost of ₹877307.50 lakh as on 31.3.2014. Accordingly, the closing capital cost of ₹877307.50 lakh has been considered as the opening capital cost as on 1.4.2014 for the purpose of tariff for the period 2014-19.

Additional Capital Expenditure

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 cut off date, after prudence check of the details of such undischraged 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;

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

(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such 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 year-wise break-up of the actual/projected additional capital expenditure (including discharge of liabilities and excluding un-discharged liabilities) claimed by the Petitioner during the period 2014-19 is as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Additions	3757.04	1962.25	8444.16	3827.19	18376.47
Deletions	601.32	312.23	425.78	250.79	4040.33
Net	3155.72	1650.02	8018.38	3576.40	14336.13

12. Before dealing with the additional capital expenditure, it is pertinent to mention that in terms of the 2014 Tariff Regulations, for any expenditure to earn tariff, the first and foremost condition is that the same shall be capitalized and paid up in cash. As such, advances paid to the contractors but not capitalized are not being allowed for the purpose of tariff.

13. The details of additional capital expenditure claimed for the tariff period 2014-19 are as under:

Sl. No	Regulations		Amount (in lakh)				
			2014-15	2015-16	2016-17	2017-18	2018-19
1	14(3)(i)	Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law.	26.11	24.72	18.61	11.83	135.27
2	14(3)(ii)	Change in law or compliance of any existing law.	0.00	0.00	52.32	160.34	109.09

3	14(3)(iii)	Expenses incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Govt. Agencies of statutory authorities responsible for national/ internal security	627.07	565.68	46.77	424.32	236.95
4	14(3)(viii)	Additional works/expenditure which has become necessary for efficient and successful operation of plant	3103.74	1012.83	7647.67	3246.06	17895.16
5	14(3)(vi)	Discharge of liabilities	0.12	359.01	678.80	8.30	0.00
6	14(3) (De-Capitalization)	Decapitalisation of assets	(-)592.97	(-) 193.81	(-) 425.78	(-) 250.79	(-) 4040.33
7	Assets Not in Use	Assets Not claimed/ Not in Use	(-)8.35	118.42	0.00	0.00	0.00
8	14(3)(vi)	Discharge of liabilities-Reversal	1335.20	5.61	411.20	0.00	0.00
9	14(3) (Exclusions)	Reversal of liabilities	(-) 1335.20	(-)5.61	(-) 411.20	0.00	0.00
		Total as per Form-9A (Net)	**3155.72**	**1650.02**	**8018.38**	**3576.40**	**14336.13**

2014-15

14. The Petitioner has claimed additional capital expenditure under Regulation 14(3)(i), Regulation 14(3)(iii) and Regulation 14(3)(viii) of the 2014 Tariff Regulations and the same is examined and allowed as under:

(a) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law {Regulation 14(3) (i)}

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount allowed
1.	Excess compensation received back	(0.60)		Reversal of excess compensation is allowed	(0.60)
2.	Capitalisation	0.09	Capitalisation on account of liabilities	Expenditure claimed on	0.09

				account of Liabilities is allowed	
3.	Additional Capitalisation on account of adjustment of advances	8.11	Amount deposited into High Court of H.P/SDO Dist, Nichar on account of enhancement of compensation	Capitalization on account of adjustments of advances is not allowed	0.00
4.	Blast damage Compensation paid	18.50	Blast damage compensation paid: Amicable settlement/ Out of court settlement in case of SJVN vs Champe Lal Negi and Prakash Chand Negi	The expenditure is on account of liabilities to meet award of arbitration. The Petitioner has submitted relevant documents for the same. Hence, expenditure is allowed under this regulation.	18.50
	Total	**26.11**			**18.00**

(b) Additional capitalization on account of higher security and safety of the plant {Regulation 14(3)(iii)}:

(₹ in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Protection of left bank from Intake to canteen D/o dam at NJHPS Nathpa.	396.91	Recommendation by B.B.M.B, Dam safety organisation and D.S.O Nasik to protect the left bank by R.C.C Barricade/cladding.	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Government agencies/statutory authorities. Hence, the expenditure is **allowed** under this regulation.	396.91
2.	Protection work for damaged Road between RD 370.00 to RD 432.00 mtr i.e from Dam Top to BTRDT	135.19	B.B.M.B suggested to protect the Right bank in stretches every year in lean season for safety of the Dam.		135.19
3.	C/o 1 mtr. Wide suspension foot bridge 46.90 mtr. span including foot path by providing RCC retaining wall on both banks of existing abutment of Bailey Bridge over River Satluj near ADIT-II.	94.97	Bureau of Intelligence recommended to make alternate approach way for the Villages Nathpa & Kandhar from D/S to Dam.		94.97
	Total	**627.07**			**627.07**

(c) Additional works/expenditure which has become necessary for efficient and successful operation of plant {Regulation 14 (3)(viii)}:

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Adhesion promotor, Quartz Powder, Epoxy Casting Resin, Insulating Cap De for Generator-Stator, Epoxy Casting Resin, AMF Engine Control Relay:Type EC2.	25.97	The items are for class-F insulation of Stator Winding which is specifically designed and proprietary item of Voith Hydro. This material comprises of resin and hardner etc. has specific shelf life and is used for repairing winding insulation. Being imported items availability of this material is required to be kept at site to avoid long outage of generating units.	**Not Allowed**. Such expenses of recurring nature shall be met from the O&M expenses	0.00
2.	102 Mva 15.75/420 Kv Single Phase Generator Transformer	615.75	NJHPS already has one complete spare Generator Transformer & one set of HV & LV coils as spare and one additional complete Generator Transformer is procured keeping in view the Simultaneous failure of more than one phase of the machine, NJHPS shall be forced to shut down one machine completely for months as site repairs in case of oil filled transformers is not very successful. Moreover, One No Generator Transformer as a spare against 18 Nos GT's seems on the very lower side seeing the recent GT's failures at various utilities in India. So, another GT has been procured to minimize the Generation Loss & also to improve the operational efficiency of Power Plant.	Since the Procurement/ capitalization of spares after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
3.	Trash Rack Pannel 3915 X3270 (W X H) for Intake Structure of Dam	99.59	It requires to shut down the corresponding Intake		0.00

			gate during maintenance and painting of panels. It requires completing the job in restricted time irrespective of rain, snow fall before high flow season starts. The repair of sever damaged trash rack panel will consume more time due to high silt water contact and hence more time to close the Intake Gate. **If we have spare panels**, damaged panels can be replaced by spare panels immediately without shut down of Intake. The damaged panels can be repaired from a place where all infrastructure available comfortably. This will improve efficiency of Plant/ down time.		
4.	One Set of complete Large Video Screen (LVS) System consisting of 4 nos.4X1 configuration of 80 inch diagonal rear project video wall with 1 no. controller of 4 outputs & 2 nos video inputs, 01 no. 19 inch industrial rack, 04 nos. mouunting stand, 04 nos. video splitter ,08 nos DVI cable 12 M and 04 mps DVI cable 2 M.	79.59	To improve the Operational efficiency of Power plant in tandem with RHPS, latest Technology Large Video Screen (LVS) & associated equipments were procured, install & commissioned. This helps in great extent for smooth functioning of Tandem Operating System (TOS) between 1500MW NJHPS & 412 MW RHEP.	Considering the fact that the assets will facilitate the successful and efficient operation of plant, the same is **allowed** under Regulation 14(3) (viii)	79.59
5.	Turbine Guide Bearing Shell (TGB)	41.20	Only one spare TGB has been supplied against 06 no. installed TGB. TGB is the very critical component. Due to wear tear the TGB needs to be repaired/re-habited, to reduce down time and increase efficiency, two **additional spares** have been purchased.	Since the Procurement/ capitalization of spares after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00

6.	Insurance Spares-Complete 420 KV, 2000AMP OR 4000 AMP, Generator Circuit Breaker Interrupting Chambers FB-16 Type CB Pole with all necessary apparatus (single Phase) without hydraulic operating mechanism for 420 KV GIS (B-142 model) of NJHPS	1050.63	Seeing the past history of GIS Faults at NJHPS, 03 Nos Generator CB Pole type FB-16 has been procured to meet any evantuality at site. Moreover, such failure of Generator Circuit Breaker can not be ruled out in near future, so we should keep sufficient inventory of these lifesaving equipment's of Generating Unit in order to avoid Generation Loss & also in order to improve the operational efficiency of Power Plant.		0.00
7.	Balance payment against Bhaba Tail Race Tunnel work capitalised in 2010-11 and allowed by CERC	1.50	Balance payment against Bhaba Tail Race Tunnel work capitalised in 2010-11 and allowed by CERC	Since the asset has already been allowed by the Commission for work capitalised in 2010-11 and the additional capitalisation is on account of balance payment for efficient operation of the plant. The same is **allowed.**	1.50
8.	Construction of Office complex for NJHPS at Jhakri	703.81	Since construction stage of the project, most of the offices of various departments are being operated from shelter/temporary structure at scattered locations. Therefore construction of permanent centralize office has been taken up for the efficient operation of Power Station/ NJHPS. The provision of check post has been considered with the security point of view of the building and ATM, STP, Canteen etc. have been considered for the welfare of the employees.	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)	703.81
9.	C/O Central Office Building At Jhakri (Prov. Consultancy Services For Planning Designing Etc For The C/O Office Complex At Jhakri	1.56			1.56
10.	P/F OF Internal El in main office building at Jhakri	34.87			34.87
11.	C/o check-post, ATM room, STP room and development of roads for office buiilding, canteen block & electrical control room at new office complex at Jhakri.	78.08			78.08
12.	Providing and fixing E.I. works in new office building at Jhakri	45.33			45.33
13.	C/O of Road development of Parking & Development slop between office complex and NH-22 in NJHPS office complex	71.43			71.43
14.	Providing External severage lines, Rain Harvesting Septik Tank	0.25			0.25

	and Development of site for septik tank and parking area Ghorala Nallah side at new NJHPS office complex Jhakri				
15.	Providing railing, fencing and fountain in NJHPS New Office Complex At Jhakri	55.07			55.07
16.	P/F Of tuffened glass door With Ozon Fitting For New Office Building Njhps Jhakri	2.26			2.26
17.	C/O Electrical /Civil Store room cum site office and MTC staff room near P&A building at Nathpa (PCD-1938) (Vide JvV NO:-872)	47.59	The Electrical/ Civil Offices at Nathpa Dam are being operated from temporary sheds. Now new permanent building is proposed for increasing efficiency.		47.59
18.	C/O Morcha and duty post award & shed for metal Detector for CISF at DAM Top to Nathpa	11.14	The works have been carried out to strengthen the security of Dam of the Project.	As the expenditure pertains to safety of the plant, the same is **allowed** under Regulation 14(3)(iii). However, the Petitioner is directed to furnish relevant documents at the time of truing up.	11.14
19.	Modification of Control Room for Tendom Operation System of NJHPS & RHEP	69.11	Modification has been necessitated in view of the tandem operation system provisions of NJHPS and RHEP which is required for better coordination and smooth running & to improve the efficiency of plant.	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)	69.11
20.	Construction of parking along road near SJVN Auditorium at Jhakri	0.07	Balance payment made against the work claimed/ capitalised in F.Y. 2013-14	Asset has already been allowed by the Commission for work capitalised in 2013-14 and the additional capitalisation is on account of balance payment. The same **is allowed**	0.07
21.	C/O R/Wall for providing parking and barricade at entrance to type-A colony below NH-22 at Jhakri	16.62	For safety & security of SJVN Township, security barrier has been constructed at the entrance of Type-A Colony. Since number of vehicle of the resident of Township have increased as such barricades has been created for safety,	The expenditure pertains to safety of the plant, the same is **allowed** under Regulation 14(3)(iii) However, the Petitioner is directed to furnish relevant documents at the time of truing up.	16.62

			security & welfare of employees.		
22.	Development of Bench for installation of Play Station at Nathpa	19.98	In hills no grounds/plain surfaces are available for children to play and if they continue to play on hill slopes there is always a danger of mis-happening. In order to facilitate the children of employees the work was carried out during the period.	Since the asset 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**	19.98
23.	Balance amount against work : Providing Severage Line, Gate, Fencing, Railing and development of outer space by interlock tiles & Grassing the area of Type-B Block no 9&10 at Pachhada Road (Above NH-22) at Jhakri	0.13	Balance payment made against the work claimed/ capitalised in 2013-14	Asset has already been allowed by the Commission for work capitalised in 2013-14 and the additional capitalisation is on account of balance payment. The same **is allowed**	0.13
24.	Balance amount against work : C/O of type B quarters (2 blocks) Block no 1 & 2Near old type V qtrs in old SJVNL colony below NH-22 at Jhakri	1.39	Balance payment made against the work claimed/ capitalised in 2013-14	Asset has already been allowed by the Commission for work capitalised in 2013-14 and the additional capitalisation is on account of balance payment. The same **is allowed**	1.39
25.	Balance amount of work C/O Additional accommodation for Delhi public school Sr. secondary school	0.11	Balance amount against the work claimed/ capitalised in 2008-09	Asset has already been allowed by the Commission for work capitalised in 2008-09 and the additional capitalisation is on account of balance payment. The same **is allowed**	0.11
26.	P/L Drinking water supply line from kandhar Nallah to Dam Control Room, silt room lab Dam area canteen , GVG portal and Adit-II portal at Nathpa	12.77	Providing & supplying drinking water supply line from kandhar Nallah to Dam Control Room, silt room lab Dam area canteen, GVG portal and Adit-II portal at Nathpa. This work involves supply of drinking water at various location at Dam Site. This is an essential service and presently water supply is being carrying out departmentally through water tanker because there is no other source of	Since the asset 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**	12.77

			drinking water at Dam.		
28.	Electric Hooter with 3 km audible range	0.40	In the event of water released from Dam, for informing general public in the downstream of Nathpa Dam. Thereby increasing safety of downstream people.	The expenditure is for safe operation of the plant, the same is **allowed** under Regulation 14(3)(iii) However, the Petitioner is directed to furnish relevant documents at the time of truing up.	0.40
29.	X-Ray machine for Project Hospital	8.03	X-Ray machine with latest technology has been procured which essentially required in the Project Hospital for the welfare of employees	Since the assets are 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**	8.03
30.	CR System for X-Ray unit with lase drypro, cassettes, PC and onle UPS for Project Hospital	9.03	New item is essentially required with the newly procured X-ray machine.		9.03
31.	Photocopy digital machine for Project Hospital	0.49	Photocopy machine procured as replacement of decapitalised machine refer Annexure-2 for details.	Since capitalization of minor assets after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.** Accordingly, the de-capitalization of the replaced asset is excluded under **"deletions"**.	0.00
	Total	**3103.74**			**1270.12**

Discharge of liabilities

15. The Petitioner has claimed an amount of ₹0.12 lakh in 2014-15 towards discharge of liabilities under Regulation 14 (3)(vi) of the 2014 Tariff Regulations and the same has been allowed.

