

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 155/GT/2013

Coram:

**Shri V.S.Verma, Member
Shri M.Deena Dayalan, Member**

**Date of Hearing: 10.9.2013
Date of Order: 13.2.2014**

In the matter of

Revision of tariff for Loktak Hydroelectric Power Station (105 MW) for the period from 1.4.2009 to 31.3.2014-14-Truing-up of tariff determined by order dated 14.6.2011 in Petition No.108/2010 and order dated 22.10.2012 in R.P. No. 24/2011.

And in the matter of

NHPC Ltd,
NHPC Office Complex, Sector 33,
Faridabad – 121003

.....**Petitioner**

Vs

1. Assam State Electricity Board,
Bijuli Bhawan, Paltan Bazar,
Guwahati – 781 001
2. Department of Power,
Government of Arunachal Pradesh,
C-Sector, Itanagar-791111
3. Electricity Department,
Government of Mizoram,
Aizawal-796001
4. Tripura State Electricity Corporation Ltd,
Vidyut Bhawan, North Banamalipur,
Agartala-799001
5. Meghalaya State Electricity Board,
Meter Factory Area,
Short Round Road,
Shillong – 793003
6. Electricity Department,
Government of Manipur,
Imphal-795001



7. Electricity Department,
Government of Nagaland,
Kohima-798001

....Respondents

Parties present

For Petitioner

Shri Parag Saxena, NHPC
Shri Jitendra Kumar Jha, NHPC
Shri S.K. Meena, NHPC

For Respondents

None

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 Loktak Hydroelectric Station (3 x 35 MW) ('the generating station'), for the period 1.4.2009 to 31.3.2014 in accordance with clause (1) of Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 ('the 2009 Tariff Regulations') after accounting for additional capital expenditure.

2. The generating station with a capacity of 105 MW was declared under commercial operation on 1.6.1983. Petition No. 108/2010 was filed by the petitioner for determination of tariff of the generating station for the period from 1.4.2009 to 31.3.2014 and the Commission by its order dated 14.6.2011 had determined the annual fixed charges for the generating station for the said period. Subsequently, the annual fixed charges determined by order dated 14.6.2011 were revised by Commission's order dated 22.10.2012 in Review Petition No.24/2011. The annual fixed charges determined by order dated 22.10.2012 based on the admitted capital cost of ₹14240.52 lakh as on 31.3.2009 was as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	1188.33	1231.88	1278.09	1308.27	1314.89
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	552.37	648.51	768.11	861.87	890.03
Interest on Working Capital	359.12	380.50	403.48	426.70	449.25
O & M Expenses	6454.12	6823.30	7213.59	7626.21	8062.43
Total	8553.94	9084.19	9663.27	10223.05	10716.60

3. 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 period 2009-12 and projections for additional capital expenditure for the period 2012-14. None of the respondents have filed reply to the petition.

4. The first proviso to 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."

5. The petitioner's claim for the revised annual fixed charges is summarized as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	1588.29	1612.21	1644.87	1302.62	1371.71
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	541.34	612.49	714.09	803.40	831.68
Interest on Working Capital	367.23	387.68	410.00	425.37	449.22
O & M Expenses	6454.12	6823.30	7213.59	7626.21	8062.43
Total	8950.98	9435.68	9982.55	10157.60	10715.04

Capital Cost

6. The last proviso to Regulation 7 of the 2009 Tariff Regulations, as amended on 21.6.2011, provides as under:

"Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional

capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff."

7. The Commission had considered the capital cost of ₹14240.52 lakh as on 31.3.2009 in Review Petition No.24/2011 as the opening capital cost as on 1.4.2009 for the purpose of approval of tariff for the period 2009-14. Accordingly, this capital cost has been considered as on 1.4.2009 for the purpose of revision of tariff in this petition.

Additional Capital Expenditure

8. Regulation 9 of the 2009 Tariff Regulations, as amended on 21.6.2011 and 31.12.2012, 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;*
- (iii) 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-materialisation 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 kilometers of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility."*

9. The additional capital expenditure for 2009-14 approved by the Commission vide order dated 22.10.2012 in Review Petition No. 24/2011 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional Capital Expenditure allowed on projected basis	801.05	859.73	902.46	248.66	3.72

10. The petitioner has stated that revision of the annual fixed charges has become necessary as there is significant difference between additional capital expenditure allowed and the actual capital expenditure incurred during the years 2009-10, 2010-11 and 2011-12, based on audited books of accounts for the respective year. It has been stated that certain works were not claimed / allowed earlier but have become necessary for efficient operation of the generating station.

