CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 238/GT/2014

Coram:
Shri Gireesh B. Pradhan, Chairperson
Shri A.K.Singhal, Member
Shri A. S. Bakshi, Member
Dr. M. K. Iyer, Member

Date of Hearing: 05.01.2016
Date of Order: 13.07.2016

In the matter of

Revision of tariff after truing-up of the capital expenditure for the period 2009-14 and determination of tariff for Uri-I HEP for the period 2014-19.

AND

In the matter of

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

Vs

1. Punjab State Power Corporation Ltd
The Mall, Near Kali Badi Mandir,
Patiala – 147 001

2. Haryana Power Utilities,
Shakti Bhawan, Sector, 6
Panchkula – 134 109

3. BSES Rajdhani Power Ltd
BSES Bhawan, Nehru Place,
New Delhi – 110 019

4. Uttar Pradesh Power Corporation Ltd
Shakti Bhawan, 14, Ashok Marg,
Lucknow – 226 001

5. BSES Yamuna Power Ltd
Shakti Kiran Building,
Karkardooma, New Delhi – 110 072

6. Rajasthan Rajya Vidyut Prasaran Nigam Ltd
Vidyut Bhawan, Janpath, Jyoti Nagar,
Jaipur – 302 005

7. Tata Power Delhi Distribution Ltd
33 KV Sub-station,
Hudson Lane, Kingsway Camp
Delhi – 110 009

8. Jaipur Vidyut Vitran Nigam Ltd
Vidyut Bhawan, Janpath,
Jaipur – 302 205

9. Jodhpur Vidyut Vitran Nigam Ltd
New Power House, Industrial Area,
Jodhpur – 342 003

10. Uttranchal Power Corporation Ltd
Urja Bhawan, Kanwali Road,
Dehradun – 248 001

11. Ajmer Vidyut Vitran Nigam Ltd
Old Power House,
Hatthi Bhatta, Jaipur Road,
Ajmer – 305 001

12. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House,
Shimla-171004

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

14. Principal Secretary,
Power Development Department, New Secretariat
Jammu – 180001 ...**Respondents**

Parties Present

Shri. A.K. Pandey, NHPC
Shri. Piyush Kumar, NHPC
Shri. Naresh Bansal, NHPC
Shri. Jitendra Kumar Jha, NHPC
Shri. R.B. Sharma, Advocate, BRPL
Shri. S.K Agarwal, Advocate, Rajasthan Discoms
Shri. G.L Verma, Advocate, Rajasthan Discoms
Ms. Neelam, Advocate, Rajasthan Discoms

ORDER

The petition has been filed by NHPC Ltd, a generating company owned and controlled by the Central Government, for revision of tariff in respect of Uri-I Hydroelectric Project (4 x 120 MW) ('the generating station'), for the period 2009-14 after truing-up exercise in terms of Regulation 6(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 ("the 2009 Tariff Regulations") and for determination of tariff for the period 2014-19 in terms of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 ("the 2014 Tariff Regulations").

2. The generating station with a capacity of 480 MW is located in the State of Himachal Pradesh and was declared under commercial operation on 01.06.1997. The annual fixed charges of the generating station were approved by Commission’s order dated 25.6.2009 in Petition No.24/2009 based on the capital cost of ₹342164.47 lakh as on 31.3.2006 (including additional capital expenditure for the period from 1.4.2004 to 31.3.2006). Subsequently, by order dated 5.1.2010 in Petition No. 197/2009, the annual fixed charges of the generating station were revised after considering the impact of additional capital expenditure for the years 2006-07 to 2008-09, as under:

(₹ in lakh)

	2004-05	**2005-06**	**2006-07**	**2007-08**	**2008-09**
Depreciation	8726.43	8727.21	8727.19	8728.14	5127.13
Interest on Loan	3808.20	3022.81	1484.31	99.70	0.00
Return on Equity	15218.10	15219.38	15219.35	15220.92	15223.39
Advance against Depreciation	10562.12	5856.12	14617.97	0.00	0.00
Interest on Working Capital	1267.47	1205.48	1366.36	1125.61	1100.80
O & M Expenses	5109.00	5313.00	5526.00	5747.00	5977.00
Total	**44691.32**	**39344.00**	**46941.19**	**30921.38**	**27428.33**

3. Though the annual fixed charges of the generating station for the period 2004-09 were revised by the Commission through various tariff orders, as stated above, it is observed that the issue of (i) Consideration of depreciation as deemed normative repayment and (ii) Correct computation of cost of maintenance spares in working capital was not considered in terms of the observations of the Tribunal in judgment dated 23.12.2009 in Appeal No. 60/2008. The relevant portion of the said judgment is extracted as under:

"36. We are unable to agree with the view of the Commission that when depreciation exceeds the actual repayment the difference between depreciation and repayment amount be taken as normative repayment of loan as regulations only state that whenever the repayment amount exceeds the depreciation recovered, excess amount is to be allowed as Advance against Depreciation. In our earlier judgment cited above this Tribunal has ruled that depreciation is an expense and not an item allowed for repayment of loan. In our view the Commission, in the absence of any Regulation to this effect, has erred in coming to the conclusion that when depreciation recovered in an year is more than the amount of repayment during that year, the entire amount of depreciation is to be considered as repayment of loan for tariff computation.”

4. It is observed that against the judgment of the Tribunal dated 23.12.2009 in Appeal Nos. 138/2006, 274/2006 and 60/2008, this Commission has filed Civil Appeals before the Hon’ble Supreme Court on the issue of ‘Consideration of depreciation as deemed normative repayment’ and the same is pending. Pending final decision of the Hon’ble Court in these appeals, the annual

fixed charges for the period 2004-09 in respect of this generating station is revised considering the same in terms of the observations of the Tribunal.

5. It is also observed that the computation of maintenance spares in working capital was inadvertently not considered in terms of the observations of the Tribunal in the said tariff orders, perhaps due to oversight. The relevant portion of the judgment of the Tribunal dated 28.08.2009 in appeal no.131 of 2006, held as under:

> *"17. The Commission in its written submission has submitted that as regards consumption of stores and spares, the Commission has allowed ₹20.45 lakh as against the claim of the appellant for ₹56.46 lakh during the year 2002-03. The appellant is aggrieved by disallowance of ₹36.01 lakh. The Commission has submitted that the amount of ₹36.01 lakh under the head "Consumption of Stores and Spares" was considered and decided to be allowed by the Commission. However, the amount was left out inadvertently while passing the order dated February 05, 2007 in Review Petition No. 47/2006 and that the Commission will take necessary action to rectify the arithmetical mistake in the order subject to the final decision of the Tribunal in this appeal.*
>
> *18. The Commission has further submitted that as regards the administrative expenses, the appellant is aggrieved on account of disallowance of expenses towards compensation for land acquisition amounting to ₹3.45 lakh in terms of the Award passed by the Learned District Judge. It is submitted by the Commission that while considering the Review Petition No. 47/2006, the Commission had decided to allow the administrative expenses for payment for compensation of Land under the head "O&M expenses". However, the same was inadvertently left out while passing the order dated February 05, 2007 in the said Review Petition. The Commission will take necessary action to rectify the arithmetical mistake in the order subject to the final decision of the Tribunal in this appeal."*

6. In line with the observations of the Tribunal, the error is rectified by considering the escalation @ 6% per annum for the period 2004-09. Consequent upon the above, the other components of tariff will also undergo revision and accordingly the Annual Fixed Charges for the period 2004-09 in respect of this generating station have been revised as stated in the subsequent paragraphs.