16. Based on the above, the total additional capital expenditure allowed for the year 2014-15 is ₹1915.31 lakh.

2015-16

17. The Petitioner has claimed additional capital expenditure under Regulation 14(3)(i), Regulation 14(3)(iii) and Regulation 14(3)(viii) of the 2014 Tariff Regulations and the same is examined and allowed as under:

(a) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law {Regulation 14(3) (i)}

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Capitalisation on account of provision for liabilities	3.22	Capitalisation on account of liabilities	Expenditure allowed on account of Liabilities **is allowed.** However, the same being not paid, the amount has been accounted (reduced) while arriving at discharge of liabilities, thus having nil impact.	3.22
2.	Alternate package to the landless families	2.00	Alternate package to the landless families	Since the expenditure is on account of liabilities to meet award of arbitration and the Petitioner has submitted relevant documents regarding the same. Hence, the expenditure **is allowed.**	2.00
3.	Additional Capitalisation on account of adjustment of advances	19.51	Amount deposited into High Court of H.P/SDO Dist, Nichar on account of enhancement of compensation for left out cases in respect of land acquired for the project	The capitalization on account of adjustments of advances **is not allowed.**	0.00
	Total	**24.72**			**5.22**

(b) Additional capitalization on account of higher security and safety of the plant {Regulation 14(3)(iii)}:

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Fire Fighting System installed at Hard Coating Facility/plant	12.21	CISF fire Wing recommended measures for implementation of the system to prevent any untoward incident in the facility jeopardizing coating work for power station	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Government agencies/statutory authorities, the	12.21
2.	Supply and Erection of 06 Nos. Rope	486.71	After the Flooding of Power House in year 2005		486.71

	Drum for Draft Tube Gates		a High Power Committee was constituted by CEA recommended various measures required for safe operation of Power Station.	same is allowed under this regulation.	
3.	XY Co-ordinator (Automatic Pendulum readout unit) range x=+/-25mm Y=+/-25mm, resolution 0.01mm, repeatability +/-0.1mm etc., Data Logger General purpose data logger inludes data taker resources, back panel encloser etc.	66.76	System recommended by Dam safety Organisation, Nasik in their Post Monsoon Dam Safety Inspection Report		66.76
	Total	**565.68**			**565.68**

(c) Additional works/expenditure which has become necessary for efficient and successful operation of plant {Regulation 14 (3)(viii)}:

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Upper Labyrinth Seal Stationary	185.52	Spares against replacement of worn out /damaged parts refer Annexure-z	The capitalization of spares after the cut-off date is not permissible in terms of the 2014 Tariff Regulations. Hence, the expenditure is **not allowed.**	0.00
2.	Upper Labyrinth Seal Rotating	89.08	Spares against replacement of worn out /damaged parts refer Annexure-z		0.00
3.	Insurance Spares (HP Flexible Tubing complete for wicket gate servomotor)	0.60	Insurance spares procured which are essential for the operation of the Project.		0.00
4.	Commissioning charges of 102 MVA Generator Transformer capitalised in 2014-15	7.44	Commissioning charges of 102 MVA Generator Transformer capitalised in 2014-15		0.00
5.	Air Circuit Breaker 1000A, 3 Pole, 415 VAC with ACB Mechanical Interlocking Kit	16.96	The retrofitting of existing air circuit breaker with latest technology air circuit breaker		0.00
6.	Sliding Ring Bush (Bronze)	244.31	During maintenance of MIV system, assembly of sliding ring with guiding ring takes considerable times which adds to machine downtime. Therefore, this additional spares has reduced downtime and hence increased productivity and efficiency of the Plant AS rings are ready in advance.		0.00
7.	Alternative	3.35	For dewatering the Dam		0.00

	Dewatering arrangement for Dam Foundation Gallery at Nathpa		Gallery the only one working pipeline is available and in case of any breakdown in the pipeline no alternative working line is available.		
8.	Manual Hand Held Diamond Jet HVOF Gun Package (Gas Fuel)	44.01	For coating of difficult areas where access with robotic arm is difficult or same cannot be utilized for coating turbine parts. This will enhance efficiency of work being executed and help in maintaining efficiency / reducing erosion damages while operating under silt		0.00
9.	D.G.Set 40kva, 415v With Amf Panel-Nathpa	6.35	For backup during power failure in snow season. During snow season/lean season demand of electricity at Dam area is less as compared to high flow season. Previously 625 KVA DG set was operated as backup in snow season. Use of 40 KVA DG set as backup during lean season will reduce the fuel consumption and thereby reducing fuel cost. Thus, it is cost saving to the organisation.		0.00
10.	Providing Solar Power Plant for New office building./Solor Power Pack	6.99	The plant has been installed for captive generation purposes and is feeding electricity to New Office Building of NJHPS.	The asset will reduce O&M expenses of the generating station. As O&M expenses have been allowed to the generating station on normative basis, the capitalization of this asset **is not allowed,** even though it has indirect impact on the efficient operation of the generating station.	0.00
11.	Adjustment made against work capitalised in 2014-15-(Protection of left bank from Intake to canteen D/o dam at NJHPS Nathpa	(-)0.01	Adjustment made against work capitalised in 2014-15-(Protection of left bank from Intake to canteen D/o dam at NJHPS Nathpa	Adjustment made against the work has already been allowed in the year 2014-15. Hence, the same **is allowed.**	-0.01

12.	Providing sanitation facility and R.S. masonry steps at the portal of additional access tunnel to Sholding Desilting Chamber at NJHPS Nathpa	12.15	The sanitation facility provided for the security guards on duty for round the clock for security of main check post of Sholding works of NJHPS.	The asset is for benefit of the employees working in remote area and will facilitate the efficient and successful operation of the generating station. Hence, the expenditure claimed **is allowed** under this regulation.	12.15
13.	Balance amount of work of office building capitalised in 2014-15	18.23	Balance amount of work of office building capitalised in 2014-15	Expenditure claimed is for balance payment of works which has already been allowed during 2014-15, the same **is allowed**.	18.23
14.	Two toilets constructed at NJHPS Petrol Pump office	2.45	The sanitation facility provided for the employee of the Project.	Since the asset 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** .	2.45
15.	Balance payment against work capitalised in Financial Year 2014-15 (Modification of Control Room for Tendom Operation	0.02	Balance payment against work capitalised in Financial Year 2014-15 (Modification of Control Room for Tendom Operation System)	Expenditure claimed is towards balance payment of works which has already been allowed during 2014-15, the same **is allowed**.	0.02
16.	Providing retaining wall in Type-C colony at different locations along road side to increase the parking area for safety of the vehicles standing along road side.	25.61	Protection of road has been carried out to reduce congestion on road to avoid accidents and for safety of vehicles and for the welfare of the employees.	Since the asset is for the benefit of the employees working in remote area and will facilitate the efficient and successful	25.61

				operation of the generating station, the expenditure claimed **is allowed**.	
17.	Balance amount of work of B-Type quarters capitalised in 2013-14 (Refer JV No.206 & 416)	0.73	Balance amount of work of B-Type quarters capitalised in 2013-14	Expenditure claimed is towards balance payment of works which has already been allowed in 2013-14, the same **is allowed**.	0.73
18.	C/o Permanent Stage at DPS ground	80.97	The construction of permanent stage has been taken up to promote welfare and cultural activities at project site to provide avenues to employees for entertainment to achieve overall increase in productivity.	Since the asset 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**	80.97
19.	C/o Stage near volley ball ground at Dam Site Nathpa	17.37	This work is for the welfare of employees. As from the execution of the project there is no proper stage for the celebration of various activities for employees of Nathpa Dam and DPS School . In view of the demand of Nathpa based employees and DPS school this stage has been made which otherwise need to be constructed during initial stage before commissioning of project		17.37
20.	Providing extra space in Staff Club for conducting various activities at Jhakri	10.60	The Project is situated in hill area and there is always space restrictions as such extra space has been created for staff club for conducting various recreational activities for the employee & families		10.60
21.	Two nos. Vacuum Circuit Breakers for the shifting of control substation to Dam Complex at Nathpa	21.24	22 kV Nathpa control sub-station is approx. 06 km away from Dam site. Operation staff comprising 01 technician and 01 helper is required for operation of control sub-station round the clock. Keeping in the view of above, it was proposed to shift the 22 KV control sub-station to dam site. so that the operation of control	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	21.24

			sub-station can be central control of all incoming and outgoing feeders at dam site. Hence manpower at dam control room can control all the feeders of New Sub Station & Manpower of old substation (02 workers in four groups) for three shifts can be utilized at some other place. Thus shifting of sub-station to dam site will be cost effective as the cost of vehicle at dam site staff will also reduce. Sub-station shall be made centralised control of power supply at Dam site. The shifting of this station to Dam site not only improve the efficient operation of Power Plant but at the same time cost will be saved towards reduction in cost of vehicle and operation staff.		
22.	Three step Play Station for Park at Jhakri	12.89	In order to beautify the township, the children park was developed. In hills, no grounds/plain surfaces are available for children to play and if they continue to play on hill slopes there is always a danger of mis-happening.	Since the asset 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**,	12.89
23.	VEHICLES-Cars-Corporate Office	39.29	7 nos. vehicles Procured as replacement against decapitalisation of vehicles	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation. De-capitalization of old asset is considered under "Deletions".	39.29

24.	Door Frame Metal Detector at left and right bank of River at Nathpa	1.77	In the view point of safety and security of Dam and personnel working in Dam area by checking personnel entering in Dam area.	Since, the expenditure is for safety of the plant, the same **is allowed** under this regulation. However, the Petitioner is directed to submit relevant documents at the time of truing up.	1.77
25.	**Audio Video Installation at Conference Hall of New Office Building** -:Digital Signal Processor, Touch Panel Control System, Wall Mounted Line Array Speaker, Swither, Amplifier, Boundary Layer Microphone, Wireless Hand held Microphone, Wireless Lapel Microphone, Pop Up Box, DVD Player with HDMI & USB Pen Drive, Motorized Ceiling Mount Kit, 4500 Luens WXGA Projector, 70" Full HD LED With Wall Mount & 133"Diagonal Motorized Screen	30.80	Since, construction stage of the Project most of the offices of various departments were being operated from shelter/ temporary structures at scattered locations. Therefore, the work has been carried out for smooth functioning of NJHPS. New office building at NJHPS is fully functional and conference room has been constructed in the office building for conducting various meetings and conferences and power point/multimedia presentation for the smooth & efficient working of the power plant.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	30.80
26.	**Installation of PA System**-at Dam Site for field and at auditorium of NJHPS-Horn Speaker, Amplifier, Wirless Microphone,.	9.89	The system has been installed for addressing the employees at a common platform.	Since the capitalization of minor asset after the cut-off date is not permissible under the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
27.	Radar Level Transmitter with additional display suitable for 60-70 mtr. range and accessories.	14.97	These system are recommended in Pre/Post Monsoon Dam Safety Inspection Reports. Also these instruments are important from safety point of view.	Since, the expenditure of safety of the plant, **is allowed** under this regulation. However, the Petitioner is directed to submit the relevant documents at the time of	14.97

				truing up.	
28.	Supply, Installation & commissioning of LAN connectivity at New Office Building	30.16	Since construction stage of the Project most of the offices of various departments were being operated from shelter/ temporary structures at scattered locations. New office building at NJHPS is fully functional & to provide internet connectivity to various offices & local services at intranet like MMS & Finnassit for day to day official work LAN network was required for smooth working & to improve the efficiency of power plant.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	30.16
29.	Supply & Installation of ABT based on line Energy Management System- Hardware Part	21.46	To improve the operational efficiency of Power Plant, the ABT based EMS System was upgraded successfully in September, 2015 as a step towards improvement in Technology.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	21.46
30.	Software Up-gradation of existing all Advant Controller 410/110 of Distributed Control System of NJHPS were upgraded sucessfully from Window NT to Window-7 in all Six Generating Units of NJHPS.	57.65	To improve the operational efficiency of Power Plant, all Advant Controller 410/110 of DCS System were upgraded successfully from Window NT to Window-7 to make compatible with Newly procured Engineering Work Station in order to carry out better diagnosis, analysis & modification in the system.	Since the Procurement/ capitalization of spares after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
	Total	**1012.83**			**340.70**

Discharge of liabilities

18. The Petitioner has claimed an amount of ₹359.01 lakhs for discharge of liabilities and the same has been allowed in terms of the 2014 Tariff Regulations.

19. Based on the above, the total additional capital expenditure allowed for the year 2015-16 is ₹1270.61 lakh.

2016-17

20. The Petitioner has claimed additional capital expenditure under Regulation 14(3)(i), Regulation 14(3)(ii), Regulation 14(3)(iii) and Regulation 14(3)(viii) of the 2014 Tariff Regulations and the same is examined and allowed as under:

(a) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law {Regulation 14(3) (i)}

(₹in lakh)

Sl. No	Name of Asset	Amount	Justifications
1.	Additional Capitalisation on account of adjustment of advances	28.16	Amount deposited into High Court of H.P. on account of enhancement of compensation for left out cases in respect of land acquired by the project
2.		(-)9.56	Amount of land holders cases decided in favour of SJVNL
3.	Adjustment of liabilities	260.94	During the period amount of adhoc payment of Arbitrator/DRB/Court cases adjusted from liabilities
4.	Add: Additional Capitalisation on account of adjustment of advances	(-)260.94	During the period amount of adhoc payment of Arbitrator/DRB/Court cases adjusted from liabilities
	Total	18.61	

21. The above additional capital expenditure after reconciliation with books of accounts is examined as under:

(₹in lakh)

Sl. No	Name of Asset	Amount	Justifications	Remarks on Admissibility	Amount allowed
1.	Additional Capitalisation on account of adjustment of advances	(-)53.79	Decrease in advances	Capitalization on account of advances is **not allowed** under this regulation.	0.00
2.	Capitalization of land/assets	53.05	Amount paid to land holders in compliance to order of Apex Court/High Court	Expenditure for compliance of order is **allowed** under this regulation	53.05
3.	Discharge of liabilities	280.29	Capitalisation on account of liabilities (Rs.19.35 lakh for land and Rs.260.94 lakh for other than land)	Expenditure allowed on account of Liabilities is **allowed** under this regulation.	280.29

4.	Add: Additional Capitalisation on account of adjustment of advances	(-)260.94	Decrease in advances	Capitalization on account of advances is **not allowed** under this regulation	0.00
	Total	**18.61**			**333.34**

(b) Additional capitalization on account of Change in law {Regulation 14 (3)(ii)}

22. The Petitioner has claimed additional capital expenditure of ₹52.32 lakh towards foundation and installation of electrical incinerators for disposal of solid waste in compliance to direction of H.P. State Pollution Control Board. In view of this, the amount of ₹52.32 lakh is allowed in terms of Regulation 14(3) (ii) of the 2014 Tariff Regulations.