Capitalization of expenditure on these works has been claimed. The petitioner has sought capitalization of some of the projected additional capital expenditure allowed for the years 2009-10, 2010-11 and 2011-12, which the petitioner was not able to capitalize during the remaining years of the tariff period 2009-14.

11. The reconciliation of the actual additional capital expenditure claimed with respect to the additional capital expenditure as per books of accounts, duly certified by auditor for the period 2009-12 is as under:

(₹ in lakh)			
	2009-10	2010-11	2011-12
Additions as per books (a)	637.87	748.19	960.67
Additions claimed (b)			
Additions against works approved by Commission	630.74	702.16	805.89
Additions not projected earlier but incurred and claimed	5.83	34.59	123.16
Additions on account of IUT	0.00	0.00	13.99
Total (b)	636.57	736.75	943.05
Deletions (c)	(-) 0.23	(-) 33.52	0.00
Net additions	636.34	703.23	943.05
Exclusions in additions (incurred, capitalized in books but not to be claimed for tariff purpose) (d1)	20.36	51.44	17.62
Exclusions in deletions (de-capitalized in books but not to be considered for tariff purpose) (d2)	(-)18.83	(-) 6.48	0.00
Net value of exclusions (d=d1+d2)	1.53	44.96	17.62
Total (e)=(b)+(c)+(d) (matching with (a) above)	637.87	748.19	960.67
Additional Capital Expenditure claimed before assumed deletion/un-discharged liability/discharge of liability (f)=(b)+(c)	636.34	703.23	943.05
Add: Assumed deletions	(-) 59.91	(-) 66.30	(-) 93.88
Less: Un-discharged liabilities in the claimed additional capital expenditure	0.00	0.00	0.00
Add: Liabilities discharged during the year out of Additional Capital Expenditure	0.00	0.00	0.00
Additional Capital Expenditure claimed	576.42	636.93	849.17

12. Based on the above reconciliation, the year-wise admissibility of the works, expenditure allowed by the Commission for these works, actual expenditure against these works along with admissibility of the actual expenditure in terms of the 2009 Tariff Regulations for 2009-10, 2010-11 and 2011-12 under various heads is discussed in the subsequent paragraphs:

Additions against Works approved in Orders dated 14.6.2011/22.10.2012

13. The year-wise actual additional capital expenditure claimed by the petitioner vis-à-vis the additional capital expenditure allowed by the Commission on projected basis in orders dated 14.6.2011 and 22.10.2012 in Petition No. 108/2010 and R.P. No. 24/2011 respectively, is as under:

	(₹ in lakh)		
	2009-10	2010-11	2011-12
Additional capital expenditure allowed in orders dated 14.6.2011 and 22.10.2012	801.05	859.73	902.46
Actual additional capital expenditure claimed	630.74	702.16	805.89

14. The details of works, the expenditure allowed by the Commission for the works, the actual expenditure against these works along with justification for admissibility of the actual expenditure in terms of the 2009 Tariff Regulations for 2009-10, 2010-11 and 2011-12 after prudence check, is summarized as under:

2009-10

(₹ in lakh)				
SI.No.	Assets/works	Amount allowed by order dated 14.6.2011	Actual expenditure incurred/ claimed	Decision on admissibility
1	Renovation & Modernization of power house	618.46	593.32	Allowed under Regulation 9(2) (iv) for works approved in order dated 14.6.2011, after considering the gross value of the replaced component as 10% (₹ 59.33 lakh) of the actual additional expenditure incurred. The old asset is being de-capitalized under "Assumed Deletions"
2	CCTV installed for Penstock area security purpose	5.87	37.42	Work order for installation of CCTV system was issued after competitive bidding, by order dated 17.6.2008 for ₹39,65,401/-. CCTV installation work was completed in May, 2009. Payments against supply were made on 6.6.2008 and 1.9.2008 for

				₹33.00 lakh (appx) and the balance payment of ₹5.62 lakh was released. The entire asset was capitalized during 2009 for ₹37.42 lakh. During the filing of petition only ₹5.87 lakh of balance payment against installation part was considered inadvertently. In view of the justification provided, the actual expenditure incurred is allowed under Regulation 9(2) (iv).
Total Expenditure claimed			630.74	
Total Expenditure allowed				630.74