7. Consequent upon this the annual fixed charges for the period 2004-09 in respect of this generating station stand revised as under:

(₹ in lakh)

	2004-05	**2005-06**	**2006-07**	**2007-08**	**2008-09**
Depreciation	8726.43	8727.21	8727.19	8728.14	8729.64
Interest on Loan	3828.22	3083.65	1529.10	179.87	129.21
Return on Equity	15218.10	15219.38	15219.35	15220.92	15223.39
Advance against Depreciation	9926.83	5375.07	14617.97	0.00	0.00
Interest on Working Capital	1256.99	1198.41	1367.37	1127.25	1165.91
O & M Expenses	5117.24	5321.93	5534.81	5756.20	5986.45
Total	**44073.80**	**38925.65**	**46995.80**	**31012.39**	**31234.60**

Revision of Annual Fixed Charges for 2009-14

8. The tariff of the generating station for the period from 1.4.2009 to 31.3.2014 was approved by the Commission vide order dated 16.6.2011 in Petition No. 74/2010 which was revised vide order dated 18.9.2012 in Review Petition No. 20/2011. Subsequently, by order dated 18.2.2014 in Petition No.142/GT/2013, the annual fixed charges of the generating station for the period 2009-14 was revised after truing-up exercise based on the actual additional capital expenditure incurred during the period 2009-12 and revised projections for additional capital expenditure for the period 2012-14. The annual fixed charges allowed for the period 2009-14 by the said order dated 18.2.2014 is as under:

(₹in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Return on Equity	25541.16	25223.88	24906.58	18981.28	18985.94
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	17692.57	4772.16	4782.51	4787.11	4791.29
Interest on Working Capital	1266.44	1011.44	1027.13	927.09	951.97
O & M Expenses	7304.01	7721.80	8163.49	8630.44	9124.10
Annual Fixed Charges	**51804.18**	**38729.28**	**38879.72**	**33325.92**	**33853.30**

9. Clause (1) of Regulation 6 of the 2009 Tariff Regulations provides as under:

> *"6. Truing up of Capital Expenditure and Tariff (1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.*
>
> *Provided that the generating company or the transmission licensee, as the case may be, may in its discretion make an application before the Commission one more time prior to 2013-14 for revision of tariff."*

10. The petitioner in this petition has claimed revision of tariff for the period 2009-14 based on the actual additional capital expenditure incurred during the years 2012-13 and 2013-14 after truing up in accordance with the 2009 Tariff Regulations and for determination of annual fixed charges for the period 2014-19 in terms of the provisions of the 2014 Tariff Regulations. The annual fixed charges claimed by the petitioner for the period 2012-14 are as under:

(₹in lakh)

	2012-13	**2013-14**
Return on Equity	21038.26	21296.93
Interest on Loan	0.00	0.00
Depreciation	4785.77	4790.61
Interest on Working Capital	969.94	1000.12
O & M Expenses	8630.44	9124.10
Annual Fixed Charges	**35424.41**	**36211.76**

11. The respondents UPPCL, BRPL and Rajasthan discoms have filed replies in the matter and the petitioner has filed its rejoinder to the said replies. Accordingly, based on the submissions of the parties and the documents available on record, we proceed to revise the tariff for the period 2012-14 based on truing-up exercise and also for determination of tariff for the period 2014-19 in respect of the generating station as stated in the subsequent paragraphs

Capital cost

12. Regulation 7 (1) (a) of the 2009 Tariff Regulations provides as under:

> *"7. Capital Cost. (1) Capital cost for a project shall include: (a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;"*

13. The Commission in order dated 18.2.2014 in Petition No. 142/GT/2013 had considered the closing capital cost of ₹341654.15 lakh as on 31.3.2012. Accordingly, this capital cost of ₹341654.15 lakh has been considered as the opening capital cost as on 1.4.2012 for revision of tariff for 2012-14.

Actual Additional Capital Expenditure

14. Regulation 9 of the 2009 Tariff Regulations, as amended on 21.6.2011, provides as under:

> *"9. **Additional Capitalisation.**(1) The capital expenditure 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;*
>
> *(ii) Works deferred for execution;*
>
> *(iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;*
>
> *(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
>
> *(v) Change in law: Provided that the details of works included in the original scope of work along with estimates of expenditure, un-discharged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.*
>
> *(2) The capital expenditure incurred or projected to be incurred on the following counts after the cut-off date may, in its discretion, 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;

(ii) Change in law;

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

(iv) 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) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and

(v) 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 of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:

Provided that in respect sub-clauses (iv) and (v) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, 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. 1.4.2009.

(vi) In case of gas/liquid fuel based open/ combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations. Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed.

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

(viii) Any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.

(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometres of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility."

15. The actual additional capital expenditure claimed by the petitioner as against the projected additional capital expenditure allowed for the period 2012-14 in order dated 16.6.2011 in Petition No. 74/2010 is as under:

(₹ in lakh)

	2012-13	2013-14
Projected additional capital expenditure allowed	150.00	27.50
Actual additional capital expenditure claimed	90.44	103.28

16. The re-conciliation of actual additional capital expenditure claimed in this petition with respect to additional capital expenditure as per books of accounts duly certified by auditor for the period 2012-13 and 2013-14 is as under:

(₹ in lakh)

S. No.		2012-13	2013-14
1	**Additional Capitalization (Claimed for the purpose of tariff)**		
(a)	**Additions**		
i	Capitalization against works allowed	14.39	2.08
ii	Capitalization against works allowed during previous years	35.94	50.37
iii	Additional Capital Expenditure not projected but likely to be claimed.	52.48	43.14
	Total (a)	**102.81**	**95.59**
(b)	**Deletion / Deduction**		
i	Assets deducted on replacement for new assets covered under category A	(-) 7.23	(-) 4.06
ii	Deduction of assets without any replacement and not covered under exclusion clause	(-)1.64	0.00
	Total (b)	**(-) 8.87**	**(-) 4.06**
(c)	**Net Addition to be claimed (c) = (a) + (b)**	**93.94**	**91.53**
2	**Additional Capitalization (Not claimed for purpose of tariff)**		
(d)	**Addition**		
i	Addition covered under exclusion clause on a/c of new purchase assets, capital spares, reclassification of assets HOA etc.	1202.12	216.51
	Total (d)	**1202.12**	**216.51**
(e)	**Deletion**		
i	Deletion covered under exclusion clause on a/c of inter unit, FERV and otherwise.	(-)27.23	(-)230.93
ii	Deletion on account of diminishes in the value of assets in terms of AS-10.	(-)0.06	0.00
	Total (e)	**(-)27.28**	**(-)230.93**
(f)	**Net Addition under Exclusion Category (d + e)**	**1174.83**	**(-)14.42**
(g)	**Net Additional Capitalization (including IUT) as per books of accounts (g = c + f)**	**1268.77**	**77.11**
3	**Net Additional Capitalization to be claimed for tariff**		
	Net additional capital expenditure as (c) above	93.94	91.53
(h)	**Less :** Un-discharged liability in additional capital expenditure	3.91	10.78
(i)	**Add:** Liability discharged during the year for the add cap 2009-14	0.41	22.53
(j)	**Net amount of additional capital expenditure claimed (c- h + i)**	**90.44**	**103.28**

17. Based on the above reconciliation, the year-wise admissibility of the additional capital expenditure under various heads is discussed in the subsequent paragraphs.

Additions against works already approved

2012-13

(₹in lakh)

Sl. No	Assets/works	Amount allowed on projected basis	Amount claimed on actual basis	Remarks for admissibility
1	Safety of offices and residential colony works including: Electric operated 3 phase siren, range 11 Km, Motorised Siren, SM OFC Transmitter, SM OFC Receiver, Video Amplifier, 16 Channel Digital Video Recorder, Vandal Proof/Scan Dome Color Day/ Night PTZ Camera, Ultra Low Light 0.001 LUX Color Camera, Joystick for control of PTZ Camera, 21' Color Monitor, etc.	5.00	14.39	The petitioner has submitted that amount allowed by the Commission was on estimated basis, whereas the actual expenditure is more because rates were quoted by the bidders through an open tender. However, since the expenditure is for safety and security of offices and residential colony which will facilitate successful and efficient operation of the generating station, the same has been **allowed** under Regulation 9(2)(iv) of the 2009 Tariff Regulations.
	Total claimed		**14.39**	
	Total allowed			**14.39**

2013-14

(₹in lakh)

Sl. No	Assets/works	Amount allowed on projected basis	Amount Claimed on actual basis	Remarks for admissibility
1	Pumps: Mono block Pump 10 HP, Mono block Pump set 7.5HP and Submersible Pump set 01 HP	10.00	1.00	The petitioner has submitted that the gravity drain provided in turbine pit is not sufficient to cater water leakage during monsoon from Shaft seal and Scour pipes. So, portable drainage pumps are installed in pit to avoid flooding in turbine pits. Since the assets are considered necessary for successful and efficient operation of the plant, the same has been **allowed** under Regulation 9(2)(iv) of the 2009 Tariff Regulations.