(c) Additional capitalization on account of higher security and safety of the plant {Regulation 14(3)(iii)}:

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Installation of X-Ray Baggage inspection system at Main Access Tunnel Gate of Power House	15.14	X-Ray BIS is required to be installed from security point of view. In view of the vulnerability of Power House an X-Ray BIS machine is required for checking of begs, tiffin boxes etc. belongs to employee, labours and visitors. Central Security Agencies in Industrial Security has also recommended to install the X-Ray Baggage Inspection Syatem at MAT gate of NJHPS for the security of Power Station.	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Government agencies/statut ory authorities, the same is **allowed** under this regulation.	15.14

2.	The work of Pkg-42- Design, fabrication, supply & erection & commissioning of 06 nos. Rope Drum Hoist capitalised	1.14	After the Flooding of Power House in year 2005 a High Power Committee was constituted by CEA to study and recommended various measures required for safe operation of Power Station. Base on the observations the committee recommended installation of "Independent rope Drum Hoist for the DT gates". The independent rope drum hoist shall be helpful in fast closure of DT gates in case of emergency requirement and is important towards safety of the Power Station.		1.14
3.	C/o Fire Store Prevention Room and Parking Bay for the Fire Vehicle at Dam Nathpa (PCD-2136)	25.90	Fire Station room is necessary to construct at Nathpa to control the any mis-happenning due to fire immediately or any other incident for the safety of Nathpa Dam. It is pertinent to mention that Nathpa Dam is situated approx. 45 Km far from Jhakri fire Station , and time will take to reach for the fire fighting vehicle at happening station. In addition to that the area of 45 km also prone under rock fall area & road can be blocked at any time during rain / snowfall. Keeping in view the above facts Dy.		25.90
4.	Various items like Brunton make Compass Geological Hammer, Global Positioning System, Data retrieval device, Data Logger, Tripod Stand, Air temperature sensor, Wind velocity sensor, rain gauge sensor, Pan evaporation sensor, wind detection censor, Barometric sensor, Solar radiation Sensor procured by Instrumentation Deptt. (Supply of Geological	4.59	Brunton make compass, Geological hammer, Global positioning system all these instruments are Geological instruments has been procured for Geological inspections, survey and other such activities in NJHPS. Data retrieval device, Data Logger, Tripod Stand, Air temperature sensor, Wind velocity sensor, rain gauge sensor, Pan evaporation sensor, wind detection censor, Barometric sensor, Solar radiation Sensor all these sensors are the part of automatic weather station and used for monitoring the climate condition in Dam area, as recommended by safety org, Nasik.	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Government agencies/statutory authorities, the same is **allowed** in terms of Regulation 14 (3)(iii).	4.59

	Instruments and Supply, Installation, Commissioning of AWS.)				
	Total	**46.77**			**46.77**

(d) Additional works/expenditure which has become necessary for efficient and successful operation of plant {Regulation 14 (3)(viii)}:

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Upper Labyrinth Seal Rotating	102.36	Spares against replacement of worn out /damaged parts refer annex-z	Since, capitalization of spares after the cut-off date is not permissible under the 2014 Tariff Regulations, the expenditure is **not allowed** under this regulation.	0.00
2.	Upper Labyrinth Seal Stationary	28.68	Spares against replacement of worn out /damaged parts refer Annexure-z		0.00
3.	Lower Labyrinth Seal Rotating	111.70	Spares against replacement of worn out /damaged parts refer Annexure -z		0.00
4.	Lower Labyrinth Seal Stationary	193.04	Spares against replacement of worn out /damaged parts refer Annexure -z		0.00
5.	Guide Vane	482.90	Guide Vanes of Turbine are one the most silt affected turbine parts as these are involved in regulating the inflow of water into turbines. In spite of hard coating on these parts, these suffer substantial damages inviting major repair works As per last import of these parts, these are custom made, very expensive and have long lead time for delivery and involves precious foreign currency. Therefore, in line with national initiative and endeavour towards self-sufficiency and to safe guard stakeholders against costly prepositions, Govt. of India/ SJVN has also		0.00

			placed emphasis on indigenization of foreign origin components. Besides, serving motive of readiness of vendors for this custom built foreign origin turbine component, availability of additional 2 sets of guide vanes shall ensure maximum availability and efficient operation of NJHPS through reduced time for turbine maintenance and thereby reduced time required for annual plant maintenance/ outages.		
6.	Indoor, air cooled cast resin, single phase, single pole, double wound, voltage transformer having one end of HV winding for connection to earth and as per specification etc.	1.04	Procured as a spares in order to meet any eventuality / breakdown in Generator VT		0.00
7.	Indoor, air cooled cast resin, single phase, single pole, double wound, voltage transformer having one end of HV winding for connection to earth and as per specification etc.	1.93		Since, capitalization of spares after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
8.	External i/o module backplane ITB10, part no. 112.066.154.200	5.51	The Electronics Spares such as PLC's, Analog/Digital card etc of Governor System has been at the verge of obsoleteness.		0.00
9.	AQ1A 1-Channel U/I Output Part No. 112.054.356.210	3.35			0.00
10.	Bi4b 4 Chhanel U-Input Part No. 112.054.352.210	2.38		Since capitalization of spares after the cut-off date is not permissible under the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
11.	I/O Module Backplane Slu10, Part No. 112.065.598.200	4.87			0.00
12.	Analog Input Module Ai1a 1 Chhanel U/I Input Part No. 112.054.355.210	11.92			0.00

13.	Dial Type Thermometer, Case: 100 Ss304 Range 0-160 Degree	1.35	The items are used for monitoring the important parameter of Turbine Guide Bearing Oil temperature and malfunctioning/damage of these items can cause loss of Generation. Hence, In order to improve the operational efficiency of Power Plant & to avoid loss of Generation these items were procured as a spare.	Since capitalization of tools & tackles after the cut-off date is not permissible under the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
14.	Design, Engineering, Manufacturing, Testing, Supply, Insurance, Packing and Transportation, Erection and Commissioning of six nos. MIV Seal Control Unit for Service Seal and Maintenance Seal	97.84	Items/ Works procured against replacement of old Items/Works	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. De-capitalization of old asset is considered under "Deletions"	97.84
15.	Supply, Installation and Commissioning of air pipe line, pneumatic tools and accessories at Dam Area of NJHPS Nathpa (PCD-551)	23.59	Use of pneumatic wrenches will faster the seal removal and assembly process particularly in Radial Gates, Intake Gates and Stoplogs etc and hence reducing maintenance time and human effort. It will eliminate the possibility of shock hazards due to use of electrical tools, particularly in the Gates & Hoists which are of metal and wet area. Other applications like removal of existing old paint by abrassive blasting process and new painting process, drilling, grinding and greasing of Gates and Hoists are being used with pneumiatic air lines. Hence the use of Pneumatic Pipe line at dam site will increase the productivity of plant and safety of employees.	Since capitalization of tools & tackles after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00

16.	D.G.Sets-Corporate Office	162.05	Since construction stage of the Project most of the offices of various departments are being operated from rented buildings at scattered locations. Therefore, construction of permanent centralised Corporate Office has been taken up.	The Commission in its order dated 26.4.2006 in Petition No. 3/2006 had disallowed the expenditure on creation of " Corporate office and other offices" of NTPC and the same was affirmed by the Appellate Tribunal for Electricity. Accordingly, the capitalization claimed is **not allowed.**	0.00
17.	Diversion Dam	(-)0.37	Protection of Left Bank from Intake to Canteen D/s of Dam at Nathpa de-capitalised	De-capitalisation is allowed	(-) 0.37
18.	Development of benches for installation of Solar Power Plant at 200 KW (AC) at Surge Shaft NJHPS Jhakri (PCD-2215)	33.22	The Petitioner envisaged to develop 200 kw captive Solar power plant in the Project land at Surge Shaft of 1500MW NJHPS as per GOI guidelines. The energy Generated from proposed Solar Power Plant has been fed in existing 22KV System near Surge Shaft & same has been utilizing for internal power consumption of NJHPS as a Captive Solar Power Plant. The expenditure is the cost of construction of civil structure for this plant.	The asset will reduce O&M expenses of the generating station. As O&M expenses have been allowed to the generating station on normative basis, the capitalization of this asset **is not allowed,** even though it has indirect impact on the efficient operation of the generating station.	0.00
19.	C/o Control room for proposed Solar Power Plant of 200 KW (AC) at Surge Shaft NJHPS Jhakri (PCD-2220)	19.30			0.00
20.	C/o Toilet and bathroom along with fencing around residential area for Security Guards at Wadhal Adit of NJHPS (PCD-2280)	5.92	The work is carried out as per the requirements of different departments of NJHPS and in line with cleanliness drive by the Prime Minister of India under Swachh Bharat Abhiyan. The work is carried out as per the requirements of different departments of NJHPS and in line with cleanliness drive by the Prime Minister of India under Swachh Bharat	Since the asset 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**	5.92
21.	C/o Toilets (i) 2 nos. toilets near NJHPS Nursery (ii) 1 no. toilet near Civil Store (iii) 1 no. toilet near W&T (iv) 2 nos. toilets near CISF office at	8.08			8.08

	Jhakri (PCD-2231)		Abhiyan.	**allowed**	
22.	Balance payment released against the work of C/o Office Complex NJHPS (PCD-1469) which is capitalised and claimed in 2014-15 under code 10.208	30.25	Balance payment released against the work of C/o Office Complex NJHPS (PCD-1469) which is capitalised and claimed in 2014-15 under code 10.208	Since capitalisation of the asset has been allowed in 2014-15, the balance payment for the same is **allowed** under this regulation.	30.25
23.	C/o Steel stair from TRT Gate area EL+/- 1026 m and Office room for operation staff of NJHPS near DG Set at TRT Outfall of NJHPS Jhakri (PCD-2200)	15.23	The steel stair has been provided in between TRT Outfall Gate and Rampur Intake Gate to evacuate the staff of tendom operation system of NJHPS / RHPS in emergent situation. The DG set at TRT Outfall has already been installed at EL=/- 1043m but there was no sitting arrangements for the staff.	Since the asset 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**	15.23
24.	Development of space for vehicle parking at Nathpa (PCD-2213)	14.26	Development of space has been carried out to reduce congestion on road to avoid accidents and for safety of vehicles and for the welfare of the employees.		14.26
25.	Providing sanitation facility at the Portal of Wadhal Adit Tunnel at NJHPS Nathpa (PCD-2198)	6.27	The sanitation facility provided for the security guards on duty for round the clock for security of main check post of Sholding works/ the Plant of NJHPS.		6.27
26.	New Corporate Office Shimla	4708.21	Since construction stage of the Project most of the offices of various departments are being operated from rented buildings at scattered locations. Therefore, construction of permanent centralised Corporate Office has been taken up for smooth line functioning of Power Station/ NJHPS.	The Commission in its order dated 26.4.2006 in Petition No. 3/2006 had disallowed the expenditure on creation of "Corporate office and other offices" of NTPC and the same was affirmed by the Appellate Tribunal for Electricity. Accordingly, the capitalization is **not allowed**.	0.00
27.	Non-Residential Buildings-	0.63	Balance payment made against PCD-2199 for work	Asset has already been	0.63

	Club/Recrea.Centre		providing extra space to staff club for conducting various activities at Jhakri, capitalised and claimed in 2015-16 under code 10.213	allowed by the commission for work capitalised in 2015-16 and the additional capitalisation is on account of balance payment. Accordingly, the same is **allowed.**	
28.	Water Supply System	38.83	C/o sedimentation water works at Pachhada Quarry Road above NH-5 at Jhakri (PCD-2199)	Since the asset 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**	38.83
29.	Providing External Sewage System / Line To New Sjvn Colony Above Nh-22 At Jhakri (Pcd-149) Capitalised	13.27	Capitalisation of arbitration case by providing Liability included in capital liabilities as shown under adjustment of liabilities above	The expenditure claimed on account of Liabilities is **allowed.** However, the same being not paid, as the amount has been accounted (reduced) while arriving at discharge of liabilities, thus having nil impact.	13.27
30.	Providing & Fixing Severage System In New Sjvn Colony Below Nh-22 At Jhakri (Pcd-151) Capitalised	1.69			1.69
31.	Providing and fixing inter chain link fencing around the acquired land of NJHPS at Kotla, Tehsil Rampur Bsr. Distt. Shimla -PCD-2189	160.79	Physical demarcation and barricading of SJVN land will safe guard the boundaries and will avoid undue encroachments, unnecessary litigations. The work is necessary from the security and safety	Since the expenditure are for safety of the plant, the same is allowed under this regulation. However, the	160.79

32.	Providing and fixing inter chain link fencing D/s Nathpa Dam along the left bank of River Satluj e.i. Suspension foot bridge to Hot Water Spring 415.00m and from steel truss bridge to towards Adit-II 270.00 length of Nathpa (PCD-2024)	29.66	point of view of the Project.	Petitioner is directed to submit the relevant documents at the time of truing up.	29.66
33.	Providing and fixing chain link fencing along the periphery of Helipad (One side) and along the approach road of NJHPS Jhakri (PCD-2261)	9.00			9.00
34.	Balance payment of c/o boundary wall and chain link fencing around the acquired land of NJHPS at Wadhal made against PCD-1803 (Refer 2015-16 under code 10.242)	0.01			0.01
35.	3 Step play station procured for Dam Site Nathpa	4.65	In hills, no grounds/plain surfaces are available for children to play and if they continue to play on hill slopes there is always a danger of mishappening. In order to facilitate the children of employees the work was carried out during the period.	Since the asset 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**	4.65