2010-11

(Rs. in lakh)

Sl.No.	Assets/works	Amount allowed by order dated 14.6.2011	Actual expenditure incurred/ claimed	Decision on admissibility
1	Renovation & Modernization of power house	618.46	627.06	Actual expenditure incurred amounting to ₹627.06 lakh is allowed under Regulation 9(2) (iv), after considering gross value of the replaced component as 10 % (₹ 62.71 lakh) of the additional expenditure incurred. The old asset is being de-capitalized under "Assumed Deletions"
Total Expenditure claimed			627.06	
Total Expenditure allowed				627.06

2011-12

(₹ in lakh)

Sl.No	Assets/works	Amount allowed by order dated 14.6.2011	Actual expenditure incurred/ claimed	Decision on admissibility
1	Renovation & Modernization of power house	618.46	602.77	Actual expenditure incurred for ₹602.77 lakh is allowed under Regulation 9(2) (iv), after considering gross value of the replaced component as 10 % (₹60.28 lakh) of the actual additional expenditure



				incurred. The old asset is being de-capitalized under "Assumed Deletions"
2	Replacement of Present Electromechanical type protection relays by Numerical relays Lot	30.00	4.23	Allowed under Regulation 9(2) (iv). Part of the work was completed during 2010-11.
Total Expenditure claimed			607.00	
Total Expenditure allowed				607.00

15. The petitioner has clarified that the additional capital expenditure allowed by the Commission by its order dated 14.6.2011 was on projection basis, whereas the actual expenditure incurred is less or higher on account of the competitive rates quoted by the bidders.

Works allowed in 2009-10 but capitalized in 2010-11

(₹ in lakh)				
Sl.No	Assets/works	Amount allowed by order dated 14.6.2011	Actual expenditure incurred/ claimed	Decision on admissibility
1	Measuring instruments	2.50	3.28	Allowed for works already approved under the Regulation 9(2)(iv).
2	OPU motor for spherical valve	1.80	1.21	Allowed for works already approved under Regulation 9(2)(iv), after accounting for ₹0.31 lakh as de-capitalization of old assets.
3	500 KVA DG set for PH	32.00	31.41	Allowed for works already approved under the Regulation 9(2)(iv).
4	Const. of CRPF morcha at penstock	25.00	18.87	Allowed for works already approved under the Regulation 9(2)(iv).
4	Const. of security morcha & facilities at at Ithai barrage	6.00	7.48	
5	Const. of CRPF barrack along with WC & kitchen at J/Nagar & Leimatak	20.00	6.06	Allowed for works approved under the Regulation 9(2) (iv). Part of the work was completed during 2010-11.
6	Const. of gate at Loktak colony	4.00	4.57	Allowed for works approved under the Regulation 9(2) (iv).
7	D&C kit, sterilizer, Foetal heart monitor	2.00	0.13	Allowed for works approved under the

8	Hand held metal detector & Door Frame metal detector for CRPF	5.00	2.08	Regulation 9(2) (iv). Part of the work was completed during 2010-11.
Total Expenditure claimed			75.09	
Total Expenditure allowed				75.09

Works allowed during 2009-10 but capitalized in 2011-12

(₹ in lakh)

Sl.No	Assets/works	Amount allowed by order dated 14.6.2011	Actual expenditure incurred/ claimed	Decision on admissibility
1.	CCTV for Loktak, Leimatak & Ithai for security purpose	15.00	13.32	Allowed for works already approved under the Regulation 9(2)(iv).
2.	Const. of CRPF barrack, WC & kitchen at J/Nagar & Leimatak	20.00	14.38	
3.	Medical equipment – Fortal monitor, D&C kit, pulse oximeter, sterilizer, weighing machine, Stethoscope, etc.	2.00	3.66	
4.	Hand held metal detectors for CRPF at PH	5.00	3.53	
Total Expenditure claimed			34.89	
Total Expenditure allowed				34.89

Works allowed during 2010-11 but capitalized in 2011-12

(₹ in lakh)