2	Fire Extinguisher/safety items: DCP Type Fire Extinguishers, 20 Feet Aluminium Ladder, Aluminium Ladder (Extendible Type-- Extendible up to 40 feet) and Wall Supporting Aluminium Ladder.	5.00	1.08	The petitioner has submitted that the fire safety equipments have been purchased to protect the power station infrastructure and equipments. Since the assets are considered necessary for the safety of the plant, which will facilitate successful and efficient operation as well, the same has been **allowed** under Regulation 9(2)(iv) of the 2009 Tariff Regulations.
	Total claimed		**2.08**	
	Total allowed			**2.08**

Works allowed in previous years but capitalized in 2012-13 and 2013-14

18. The details of works/assets, the additional capital expenditure allowed for these works / actual additional capital expenditure against these works along with reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations are as under:

2012-13

(₹in lakh)

Sl. No	Assets/works	Amount allowed on projected basis	Amount Claimed on actual basis	Remarks for admissibility of expenditure
1	Digital Clamp Meter Model FLUKE 381	30.00	0.64	The expenditure towards procurement of these assets is in the nature of Tools & Tackles/ minor assets, hence the same is **not allowed**.
2	Digital Clamp Meter Make-MOTWANE 9930		0.28	
3	Digital Multi meter FLUKE Make Model NO.289		1.41	
4	Digital Multi meter-Make-MOTWANE 4750D		0.62	
5	Optical Time Domain Reflectometer		3.54	
6	Optical Power Meter		0.35	
7	Fibre Optic Tool Kit		0.36	
8	HVAC Combo Kit- FLUKE Make Model 116/322		0.18	
9	Loop Calibrator, FLUKE 707		0.43	
10	Microprocessor Based Relay Test Kit with Display Machine		23.06	
11	Interactive Board Dimension 77" Diagonal, Drawing Function , Recording Function		1.00	
12	Optical Fibre Splicing Machine, Power Supply 100-240 V AC AND/OR 12-24 V	0.00	4.06	The petitioner has submitted that the asset is considered necessary for successful and

	DC			efficient operation of the generating station, therefore same may be allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations. Unlike assets at Sl. no. 1 to 11 above, this asset is **allowed** to be capitalized under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the benefit of acquiring this asset will be derived by the petitioner company over a longer period of time.
	Total claimed		**35.94**	
	Total allowed			**4.06**

2013-14

(₹ in lakh)

Sl. No	Assets/works	Amount allowed on projected basis	Amount Claimed on actual basis	Remarks for admissibility of expenditure
1	Multifunctional Primary Injection Test kit with Display Machine		28.36	The expenditure towards procurement of these assets is in the nature of 'Tools & Tackles'/minor assets, hence **not allowed** for capitalisation.
2	Telescopic Gauge , 8-150 MM, P.No.155-905		0.19	
3	Common Meter Reading Instrument (CMRI) complete with software, comm. Cable to pc and charger etc.		0.66	
4	Electronic Balance , 50 Kg Capacity		0.23	
5	AVAYA IP500 Phone 30 Extension Module		1.44	Since the asset is in the nature of minor asset, hence the expenditure towards procurement of the same, is **not allowed** for capitalisation.
6	Ethernet Switch RS-4TX/1FX-SM		1.51	The expenditure towards procurement of this asset is in the nature of spares, hence the same is **not allowed** for capitalisation.
7	Ethernet Switch RS 20-1600S2M2SDAE		1.61	
8	8 Port GIGABIT Switch 10/100 /1000 MBPS		0.07	Since the assets are in the nature of minor asset, hence the expenditure towards procurement of the same is **not allowed** for capitalisation.
9	802.11N Indoor Wireless Access Point +POE		0.25	
10	Chain link fencing along bank of river Jhelum at power house, Rajarwani.	17.00	16.06	The petitioner has submitted that the actual expenditure incurred against ₹5.00 lakh each was approved by Commission in 2010-11 & 2011-12 & 2012-13 and ₹2.00 lakh in 2009-10 and ₹2.90 lakh

				was utilised in 2010-11.To protect infiltration of outsider inside power house premises and considering security measures, Chain link fencing along bank of river Jhelum has been done. Since the asset/work is considered necessary for the safety of the plant, which will facilitate successful and efficient operation of the plant, is **allowed** under Regulation 9(2)(iv) of 2009 Tariff Regulations.
	Total claimed		**50.38**	
	Total allowed			**16.06**

Capital expenditure not projected/allowed by the Commission, but incurred and claimed

19. The details of the actual additional capital expenditure incurred against new works/ assets along with admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

2012-13

(₹in lakh)

Sl. No	Assets/works	Actual expenditure incurred/ claimed	Justification submitted by the petitioner	Remarks for admissibility of expenditure
1	Construction of parking shed, rain shelter/Bus waiting stand at different locations of UPS.	6.09	The petitioner has submitted that shelter/parking sheds for the office staff, school children and inhabitants of the colony are necessary for protection from rain, snow and sun.	Since the expenditure is for the benefit of the employees working in remote areas of the project which in turn facilitates the successful and efficient operation of the generating station the same is **allowed** under Regulation 9(2)(iv) of the 2009 Tariff Regulations.
2	Multistage Pump (Head=100 Mtr, Discharge =10KL/HR, RPM-1450), KIRLOSKAR, CF-446	1.47	The petitioner has submitted that these assets have been claimed under replacement.	These assets have been claimed under replacement. Considering the fact that these pumps are required for successful and efficient operation of the plant, the same is **allowed** under regulation 9(2)(iv) of the 2009 Tariff Regulations. The de-capitalization value of old assets is considered under 'deletions'.
3	Submersible Pump 5 HP (ISI Mark) Head 110 TO 141 Mtr. Discharge 120 TO 65 Ltr. per minute.	1.29		

4	Portable Welding Set (MMA/TIG), IN.-230V, Single Phase,50 HZ,CUR. RANGE MMA/TIG-5-160A/5-200A- ,INS.-F	0.52	The petitioner has submitted that the asset is procured against replacement of old welding machine.	Considering the fact that the asset is procured against replacement of old welding machine the same is **allowed** under Regulation 9(2) (iv) of the 2009 Tariff Regulations. De-capitalization value of the old asset has been considered in deletions.
5	ELGI Reciprocating Air Compressor TS 03 120HN-160 LTR.	0.78	The petitioner has submitted that procurement of this asset is required to maintain the air pressure in the tyre of vehicles at power station.	Since the assets will facilitate successful and efficient operation of the generating station, the same is **allowed** under Regulation 9(2)(iv) of the 2009 Tariff Regulations.
6	Maruti Gypsy King Hard Top - MG 413 (6 nos.)	35.65	The petitioner has submitted that the new vehicles were purchased on replacement.	Since the asset is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 9(2)(iv) of the 2009 Tariff Regulations. De-capitalization value of the old assets is considered under regular “Deletions”.
7	Defibrillator Monitor, BPL& RELIFE700	4.98	The petitioner has submitted that the item is a life saving machine and a necessity for the project hospital.	Since the expenditure is for the benefit of the employees working in remote areas of the project which in turn facilitates the successful and efficient operation of the generating station, the same is **allowed** under Regulation 9(2)(iv)
8	Photocopier Machine XEROX, WC-5325 (4 nos.)	6.43	The petitioner has submitted that these assets have been claimed under replacement.	Since the asset is minor in nature, the same is not **allowed.**
9	Supply of material erection, testing & commissioning of 33KV transmission line.	(-) 4.74	The petitioner has submitted that an amount of ₹22.53 lakh was allowed by the Commission during 2010-11 vide order dated 18.2.2014 in Petition No. 142/GT/2013. As actual payment of this amount was not made, the same was kept under undischarged liability during 2010-11. Now the	Excess capitalization of ₹4.74 (22.53-17.79) lakh is de-capitalized in books of account. As this de-capitalization of ₹4.74 lakh have no impact on tariff, the same is **allowed** under Regulation 9(2)(i) of the 2009 Tariff Regulations.

			petitioner has submitted that as per direction of Hon'ble Delhi High Court, arbitration amount of ₹17.79 lakh was awarded. Accordingly, the same was made through undischarged liability.	
	Total claimed	**52.47**		
	Total allowed			**46.04**

2013-14

(₹in lakh)