36.	Lifts & Escalators-Corporate Office	212.07	Since construction stage of the Project most of the offices of various departments are being operated from rented buildings at scattered locations. Therefore, construction of permanent centralised Corporate Office has been taken up for smooth line functioning of Power Station/ NJHPS. These works are necessary works to the New Corporate Office Complex.	The Commission in its order dated 26.4.2006 in Petition No. 3/2006 had disallowed the expenditure on creation of "Corporate office and other offices" of NTPC and the same was affirmed by the Appellate Tribunal for Electricity. Accordingly, the capitalization is **not allowed**.	0.00
37.	Innova crysta no. HP 06A 8228 procured	15.06	Vehicle procured as replacement of old vehicle AMBASSADOR CAR-HP-06-4444 decapitalised in 2015-16 refer Annexure-2 for details.	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. De-capitalization of old asset is considered under "Deletions"	15.06
38.	Maruti Ertiga Vxi Egn No 4049619 And 4049742	6.82	Vehicle Procured as replacement against de-capitalisation of vehicles refer Annexure-2 for details.		6.82
40.	EPABX System and Related Items for New Corporate Office Complex Shimla	137.66	Since construction stage of the Project most of the offices of various departments are being operated from rented buildings at scattered locations. Therefore, construction of permanent centralised Corporate Office has been taken up for smooth line functioning of Power Station/ NJHPS. These works are necessary works to the New Corporate Office Complex.	The Commission in its order dated 26.4.2006 in Petition No. 3/2006 had disallowed the expenditure on creation of "Corporate office and other offices" of NTPC and the same was affirmed by the Appellate Tribunal for Electricity. Accordingly, the capitalization is	0.00
41.	Building Automation system & Access control.	94.14			0.00
42.	Miscellaneous Items(Communication equipment etc.)	201.63			0.00
43.	Centralised Air-Conditioning System (New Corporate Office Shimla)	351.05			0.00
44.	Projector/Public Address System)	33.19			0.00

45.	CCTV's/Camera in New Corporate Office Shimla	37.38		**not allowed**.	0.00
46.	Public Add System-Corporate Office	28.31			0.00
47.	Digital Multifunctional Copier -Xerox Machines Procured (F&A Dept. & It Dept.)	3.41	Item / Items Procured as replacement of old Items	Since the Procurement/ capitalization of minor assets after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed. Accordingly,** de-capitalization of old asset is not considered under "Deletions".	0.00
48.	Digital Multifunctional Copier Model-5325-Xerox Machines With Stabiliser Procured (Ther Dept.)	1.71	Item / Items Procured as replacement of old Items		0.00
49.	Digital Multifunctional Copier Model-3225-Xerox Machines Procured (P&A Dept.)	0.27	Item Procured for the efficient operation of the Project/ department.		0.00
50.	Digital Copier Machine Xerox Make Model-5021	0.53	Item Procured as replacement of old Items.		0.00
51	Window based 800xA HMI System for DCS system procured for up-gradation of operator station at Power House Control	191.06	The Up-gradation of present Unix Based Advant Station 520 (OS) with latest Industrial IT 800xA HMI is required as Operating System (Unix platform for Advant) on which the application is executed is obsolete and no technical support is available for this in terms of Software/cyber security etc. Computer hardware is also obsolete & Spare parts are no longer available.	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. De-capitalization of old asset is considered under "Deletions"	191.06
	Total	**7647.67**			**648.95**

Discharge of liabilities

23. The Petitioner has claimed an amount of ₹678.80 lakh for discharge of liabilities as per Regulation 14 (3)(vi) in 2016-17 and the same has been allowed.

Based on the above, the total additional capital expenditure allowed for the year 2016-17 is ₹1760.18 lakh.

2017-18

24. The Petitioner has claimed additional capital expenditure under Regulation 14(3)(i), Regulation 14(3)(ii), Regulation 14(3)(iii) and Regulation 14(3)(viii) of the 2014 Tariff Regulations and the same is examined and allowed as under:

(a) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law {Regulation 14(3) (i)}

(₹ in lakh)

Name of Asset	Amount	Justifications
Additional Capitalisation on account of adjustment of advances	(11.83)	Amount of land holders cases decided in lower amount in favour of SJVN
Total	**(11.83)**	

25. The above additional capital expenditure after reconciliation with books of accounts is examined as under:

(₹ in lakh)

Sl. No	Name of Asset	Amount	Justifications	Remarks on Admissibility	Amount allowed
1.	Additional Capitalisation on account of adjustment of advances	(-)63.92	Decrease in advances	Capitalization on account of advances is **not allowed** under this regulation	0.00
2.	Capitalization of land/assets	52.09	Amount paid to land holders in compliance to order of Apex Court/High Court	Expenditure for compliance of order is **allowed** under this regulation.	52.09
	Total	**(-)11.83**			**52.09**

(b) Additional capitalization on account of Change in law {Regulation 14 (3)(ii)}

26. The Petitioner has claimed additional capitalization of ₹160.34 lakh towards Design, Supply, Installation and Commissioning of Sewage Treatment Plant in compliance to the order of the Hon'ble National Green Tribunal to install a STP in township area and notice issued by H.P. State Pollution Control Board. In view of

this, the amount of ₹160.34 lakh is allowed in terms of Regulation 14(3) (ii) of the 2014 Tariff Regulations.

(c) Additional capitalization on account of higher security and safety of the plant {Regulation 14(3)(iii)}:

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Fire Protection And Safety Equipment	2.21	Supply and Installation and Commissioning of complete IP balsed CCTV system for Unit Kote, CISF Unit, NJHPS Jhakri (PPR-1512) (Copy of NSG' recommendation enclosed at page from 101 to 104)	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Government agencies/statutory authorities, the same is **allowed** under this regulation.	2.21
2.	Incorporation of safety provisions through automation and addition of required instrumentation in existing Gas distribution system installed at Hard Coating Facility at Jhkari (PCD-488)	22.01	Hard Coating Facility of NJHPS uses High pressure inflammable gases i.e. Hydrogen & Oxygen in significant quantities throughout the year for hard coating of NJHPS turbine components. Therefore in order to prevent any untoward incident in the facility jeopardizing coating work for power station, CISF fire Wing recommended measures for implementation. (Relevant documents enclosed from page 119 to 123 as documentary proof for the necessity of the expenditure).		22.01
3.	C/o Office and Fire Equipment Store for CISF Fire Wing stationed at Power House road near Hard Coating Plant at Jhakri (PCD-2194 & 592 & 599R)	45.25	Previously CISF Fire Wing Office & equipment were stationed in very old Tin Sheds. Therefore to provide proper office building and equipment store the work is carried out as per the requirement of CISF Fire Wing.		45.25
4.	Providing and fixing G.I.wire chainlink fencing along the NH-5 for protection of vehicle playing on NH-5 above	183.44	NH-5 is situated just above the NJHPS Nathpa Dam reservoir and in past, accident of vehicle has taken place in the vicinity of Nathpa Dam many times. Due to	The additional capital expenses claimed is on account of need for higher security and	183.44

	NJHPS reservoir at Nathpa		repeated occurrence of mishappening in the area power house need to be shut down many time for flushing of Nathpa Reservoir to recover the dead bodies & trace out the accidental vehicles on the humanity ground. So from security & safety point of view and to avoid the accident cum loss of generation, it has been felt necessary to provide the view cutter (as GI wire fencing) along the NH-5 up to the end of Nathpa reservoir area on the recommendation of Local administrative authority Distt Kinnaur & Intelligence Bureau (IB), Govt. of India.	safety of plant as directed by Government agencies/statutory authorities, the same is **allowed** under this regulation.	
5.	Three Fire Tenders- Hp 06a-9594, Hp-06a-9563, Hp-06a-9597 Procured (2 Nos. 4718398 +4717858) (One Foam Fire Tender For Rs.4501268)	139.38	(a) The existing 2 nos. fire tenders are bought back in year 1998/99 and are almost more than 17 years old and service of these fire tenders in case of any fire mishap cannot be considered reliable. (b) As per CISF survey report also they have recommended to replace these fire tenders. (c) In addition to existing 2 no. fire tenders, CISF has also suggested to buy 1 nos. additional Foam Type fire tender for power station for fire fighting incidents in transformer hall where 19 nos. generator transformers are installed having thousands of litres of oil in each of equipment. (d) After Fire Incident at Sanjay Vidyut Pariyojna (Bhaba Power House (HPSEBL), the availability of new Fire Tenders at NJHPS, as per CISF Recommendations, becomes even more urgent to avert the probable fire threats	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Government agencies/statutory authorities, the same is **allowed** under this regulation. The de-capitalization of old asset of Rs 1.32 lakh as indicated by the Petitioner in 2018-19 is considered in 'deletions' in this year.	139.38

			and resulting loss of property & productivity. The de-capitalization is proposed in the financial year 2018-19.		
6.	Making Automatic Weather Station Telemetric which was installed at Advance Warning Station Khab (PPR-1327 & PCD-662)	6.52	Automatic weather station has been made telemetric to monitor the real time conditions at Khab.	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Government agencies/statutory authorities, the same is **allowed** under this regulation.	6.52
7.	Supply & Installation of Inclinometer and 2D crack meter at various sites of NJHPS (PCD-575)	25.52	2-D crack meters were installed at disilting chambers to monitor the movement between the adjacent cracks around the chambers. As per the recommendation of the internal dam safety committee the inclinometers has been installed at various location of NJHPS to monitor the movement along the slopes.		25.52
	Total	**424.32**			**424.32**

(d) Additional works/expenditure which has become necessary for efficient and successful operation of plant {Regulation 14 (3)(viii)}:

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Upper Labyrinth Seal Stationary	41.06	Spares against replacement of worn out /damaged parts refer Annexure-z	Since capitalization of spares after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
2.	Upper Labyrinth Seal Rotating	42.86	Spares against replacement of worn out /damaged parts refer annex-z		0.00
3.	Guide Vane	10.23	Guide Vanes of Turbine are one the most silt affected turbine parts as these are involved in regulating the inflow of water into turbines. In spite of hard coating on these parts, these suffer substantial damages inviting major repair works in order to make it operation worthy for next high flow season. As per last import of these parts, these are custom made, very expensive and have long lead time for delivery and involves		0.00

			precious foreign currency. Therefore, in line with national initiative and endeavor towards self-sufficiency and to safe guard stakeholders against costly prepositions, Govt. of India/ SJVN has also placed emphasis on indigenization of foreign origin components. Besides, serving motive of readiness of vendors for this custom built foreign origin turbine component, availability of additional 2 sets of guide vanes shall ensure maximum availability and efficient operation of NJHPS through reduced time for turbine maintenance		
4.	Indoor Type, Air cooled, Cast Resin, Ring Type 04 Core Pedestal mounting CT, CT ratio 12500/5/5/5/5A	7.83	Procured as a spares in order to meet any eventuality / breakdown in Generator CT		0.00
5.	Supply of Hydraulic Manifold Blocks and other important Hydraulic spare for the Governor System of NJHPS (LOA-154)	61.79	The Manifold Block of Governor Hydraulic System has been under successful operation since 2003 & failure of this Manifold Block cannot be ruled out, so we should keep sufficient quantity of Hydraulic Spares to meet the emergency requirement. In order to improve the operational efficiency of Power Plant & to avoid loss of Generation, we have procured these Manifold Block Hydraulic Spares.	The additional capital expenditure has been claimed for the purchase of spares. The expenditure incurred for spares after the cut-off date **is not allowed** in terms of regulation.	0.00
6.	Design, Engineering, Manufacturing, Testing, Supply, Insurance, Packing and Transportation, Erection and Commissioning of Six Nos. MIV Seal Control Unit for Service Seal and Maintenance Seal	9.96	MIV seal control unit for service seal & maintenance seal is procured for safe & efficient operation of generating units.The wet Scrubber unit supplied was meant for a smaller acoustic chamber for coating of Guide vanes. As subsequently, additional and bigger acoustic room was constructed for coating of large	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation	9.96

7.	Supply of Dry Type Scrubber Unit (Cartridge Type) for Hard Coating Facility of NJHPS (PPR-1463)	30.51	The wet Scrubber unit supplied was meant for a smaller acoustic chamber for coating of Guide vanes. As subsequently, additional and bigger acoustic room was constructed for coating of large turbine parts such as cheek plates, Wear Ring, Gates, Labyrinth Seals and runner etc., the existing scrubber unit was found significantly inadequate for recovery of fine metal dust particle. Considering the hazardous nature of coating powder dust, replacement of existing scrubber unit with adequate capacity scrubber unit is a necessity. It is also worthwhile to mention that collection, storage and disposal of collected dust in sludge form through existing wet scrubber is also difficult. The existing item is proposed to be /will be de-capitalised in 2018-19.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation The de-capitalisation of old asset of Rs. 14.26 lakh as indicated by the Petitioner in 2018-19 is considered in deletions in this year	30.51
8.	D.G.Sets	15.30	Two No.62.5 KVA DG sets shifted from Corporate Office Shimla to NJHPS and installed at New Office Complex for back up of power Supply.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation	15.30
9.	D.G.Sets	(-)15.30		Considering the fact that the assets of corporate office have not been allowed, de-capitalization entry may be excluded.	0.00