Sl.No	Assets/works	Amount allowed by order dated 14.6.2011	Actual expenditure incurred/ claimed	Decision on admissibility
1.	Purchase of new 5 MVA transformer- 1 no.	50.00	81.00	Allowed under Regulation 9(2)(iv). The petitioner has submitted that the exp. incurred is based on the cost of asset as per competitive bidding through open tender.
2.	Control panel of feeders with VCB & Control panel for station transformer with various meters & protection relays	0.00	37.70	The petitioner has submitted that during the damage of the transformer due to fire, the associated 132 KV panel as well as 11 KV panel were also damaged beyond repair. Hence, transformer along with 132 kV and 11 kV panels with all protection systems, VCBs etc. were purchased and installed. Though the petitioner has not claimed the additional capital

				expenditure for these 132 kV & 11 kV panels along with protection system in the earlier petition, the same has been claimed in the instant petition and allowed keeping in view their essential requirement for providing supply to employees colony. Hence, allowed under Regulation 9(2)(iv).
3.	Bullet proof vehicle against existing one	39.0	38.30	Allowed for already approved works, under Regulation 9(2)(iv).
4	Ambulance	8.50	6.99	Allowed for already approved works under the Regulation 9(2) (iv).
Total Expenditure claimed			163.99	
Total Expenditure allowed				163.99

Capital expenditure not allowed /projected earlier, but incurred and claimed due to actual site requirements

2009-10

(₹ in lakh)			
Sl.No.	Assets/works	Actual expenditure incurred/ claimed	Decision on admissibility
1.	Potential transformers (three nos.)	0.68	Not allowed as the asset is of the minor nature and is not allowable in terms of proviso to the Regulation 9(2)(iv).
2.	Battery bank 220 volt, 300 AH capacity	5.15	Allowed under Regulation 9(2)(iv) after considering gross value of the replaced component as 10 % of the actual additional capital expenditure . The old asset is being de-capitalized under "Assumed Deletions"
Total Expenditure claimed		5.83	
Total Expenditure allowed			5.15

2010-11

(₹ in lakh)			
Sl.No.	Assets/works	Actual expenditure incurred/ claimed	Decision on admissibility
1.	Construction of retaining wall at valley side of Loktak-Leimatak road	3.59	Not allowed under the Regulation 9(2)(iv) as the work of such nature may be claimed under O&M expenses.
2.	Siemens make ACBs (3 nos.)	6.02	Allowed under the Regulation 9(2)(iv) after considering gross value of the replaced component as 10 % of the actual additional expenditure incurred. The old asset is being de-capitalized under "Assumed Deletions"
3.	HV bushings of generator transformer	10.53	
4.	Voltage transformer (9 nos.)	1.73	Not allowed as the asset is of the minor nature and is not allowable in terms of proviso to the Regulation 9(2)(iv).
5.	Flow meter (3 nos.)	2.71	Not allowed as the asset is of the minor nature and is not allowable in terms of proviso to the Regulation 9(2)(iv).
6.	Common meter reading instrument	0.28	
7.	Electro-static liquid cleaner	5.71	Allowed under the Regulation 9(2)(iv) after considering gross value of the replaced component as 10 % of the actual additional expenditure incurred. The old asset is being de-capitalized under "Assumed Deletions".
8.	Steel tubular poles	1.16	
9.	L&T make Starters (2 nos.)	0.62	Not Allowed as the asset is of the minor nature and is not allowable in terms of proviso to the Regulation 9(2)(iv).
10.	Submersible pumps (2 nos.)	0.52	Allowed under Regulation 9(2)(iv) for drainage of water from hill protection wells near the penstock to avoid destabilization of PH slope area.
11.	Radio bridges	1.72	Allowed under Regulation 9(2)(iv) for reliable communication between Headquarters at Loktak and the PH situated at Leimatak.
Total Expenditure claimed		34.59	
Total Expenditure allowed			25.66

2011-12

(₹ in lakh)			
Sl.No.	Assets/works	Actual expenditure incurred/ claimed	Decision on admissibility
1.	CVT, 132 KV- 2 nos.	6.80	CVTs were claimed as capital spares in the original petition (Petition No. 108/2010) and had not been allowed