Sl. No	Assets/works	Actual expenditure incurred/ claimed	Justification submitted by the petitioner	Remarks for admissibility of expenditure
1	3-Phase Float cum Boost Charger 660 AH for 220V DC	4.40	The petitioner has submitted that the said equipment was found faulty and beyond economical repair. That is why the faulty chargers have been replaced with new one.	Since the asset is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 9(2)(iv) of the 2009 Tariff Regulations. De-capitalization value of the old asset is considered under "Assumed Deletions".
2	48 V FCBC Battery Charger	3.09		
3	BPL CARDIART ECG Machine, MODEL 9108	1.37	The petitioner has submitted that these assets have been claimed under replacement.	Since the asset is considered beneficial for the employees working in remote areas of the project which, in turn, will facilitate the successful and efficient operation of the generating station, the same is **allowed** under Regulation 9(2)(iv) of the 2009 Tariff Regulations. The de-capitalization value of the old asset is considered under Deletions.
4	Photocopier Machine XEROX, WC-5325	3.47	The petitioner has submitted that these assets have been claimed under replacement for up-gradation of computer, printers and scanners.	The assets being minor in nature, the capitalization of same is **not allowed** after the cut-off date in terms of proviso to the Regulation 9(2)(iv) of the 2009 Tariff Regulations.
5	Desktop Computer - HP Compaq 8200 Elite Convertible Minitower	9.56		
6	A-4 Network Colour Laser Printer, HP CP/CL 1525N	0.83		
7	HP Laser Jet Printer 1020+	0.08		
8	HP Laser Jet - P-1108 Printer	0.50		
9	Cannon 110 Scanner	0.21		

10	MS Office -Office Std 2013 SNGL OLP NL, PART NO. 021-10257	9.44		
11	Suit for compensation of land situated in survey no. 298 & 261 Measuring 12K AT Boniyar	10.20	The petitioner has submitted that though the issue was being shown as part of the contingent liability, but the statutory auditor wanted the petitioner to make provision in the book of accounts. Accordingly, provision was made through closing entry for the year 2013-14. However, since the case is pending before the District Court, Baramulla, the amount has been shown under un-discharged liabilities.	Since, the amount is **allowed** as additional capital expenditure, but since the petitioner has kept the amount of ₹10.20 lakh as un-discharged liability to be deducted for the purpose of tariff during the year 2013-14, there will be no impact on the tariff.
	Total claimed	**43.15**		
	Total allowed			**19.06**

Deletions

20. The following year-wise expenditure has been de-capitalized by the petitioner on account of deletion of assets with and without replacement. The details of deletions claimed are as follows:

(₹in lakh)

	2012-13	**2013-14**
Assets deducted on replacement for new assets covered under category A	(-) 7.23	(-) 4.06
Deduction of assets without any replacement and not covered under exclusion	(-)1.64	0.00
Total	**(-) 8.87**	**(-) 4.06**

21. It is observed that the amount of ₹5.28 lakh has been de-capitalized against capitalization of photocopier machine (4nos.) in 2012-13. Since, the capitalization of new photocopier is not allowed during 2012-13, de-capitalization of the same has been excluded for the purpose of tariff. Similarly, in 2013-14 the petitioner has de-capitalized ₹2.54 lakh against photocopier machine. Since, the capitalization of new photocopier is not allowed in 2013-14, de-capitalization of the same has been excluded for the purpose of tariff.

22. In view of above, the following amounts have been deleted for the purpose of tariff:

(₹In lakh)

	2012-13	2013-14
Assets deducted on replacement for new assets covered under category A	(-)1.95	(-)1.52
Deduction of assets without any replacement and not covered under exclusion	(-)1.64	0.00
Total	**(-)3.59**	**(-)1.52**

Exclusions in additions (incurred, capitalized in books but not to be claimed for tariff purpose)

23. The year-wise expenditure incurred by the petitioner on replacement of minor assets, purchase of capital spares, purchase of miscellaneous assets, additions on inter-unit transfers, minor assets, etc. is as under:

(₹In lakh)

	2012-13	2013-14
Exclusions in additions (incurred, capitalized in books but not to be claimed for tariff purpose)	1202.12	216.51

24. The expenditure incurred towards procurement/replacement of minor assets and procurement of capital spares after the cut-off date is not permissible for the purpose of tariff in terms of the 2009 Tariff Regulations. Accordingly, the petitioner has considered these additions under exclusion category. As such, the exclusions of the positive entries under the head are in order and hence allowed.

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

25. The petitioner has de-capitalized amounts in books of accounts pertaining to capital spares, minor assets such as computers, office equipment, furniture, fixed assets of minor value less than ₹5000, etc., as these are not in use on account of their becoming unserviceable/obsolete and also deletion on account of inter-unit transfer of minor assets, as under:

(₹in lakh)

	2012-13	2013-14
Deletion covered under exclusion – minor assets	(-) 22.15	(-)13.40
Consumption of capital spares (deletion not claimed/under exclusion category)	(-) 5.07	(-) 217.53
Deletions on account of diminish in the value of assets in terms of AS-10.	(-) 0.06	0.00
Total	**(-) 27.28**	**(-) 230.93**

26. It is observed that in 2013-14, the petitioner has kept deletion of an amount of (-) ₹ 4.85 lakh {out of (-)₹13.40 lakh} under exclusion category for de-capitalization of assets like Motor boat, DSL modem, VOIP gateway and numeric online ups. However, considering the fact that the capitalization of these assets is allowed by the Commission, the de-capitalization of (-) ₹4.85 lakh is not excluded/ignored for the purpose of tariff.

27. The diminish in value of assets awaiting disposal as per AS-10, would only affect the extent of profit/loss when these assets are sold. As such, the profit/loss on disposal of obsolete assets is to be borne by the petitioner. Accordingly, exclusion/ignoring of negative entries arising out of 'diminish in value of assets awaiting disposal' has been allowed for the purpose of tariff.

28. The petitioner has prayed that the negative entries may be ignored/ excluded for the purpose of tariff as the corresponding positive entries for purchase of such assets are not being allowed for the purpose of tariff in terms of the provisions of the 2009 Tariff Regulations. In support of this, the petitioner has referred to the observations of the Commission in order dated 7.9.2010 in Petition No.190/2009 as under:

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

29. The respondent, BRPL vide its reply dated 30.12.2015 has submitted that the minor assets/spares which are de-capitalized is required to be adjusted in the capital cost as per proviso under Regulation 7(1)(c) of the 2009 Tariff Regulations. It has also submitted that the petitioner has not deleted this de-capitalization from the capital cost (as in Annexure-II to Form-9) and hence not complied with the express provisions of the 2009 Tariff Regulations, but has only adjusted the additional capitalization not to be claimed (nature of minor assets) with the de-capitalization mentioned, thereby not giving full play to the said proviso. The respondent has pointed out that the order of the Commission dated 20.4.2011 in Petition No.183/2009 disallowing NTPC to retain the capital value of the assets like wagons which were earlier de-capitalized in the

books of accounts have been affirmed by the Tribunal vide its judgment dated 2.1.2013 in Appeal No. 84/2011 and is applicable in the instant case. Accordingly, the respondent has stated that the order dated 7.9.2010 followed by the petitioner is not applicable on this issue and the same may be rejected by the Commission.

30. We have examined the matter. It is noticed that the provisions of both the 2004 and the 2009 Tariff Regulations provide that the expenditure on minor items/assets, tools and tackles etc procured after the cut-off date shall not be considered for additional capitalization for determination of tariff. It is observed that the judgment of the Tribunal in NTPC case pertained to wagons which are capital assets and are permitted to be capitalized as per the regulations. In the judgment, the Tribunal had observed that since the wagons had been de-capitalized, the gross value of the de-capitalized wagons was to be deducted from the capital cost. Para 10 of the judgment is quoted as under:

> *"10. These Regulations would indicate that the capital cost of generating station is a cost which was incurred in commissioning the plant and any other additional expenditure made for efficient running of the plant. The tariff of the Generating Stations is determined on cost plus basis meaning thereby that any capital expenditure incurred which will enhance the efficiency of the plant will be capitalized and the tariff will be determined accordingly. Similarly, if any asset is taken out of service, then its gross value will be deducted from the capital cost of the plant. The Appellant has claimed to retain the de-capitalized amount in respect of wagons and capitalized spares during the period 2008-09. If the equipment is not rendering any service, the same cannot be retained in the capital cost for the purpose of tariff as no benefit out of the same is being given to the beneficiaries."*

31. The present case is distinguishable from the facts of the case which was decided in the said appeal. The minor assets are not considered as capital assets and are not permitted to be capitalised after the cut-off date. In our view, since the cost of new assets would not be taken into account by implication of the regulations, the value of old assets should be permitted to continue to form part of the gross block. In other words, if the cost of the new assets is not considered on account of implication of the regulations, the cost of minor assets originally included in the capital cost of the projects and replaced by new assets should not be reduced from the gross block. The generating station should not be debarred from servicing the capital originally deployed on account of procurement of minor assets, if the services of these assets are being rendered by similar assets which do not form part of the gross block. In this background and in line with the

decision of the Commission in order dated 7.9.2010, the negative entries corresponding to the deletion of minor assets are allowed to be excluded/ ignored for the purpose of tariff.

