

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 457/GT/2014

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri A. K. Singhal, Member

Shri A. S. Bakshi, Member

DATE OF HEARING: 16.07.2015

DATE OF ORDER: 28.09.2015

IN THE MATTER OF

Revision of tariff for the period 2009-14 based on truing-up of the capital expenditure including additional capital expenditure incurred during the financial years 2009-10 to 2013-14 in respect of Ranganadi Hydro Electric Project (405 MW) of North Eastern Electric Power Corporation Limited.

AND

IN THE MATTER OF

North Eastern Electric Power Corporation Ltd
Brookland Compound
Lower New Colony
Shillong-793 003

.....Petitioner

Vs

1. Assam Power Distribution Company Ltd.
Bijulee Bhawan, Paltanbazar
Guwahati-781 001

2. Meghalaya Energy Corporation Ltd.
Meter Factory Area, Short Round Road
Integrated Office Complex
Shillong-793 001

3. Tripura State Electricity Corporation Ltd.
Bidyut Bhavan, North Banamalipur
Agartala-799 001

4. Power and Electricity Department
Govt. of Mizoram
P&E Office Complex, Electric Veng,
Aizwal-796 001



5. Electricity Department
Govt. of Manipur, Keishampat
Imphal-795 001

6. Department of Power
Govt. of Arunachal Pradesh
Vidyut Bhawan
Itanagar-791 111

7. Department of Power
Govt. of Nagaland
Kohima-797 001

8. North Eastern Regional Power Committee
Meghalaya State Housing Finance Co-operative
Society Ltd. Building
Nongrim Hills
Shillong-793 003

9. North Eastern Regional Load Despatch Centre
Dongtiah, Lower Nongrah
Lapalang
Shillong-793 006

.....**Respondents**

Parties present:

1. Shri. Rana Bose, NEEPCO
2. Shri. Paresh Ch. Barman, NEEPCO
3. Ms. Elizabeth Pyrbot, NEEPCO
4. Shri Devapriya Choudhary, NEEPCO
6. Shri K. Goswami, APDCL

ORDER

The petitioner has filed this petition for revision of tariff for 2009-14 based on trueing-up of the capital expenditure including additional capital expenditure incurred during the financial years 2009-10 to 2013-14 in respect of Ranganadi Hydro Electric Project (405 MW) (hereinafter referred to as “the generating station”) of North Eastern Electric Power Corporation Ltd, in terms of Regulation 6(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”).



2. The project comprises of three units of 135 MW capacity each and is a run of the river scheme with pondage having a Head Race Tunnel and a surface Power House. The tail race discharge of the generating station is diverted to Dikrong River through an open channel of 56 m length. The date of commercial operation of the respective units of the generating station is as under:

Units	Date of commercial operation
Unit-I	12.2.2002
Unit-II	12.2.2002
Unit-III	12.4.2002

3. The tariff of the generating station for the period 2009-14 was determined by the Commission by order dated 10.5.2011 in Petition No.296/2009 based on the opening capital cost of ₹145849.72 lakh as on 1.4.2009. The annual fixed charges approved by the Commission vide order dated 10.5.2011 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	12731.64	12734.65	12737.67	12737.67	12738.59
Interest on Loan	1744.85	980.43	300.04	0.00	0.00
Depreciation	9052.01	9055.58	9059.15	9059.15	9060.24
Interest on Working Capital	768.10	768.19	770.94	782.44	801.25
O & M Expenses	5551.91	5869.48	6205.21	6560.15	6935.39
Total	29848.51	29408.33	29073.01	29139.41	29535.47

4. 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."

5. As stated, the petitioner has filed this petition for revision of tariff based on truing-up in terms of Regulation 6(1) of the 2009 Tariff Regulations. Accordingly, the annual fixed charges claimed by the petitioner for the period 2009-14 are as under:



	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	13602.06	14105.34	14132.13	14370.70	15259.19
Interest on Loan	1746.16	983.39	301.77	0.00	0.00
Depreciation	9053.33	9058.74	9072.56	9084.14	9106.06
Interest on Working Capital	786.30	796.88	800.32	817.00	854.74
O & M Expenses	551.91	5869.48	6205.21	6560.15	6935.39
Total	30739.76	30813.83	30511.99	30831.99	32155.38

6. Reply to the petition has been filed by the respondent No.1, APDCL. The petition was heard on 7.4.2015 and the Commission vide Record of the proceedings held on 7.4.2015 directed the petitioner to file certain additional information. In response, the petitioner vide affidavit dated 1.6.2015 has filed the information with copy to the respondents. Thereafter, the matter was heard on 16.7.2015 and the Commission reserved its orders in the petition.