			by the Commission. Hence, not allowed under Regulation 9(2)(iv) De-capitalization considered in Assumed deletions has been ignored since the capitalization has not been considered
2.	145 KV, SF6 breaker with accessories- 5 nos.	50.56	New SF6 breakers were claimed as capital spares in the original petition (Petition No. 108/2010) and had not been allowed by the Commission. Hence, not allowed under Regulation 9(2)(iv). De-capitalization considered in Assumed deletions has been ignored since the capitalization has not been considered
3.	145 KV SF6 breaker with accessories-4 nos.	29.60	New SF6 breakers have been claimed as capital spares in the original petition and had not been allowed by the Commission. Hence, not allowed under Regulation 9(2)(iv) De-capitalization considered in Assumed deletions has been ignored since the capitalization has not been considered
4.	Vertical hollow shaft motor -30 HP	1.80	Not Allowed as the asset is of the minor nature and is not allowable in terms of proviso to the Regulation 9(2)(iv). De-capitalization considered in Assumed deletions has been ignored since the capitalization has not been considered
5.	Vertical turbine pump for dewatering sump	4.36	Drainage pumps has been claimed as capital spares in the original petition and had not been allowed by the Commission under Regulation 9(2)(iv). Hence, not allowed , De-capitalization considered in Assumed deletions has been ignored since the capitalization has not been considered.
6.	Vertical turbine pump	2.48	
7.	Vertical hollow shaft motor -25 HP	1.39	Not allowed as the asset is of the minor nature and is not allowable in terms of proviso to the Regulation 9(2)(iv). De-capitalization considered in Assumed deletions has been ignored since the capitalization has not been considered
8.	Arc welding machine	0.77	Not allowed as the asset is of the minor nature and is not allowable in terms of proviso to the Regulation 9(2)(iv). De-capitalization considered in Assumed deletions has been ignored since the capitalization has not been considered
9.	Conventional fire panel	0.06	Not allowed as the asset is of the minor nature and is not allowable in terms of proviso to the Regulation 9(2)(iv).

10.	Generator Air cooler for stator -8 nos.	25.34	Allowed under Regulation 9(2)(iv) after considering gross value of the replaced component as 10 % of the actual additional expenditure incurred. The old asset is being de-capitalized under "Assumed Deletions".
Total Expenditure claimed		123.16	
Total Expenditure allowed			25.34

Inter-unit Transfers

16. The petitioner has claimed following Additional Capital Expenditure on account of inter unit transfers:

<i>(₹ in lakh)</i>			
	2009-10	2010-11	2011-12
Other additions (IUT)	0.00	0.00	13.99

17. On scrutiny of the details of inter-units transfers, it is observed that these include asset such as Maruti Gypsy (4 nos) transferred from other stations/offices. The petitioner has submitted that the said asset have been transferred permanently from Loktak Downstream project, which is under construction. Accordingly, the capitalization of ₹13.99 lakh on account of Inter-unit transfer is allowed during the year 2011-12.

Deletions

18. The petitioner has claimed following amounts towards de-capitalization on account of assets like Jeeps, D.G sets, tippers, trucks etc., declared as obsolete.

<i>(₹ In lakh)</i>			
	2009-10	2010-11	2011-12
Deletions claimed	(-) 0.23	(-) 33.52	0.00

19. The de-capitalization of the above amounts as affected in books of accounts has been allowed for the purpose of tariff also as they are not rendering any useful service in the operation of the plant. An amount of (-) ₹2.79 lakh on account of de-capitalization of Ambulance has been indicated under 'Exclusions in deletions' during 2010-11. The petitioner has submitted that the corresponding new asset was actually purchased/capitalized during 2011-12 and accordingly, the

de-capitalization value has been shifted to 'Assumed deletions' for the year 2011-12. However, considering the fact that the old asset is not in service from the year 2010-11 onwards, the shifting of the de-capitalization value is not allowed. Accordingly, the following deletions have been considered:

(₹ in lakh)			
	2009-10	2010-11	2011-12
Deletions allowed	(-) 0.23	(-) 36.31	0.00

Exclusions in additions

20. The petitioner has prayed that the following positive entries effected in books of accounts on account of replacement of minor assets, purchase of capital spares, purchase of miscellaneous assets, may be excluded/ ignored for the purpose of tariff:

(₹ in lakh)			
	2009-10	2010-11	2011-12
Expenditure on replacement of minor assets, etc. (incurred, capitalized in books but not to be claimed for tariff purpose)	17.11	50.36	17.27
Inter- unit transfers of minor asset.	3.25	1.08	0.35
Total	20.36	51.44	17.62

21. The expenditure incurred on procurement/replacement of minor assets is not allowed for the purpose of tariff after the cut-off date under the 2009 Tariff Regulations. Accordingly, the petitioner itself has put these additions under exclusion category. As such, the above exclusions of the positive entries have been accepted for the purpose of tariff.