10.	Construction of Office building for Central Store Deptt. Near O&M Store at Jhakri (PCD-2299)	22.86	The O&M Store Office at Jhakri was being operated from temporary shed. Now new permanent building is constructed for increasing working efficiency of the employees in the Plant & security of the assets of the Plant .	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	22.86
11.	Construction of Check Post cum toilet, chain link fencing and barricading near Helipad etc. at Jhakri (PCD-2326)	5.55	The HIMPESCO Security guard deployed for watch and ward of SJVN Helipad but there was no facility for Check Post and Toilet. Therfore, the work was carried out for the security purpose.	Since the expenditure of safety of the plant, the same is allowed under this regulation However, the Petitioner is directed to submit relevant documents at the time of truing up.	5.55
12.	Construction of Dining Hall for CISF at Jhakri (PCD-2250)	16.46	The work was carried out as per the requirement of CISF as there were no facility of permanent Mess near their barracks.		16.46
13.	Balance payment against work-Development of benches for installation of Solar Power Plant at 200 KW (AC) at Surge Shaft NJHPS Jhakri (PCD-2215) capitalised and claimed in 2016-17	0.01	Balance payment against work-Development of benches for installation of Solar Power Plant at 200 KW (AC) at Surge Shaft NJHPS Jhakri (PCD-2215) capitalised and claimed in 2016-17	Since is the capitalisation of the asset has been disallowed in 2016-17, the balance payment for the same is **not allowed.**	0.00
14.	Providing and fixing wire gauge aluminium window shutters in New Office Building Complex at Jhakri (PCD-2240)	12.19	The New Office Complex of NJHPS was not provided wire gauge shutters in windows which causes insects problems in the office rooms. Therefore the work is carried out to provide the fresh air during the office hours and which ultimately increasing the efficiency of the employees.	Since capitalisation of expenditure on New Office Building Complex at Jhakri has been allowed, the balance work related to building is also **allowed**.	12.19
15.	Balance payment against work -C/o Toilets (i) 2 nos. toilets near	0.05	Balance payment against work -C/o Toilets (i) 2 nos. toilets near NJHPS Nursery (ii) 1 no. toilet near Civil Store (iii) 1 no. toilet near	Asset/work has already been allowed by the Commission	0.05

	NJHPS Nursery (ii) 1 no. toilet near Civil Store (iii) 1 no. toilet near W&T (iv) 2 nos.toilets near CISF office at Jhakri (PCD-2231) which is claimed in 2016-17		W&T (iv) 2 nos.toilets near CISF office at Jhakri (PCD-2231) which is claimed in 2016-17	for work capitalised in 2016-17, the additional capitalisation is on account of balance payment is **allowed**.	
16.	Balance payment against work C/o Control room for proposed Solar Power Plant of 200 KW (AC) at Surge Shaft NJHPS Jhakri (PCD-2220) which was claimed in 2016-17	0.05	Balance payment against work C/o Control room for proposed Solar Power Plant of 200 KW (AC) at Surge Shaft NJHPS Jhakri (PCD-2220) which was claimed in 2016-17	Since capitalization of work has not been allowed during 2016-17, the balance payment **is also not allowed.**	0.00
17.	Balance payment against work C/o Toilet and bathroom along with fencing around residential area for Security Guards at Wadhal Adit of NJHPS (PCD-2280) which is claimed in 2016-17	0.15	Balance payment against work C/o Toilet and bathroom alongwith fencing around residential area for Security Guards at Wadhal Adit of NJHPS (PCD-2280) which is claimed in 2016-17	Since asset/work has already been allowed by the Commission for work capitalised in 2016-17, the additional capitalisation is on account of balance payment is also **allowed**.	0.15
18.	New Corporate Office Shimla	590.84	Since construction stage of the Project most of the offices of various departments are being operated from rented buildings at scattered locations. Therefore, construction of permanent centralised Corporate Office has been taken up for smooth line functioning of Power Station/ NJHPS. These works are necessary works to the New Corporate Office Complex.	The Commission in its order dated 26.4.2006 in Petition No. 3/2006 had disallowed the expenditure on creation of "Corporate office and other offices" of NTPC and the same was affirmed by the Appellate Tribunal for Electricity. Accordingly, the capitalization	0.00

				claimed is not allowed.	
19.	Construction and widening of road from Power House road bifurcation point RD 750//0.00 mtr. To 230 mtr leading to New O&M Workshop below NH-5 at Jhakri (PCD-2264)	73.50	The proposed Central O&M Workshop at NJHPS is being developed as a fully equipped facility to facilitate repair & reclamation work of massive turbine parts. NJHPS turbines suffer extensive damage on its underwater parts due to heavy silt load and requires replacement of all underwater parts in order to make the generating machines operation worthy for every monsoon season. The related works involved for reclamation of underwater parts are required to be completed in a short time span and moreover require designated / independent allocated area for execution & achieving of quality standards. As major repair works have become an integral part of NJHPS maintenance programme, need for establishment of an Central O&M Workshop for NJHPS is being felt since long. Repair and reclamation works on large turbine components generate lot of metallic dust and smoke during the process which is perceived detrimental to the life of electric and electronic installations in machine hall & transformer hall where such works are being performed at present. Besides above, keeping in view the essentiality of hard coating on NJHPS turbine parts, it has been decided to establish additional coating facility at NJHPS in order to cater to future requirements and also create redundancy to existing facility. The establishment of this facility shall enhance efficiency of works being performed together with	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation	73.50

			quality in all aspects of works and Safety to already installed machines , equipment and personnel as well.		
20.	Construction of Toilets in DPS School and extension of boundary wall of O&M Store at Jhakri (PCD-2320)	13.75	The work is carried out as per the requirements of DPS School of NJHPS as a separate toilets for boys & girls in line with cleanliness drive by the Prime Minnister of India under Swachh Vidhyalya Abhiyan.	Since the asset 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**	13.75
21.	Design, Supply, Installation and Commissioning of Water Treatment Plant at Hydel Training Institute, NJHPS (PCD-2274)	8.44	The water filteration plant has been installed in order to provide clean and hygenic quality of water to employees & trainees of SJVN		8.44
22.	Providing and fixing inter chain link fencing to the acquired land of NJHPS at Jhakri (PCD-2031)	65.09	Physical demarcation and barricading of SJVN land will safe guard the boundaries and will avoid undue encroachments, unnecessary litigations.	Since the expenditure pertains to safety of the plant, the same is **allowed** under this Regulation. However, the Petitioner is directed to furnish relevant documents at the time of truing up.	65.09
23.	Providing and fixing of inter chain link fencing in D/S of Nathpa Dam along the Right Bank of Satluj River i.e. Steel Truss Bridge to Hot Water Spring (RD 0.00 to 586 m of NJHPS	22.13	The work is necessary from the security and safety point of view of the Project.		22.13
24.	Providing and fixing chain link fencing to the acquired land of NJHPS at Wadhal (PCD-2305)	84.35			84.35
25.	Providing and fixing of inter chain link fencing and steel gate in front of Seismic Observatory lab at Dam Nathpa (PCD-2367)	5.07			5.07

26.	Balance payment against work -Providing and fixing inter chain link fencing around the acquired land of NJHPS at Kotla, Tehsil Rampur Bsr. Distt. Shimla - PCD-2189 which is claimed in 2016-17	1.92			1.92
27.	Providing view cutter fencing along road of Surge Shaft periphery and steel grating over drain at EL 1584.00 at Surge Shaft in NJHPS Jhakri (PCD-2295)	23.53	The work was carried out for the security & safety of the sensitive part of the Project i.e. Surge Shaft Complex & Structure and recently 200 KWA Solar Plant has also been commissioned in this complex.	Since the expenditure is essential for safety of the plant, the same **is allowed** under this regulation However, However, the Petitioner is directed to furnish relevant documents at the time of truing up.	23.53
28.	Design, manufacture, quality assurance of 420k V, 2000A, GIS Extension bay at existing 420 Kv GIS system of NJHPS	1620.46	High Voltage in the range of 430KV to 440KV, four Nos, 400KV Line Circuit Breaker got flashover in the year 2009-10 which effect the safe evacuation of power to GRID. Accordingly, 80MVAR Bus Reactor for NJHPS was approved by NRPC in order to control the GRID voltage & also to avoid the frequent failure of GIS Line Circuit Breakers at NJHPS on account of High GRID Voltage. The Installation & Commissioning of reactor on these parts of the GRID may help in controlling the GRID Voltage & thus increase the overall efficiency of Power Plant (NJHPS). Similarly, the manufacturing of existing obsolete Line Circuit Breaker has already been stopped by OEM & procuring obsolete Line Circuit Breaker from OEM is	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation. However, the Petitioner is directed to furnish relevant documents related to the claim at the time of truing up.	1620.46

			a costly affair, so we have procured latest technology based Line CB's for two nos.Line bays complete with Operating Mechanism & associated equipments on open tender basis for retrofitting in existing 400KV Line Bays (Panchkula-I &II) so as to obtain a cost effective solution & advance Technology for better efficiency of the systems in 420KV GIS System of NJHPS. The Line CB Pole being an obsolete model, the lack of spare availability is a major concern for NJHPS. Also there is enormous escalation in the price of these obsolete spares with each passing year. Being in continuous operation for more than 14 years, we strongly feel that the GIS Circuit Breakers require up gradation. Keeping in view the larger & future interest of the plant, we feel that in the long run the retrofitting solution shall not only be economical but also advantageous for NJHPS in many ways towards efficient operation of 1500MW NJHPS.		
29.	Supply installation , testing & commissioning of 6 Nos. of 6KW Solar Photovoltaic Power Plant at various building /locations of NJHPS	40.35	Solar power being renewable source of energy and can be used for providing electricity to offices and street lights, which will reduce the energy bills. Moreover, during low flow seasons and winter frequent tripping take place and electricity is being provided by DGs at various locations. So with energy available form solar plant, clean and green energy will be available, energy bill will be reduced and plant efficiency will increase.	The asset will reduce O&M expenses of the generating station. As O&M expenses have been allowed to the generating station on normative basis, the capitalization of this asset is **not allowed**, even though it has indirect	0.00

30.	Design, Engineering, Manufacturing, Procurement & Supply of equipment and forwarding etc., Erection, Testing and Commissioning of 200 KW(AC), Ground Mounted, Grid Interactive Solar PV Power Plant at Surge Shaft, NJHPS Jhakri (Pkg-155)	181.61	Solar power is a renewable source of energy and The energy Generated from proposed Captive Solar Power Plant has been fed in existing 22KV System near Surge Shaft & same has been utilized for internal power consumption of NJHPS. Moreover, the Ministry of Power, Govt. of India has also emphasized to developed Solar Power in land of Old & New Hydro Power Station. So, NJHPS has also taken a step to developed solar power in the vicinity of 1500MW NJHPS in phased manner to meet the Govt guidelines.	impact on the efficient operation of the generating station.	0.00
31	Maruti Ertiga Vxi Regd. No. Hp03c4975	3.47	Vehicle Procured as replacement against decapitalisation of vehicles refer Annexure-2 for details.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation. De-capitalization of old asset is considered under "Deletions"	3.47
32.	Maruti Ertiga Vxi Regd. No. Hp03c4976	3.16	Vehicle Procured as replacement against decapitalisation of vehicles refer Annexure		3.16
33.	Maruti Ciaz Delta Regd. No. Hp03c 4971	3.77	Vehicle Procured as replacement against decapitalisation of vehicles refer Annexure		3.77
34.	Maruti Ciaz Delta Regd. No. Hp03c 4972	3.77	Vehicle Procured as replacement against decapitalisation of vehicles refer Annexure		3.77
35.	Maruti Ciaz Delta Regd. No. Hp03c 4973	3.77	Vehicle Procured as replacement against decapitalisation of vehicles refer Annexure		3.77
36.	Toyota Corolla Altis Hp 07 D 0961	8.30	Vehicle Procured as replacement against de-capitalisation of vehicles refer Annexure.		8.30
37.	Projector/ Public Address System) & Building Automation system & Access control- Corporate Office	77.22	Since construction stage of the Project most of the offices of various departments are being operated from rented buildings at scattered locations. Therefore, construction of permanent centralised Corporate Office has been taken up for smooth line functioning of Power Station/ NJHPS. These works are necessary works to the New Corporate Office Complex.	Since capitalisation of corporate office has been disallowed earlier, the expenditure related to corporate office is also **not allowed**.	0.00

38.	Digital Multifunctional Copier Model-5021- XEROX Make	0.43	Item Procured for the efficient operation of the Project/ department.	Since capitalization of minor assets after the cut-off date is not permissible under the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
39.	IFS Sofware Procured for imporving of efficiency of employees-Corporate Office	138.40	IFS Software installed in order to comply with the new accounting standards reporting requirements i.e. Ind as applicable from 2015 .	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation	138.40
40.	Installation Charges For The Window Based 800xa Hmi System For Dcs System Of Njhps Which Was Capitalised In 2016-17	11.16	Installation Charges For The Window Based 800xa Hmi System For Dcs System Of Njhps Which Was Capitalised In 2016-17	Asset has already been allowed by the Commission for work capitalised in 2016-17, the additional capitalisation on account of installation charges for the same is **allowed**.	11.16
	Total	**3246.06**			**2207.07**

Discharge of liabilities

27. The Petitioner has claimed an amount of ₹8.30 lakh for towards discharge of liabilities during 2017-18. This has been allowed in terms of Regulation 14 (3)(vi) of the 2014 Tariff Regulations.

28. Based on the above, the total additional capital expenditure allowed for the year 2017-18 is ₹2852.12 lakh.

2018-19

29. The additional capital expenditure of ₹135.27 lakh has been claimed by the Petitioner towards free hold land township area under Regulation 14(3)(i) of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that the expenditure has been incurred towards enhanced compensation paid for balance cases as per the decision of the Hon'ble Court. Considering the fact that the expenditure of ₹135.27 lakh has been incurred by the Petitioner for compliance with the order of the Court, the same is allowed to be capitalized under this regulation.

Additional capitalization on account of Change in law {Regulation 14 (3)(ii)}

30. The Petitioner has claimed additional capital expenditure of ₹109.09 lakh for Design, Supply, Installation and Commissioning of Sewage Treatment Plant, paper to pencil making plant and purchase of garbage containers under Regulation 14(3)(ii). Since the expenditure incurred is in compliance to the notice issued by H.P. State Pollution Control Board, the same is allowed under this head.