32. The petitioner has excluded amounts of (-) ₹5.07 lakh and (-) ₹217.53 lakh during the year 2012-13 and 2013-14 respectively for de-capitalization of capital spares. As regards the prayer of the petitioner for exclusion of negative entries corresponding to de-capitalization of capital spares, it is observed that the expenditure on capital spares are not allowed to be capitalized after the cut-off date in terms of the 2009 Tariff Regulations. While the recovery of expenditure on capital spares is allowed through O&M expenses on consumption, the recovery of additional expenditure on minor assets beyond the cut-off date is neither allowed to be capitalized nor permissible under O&M expenses. Hence, the observations of the Commission in order dated 7.9.2010 cannot be made applicable in respect of de-capitalization of spares. Accordingly, the claim of the petitioner for exclusion of negative entries arising out of de-capitalization of capital spares is justifiable provided that the de-capitalized spares are the ones which were not considered in the capital base for the purpose of tariff in the year of capitalization. On verification of the details in the Petition filed by the petitioner for the period 2009-12 and this petition, it is observed that the capital spares de-capitalized in books during the period 2012-13 and 2013-14 are the ones which were not allowed in the capital cost for the purpose of tariff. In other words, positive entries arising out of their purchase were also excluded/ ignored for the purpose of tariff. In view of the above discussions, the amounts have been allowed to be excluded/ ignored for the purpose of tariff. The exclusion of negative entries arising due to inter unit transfer of minor assets are allowed as the capitalization of these minor assets are not allowed after the cut-off date. Accordingly, the following amounts have been excluded/ ignored for the purpose of tariff as under:

(₹in lakh)

	2012-13	**2013-14**
Deletion covered under exclusion – minor assets	(-)22.15	(-)8.55
Consumption of capital spares (deletion not claimed/under exclusion category)	(-)5.07	(-)217.53
Deletions on account of diminish in the value of assets in terms of AS-10.	(-)0.06	0.00
Total	**(-)27.28**	**(-)226.08**

Assumed Deletions

33. As per consistent methodology adopted by the Commission, the expenditure on replacement of assets, if found justified is allowed for the purpose of tariff provided that the capitalization of the said asset is followed by the de-capitalization of the original value of the old asset. However, in certain cases where de-capitalization is proposed as deletion in the books of account subsequent to the year of capitalization of new asset, the de-capitalization of the old asset for the purpose of tariff is considered in the year in which the capitalization of the new asset is allowed. Such de-capitalization of old asset which is not considered in the books of account in the year of capitalization of new asset is termed as “Assumed deletion”.

34. It has been observed that the petitioner has claimed an amount of ₹ 4.40 lakh and ₹ 3.09 lakh against capitalization of 3-Phase Float cum Boost Charger and 48 V FCBC Battery Charger respectively on replacement basis in 2013-14. The petitioner has not indicated the gross value of the old assets replaced. Therefore, the methodology of arriving at the fair value of the de-capitalized asset, i.e. escalation rate of 5% per annum from the COD has been considered in order to arrive at the gross value of old asset in comparison to the cost of new asset. Accordingly, the assumed deletions claimed and allowed for the purpose of tariff are detailed as under:

(₹ in lakh)

	Additional Capital Expenditure claimed	**De-capitalization claimed**	**De-capitalization considered**
3-Phase Float cum Boost Charger	4.40	**0.00**	**(-)2.02**
48 V FCBC Battery Charger	3.09	**0.00**	**(-)1.42**
	7.49	**0.00**	**(-)3.43**

Discharged & Un-discharged Liabilities

35. The petitioner has submitted the details of discharged and un-discharged liabilities in the actual additional capital expenditure during 2012-14 as under:

(₹ in lakh)

	2012-13	**2013-14**
Un-discharged liabilities in additional capitalization	3.91	10.78
Liability discharged for additional capitalization during 2009-14	0.41	22.53

36. The discharged and un-discharged liabilities as above have been considered for working out the admissible additional capital expenditure for the period 2012-14. Accordingly, the actual additional capital expenditure allowed for the period 2012-14 for the purpose of tariff is as under:

(₹in lakh)

	2012-13	2013-14
Capitalization against works allowed during the year **(a)**	14.39	2.08
Capitalization against works allowed during previous years **(b)**	4.06	16.06
Additional Capital Expenditure not projected but claimed **(c)**	46.04	19.06
Total additions allowed **(d)=(a)+(b)+(c)**	**64.49**	**37.20**
Deletions considered under regular "Deletions"**(e)**	(-)3.59	(-)1.52
Exclusion of negative entries not allowed **(f)**	0.00	(-)4.85
Assumed deletions considered **(g)**	0.00	(-)3.43
Total deletions considered **(h)=(e)+(f)+(g)**	**(-)3.59**	**(-)9.80**
Total additional capital expenditure allowed before un-discharged/ discharged liabilities **(i)=(d)+(h)**	**60.90**	**27.40**
Less : un-discharged liability in additional capital expenditure **(j)**	3.91	10.78
Add: Liability discharged during the year for the additional capital expenditure 2009-14 **(k)**	0.41	22.53
Additional Capital Expenditure allowed (l)= (i)-(j)+(k)	**57.40**	**39.15**

Capital cost for 2012-14

37. Accordingly, the capital cost considered for the purpose of the tariff is as under:

(₹in lakh)

	2012-13	2013-14
Opening capital cost	341654.15	341711.55
Additional capital expenditure allowed	57.40	39.15
Closing capital cost	**341711.55**	**341750.70**

Return on Equity

38. In terms of Regulation 15 (3) of the 2009 Tariff Regulations, the Return on Equity is computed as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	108741.67	108805.76	108547.83	108559.77	108576.99
Addition due to Additional Capitalization	64.09	(-) 257.93	11.95	17.22	11.75
Closing Equity	108805.76	108547.83	108559.77	108576.99	108588.74
Average Equity	108773.71	108676.79	108553.80	108568.38	108582.87
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax rate for the year	33.990%	33.218%	32.445%	20.008%	20.961%
Rate of Return on Equity	23.481%	23.210%	22.944%	19.377%	19.610%
Return on Equity	**25541.16**	**25223.88**	**24906.58**	**21037.30**	**21293.10**

Interest on Loan

39. In accordance with Regulation 16 of the 2009 Tariff Regulations, interest on loan has been worked out as under:

(a) The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project.

(b) The repayment for the year of the tariff period 2009-14 has been considered equal to the depreciation allowed for that year.

(c) The interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest considering the time factor.

40. The necessary calculation for interest on loan is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross normative loan	233518.80	233668.35	233066.51	233094.38	233134.56
Cumulative repayment up to previous year	229417.01	233668.35	233066.51	233094.38	233134.56
Net loan - Opening	4101.79	0.00	0.00	0.00	0.00
Repayment during the year	4251.34	-601.84	27.87	40.18	27.41
Addition due to additional capitalization	149.55	-601.84	27.87	40.18	27.41
Net loan - Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	2050.89	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	2.5238%				
Interest	**51.76**	**0.00**	**0.00**	**0.00**	**0.00**

Depreciation

41. The date of commercial operation of the generating station is 1.6.1997. Since the generating station has completed 12 years of operation as on 1.6.2009, the weighted average rate of 5.1677% calculated as per the 2009 Tariff Regulations has been applied during 2009-10 and the remaining depreciable value has been spread over the balance useful life of the project from the year 2010-11. Accordingly, the depreciation has been computed as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	342260.46	342474.10	341614.33	341654.15	341711.55
Additional capital expenditure	213.64	(-)859.77	39.82	57.40	39.15
Closing gross block	342474.10	341614.33	341654.15	341711.55	341750.70
Average gross block	342367.28	342044.22	341634.24	341682.85	341731.13
Rate of Depreciation	5.1677%	-	-	-	-
Depreciable Value	308130.56	307839.80	307470.82	307514.57	307558.02
Balance Useful life of the asset	23.17	22.17	21.17	20.17	19.17
Remaining Depreciable Value	121264.02	103296.93	98862.77	94243.03	89615.56
Depreciation	**17692.57**	**4660.01**	**4670.68**	**4673.21**	**4675.59**

O & M Expenses

42. The O & M expenses allowed in order dated 18.2.2014 in Petition No. 142/GT/2013 has been considered as under:

(₹in lakh)

2009-10	2010-11	2011-12	2012-13	2013-14
7304.01	7721.80	8163.49	8630.44	9124.10

Interest on Working Capital

43. The petitioner is entitled to claim interest on working capital as per Regulation 18 of the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder.