Exclusions in deletions

22. The petitioner has prayed that following negative entries as effected in the books of accounts pertaining to de-capitalized minor assets such as computers, office equipment, furniture, fixed assets of minor value less than ₹5000 etc., may be excluded/ignored for the purpose of tariff:

(₹ In lakh)

	2009-10	2010-11	2011-12
De-capitalization of minor assets, tools and tackles not considered for additional capitalization	(-) 18.83	(-) 3.84	0.00
Inter-unit transfer	0.00	(-) 2.64	0.00
Total exclusions in deletions (de-capitalized in books but not to be considered for tariff purpose)	(-) 18.83	(-) 6.48	0.00

23. The negative entries arising out of de-capitalization of minor assets may be excluded/ ignored for the purpose of tariff as the corresponding positive entries for purchase of minor assets are not being considered for the purpose of tariff. The Commission in its order dated 7.9.2010 in Petition No. 190/2009 has observed 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."

24. Accordingly, in line with the above order, the negative entries arising out of de-capitalization of minor assets has been allowed to be excluded/ignored for the purpose of tariff. However, considering the fact that shifting of the de-capitalization value of ₹2.79 lakh pertaining to 'Ambulance' has not been allowed during the years 2010-11 to 2011-12, the exclusions in deletion allowed as under:

(₹ In lakh)

	2009-10	2010-11	2011-12
De-capitalization of minor assets, tools and tackles not considered for additional capitalization	(-) 18.83	(-) 1.05	0.00
Inter-unit transfer	0.00	(-) 2.64	0.00
Total Exclusions in deletions (de-capitalized in books but not to be considered for tariff purpose)	(-) 18.83	(-) 3.69	0.00

Assumed deletions

25. As per consistent methodology adopted by the Commission, expenditure on replacement of assets, if found justified is allowed for the purpose of tariff provided that the capitalization of the said asset is followed by the de-capitalization of the gross value of the old asset. However, in certain cases where de-capitalization is proposed to be effected /affected during the future years to the year of capitalization of new asset, the de-capitalization of the old asset for the purpose of tariff is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as "Assumed deletion". The amounts considered by the petitioner under this head are as under:

(₹ in lakh)

	2009-10	2010-11	2011-12
Assumed deletions	(-) 59.91	(-) 66.31	(-) 93.88

26. Assumed deletions based on the 10% value of the actual expenditure on 'new additions' as claimed by the petitioner is acceptable as the generating station is 30 years old (approx). Accordingly, the assumed deletions as claimed are allowed. However, Assumed deletions indicated by the petitioner corresponding to assets disallowed in this order under the head "*Capital expenditure not allowed /projected earlier, but incurred and claimed due to actual site requirements*" have been ignored for the purpose of tariff. Also, considering the fact that shifting of de-capitalized value of ₹2.79 lakh pertaining to 'Ambulance' has not been allowed from the year 2010-11 to 2011-12, the 'assumed deletion' for the year 2011-12 has been adjusted by (-) ₹2.79 lakh to avoid double deduction. In view of the said adjustments, the Assumed deletions considered for the purpose of tariff are as under:

(₹ in lakh)

	2009-10	2010-11	2011-12
Assumed deletion allowed	(-) 59.84	(-) 66.05	(-) 81.20

Un-discharged liabilities and discharge of liabilities

27. The petitioner has not claimed any un-discharged liability/discharge of liabilities during the period 2009-14.

Actual additional capital expenditure allowed during 2009-12

28. In view of above deliberations, the actual Additional Capital Expenditure for period 2009-12 allowed for the purpose of revision of tariff, is as under:

(₹ in lakh)

	2009-10	2010-11	2011-12
Additions allowed (a)			
Additions against works approved by Commission	630.74	627.06	607.00
Capitalization against works allowed in previous year but actually incurred in subsequent years	0.00	75.09	198.88
Additions not projected earlier but incurred and claimed	5.15	25.66	25.34
Other additions (IUT transfer)	0.00	0.00	13.99
Total (a)	635.89	727.81	845.21
Deletions (b)	(-) 0.23	(-) 36.31	0.00
Net Add cap allowed for tariff purpose before assumed deletions, discharge of liabilities and un-discharged liabilities (c)= (a)+(b)	635.66	691.50	845.21
Add: Assumed deletions	(-) 59.84	(-) 66.05	(-) 81.20
Add: Liabilities discharged during the year out of Additional Capital Expenditure during 2009-12	0.00	0.00	0.00
Less: Un-discharged liability in additional capital expenditure for the period 2009-12	0.00	0.00	0.00
Additional Capital Expenditure allowed for the purpose of revision of tariff	575.82	625.45	764.01