Additional capitalization on account of higher security and safety of the plant {Regulation 14(3)(iii)}:

(₹ in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Providing and fixing chain link fencing at various location on road leading to MAT Portal and TRT Outfall to control unauthorised movement in Project premises at NJHPS Jhakri (PCD-2420)	24.55	As per the decision taken in the security co-ordination meeting the work should be provided/constructed along both side of the road to check the movement of unauthorised persons and animals keeping in view the security of the Project	The additional capital expenditure claimed is on account of need for higher security and safety of plant as directed by Government agencies/ statutory authorities, the	24.55

2.	Installation of Micro seismic Instruments (5 nos.), Strong Motion Accelerographs (2 nos.), Inclinometer (8 nos.), Automatic Weather Station (1 no.), 2-D Crack Meters (6 nos.)	130.00	As per the recommendation of DSO Nasik micro seismic instruments and strong motion accelerographs has been installed to measure the micro seismic activities in Dam and around NJHPS	same is allowed under this regulation.	130.00
3.	Procurement of CCTV Cameras.	76.69	Various Sites & important locations of NJHPS has not been covered by CCTV Surveillance system till date. As per security recommendation of NSG team installation of adequate surveillance device CCTV at requisite locations of project is required. Further a committee having personnel from CISF has recommended installation of CCTV's at various project locations to enhance security preparedness.		76.69
4.	Procurement of High pressure portable Back pack water mist system through GEM for CISF (Fire wing)	5.71	In order to strengthen the operational preparedness of Fire Wing personnel with updated & advance technology to meet any emergency/eventuality, all CISF Unit commanders were instructed by DG / CISF, Ministry of Home Affairs via letter no. E-37015/ F.AQP/PROC/2016/Fire-1492 dt:- 22/9/2016 to maintain the stock of the above equipment in their respective unit.	Since the additional capital expenditure incurred is on account of need for higher security and safety of plant as directed by Governmental agencies/ statutory authorities, the same is allowed under this regulation.	5.71
5.	Providing and fixing chain link fencing at various location on road leading to MAT Portal and TRT Outfall to control unauthorised movement in Project premises at NJHPS Jhakri (PCD-2420)	24.55	As per the decision taken in the security co-ordination meeting the work should be provided/constructed along both side of the road to check the movement of unauthorised persons and animals keeping in view the security of the Project		24.55
6.	Installation of Microseismic	130.00	As per the recommendation of DSO		130.00

	Instruments (5 nos.), Strong Motion Accelerographs (2 nos.), Inclinometer (8 nos.), Automatic Weather Station (1 no.), 2-D Crack Meters (6 nos.)		Nasik micro seismic instruments and strong motion accelerographs has been installed to measure the micro seismic activities in Dam and around NJHPS As per the recommendation of DSO Nasik , Automatic weather station has been installed at Nathpa Dam for monitoring the various climatic parameters surrounding the Dam . 2-D crack meters were installed at disilting chambers to monitor the movement between the adjacent cracks around the chambers. As per the recommendation of the internal dam safety committee the inclinometers has been installed at various location of NJHPS to monitor. The movement along the slopes. To full fill the safety measures of Dam, disilting chambers and TRT outfall area all these instruments were installed.		
7.	Procurement of CCTV Cameras.	76.69	Various Sites & important locations of NJHPS has not been covered by CCTV Surveillance system till date. As per security recommendation of NSG team installation of adequate surveillance device CCTV at requisite locations of project is required. Further a committee having personnel from CISF has recommended installation of CCTV's at various project locations to enhance secutiry prepardness. (Copy of NSG' recommendation enclosed at page from 101 to 104)		76.69
	Total	**236.95**			**236.95**

(d) Additional works/expenditure which has become necessary for efficient and successful operation of plant {Regulation 14 (3)(viii)}:

(₹in lakh)

Sl. No	Name of Asset	Amount Claimed	Justification submitted by the Petitioner	Remarks on Admissibility	Amount allowed
1.	Francis runner according to DRG No. 314491 sheet 2, without hard coated & without labyrinth rings for NJHPS	3572.14	Spares against replacement of worn out /damaged parts refer annex-z	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. De-capitalization of old assets amounting to Rs.3464.78 lakhs is considered in "Deletions"	3572.14
2.	Upper labyrinth seal Stationary	62.89	Spares against replacement of worn out /damaged parts refer Annexure-z	Since capitalization of spares after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
3.	Upper labyrinth seal rotating	131.30	Spares against replacement of worn out /damaged parts refer Annexure -z		0.00
4.	Lower labyrinth seal rotating	53.35	Spares against replacement of worn out /damaged parts refer Annexure -z		0.00
5.	MIV Service Seal Guiding Ring	13.94	Additional spares procured to reduce the downtime & increase efficiency.		0.00
6.	MIV Maintenance Seal Guiding Ring	13.94	Additional spares procured to reduce the downtime & increase efficiency.		0.00
7.	Supply, installation, Modification, testing & commissioning of independent water make up expansion tank for secondary cooling water circuit of Power House.	25.70	The primary cooling water system is open circuit and secondary cooling water system is close circuit. In secondary cooling water system, to make up loss of water due to leakage, evaporation etc water make up tank is installed at Transformer Hall & this tank is common for all the six units. In case of sudden loss of excess	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	25.70

			water from any of the unit the water pressure of all the six units drops which leads to tripping of Generating Units. Hence installation of independent make up tank is necessary to reduce unit down time, safety & reliability and efficiency of generating units of NJHPS.		
8.	Design, Manufacture, Quality assurance, Qualtiy control, Shop Assembly, Shop Testing, Packing & Forwarding, Supply, Transportation, & delivery at site, Transport insurance, Site storage and preservation, Installation, Commissioning. Performance testing, Acceptance testing, handing over to SJVN, 25MVA, 400KV/22KV, Station Transformer GIS Extension Bay & Retrofit Circuit Breaker GIS Bay of NJ-Panchkula-I Feeder)	1554.64	The High Transmission voltage particularly during lean season in the range of 430KV to 440KV has been a serious threat to high voltage GIS equipments of 420KV GIS system of NJHPS as Lines has been opened very frequently on High Voltage to Control the GRID Voltage. On account of opening of 400KV Line at High Voltage in the range of 430KV to 440KV, four Nos, 400KV Line Circuit Breaker got flashover in the year 2009-10 which effect the safe evacuation of power to GRID. Accordingly, 80MVAR Bus Reactor for NJHPS was approved by NRPC in order to control the GRID voltage & also to avoid the frequent failure of GIS Line Circuit Breakers at NJHPS on account of High GRID Voltage. The Installation & Commissioning of reactor on these parts of the GRID may help in controlling the GRID Voltage & thus increase the overall efficiency of Power Plant (NJHPS). Since inception of Power Plant, NJHPS has no arrangement to use its own Power Supply to meet the Auxiliary Power requirement of Power station. NJHPS has been drawing power from HPSEB to meet the station auxiliary requirement of NJHPS Unit including Dam site. The Power Supply from HPSEB is not only	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. However, the Petitioner is directed to furnish relevant documents related to the claim at the time of truing up.	1554.64
9.	Design, Manufacture, Supply, Erection Storage, Testing & Commissioning of 400KV/22KV, 25MVA, 3 Phase, Star/Star Transformer with oil to Air Bushing on 400KV Side & 22Kv cable termination Gland on 22KV side &	567.13		Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** this regulation. However, the Petitioner is directed to furnish relevant documents related to the	567.13

	Protection panel.		erratic & unreliable but also a costly affair & thus effecting the efficient operation of Power Plant. Accordingly The 25MVA, 400KV/22KV, Station Transformer was approved by CEA in order to use Own reliable station Auxiliary Power Supply at NJHPS. In order to make Bus Reactor & Station Transformer fully operational, the following equipment are divided in to five number packages as detailed below: a) Two Nos GIS Bay & associated equipment required for Switching of 80MVAR Bus Reactor & 400KV/22KV Station Transformer. b) One No, 400KV/22KV, 25 MVA Station Transformer along with Protection Panel. c) One No 80MVAR Bus Reactor along with Protection Panel. d) Numerical Bus Bar Protection for Bus Reactor & Station Transformer along with complete replacement of existing obsolete Static Bus Bar protection of 13 Nos GIS Bays as Static & Numerical Bus Bar protection cannot be configured together, hence replacement of existing obsolete Static Bus Bar protection is inevitable to make the complete Bus Bar scheme workable & safe for the Power Plant. e) Misc Works such as Gantry Structures, LA, Fire Fighting, 22KV Panel etc associated with Bus Reactor & Station Transformer. Similarly, the manufacturing of existing	claim at the time of truing up.	
10.	Design, Manufacture, Supply, Erection Storage, Testing & Commissioning of 400KV, 80MVAR Bus Reactor, oil to Air Bushing on 400KV side a/w Protection panel.	541.30			541.30
11.	Design, Manufacture, Supply, Erection Storage, Testing & Commissioning of 400KV Numiricle Bus Bar Protection System for Bus Reactor & Station Transformer & upgradation of existing obsolete Static Bus Bar Protection of 13 Nos GIS Bays with Numiricle Bus Bar Protection in order to make same configuration in Bus Bar Scheme.	54.97		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. However, Petitioner may be directed to furnish relevant documents related to the claim.	54.97
12.	Supply, Erection, Storage, Testing & Commissioning of 12 Nos 22KV Panels with 22KV Breakers & All cable works of Control & 22KV Power Cables, cable trenches & all related works.	182.05		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. However, Petitioner may be directed to furnish relevant documents	182.05
13.	420 Kv Outdoor And Miscellaneous Equipment For Reactor Bay At Pot Head Yard	199.78			199.78

	(Pkg-175)		obsolete Line Circuit Breaker has already been stopped by OEM & procuring obsolete Line Circuit Breaker from OEM is a costly affair, so we have procured latest technology based Line CB's for two nos. line bays complete with Operating Mechanism & associated equipment on open tender basis for retrofitting in existing 400KV Line Bays (Panchkula-I &II) so as to obtain a cost effective solution & advance Technology for better efficiency of the systems in 420KV GIS System of NJHPS. The Line CB Pole being an obsolete model, the lack of spare availability is a major concern for NJHPS. Also there is enormous escalation in the price of these obsolete spares with each passing year. Being in continuous operation for more than 14 years, we strongly feel that the GIS Circuit Breakers require up gradation. Keeping in view the larger & future interest of the plant, we feel that in the long run the retrofitting solution shall not only be economical but also advantageous for NJHPS in many ways towards efficient operation of 1500MW NJHPS.	related to the claim.	
14.	Variation Order For "420 Kv Outdoor And Miscellaneous Equipment For Transformer Bay At Pot Head Yard (Pkg-175-Variation Order)	125.62			125.62
15.	Alfa Laval Oil Purification system two nos. (Model No. MAB 103)	22.47	This machine is required for filtration of hydraulic oil being used in the Hydraulic Hoist of Radial Gates and SFT Gates & to enhance the life & efficiency of the equipment.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	22.47
16.	Purchase of New Hard Coating Equipment	465.00	The proposed Central O&M Workshop at NJHPS is being developed as a fully equipped facility to facilitate repair & reclamation work of massive turbine parts.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of	465.00
17.	Design & installation of Pre-engineered Metal Building	348.00			348.00

	(Central O&M Workshop-(PEB Structure)		NJHPS turbines suffer extensive damage on its underwater parts due to heavy silt load and requires replacement of all underwater parts in order to make the generating machines operation worthy for every monsoon season. The related works involved for reclamation of underwater parts are required to be completed in a short time span and moreover require designated / independent allocated area for execution & achieving of quality standards. As major repair works have become an integral part of NJHPS maintenance programme, need for establishment of an Central O&M Workshop for NJHPS is being felt since long. Repair and reclamation works on large turbine components generate lot of metallic dust and smoke during the process which is perceived detrimental to the life of electric and electronic installations in machine hall & transformer hall where such works are being performed at present. Besides above, keeping in view the essentiality of hard coating on NJHPS turbine parts, it has been decided to establish additional coating facility at NJHPS in order to cater to future requirements and also create redundancy to existing facility. The establishment of this facility shall enhance efficiency of works being performed together with quality in all aspects of works and Safety to already installed machines, equipment and personnel as well.	plant, the same is **allowed** under this regulation.	
18.	Design, Supply and Erection, Testing and Commissioning of 60/40 Ton capacity EOT crane in proposaed Central O&M Workshop.	104.00			104.00
19.	40 Ton capacity Large Turntable / Manipulator / positioner for Coating Runner and other comp.	122.00			122.00
20.	Runner Manipulator for Repair Works	115.00		Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	115.00
21.	Acoustic Rooms for Coating Process and Grit Blasting including Dust Extraction Filter for both chambers.	134.00			134.00
22.	Air Compressors (02 nos.) with receiver for Service Air and Hard Coating process	25.30			25.30
23.	Lab Equipment (Sample Cutting and Polishing Machine-Portable)	3.50			3.50
24.	Fuel/ Gas Supply System including Gas Leakage Detection & Alarm System	120.00			120.00
25.	Development of bench for C/O of integrated O&M workshop at Jhakri	167.17			167.17
26.	Providing and laying concrete pavement, chequer tiles, chain link fencing, m.s. gate and sewage line etc. at New O&M	72.53			72.53