> ***(i) Receivables***
> *As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital are equivalent to two months" of fixed cost. In the tariff being allowed, receivables have been worked out on the basis of "2 months" fixed cost.*
>
> ***(ii) Maintenance spares***
> *Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses as part of the working capital. The value of maintenance spares has accordingly been worked out.*
>
> ***(iii) O & M expenses***
> *Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.*
>
> ***(iv) Rate of interest on working capital***
> *In accordance with clause (3) of Regulation 18 of the tariff regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the generating station or a unit thereof is declared under commercial operation, whichever is later. Accordingly, SBI PLR of 12.25% as on 1.4.2009 has been considered in for working out Interest on Working Capital.*

44. Accordingly, Interest on Working Capital has been calculated as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	1095.60	1158.27	1224.52	1294.57	1368.62
O & M expenses	608.67	643.48	680.29	719.20	760.34
Receivables	8642.84	6435.80	6460.93	5884.75	6015.07
Total	10347.11	8237.55	8365.74	7898.52	8144.03
Interest on working capital @ 12.25%	**1267.52**	**1009.10**	**1024.80**	**967.57**	**997.64**

Annual Fixed charges

45. Accordingly, the annual fixed charges allowed for the generating station for the period 2009-14 are summarized as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	25541.16	25223.88	24906.58	21037.30	21293.10
Interest on Loan	51.76	0.00	0.00	0.00	0.00
Depreciation	17692.57	4660.01	4670.68	4673.21	4675.59
Interest on Working Capital	1267.52	1009.10	1024.80	967.57	997.64
O & M Expenses	7304.01	7721.80	8163.49	8630.44	9124.10
Total	**51857.02**	**38614.80**	**38765.56**	**35308.51**	**36090.44**

46. The difference between the annual fixed charges already recovered by the petitioner and the annual fixed charges determined by this order as above shall be adjusted in terms of Clause (6) of Regulation 6 of the 2009 Tariff Regulations.

Determination of Annual Fixed Charges for the period 2014-19

47. As stated, the petitioner in this petition has also prayed for the 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 annual fixed charges claimed by the petitioner for the period 2014-19 are as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	21319.31	21355.42	21407.81	21442.65	21442.95
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	4808.68	4846.23	4896.06	4942.12	4942.45
Interest on Working Capital	1011.28	1040.21	1071.60	1104.43	1137.48
O & M Expenses	7419.40	7912.34	8438.04	8998.66	9596.54
Total	**34558.68**	**35154.20**	**35813.51**	**36487.87**	**37119.42**

48. In response to the directions of the Commission, the petitioner has submitted additional information and has served copies of the same on the respondents. The respondents JVVNL, JDVVNL, AJVVNL, UPPCL and BRPL have filed replies to the petition and the petitioner has filed its rejoinder to the said replies filed by the respondents. Based on the submissions of the parties and the documents available on record, we proceed to determine the tariff of the generating station for the period 2014-19 as stated in the subsequent paragraphs.

Capital Cost

49. 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

50. The closing capital cost considered by the Commission as on 31.3.2014 in this order is ₹341750.70 lakh. This has been considered as the opening capital cost as on 1.4.2014 for determination of tariff for the period 2014-19.

Actual/ Projected Additional Capital Expenditure during 2014-19

51. 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 up to 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 2014-15 to 2018-19.

52. Clause 3 of Regulation 14 of the 2014 Tariff Regulations, provides as under:

"14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

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

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

(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;

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

(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such 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 Modernization (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation."

53. The year-wise breakup of the projected additional capital expenditure claimed by the petitioner is as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Proposed additional capital expenditure on gross basis.	790.00	613.00	1535.00	0.00	0.00
Proposed de-capitalization	181.02	5.95	360.91	0.00	0.00
Net proposed additional capital expenditure	**608.98**	**607.05**	**1174.09**	**0.00**	**0.00**

54. The respondent, BRPL has submitted that the claim of the petitioner for projected additional capital expenditure under Regulation 14(3)(viii) is required to be made under Regulation 14(3)(vii) of the 2014 Tariff Regulations, which require that the claim for expenditure for replacement of assets which are necessary for successful and efficient operation of the plant shall be substantiated with technical justification duly supported by documentary evidence like test results carried out by independent agency in case of deterioration of the assets.

55. We have examined the matter. The petitioner has claimed capitalization of the expenditure under Regulation 14(3)(viii) which also provides for capitalization of expenditure incurred due to additional work which has become necessary for successful and efficient operation of plant. The submission of the respondent, BRPL that Regulation 14(3)(viii) should be read with Regulation 14(3)(vii) in respect of expenditure incurred on replacement assets and that the same should be supported by documentary evidence like test results carried out by independent agency in case of deterioration of the assets, is also not acceptable. In our view, the requirement of documentary evidence like test results etc., carried out by independent agency will be necessary in case of major assets which have deteriorated prior to the expiry of useful life and accordingly sought to be replaced. In the instant case, these assets are being replaced on account of obsolescence /deterioration etc., after expiry of its useful life which is evident from the details of de-capitalized assets at Form 9 (B) (i) which includes the year during which these were put to use. However, there may be some assets which are serviceable even after the expiry of their useful life and should be put to use instead of seeking their replacement in a routine manner. In our view, the petitioner should support its claim of such replacement either on the basis of the certificate by the OEM or its technical committee. In the event of such replacement, we direct that the petitioner shall place on record the necessary certificate from the OEM or its technical committee at the time of truing-up of tariff. Similar approach shall be adopted in other cases where additional capitalization has been allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.

56. Accordingly, based on the submissions of the parties and the documents available on record, the claims of the petitioner for the period 2014-19 are considered and allowed on prudence check, after reduction of the gross value of old assets, wherever necessary, as detailed in the subsequent paragraphs.

2014-15

(₹In lakh)

Sl. No.	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Modification / Up gradation of existing Turbine Governor and Excitation System of Uri Power Station.	450.00	The petitioner has submitted that due to obsolesce of controllers of Governor and Excitation system, no spare support is available from OEM. Further, engineering station of present system is not working which is causing problem in fault diagnosis and troubleshooting. Therefore, modification/up gradation of present system is very much essential. The detailed specification could not be finalized and hence, item could not be capitalized during the period 2009-14. Now after finalization of the same, the tender has been issued. The work in first unit shall be done in 2014-15 and remaining three units shall be taken in 2016-17.	Considering the fact that the expenditure will be incurred for compliance of IEGC, 2010 the same is **allowed** under Regulation 14(3)(ii) of the 2014 Tariff Regulations.	**330.00**
2	Retrofitting of relays / protection scheme in generating units	30.00	The petitioner has submitted that the retrofitting of relays in two units is completed in 2010-11 & 2011-12. However relays are required to be retrofitted in two more units during 2014-15 & 2015-16.	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old asset is considered as ₹5.00 lakh.	**25.00** (30.00 - 5.00)
3	Up gradation of existing Hydraulic Elevator of Power House.	50.00	The petitioner has submitted that the tender for upgradation of existing Hydraulic Elevator of power house was floated but same could not be finalized. However, fresh tender has been floated and the work is likely to be completed in 2014-15. The cost has been considered based on the offer received.	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old	**14.16** (50.00-35.84)