Additional Capital Expenditure during 2012-13 and 2013-14

29. The petitioner has not made any revision in the projected additional capital expenditure of ₹248.66 lakh and ₹3.72 lakh for the years 2012-13 and 2013-14, allowed by the Commission vide order dated 22.10.2012 in R.P. No. 24/2011.

Total Additional Capital Expenditure

30. The expenditure allowed to be capitalized during the tariff period 2009-14 is summarized as under:

(₹ in lakh)

	PARTICULARS	2009-10	2010-11	2011-12	2012-13	2013-14
		ACTUAL			PROJECTED	
	Addition					
1	Addition against work already approved by Commission	630.74	627.06	607.00	299.50	5.50
2	Capitalization against work allowed in previous year but actually incurred in subsequent years	0.00	75.09	198.88	0.00	0.00
3	Addition not projected earlier but incurred and claimed	5.15	25.66	25.34	0.00	0.00
4	Other additions (IUT transfer)	0.00	0.00	13.99	0.00	0.00
5	Total Addition (1+2+3+4)	635.89	727.81	845.21	299.50	5.50
	Deletion					
6	Deletion allowed	0.23	36.31	0.00	21.63	1.78
7	Exclusion in deletion (not allowed)	0.00	0.00	0.00	0.00	0.00
8	Assumed Deletion	59.84	66.05	81.20	29.21	0.00
9	Total Deletion (6+7+8)	60.07	102.36	81.20	50.84	1.78
10	Total additional capital expenditure allowed before adjustment of discharge/un-discharge of liabilities (5-9)	575.82	625.45	764.01	248.66	3.72
11	Less: Un-discharged liabilities in the allowed ACE	0.00	0.00	0.00	0.00	0.00
12	Add: Liabilities discharged during the year out of ACE during 2009-12	0.00	0.00	0.00	0.00	0.00
13	Add: Liabilities discharged during the year (Related to un-discharged liabilities as on 31-03-2009)	0.00	0.00	0.00	0.00	0.00
14	Additional Capital Expenditure allowed (10-11+12+13)	575.82	625.45	764.01	248.66	3.72

Capital Cost

31. The capital cost allowed for the purpose of the annual fixed charges is as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	14240.52	14816.34	15441.79	16205.80	16454.46
Additional Capital Expenditure	575.82	625.45	764.01	248.66	3.72
Closing Capital Cost	14816.34	15441.79	16205.80	16454.46	16458.18

Debt-Equity Ratio

32. In accordance with clause (2) of Regulation 12 of the The 2009 Tariff Regulations, in case of the generating stations declared under commercial operation prior to 1.4.2009, debt-equity ratio for the purpose of additional capitalization allowed by the Commission for determination of

tariff for the period ending 31.3.2009 is considered.

Return on Equity

33. Regulation 15 of the 2009 Tariff Regulations provides as under:

*“15. **Return on Equity.** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.*

(2) Return on Equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

*Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:*

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

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

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

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

Where “t” is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case may be, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.

Illustration.-

(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 11.33% including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1-0.1133) = 17.481\%$$

(ii) In case of generating company or the transmission licensee paying normal corporate tax @ 33.99% including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1-0.3399) = 23.481\%”$$

34. The petitioner has claimed Rate of Return on Equity as follows:

Year	2009-10	2010-11	2011-12	2012-13	2013-14
	ACTUAL			PROJECTED	
Base Rate	15.5%	15.5%	15.5%	15.5%/16.5%	16.5%
Applicable Tax Rate	33.990%	33.218%	32.445%	11.330%	11.330%
Tax Rate	30%	30%	30%	10%	10%
Surcharge	10%	7.50%	5%	10%	10%
Education cess	3%	3%	3%	3%	3%
Rate of ROE (pre-tax)	23.481%	23.210%	22.944%	17.762%	18.608%

Note: - Base Rate has been changed from 15.5% to 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage vide 2009 Tariff Regulations amended on 31.12.2012. The rate of ROE (pre-tax) for the year 2012-13 (17.762%) is the composite rate calculated for the year.