	Workshop				
27.	Replacement of Robotic System installed at Hard Coating System supplied alongwith Hard Coating Equipment under EMP-I	91.12	The existing robotic system was supplied under the scope of EMP -I (Turbine Package) and is of year 1998 built. This system, after use for several years, posing difficulty in maintaining costly spare inventory and also facing increased breakdowns. Therefore, in order to ensure efficient and ready availability of robotic system for most vital service to power station (i.e. meeting hard coating requirements) for further ensuring availability of power station throughout the year for efficient generation under extreme silt conditions.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation. De-capitalization of old asset is considered under "Deletions"	91.12
28.	Installation of Emulsifier fire fighting system in the Radial Gate and SFT Gate Power Pack	40.21	The hydraulic Power Packs of Radial Gates and SFT Gates which are core components of Nathpa Jhakri Hydro Power Station contains the large quantity of Hydraulic Oil. Therefore Emulsifier system is to be required for protection from fire under safety aspects.	Since the expenditure of safety of the plant, the same is allowed under this regulation. However, the petitioner is directed to submit relevant documents at the time of truing up.	40.21
29.	Design, Fabrication, Supply and Testing & Commissioning of SFT Gates(06 Nos)	30.00	Presently the repair work of SFT Gates are being carried out by manual welding & grinding. However by manual welding & grinding, the profile and finishing cannot be achieved as per the drawing parameters. Proper repair of these Gates can only be carried out at the workshops/onsite having facility of machining centers, handling and drilling etc. Since during the high flow season the maintenance activities are less, the damaged SFT Gates can be repaired during high flow season. Considerable manpower	Since capitalization of spares after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00

			and time will be saved with additional SFT Gates, so that other maintenance activities can be completed within stipulated time. Further. The hard coating of the Gates is being carried out during the lean season i.e. during annual maintenance period. Hard coating workshop at Jhakri is loaded with the Power house equipment. Therefore additional SFT Gates will give the flexibility to carry out the hard coating during the high flow season. The procurement of additional gates will increase the productivity of plant in term of generation.		
30.	Integrity status of gates, discharge measurement and display of the discharge released through the radial gates and BTRDT Outfall in the existing minimum flow measurement system for flow measurement arrangement at NJHPS Nathpa Dam	13.95	The discharge released through the Radial Gates and SFT Gates is to be integrated into the flow discharge measurement arrangement and display on the online webpage for public view to meet the Statutory requirement.	Since the expenditure incurred is for safety of the plant, the same is allowed under this regulation. However, the petitioner is directed to submit relevant documents at the time of truing up.	13.95
31.	Design, Fabrication, Supply and Testing & Commissioning of 40 T Gantry Crane for operation of Stoplog elements of Automatic Spillway Gate (01 No)	109.89	There is no permanent hoisting arrangement for operation of Stoplog elements of Automatic Spillway Gates since commissioning. Maintenance of Automatic Gates is possible only if Stoplog elements are lowered to its sill beam. Optimum water level in between 1490 to 1495 is always required to maintained for optimum generation. The sill level of Automatic Stoplog is 1491.935. Further Small floating bodies/trashes which are accumulated on the right side of Log boom barrier can be taken out	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	109.89

			with the hydraulic grab of above Crane so that entry of trashes in to the HRT can be minimised. This Crane is being a functional requirement to improve the efficiency of plant.		
32.	Fixing of Monorail Crane	5.50	The replacement of side seal rubber seal and other small items are being done through available 50 ton mobile crane for Radial Gate Nos 1,2,4,and 5 except 3, because of Automatic spillway trajectory portion over the Radial Gate No 03. Hence 2 ton monorail hoist is inevitably required over Radial Gate No 03 for change of side seal rubber. This is being a functional and safety requirement.	Since the asset is for safety of the employees and will facilitate the efficient and successful operation of the generating station, the expenditure claimed **is allowed** under this regulation.	5.50
33.	Construction of Check Post & Toilet at GVG Portal and Check Post at Adit-II (SFT Portal) of NJHPS Nathpa	6.87	The CISF Security guard deployed for watch and ward of GVG Structure day and night , even they stay there . But there was no facility for toilet at check post at GVG Portal . A note sheet from Company Commander CISF unit NJHPS Nathpa had been received regarding construction of toilet & Check Post at GVG Portal .	Since the asset 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 this regulation.	6.87
34.	P/F Aluminium Cabin in Different Security Posts at nathpa.	8.48	Aluminium Cabin in Different Security Posts are required to be installed for security personnel deployed at different location. A request letter has been received from Himfecsco supervisor and Dam operation Deptt Nathpa for construction of cabin in Sholding, Adit-I , EIC office & in SFT respectively.	Since the expenditure is for safety of the plant, the same is **allowed** under this regulation However, the petitioner is directed to submit relevant documents at the time of truing up.	8.48
35.	Office Building & Other Building at Delhi	8435.30		The Petitioner has not submitted any justification for the claim. However, the	0.00

				expenditure is claimed for Office Building & Other Building at Delhi. Commission in its order dated 26.4.2006 in Petition No. 3/2006 had disallowed the expenditure on creation of " Corporate office and other offices" of NTPC and the same was affirmed by the Appellate Tribunal for Electricity. Accordingly, the capitalization claimed **is not allowed.**	
36.	Civil works required for installation of Shunt Reactor and transformers in Pot Head yard complex.	133.76	The High Transmission voltage particularly during lean season in the range of 430KV to 440KV has been a serious threat to high voltage GIS equipments of 420KV GIS system of NJHPS as Lines has been opened very frequently on High Voltage to Control the GRID Voltage. On account of opening of 400KV Line at High Voltage in the range of 430KV to 440KV, four Nos, 400KV Line Circuit Breaker got flashover in the year 2009-10 which effect the safe evacuation of power to GRID. Accordingly, 80MVAR Bus Reactor for NJHPS was approved by NRPC in order to control the GRID voltage & also to avoid the frequent failure of GIS Line Circuit Breakers at NJHPS on account of High GRID Voltage. The Installation & Commissioning of reactor on these parts of the GRID may help in controlling the GRID	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	133.76

			Voltage & thus increase the overall efficiency of Power Plant (NJHPS). Since inception of Power Plant, NJHPS has no arrangement to use its own Power Supply to meet the Auxiliary Power requirement of Power station. NJHPS has been drawing power from HPSEB to meet the station auxiliary requirement of NJHPS Unit including Dam site. The Power Supply from HPSEB is not only erratic & unreliable but also a costly affair & thus effecting the efficient operation of Power Plant. Accordingly The 25MVA, 400KV/22KV, Station Transformer was approved by CEA in order to use Own reliable station Auxiliary Power Supply at NJHPS. In order to make Bus Reactor & Station Transformer fully operational, the following equipment are divided in to five number packages as detailed below: a) Two Nos GIS Bay & associated equipment required for Switching of 80MVAR Bus Reactor & 400KV/22KV Station Transformer. b) One No, 400KV/22KV, 25 MVA Station Transformer along with Protection Panel. c) One No 80MVAR Bus Reactor along with Protection Panel. d) Numerical Bus Bar Protection for Bus Reactor & Station Transformer along with complete replacement of existing obsolete Static Bus Bar protection of 13 Nos GIS Bays as Static & Numerical Bus Bar protection cannot be configured together, hence replacement of existing obsolete Static Bus Bar protection is inevitable to make the		

			complete Bus Bar scheme workable & safe for the Power Plant. e) Misc Works such as Gantry Structures, LA, Fire Fighting, 22KV Panel etc associated with Bus Reactor & Station Transformer.		
37.	Non-Residential Buildings - School	13.50	As per the request of Principal DPS, an accommodation for Canteen in DPS premises is required to be provided for the welfare of students ,school staff and visiting parents as presently there is no space for running Canteen in DPS premises. The subject sited accommodation of Canteen in DPS premises was agreed during LMC meeting held on 11.7.2017.	Since the asset 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 this regulation.	13.50
38.	Procurement of two no's of 630 KVA transformer for supply to various establishments with in the project area.	11.33	At present nearly 15 numbers of transformers are supplying power to various establishments of the project. These transformers were procured in the year 1990-91 and procurement of transformers is required keeping in view increasing load requirement and spare management.	The additional capital expenditure has been claimed for the purchase of spare. The expenditure incurred for spares after the cut-off date is **not allowed.**	0.00
39.	Supply, Erection & Commissioning of Power Supply System including Transformer, Illumination of premises, distribution board and associated cabling etc.	60.00	The proposed Central O&M Workshop at NJHPS is being developed as a fully equipped facility to facilitate repair & reclammation work of massive turbine parts. NJHPS turbines suffer extensive damage on its underwater parts due to heavy silt load and requires replacement of all underwater parts in order to make the generating machines operation worthy for every monsoon season. The related works involved for reclamation of underwater parts are required to be completed in a short time span and moreover require	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this Regulation.	60.00

			designated / independent allocated area for execution & achieving of quality standards. As major repair works have become an integral part of NJHPS maintenance programme, need for establishment of an Central O&M Workshop for NJHPS is being felt since long. Repair and reclamation works on large turbine components generate lot of metallic dust and smoke during the process which is perceived detrimental to the life of electric and electronic installations in machine hall & transformer hall where such works are being performed at present. Besides above, keeping in view the essentiality of hard coating on NJHPS turbine parts, it has been decided to establish additional coating facility at NJHPS in order to cater to future requirements and also create redundancy to existing facility. The establishment of this facility shall enhance efficiency of works being performed together with quality in all aspects of works and Safety to already installed machines, equipment and personnel as well.		

40.	Capacity addition towards Design, Engineering, Supply, Installation, Testing & Commissioning & Comprehensive O&M of 70KW (AC) / 80.60 KWp (DC) Solar Power System & integration thereof with existing 200KW (AC)/230 KWp at Surge Shaft Area of 1500 MW NJHPS.	51.80	In order to utilize the Space available at site, we are planning to enhance the capacity of Solar Power plant by 70KW (AC) / 80.60 KWp (DC) at existing 200KW (AC)/230KW (DC) Solar Power plant at Surge Shaft. Moreover, the Ministry of Power, Govt. of India has also emphasized to developed Solar Power in unused land of Old & New Hydro Power Station. So, NJHPS has also taken a step to developed solar power in the vicinity of 1500MW NJHPS in phased manner to meet the Govt guidelines. The Solar Power generated from this plant shall be further utilized for captive use of NJHPS.	The asset will reduce O&M expenses of the generating station. As O&M expenses have been allowed to the generating station on normative basis, the capitalization of this asset **is not allowed,** even though it has indirect impact on the efficient operation of the generating station.	0.00
41.	Air dryer	4.81	At present there is no air dryer in compressed air system of Power House. When pneumatic tools were operated through compressed air, we are facing entry of water in the tools, causing rusting of tools & mal operation. Air dryer is proposed to dry the compressed air for various uses in Power House operation. This will enhance the life of components.	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation.	4.81
42.	Motorized Life Boat	9.00	Motorized Life Boat is required for repair of Log Boom Barrier, Under water Diving, and other safety related matters which can be performed efficiently. The Motorized boat is required under Disaster Management/ Safety.	The additional capital expenses claimed is on account of need for higher security and safety of plant as directed by Governmental agencies/ statutory authorities, the same is **allowed** under this regulation.	9.00
43.	High Capacity Portable Fume Extractor	3.19	In order to minimize the extent of spreading of fumes and making the surrounding environment conducive, the high	Since capitalization of tools & tackles after the cut-off	0.00

			capacity portable welding fume extractor is required to minimize the emission of welding fume in the surrounding atmosphere/ Confined SFT Chamber so that healthy working environment can be achieved during welding, creating the health hazard while carrying out the welding.	date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	
44.	Purchase of Painting Machine	4.15	It is required for carrying out the painting activities of the Gates and Hoist at the Dam area in order to enhance the quality & life of Gates & structures and efficiency of Manpower/ components.		0.00
45.	Vehicle against old vehicle TATA Safari	20.00	In order to fulfill the needs during the visits of dignitaries to project site, new vehicle is required to be procured as replacement vehicle in place of TATA SAFARI, after condemnation/ decapitalisation in 2017-08	Considering the fact that the assets/ works will facilitate the successful and efficient operation of plant, the same is **allowed** under this regulation. De-capitalization of old asset is considered under "Deletions"	20.00
46.	Storage Cabinets for Storage of T&P items, spares and documents	10.00	These are required for storage of manuals, drawings, tools, plants, spares and consumable at various locations of Dam i.e. BTRDT Pump House, SFT Area, Sholding which are located at long distance from each other, to reduce the lead time for arranging these items thereby efficient use of Men, Machine & Materials can be achieved. The life of tools, manual & drawings shall be improved at a greater extent.	Since capitalization of minor asset after the cut-off date is not permissible in terms of the 2014 Tariff Regulations, the expenditure is **not allowed.**	0.00
47.	System Software Up-gradation in all PLC's of Governor System from present Window-98 to latest Window	34.60	To improve the operational efficiency of Power Plant, the System Software of all Programmable Logic Controller (PLC) of Governor System in all Six Generating Units shall be		0.00

	Operating system in all six Units of the generating station.		upgraded from Window-98 to latest Window to make system compatible with latest engineering work station in order to carry out better diagnosis, analysis & modification in the system. Moreover, we have to move forward with the latest technology as limited support is available from OEM for obsolete system which may affect the efficient operation of Power Plant.		
	TOTAL	**17895.16**			**9039.40**

31. Based on the above, the total additional expenditure of ₹9520.70 lakh is allowed to be capitalized for the year 2018-19.

Discharge of liabilities

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

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
0.12	359.01	678.80	8.30	0.00

33. The discharge of liabilities has been allowed for the purpose of tariff. This is however subject to submission of the balance sheet for 2014-19, along with reconciliation of liabilities with the balance sheet at the time of truing up exercise.

De-capitalization

34. The Petitioner has claimed de-capitalization (as per Form 9B (i) as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
601.32	312.23	425.78	250.79	4040.33

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

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

36. Since the assets are not in use, the de-capitalization as claimed by the Petitioner is allowed other than those assets/works, for which capitalization against replacement has not been allowed by the Commission. Based on this, the year wise details of de-capitalization allowed is as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
600.08	312.23	421.32	255.19	4024.75

37. As stated earlier, the de-capitalization of old assets for ₹14.26 lakh for wet scrubber and ₹1.32 lakh for fire tender as claimed by the Petitioner in the year 2018-19 have been considered under 'deletion' during the year 2017-18 i.e. the year of capitalization of new/ replaced asset.

Additional capital expenditure allowed (Net)

38. Accordingly, the additional capital expenditure allowed for the period 2014-19 are as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Additional capital expenditure allowed	1915.19	911.60	1081.38	2843.82	9520.70
Less: De-capitalization allowed	600.08	312.23	421.32	255.19	4024.75
Addition: Discharge of liabilities	0.12	359.01	678.80	8.30	0.00
Total Additional capital expenditure allowed (Net)	**1315.23**	**958.38**	**1338.86**	**2596.93**	**5495.95**

Capital cost

39. As stated, the closing capital cost allowed by the Commission in order dated 22.5.2019 in Petition No. 309/GT/2018 is ₹877307.50 lakh as on 31.3.2014. The same has been considered as the opening capital cost as on 1.4.2014. Accordingly, the capital cost has been worked out for the purpose of tariff as under:

(₹ In lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	877307.50	878622.73	879581.11	880919.97	883516.90
Admitted Additional Capitalization	1315.23	958.38	1338.86	2596.93	5495.95
Closing Capital Cost	878622.73	879581.11	880919.97	883516.90	889012.85

Debt-Equity Ratio

40. The debt-equity ratio of 70:30 has been considered in terms of Regulation 19 of the 2014 Tariff Regulations for the purpose of tariff.

Return on Equity

41. 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:*
>
> *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."*

42. 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 overrecovery 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."