			The petitioner has submitted that the tender for upgradation of existing Hydraulic Elevator of power house was floated but same could not be finalised. However, fresh tender has been floated and the work is likely to be completed in 2014-15. The cost has been considered based on the offer received.	asset is considered as ₹35.84 lakh.	
4	Disaster Management Plan for Power House	100.00	The petitioner has submitted that keeping in view the recent incident in one of the NHPC Power Station, the implementation of disaster Management Plan at Uri Power Station is being proposed in phased manner. The tentative scheme has been prepared and accordingly, the price has been considered based on Estimation. The present scheme for drainage and dewatering consists of four pumps, two dry pits for dewatering and two wet sumps for drainage. The dewatering pumps (one in each sump) are vertical centrifugal pumps and the drainage pumps (two in each sump) are submersible type. The power supply to all the pumps are fed through panels located in pump floor (the lowest floor of PH) and in case of any eventuality the complete drainage and dewatering system will be non functional. Hence an alternate arrangement for dewatering is proposed in which panel three nos. 150HP submersible pumps will be installed at pump floor and a separate piping arrangement will be made so that water can be directly discharged in to the main river through MAT. The control and power supply panel shall be located in the GIS floor	Considering the fact that the asset will facilitate the successful and efficient operation of plant, the same is allowed under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	**100.00**

			which shall be fed directly from the existing DG set installed near the pothead yard.		
5	Purchase of CT Analyser & DGA testing instruments.	35.00	CT Analyser is proposed to be purchased for measurement and protection of CTs while DGA testing instrument is essential for testing condition of transformer oil.	Considering the fact that the assets are in the nature of tools and tackles, the same is not allowed	**35.00**
6	TATA 407, 3.0 MT	15.00	The petitioner has submitted that, the existing two vehicles (TATA 407, 3.0 MT) have been deployed for 13 years against its scheduled life of 6/10 years. Presently these vehicles have already been grounded. It is proposed to purchase two nos. TATA 407 to replace this vehicle with an estimated cost of ₹7.50 Lakh each.	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old asset is considered as ₹8.44 lakh.	**6.56** (15.00 – 8.44)
7	47 seater Bus fabricated on TATA 1512/52 TC Chassis	10.00	The petitioner has submitted that, the existing 47 seater bus fabricated on TATA 1512 TC chassis has been deployed for 12.5 years against its scheduled life of 8 years. The vehicle demands frequent repairs and has been kept running for want of its replacement. It is proposed to replace it with a new bus fabricated on TATA 1512/52 TC Chassis with an estimated cost of ₹25.00 lakh. The expenditure of ₹10 lakh and ₹15 lakh for purchase of chassis and fabrication shall be incurred in 2014-15 and 2015-16 respectively.	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old asset is considered as ₹10.68 lakh.	**(-) 0.68** (10.00-10.68)
8	Hydro Mobile Crane	100.00	The petitioner has submitted that, the existing hydraulic mobile crane has been deployed for 28 years against its scheduled life of 12 years. The vehicle demands frequent repairs and has been kept running for want of its replacement. It is proposed to replace the old crane with a similar model crane at an	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014Tariff Regulations. The	**98.94** (100.00 – 1.06)

			estimated cost of ₹1.06 lakh in the year 2014-2015.	gross value of old asset is considered as ₹1.06 lakh.	
Total Claimed		**608.98**			
Total Allowed (after de-capitalization)				**573.98**	

2015-16

(₹in lakh)

Sl. No.	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Disaster Management Plan for Power House	200.00	The petitioner has submitted that, keeping in view the recent mis-happening in one of the NHPC Power Station, the implementation of disaster management plan at Uri Power Station is being proposed in phased manner. The tentative scheme has been prepared and accordingly, the price has been considered based on Estimation. The present scheme for drainage and dewatering consists of four sumps, two dry pits for dewatering and two wet sumps for drainage. The dewatering pumps (one in each sump) are vertical centrifugal pumps and the drainage pumps (two in each sump) are submersible type. The power supply to all the pumps are fed through panels located in pump floor (the lowest floor of PH) and in case of any eventuality the complete drainage and dewatering system will be non functional. Hence an alternate arrangement for dewatering is proposed in which panel three nos. 150HP submersible pump will be installed at pump floor and a separate piping arrangement will be made so that water can be directly discharged in to the main river through MAT. The control and power supply panel shall be located in the GIS floor which shall be fed directly from the existing DG set installed near the	Considering the fact that the asset will facilitate successful and efficient operation of plant the same is **allowed** under Regulation 14(3) (viii) of the 2014 Tariff Regulations.	**200.00**

			pothead yard.		
2	Purchase of CT Analyser & DGA testing instruments.	40.00	CT Analyser is proposed to be purchased for measurement and protection of CTs while DGA testing instrument is essential for testing condition of transformer oil.	Considering the fact that the assets are in the nature of tools and tackles, the same is **not allowed.**	**40.00**
3	TATA 207 (Two nos)	11.00	The petitioner has submitted that, the existing two vehicles (TATA 407, 3.0 MT) have been deployed for 23 & 20 years against its scheduled life of 6/10 years. The vehicles demand frequent repairs and has been kept running for want of its replacement. It is proposed to purchase two nos TATA 207 to replace these vehicles with an estimated cost of ₹5.50 Lakh each.	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old asset is considered as ₹0.95 lakh.	**10.05** (11.00 – 0.95)
4	TATA 407, Ambulance.	12.00	The petitioner has submitted that, the existing ambulance (TATA 407 ambulance) has been deployed for 21 years against its scheduled life of 6/10 years. Presently this vehicle has already been grounded. It is proposed to purchase a new TATA 407 ambulance to replace it with an estimated cost of ₹15.00 lakh in 2015-16. The petitioner has submitted that the Old ambulance has been deleted in 2010-11.	Considering the fact that the expenditure is for the benefit of the employees working in remote areas of the project which in turn will facilitate the successful and efficient operation of the generating station, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	**12.00**
5	47 seater Bus fabricated on TATA 1512/52 TC Chasis	15.00	The petitioner has submitted that, the existing 47 seater bus fabricated on TATA 1512 TC chassis has been deployed for 12.5 years against its scheduled life of 8 years. The vehicle demands frequent repairs and has been kept running for want of its replacement. It is proposed to replace it with a new bus fabricated on TATA 1512/52 TC Chasis with an estimated cost of ₹25.00 lakh. The expenditure of ₹10 lakh and ₹15 lakh for purchase of chasis and fabrication shall	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations.	**15.00**

			be incurred in 2014-15 and 2015-16 respectively.		
6	Retrofitting of relays / protection scheme in generating units.	35.00	The petitioner has submitted that the retrofitting of relays in two units is completed in 2010-11 & 2011-12. However relays are required to be retrofitted in two more units during 2014-15 & 2015-16.	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of the 2014 Tariff Regulations. The gross value of old asset is considered as ₹5.00 lakh.	**30.00** (35.00 – 5.00)
7	Trash cleaning arrangement at Barrage	300.00	The petitioner has submitted that, Uri power station faces an acute problem of trash at the intake of barrage specially during the high intake season. The trash comprises of the small thorny vegetation and municipal waste which is suspended in the water and chokes the trash rack at the head regulator. As a result, there occurs a head difference between the reservoir and intake levels. Presently, to tackle this issue, back flushing is resorted to, which leads to backing down of the generation resulting in generation loss to the power station. Frequency of back flushing varies from once in a day to even six times a day depending upon the quantum of trash in the inflow and in one flushing activity, the average loss of generation faced is about 0.2 MU. To avoid generation loss due to heavy trash accumulation at intake during high inflow season, trash cleaning arrangement is proposed to be installed at Barrage. This is essential for the power station and will lead to efficient and smooth operation of the power station by minimizing the generation loss due to	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of Tariff Regulations, 2014.	**300.00**

			trash. Further in case an efficient trash removal system is installed upstream of the Barrage, it will help reduce the menace of trash at Uri-II also.		
Total Claimed		**613.00**			
Total Allowed (after de-capitalization)					**567.05**

2016-17

(₹in lakh)

Sl. No.	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Modification/Up gradation of existing Turbine Governor and Excitation System of Uri Power Station.	1500.00	The petitioner has submitted that, due to obsolesce of controllers of Governor and Excitation system, no spare support is available from OEM. Further, engineering station of present system is not working which is causing problem in fault diagnosis and troubleshooting. Therefore, modification/up gradation of present system is very much essential. The detailed specification could not be finalized hence, item could not be capitalized during the tariff period 2009-14. Now after finalization of the same, the tender has been issued. The work in first unit shall be done in 2014-15 and remaining three units shall be taken in 2016-17.	Considering the fact that the expenditure is for compliance of IEGC, 2010 the same is **allowed** under Regulation 14(3)(ii) of the 2014 Tariff Regulations. The gross value of old asset is considered as ₹360.00 lakh.	**1140.00** (1500.00 - 360.00)
2	Fire Tender Fabricated on TATA LPT 1613/42 Chasis.	35.00	The petitioner has submitted that, the existing fire tender fabricated on TATA 1210 SE chasis has been deployed for 24.5 years against its scheduled life of 8 years. The vehicle demands frequent repairs and has been kept running for want of its replacement. It is proposed to replace it with a new fire tender fabricated on TATA LPT 1613/42 Chassis with an estimated cost of ₹35.00 lakh in 2016-17.	Considering the fact that the asset/work is considered necessary for successful and efficient operation of the plant, the same is **allowed** under Regulation 14(3)(viii) of Tariff Regulations, 2014. The gross value of old asset is considered as ₹0.91 lakh.	**34.09** (35.00 – 0.91)
Total Claimed		**1535.00**			
Total Allowed (after de-capitalization)					**1174.09**