35. Accordingly, the petitioner is entitled to Return on Equity as under:

	(₹ In lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	6677.70	6850.45	7038.08	7267.29	7341.88
Addition due to Additional Capital Expenditure	172.75	187.64	229.20	74.60	1.12
Closing Equity	6850.45	7038.08	7267.29	7341.88	7343.00
Average Equity	6764.07	6944.27	7152.68	7304.58	7342.44
Return on Equity	1588.27	1611.76	1641.11	1297.44	1366.28

Interest on Loan

36. The normative loan in respect of the project has already been repaid. The normative loan on account of the admitted additional capital expenditure during the respective years of the entire tariff period have been considered as fully paid, as the admitted depreciation is more than the amount of normative loan in these years. As such, the Interest on loan during the period 2009-14 is 'Nil'

Depreciation

37. The date of commercial operation of the generating station is 1.6.1983. Since the generating station has completed 12 years of operation as on 1.6.1995, the remaining depreciable value has been spread over the balance useful life of the assets. Assets amounting ₹60.07 lakh, ₹102.36 lakh, ₹81.20 lakh, ₹50.84 lakh and ₹1.78 lakh have been de-capitalized during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively. As per methodology adopted, the amount of cumulative depreciation allowed in tariff against those de-capitalized assets has been calculated on pro-rata basis. Further, proportionate adjustment has

been made to the cumulative depreciation on account of de-capitalization of assets considered for the purpose of tariff. The necessary calculations in support of depreciation are as under. The petitioner's entitlement to depreciation has been worked out as under:

	(₹ In lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block as on 31-3-2009	14240.52	14816.34	15441.79	16205.80	16454.46
Additional capital expenditure during 2009-14	575.82	625.45	764.01	248.66	3.72
Closing gross block	14816.34	15441.79	16205.80	16454.46	16458.18
Average gross block	14528.43	15129.07	15823.80	16330.13	16456.32
Depreciable Value	13039.69	13580.26	14205.52	14661.22	14774.79
Balance Useful life of the asset	9.17	8.17	7.17	6.17	5.17
Remaining Depreciable Value	4962.05	4996.11	5070.15	4867.47	4224.31
Depreciation	541.32	611.77	707.46	789.32	817.61

O & M Expenses

38. The following O & M expenses considered in the order dated 22.10.2012 in R.P. 24/2011 *ibid* have been considered for revision of tariff:

(₹ In lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
6454.12	6823.30	7213.59	7626.21	8062.43

Interest on Working Capital

39. 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. In the instant case, SBI PLR of 12.25% as on 1.4.2009 has been considered in for working out Interest on Working Capital.

40. Necessary computations in support of interest on working capital are appended hereunder:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	968.12	1023.50	1082.04	1143.93	1209.36
O & M Expenses	537.84	568.61	601.13	635.52	671.87
Receivables	1491.82	1572.41	1661.99	1689.66	1782.52
Total	2997.78	3164.52	3345.16	3469.11	3663.76
Interest	367.23	387.65	409.78	424.97	448.81

Annual Fixed Charges

41. The Annual Fixed Charges approved for the generating station are consolidated in the table below:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	1588.27	1611.76	1641.11	1297.44	1366.28
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	541.32	611.77	707.46	789.32	817.61
Interest on Working Capital	367.23	387.65	409.78	424.97	448.81
O & M Expenses	6454.12	6823.30	7213.59	7626.21	8062.43
Total	8950.94	9434.48	9971.94	10137.94	10695.13

42. The recovery of the Annual Fixed Charges shall be subject to truing up in terms of Regulation 6 of the 2009 Tariff Regulations. In all other respects, the order dated 14.6.2011/22.10.2012 shall continue to apply.

43. The difference between the Annual Fixed Charges already recovered by the petitioner and the Annual Fixed Charges determined under this order shall be mutually settled between the petitioner and the respondents within a period of six months from the date of this order, in terms of the clause (6) of Regulation 6 of the 2009 Tariff Regulations.

44. Petition No. 155/GT/2013 stands disposed of in terms of the above.

Sd/-
(M. Deena Dayalan)
Member

Sd/-
(V. S. Verma)
Member