43. In terms of the above regulation, the base rate has been grossed up with MAT Rate i.e. 20.961% for the year 2013-14. Accordingly, Return on Equity has been calculated as under:

(₹ in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Equity	413969.95	414364.51	414652.03	415053.69	415832.77
Addition due to Additional Capitalization	394.57	287.51	401.66	779.08	1648.79
Closing Equity	414364.51	414652.03	415053.69	415832.77	417481.55
Average Equity	414167.23	414508.27	414852.86	415443.23	416657.16
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)	**86461.55**	**86532.75**	**86604.68**	**86727.93**	**86981.35**

44. 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 revision of tariff based on truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations.

Interest on loan

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

> *"26. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*
>
> *(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*
>
> *(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of Decapitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalization of such asset*
>
> *(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*
>
> *(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*
>
> *Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:*
>
> *Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered*
>
> *(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*
>
> *(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such refinancing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*
>
> *(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.*
>
> *(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute: Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."*

46. The Normative loan for the project has already been repaid. The normative loan on account of admitted additional capital expenditure during the respective years of the entire period has been considered as paid fully, as the admitted depreciation is more than the amount of normative loan in these years. As such, the Interest on Loan during the period 2014-19 is 'nil'.

Depreciation

47. 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 tranmission 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 upto 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) alongwith 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 decapitalized asset during its useful services."

48. The COD of the generating station is 18.5.2004. Since, the project has completed 12 years of commercial operation as on 18.5.2016, the weighted average rate of depreciation of 5.095%, 5.094% and 5.091% has been considered for calculation of depreciation during the years 2014-15, 2015-16 and 2016-17 respectively in terms of the above regulations. The remaining depreciable value has been spread over the balance useful life of the project from 2017-18 onwards. Accordingly, depreciation has been computed as under:

(₹ in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Gross Block	877307.50	878622.73	879581.11	880919.97	883516.90
Addition due to Additional Capitalisation	1315.23	958.38	1338.86	2596.93	5495.95
Closing Gross Block	878622.73	879581.11	880919.97	883516.90	889012.85
Average Gross Block	877965.12	879101.92	880250.54	882218.44	886264.88
Land related cost	7521.22	7740.16	7758.76	7741.65	7876.91
Rate of Depreciation	5.095%	5.094%	5.091%	0.00	0.00
Depreciable Value	783399.51	784225.58	785242.60	787029.11	790549.17
Balance Useful life of the asset	25.13	24.13	23.13	22.13	21.13
Remaining Depreciable Value	370330.10	326107.34	282165.96	238876.60	231441.20
Depreciation	**44735.95**	**44779.82**	**44813.70**	**10793.97**	**10952.92**

O&M expenses

49. Regulation 29 (3) (b) of the Tariff Regulations, 2014 provides as under:

"for hydro generating stations of Satluj Jal Vidyut Nigam Limited (SJVNL) and Tehri Development Corporation Limited (THDC), the O&M expenses shall be approved as per the following methodology:

i. The operation and maintenance expenses shall be derived on the basis of actual operation and maintenance expenses for the years 2008-09 to 2012-13, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission.

ii. The normalised operation and maintenance expenses after prudence check, for the years 2008-09 to 2012-13, shall be escalated at the rate of 6.04% to arrive at the normalized operation and maintenance expenses at the 2012-13 price level respectively and then averaged to arrive at normalized average operation and maintenance expenses for the 2008-09 to 2012-13 at 2012-13 price level. The average normalized operation and maintenance expenses at 2012-13 price level shall be escalated at the rate of 6.04% to arrive at the operation and maintenance expenses for year 2013-14 and thereafter escalated at the rate of 6.64% p.a., to arrive at the O&M expenses for the period FY 2014-15 to FY 2018-19."

50. The Petitioner has submitted that the wage revision of Petitioner company is due w.e.f 1.1.2017 and therefore the financial implication on this account cannot be determined determined and seeks enhancement in O&M expenses w.e.f 1.1.2017 and 1.1.2016 towards increase in salary on account of revision based on based on actual payments, whenever paid to employees. The O&M expenses claimed by the Petitioner are as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
25998.86	27725.18	29566.13	31529.32	33622.87

51. The Respondent BRPL has submitted that increase in employee cost, if any, due to wage revision must be taken care by improvement in their productivity level by the Petitioner. The Petitioner has clarified that the Commission in the Statement of Reasons in support of the 2014 Tariff Regulations has stated that increase in O&M cost would be examined by the Commission on case to case basis and would consider the same if found appropriate. Accordingly, the Petitioner has submitted that O&M expenses claimed is based on the 2014 Tariff Regulations.

52. The matter has been examined. The Petitioner has prayed to allow revision of O&M charges including the revised salary of employees w.e.f. 1.1.2017/1.1.2016 as and when it is finalized. The Petitioner has furnished the actual O&M expenses for the

period from 2008-09 to 2012-13, based on the audited balance sheets of the said period. On prudence check of the actual O&M expenditure for the year 2008-09 to 2012-13, the expenses of following nature have been excluded for arriving at the allowable O&M expenses for the period 2014-19:

a) **Productivity linked incentive and performance related pay**: The productivity linked incentive and performance related pay made to the employees of the generating station and corporate centre/service centre has not been allowed as the same has to be borne from the "incentive" earned by the Petitioner by way of better performance of the generating station in terms of the provisions of the 2014 Tariff Regulations.

b) **Donations:** Expenditure is not allowed as the Petitioner is required to bear such expenses from its own profits/ resources.

c) **Capital spares consumed during the period 2008-2013 and not allowed by Commission for capitalisation:** Expenditure claimed for capital spares is not being considered now. However, the Petitioner is directed to submit the details of capital spares capitalized and consumed during the period 2014-19 in the truing up petition

53. The Petitioner has furnished details of the expenditure under the head "Other expenses" and the same has been examined. It is observed that for certain years, there is abnormal increase of more than 20% in certain heads compared to previous year expenditure such as expenditure on Repair and Maintenance for Dam, Intake, WCS and De-silting chamber, Insurance, Rent, Rates & Taxes, Travelling and conveyance, Advertising, Entertainment, etc. The same has been considered. However, the Petitioner is directed to furnish reasons for the said increase in expenditure at the time of truing up of tariff in terms of Regulation 8 of the 2014 Tariff Regulations.

54. Based on the above discussions, the total O&M expenses (net) considered for the generating station for the period 2008-13, for the purpose of calculation of O&M expenses for 2014-19 is as summarized as under:

(₹in lakh)

	ITEMS	2008-09	2009-10	2010-11	2011-12	2012-13
(A)	Breakup of O&M expenses					
1	**Consumption of Stores and Spares**	1513.25	1884.00	1274.00	725.53	1220.00
2	Repair and Maintenance					
2.1	For Dam, Intake, WCS, De-silting chamber	337.81	308	600.99	365.42	380.77
2.2	For Power House and all other works	2071.10	2013.54	1571.24	1746.87	1245.45
	Sub-Total (Repair and Maintenance)	2408.91	2321.54	2172.23	2112.28	1626.22
3	**Insurance**	1688.48	1442.04	2008.70	2231.32	2532.89
4	**Security**	599.11	825.01	769.01	933.33	1120.49
5	**Administrative Expenses**					
5.1	- Rent, Rates & Taxes	1.9	3.25	2.74	3.26	93.79
5.2	- Electricity Charges	743.72	841.06	856.98	976.87	1,008.84
5.3	- Travelling and conveyance	40.76	32.93	50.93	48.4	47.91
5.4	- Communication	48.21	55.93	40.26	49.58	52.91
5.5	- Advertising	45.94	63.38	80.39	50.54	64.69
5.6	- Donations					
5.7	- Entertainment	4.25	4.08	4.23	5.77	5.98
	Sub-Total (Administrative Expenses)	884.78	1000.64	1035.54	1134.41	1274.13
6	Employee Cost					
6.1	Salaries, wages and allowances	3217.93	3394.49	3741.56	4381.75	5001.55
6.2	Staff welfare expenses	373.11	327.34	411.78	397.27	386.35
6.3	Productivity linked incentive					
6.4	Expenditure on VRS					
6.5	Ex-gratia					
6.6	Performance related pay (PRP)	0.00	0.00	0.00	0.00	0.00
	Sub-Total (Employee Cost)	4551.97	4484.21	4663.98	5528.52	5925.24
7	Loss of stores					
8	Provisions					
9	Allocation of Corporate office expenses	2860.59	3223.73	5143.15	6673.69	7632.05
10	Other expenses (Specify items)	2878.22	2390.19	2739.90	3959.08	1670.23
11	**Total (1 to 10)**	**17385.31**	**17571.36**	**19806.51**	**23298.16**	**23001.25**
12	Revenue/Recoveries, if any	40.48	114.6	197.58	63.63	1126.67
13	**Net Expenses**	**17344.83**	**17456.76**	**19608.93**	**23234.53**	**21874.58**

55. The normalized O&M expenses after prudence check, for the period from 2008-09 to 2012-13 has been escalated at the rate of 6.04% to arrive at the normalized O&M expenses at the 2012-13 price level and then averaged to arrive at normalized O&M expenses for the year 2012-13. The same has been escalated at the rate of 6.04% to arrive at O&M expenses for year 2013-14 and thereafter escalated at the rate of 6.64% per annum to arrive at the permissible O&M expenses for the period 2014-19.

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

(₹in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
25173.44	26844.95	28627.46	30528.32	32555.40

57. As regards the prayer of Petitioner for enhancement of O&M expenses due to pay/salary revision, the same may be examined by the Commission, on a case to case basis, subject to the implementation of pay revision as per DPE guidelines and the filing of an appropriate application by the Petitioner in this regard.

Interest on Working Capital

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

> *"28. Interest on Working Capital: (1) The working capital shall cover*
>
> *(c) Hydro generating station including pumped storage hydro electric generating Station and transmission system including communication system:*
>
> *(i) Receivables equivalent to two months of fixed cost;*
>
> *(ii) Maintenance spares @ 15% of operation and maintenance expense specified in regulation 29; and*
>
> *(iii) Operation and maintenance expenses for one month."*

Rate of interest on working capital

59. 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."*

60. In terms of the above regulations, interest on working capital is worked out as under:

(₹ in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Maintenance Spares	3776.02	4026.74	4294.12	4579.25	4883.31
O & M expenses	2097.79	2237.08	2385.62	2544.03	2712.95
Receivables	26796.92	27110.51	27442.05	21996.91	22423.73
Total	**32670.72**	**33374.33**	**34121.79**	**29120.18**	**30019.99**
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	**4410.55**	**4505.53**	**4606.44**	**3931.22**	**4052.70**

Annual Fixed Charges

61. 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	86461.55	86532.75	86604.68	86727.93	86981.35
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	44735.95	44779.82	44813.70	10793.97	10952.92
Interest on Working Capital	4410.55	4505.53	4606.44	3931.22	4052.70
O & M Expenses	25173.44	26844.95	28627.46	30528.32	32555.40
Total	**160781.49**	**162663.05**	**164652.28**	**131981.44**	**134542.36**

Normative Annual Plant Availability Factor (NAPAF)

62. In terms of Regulation 37(4) of 2014 Tariff Regulations, NAPAF of 90% has been considered for the generating station for the period 2014-19.

Design Energy (DE)

63. The Respondent BRPL has pointed out that the Petitioner had submitted one set of hydrology data to CEA to seek Techno Economic Clearance (TEC) of the project to justify its economic viability and immediately after construction of the project, the Petitioner had approached CEA with another set of hydrology data with the purpose to reduce DE. Accordingly, BRPL has submitted that the the DE as set out in the TEC may be considered for tariff purposes. The Respondent UPPCL has submitted that the Petitioner may be directed to furnish reasons and calculations of the revised DE of 6612 MU. In response, the Petitioner has clarified that the detailed calculation of DE has been furnished vide its affidavits dated 18.12.2018 & 20.12.2018. It has further stated that in view of the approval of CEA vide its letter dated 7.7.2009, the annual DE of 6612 MU has been claimed for the period 2014-19.

64. The submissions have been considered. The CEA vide its letter No.3/88/2009/ HP&I (1)/286 dated 7th July, 2009 has approved the annual DE of the generating

station as 6612 MUs. The same has been considered for the purpose of tariff of the generating station. The month-wise details are as under:

Months	10 days monthly	Design Energy (MUs)
April	1-10	92.55
	11-20	113.87
	21-30	146.61
May	1-10	265.59
	11-20	222.91
	21-31	376.07
June	1-10	301.80
	11-20	342.00
	21-30	342.00
July	1-10	342.00
	11-20	342.00
	21-31	376.00
August	1-10	342.00
	11-20	342.00
	21-31	376.20
September	1-10	281.85
	11-20	212.75
	21-30	190.57
October	1-10	171.31
	11-20	146.88
	21-31	147.02
November	1-10	129.00
	11-20	114.29
	21-30	101.78
December	1-10	79.67
	11-20	67.93
	21-31	71.46
January	1-10	66.69
	11-20	61.83
	21-31	66.84
February	1-10	52.10
	11-20	54.10
	21-29	41.13
March	1-10	61.26
	11-20	79.75
	21-31	89.79
Total		**6611.77**
	Say	**6612**

Application Fee and Publication Expenses

65. The Petitioner has sought reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the periods 2009-14 (in Petition No. 309/GT/2018) and 2014-19 (in Petition No. 314/GT/2018)

respectively. The Petitioner has deposited the filing fees for the said periods in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The Petitioner has also incurred charges towards publication of the tariff petition in the newspapers. Accordingly, in terms of Regulation 42 of the 2009 Tariff Regulations and Regulation 52 of the 2014 Tariff Regulations, the Petitioner is entitled to recover the filing fees and the expenses incurred on publication of notices for the periods 2009-14 and 2014-19 respectively directly from the respondents. Accordingly, the expenses incurred by the Petitioner towards tariff application filing fees and for publication of notices for the above said tariff periods shall be directly recovered from the respondent beneficiaries on *pro rata* basis, on submission of documentary proof of the same.

66. Similarly, RLDC Fees & charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015, shall be recovered from the beneficiaries. In addition, the Petitioner is entitled recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2014 Tariff Regulations.

67. 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. The tariff recovered by the Petitioner in terms of the earlier orders of this Commission shall be adjusted against the tariff determined by this order.

68. This order disposes of Petition No. 314/GT/2018.

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