2017-18 & 2018-19

57. No additional capital expenditure has been claimed by the petitioner during 2017-18 and 2018-19.

Additional capital expenditure for 2014-19

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

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Additional Capital Expenditure allowed	755.00	573.00	1535.00	0.00	0.00
Less: De-capitalization considered	181.02	5.95	360.91	0.00	0.00
Net Additional Capital Expenditure allowed for the purpose of tariff	**573.98**	**567.05**	**1174.09**	**0.00**	**0.00**

59. The petitioner has proposed the following liability to be discharged for the period 2014-19 is as under:

(₹in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
11.49	0.00	0.00	10.20	0.00

60. Taking into consideration the discharge of liabilities, the projected additional capital expenditure allowed for the purpose of tariff is as under:

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Net Additional Capital expenditure allowed	573.98	567.05	1174.09	0.00	0.00
Discharge of liabilities	11.49	0.00	0.00	10.20	0.00
Additional Capital expenditure allowed	**585.47**	**567.05**	**1174.09**	**10.20**	**0.00**

Capital Cost for 2014-19

61. As stated, the closing capital cost of ₹341750.70 lakh has been considered as on 31.3.2014. The same has been considered as the opening capital cost as on 1.4.2014. Accordingly, the capital cost considered for the purpose of tariff for the period 2014-19 is as under:

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	341750.70	342336.17	342903.22	344077.31	344087.51
Additional Capital expenditure allowed	585.47	567.05	1174.09	10.20	0.00
Capital Cost as on 31st March of the year	**342336.17**	**342903.22**	**344077.31**	**344087.51**	**344087.51**

Debt- Equity Ratio

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

> ***"19. Debt-Equity Ratio***
>
> *(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*
>
> *Provided that:*
> *i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
>
> *ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
>
> *iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio."*

63. The petitioner has stated that the funding of the additional capital expenditure has been made through internal resources and others. In terms of the above, the debt equity ratio of 70:30 has been considered on the additional capital expenditure, after adjustment of the un-discharged liability.

Return on Equity

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

> ***"24. Return on Equity:*** *(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*
>
> *(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*
>
> *Provided that:*
>
> *(i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*

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

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

(iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system: v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues: vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers."

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

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

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

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

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

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

66. The Base rate of ROE has been grossed up with the MAT rate for the year 2013-14. Accordingly, in terms of the above regulations, Return on Equity has been computed as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Notional Equity	108588.74	108764.38	108934.49	109286.72	109289.78
Addition due to additional capital expenditure	175.64	170.12	352.23	3.06	0.00
Closing Equity	108764.38	108934.49	109286.72	109289.78	109289.78
Average Equity	108676.56	108849.44	109110.61	109288.25	109289.78
Rate of ROE (pre-tax)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity	**21311.47**	**21345.37**	**21396.59**	**21431.43**	**21431.73**

67. The petitioner is however directed to furnish on affidavit the effective tax rates along with the Tax Audit Report for the period 2015-19 at the time of revision of tariff based on truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

Interest on loan

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

Depreciation

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

> ***"27. Depreciation****: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.*
>
> *Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*
>
> *(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.*
>
> *(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*
>
> *Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*

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

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

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

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

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission 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) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

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

70. The COD of the generating station is 1.6.1997. As the generating station has completed 12 years of operation as on 1.6.2009, the remaining depreciable value has been spread over the balance useful life of the project. Accordingly, depreciation has been computed as under:

(₹in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Gross block	341750.70	342336.17	342903.22	344077.31	344087.51
Additional capital expenditure during 2014-19	585.47	567.05	1174.09	10.20	0.00
Closing gross block	342336.17	342903.22	344077.31	344087.51	344087.51
Average gross block	342043.44	342619.70	343490.27	344082.41	344087.51
Depreciable Value	307839.09	308357.73	309141.24	309674.17	309678.76
Balance Useful life of the asset	18.17	17.17	16.17	15.17	14.17
Remaining Depreciable Value	85227.42	81174.77	77233.68	73237.27	68413.03
Depreciation	**4691.42**	**4728.63**	**4777.34**	**4828.83**	**4829.16**

Operation & Maintenance Expenses

71. Regulation 29 clause (3) sub-clause (a) provides as under:

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

(₹ in lakh)

NHPC				
Uri				
2014-15	***2015-16***	***2016-17***	***2017-18***	***2018-19***
7419.40	*7912.34*	*8438.04*	*8998.66*	*9596.54*

72. The generating station is in operation for three or more years as on 1.4.2014. Accordingly, in terms of the above regulation, the year-wise O&M expense norms considered for the generating station for 2014-19 is as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
7419.40	7912.34	8438.04	8998.66	9596.54

Interest on Working Capital

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

"28 (1) (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 expenses specified in regulation 29; and

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

74. Working capital has been calculated considering the following elements:

Maintenance Spares

75. Maintenance spares considered for the purpose of tariff is as under:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1112.91	1186.85	1265.71	1349.80	1439.48

Receivables

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

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
5738.45	5837.27	5946.76	6060.08	6165.34

O&M Expenses (1 month)

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

(₹in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
618.28	659.36	703.17	749.89	799.71

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

"(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."

79. In terms of the above regulations, the Bank Rate of 13.50% (Base Rate + 350 Basis Points) as on 1.4.2014 has been considered by the petitioner. This has been considered in the calculations for the purpose of tariff.

Interest on Working Capital

80. Necessary computations in support of interest on working capital are appended below:

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	1112.91	1186.85	1265.71	1349.80	1439.48
O & M expenses	618.28	659.36	703.17	749.89	799.71
Receivables	5738.45	5837.27	5946.76	6060.08	6165.34
Total	7469.64	7683.48	7915.64	8159.77	8404.53
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	**1008.40**	**1037.27**	**1068.61**	**1101.57**	**1134.61**

Annual Fixed charges for 2014-19

81. Accordingly, the annual fixed charges approved for the generating station for the period 2014-19 is as under:

(₹in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	21311.47	21345.37	21396.59	21431.43	21431.73
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	4691.42	4728.63	4777.34	4828.83	4829.16
Interest on Working Capital	1008.40	1037.27	1068.61	1101.57	1134.61
O & M Expenses	7419.40	7912.34	8438.04	8998.66	9596.54
Total	**34430.69**	**35023.61**	**35680.58**	**36360.49**	**36992.03**

Normative Annual Plant Availability Factor

82. Clause (4) of Regulation 37 of the 2014 Tariff Regulations provides for the Normative Annual Plant Availability Factor (NAPAF) for hydro generating stations already in operation. Accordingly, the NAPAF of 70% has been considered for this generating station, the same being a R.O.R Hydro generating station.

Design Energy

83. The Commission in its order dated 16.6.2011 in Petition No.74/2010 had approved the annual Design Energy (DE) of 2587.38 Million units for the period 2009-14 in respect of this generating station. This DE has been considered for this generating station for the period 2014-19 as per month-wise details as under:

Month	**Design Energy (MUs)**
April	328.32
May	339.26
June	328.32
July	339.26
August	302.63
September	209.24
October	117.69
November	72.21
December	71.39
January	81.09
February	133.09
March	264.88
Total	**2587.38**

Application Fee and Publication Expenses

84. The petitioner has deposited the filing fees of ₹2112000/- for the period 2014-15 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The petitioner has published the notice of the tariff petition for 2014-19 in the newspapers in terms of the Central Electricity Regulatory Commission (Procedure for making of application for determination of tariff, publication of the application and other related matters) Regulation, 2004. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in order dated 6.1.2016 in Petition No. 232/GT/2014, the petitioner shall be entitled to recover the filing fees for the year 2014-15 and the expenses incurred on publication of notices for the period 2014-19 directly from the respondents. The filing fees for the remaining years of the tariff period

2015-19 shall be reimbursed after deposit of the same and subject to production of documentary proof.

85. The annual fixed charges approved for the generating station for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

86. Petition No. 238/GT2014 is disposed of in terms of the above.

Sd/-	***Sd/-***	***Sd/-***	***Sd/-***
(Dr. M.K. Iyer)	**(A.S Bakshi)**	**(A.K.Singhal)**	**(Gireesh B Pradhan)**
Member	**Member**	**Member**	**Chairperson**