7. The respondent No.1, APDCL in its reply affidavit dated 6.1.2015 has pointed out that there was no proposal of additional capital expenditure for the period 2009-10 and after prudence check of the claims of the petitioner, the Commission had allowed additional capital expenditure only for the years 2010-11 and 2013-14. The respondent has submitted that the petitioner cannot exceed the limit of additional capital expenditure allowed by the Commission in order dated 10.5.2011, without the permission of the Commission. The respondent has also pointed out that the petitioner has now incurred expenditure on new heads other than those proposed and approved by the Commission in order dated 10.5.2011 without the prior approval of the Commission. The respondent has stated that this is against the second proviso to Regulation 6(1) of the 2009 Tariff Regulations and has prayed that the Commission may not entertain the present claims of the petitioner.

8. In response, the petitioner in its rejoinder affidavit dated 22.1.2015 has clarified that projection of the capital expenditure to be incurred during the period 2009-14 was



claimed in Petition No. 296/2009 based on the estimation work/planning in accordance with Regulation 9(2) of the 2009 Tariff Regulations. It has also submitted that the projected expenditure varies based on actual requirements as well as applicable rates /prices for such works. It has also submitted that in terms of Regulation 6(1) , regulation 6(2) and 6(3) of the 2009 Tariff Regulations, this petition has been submitted for considering the allowable capital expenditure based on its actual execution and accounting thereof. The petitioner has further submitted neither the provisions of Regulation 9(2) nor Regulation 6(1) to 6(3) of the 2009 Tariff Regulations limits and/ or restricts the additional capital expenditure claimed in the truing-up petition upto the extent of the projected additional capital expenditure allowed by the Commission's order dated 10.5.2011. Accordingly, the petitioner has submitted that it is entitled for recovery for such expenditure actually incurred during the said period, subject to prudence check by the Commission.

9. We have examined the matter. The 2009 Tariff Regulations envisages determination of tariff based on the projected capital expenditure as on the cut-off date and projected additional capital expenditure during the tariff period. One mid-term truing-up and final truing-up of the capital expenditure in terms of Regulation 6 of the 2009 Tariff Regulations, with suitable provision for payment of interest on the excess recovery or shortfall in recovery, has been provided to balance the interest of the generating companies as well as the beneficiaries. In terms of the proviso to Regulation 6(1) of the 2009 Tariff Regulations, the generating company has the discretion to approach the Commission one more time for truing up during the tariff period. In terms of Regulation 6 (1), the Commission shall carry out truing-up exercise along with the tariff petition filed for the next period with respect to the capital expenditure including additional capital expenditure incurred upto 31.3.2014 as admitted by the Commission after prudence



check at the time of truing-up. The petitioner instead of approaching for a mid-term truing-up has opted for truing-up of expenditure at the end of the tariff period. With the provision for truing-up of tariff on prudence check of the claims and the adjustment of excess recovery or shortfall as a result of such truing up at SBI PLR rate, the concerns of the respondent, APDCL are duly taken care of. Thus, the objection of the respondent is disposed of as above. We now proceed to revise the tariff of the generating station for the period 2009-14 based on the submissions of the parties in the subsequent paragraphs.

Capital Cost as on 1.4.2009

10. The last proviso of Clause 2 of Regulation 7 of the 2009 Regulations, provides as under:

“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 and the additional capital expenditure 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.”

11. The Commission vide its order dated 17.5.2010 in Petition No. 211/2009 (tariff for 2004-19) had approved the closing capital cost of ₹145849.72 lakh as on 31.3.2009. This was considered as the opening capital cost as on 1.4.2009 in order dated 10.5.2011 in Petition No. 296/2009. Accordingly, in terms of the above proviso, the capital cost of ₹145849.72 lakh has been considered as the opening capital cost as on 1.4.2009.

Additional Capital Expenditure for 2009-14

12. Clause (2) of Regulation 9 of the 2009 Tariff Regulations provides as under:

“9. Additional Capitalisation

(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.”*

13. The reconciliation of the actual additional capital expenditure claimed for the purpose of tariff with the actual additional capital expenditure as per books of accounts for the period 2009-14 is as under:



Sl. No.		Actual additional capital expenditure				
		2009-10	2010-11	2011-12	2012-13	2013-14
A.	Net additional capital expenditure as per books of accounts	176.29	317.45	339.41	250.55	653.99
1(a)	Additional Capital Expenditure					
(i)	For arranging proper security for the Power Station as well as to the officials engaged for maintenance & operation, which in turn have contributed to the smooth & successful operation of the Plant (New assets & hence no de-capitalization is applicable) - Regulation 9(2)(iv)	3.29	3.63	3.95	7.61	0.00
(ii)	New Asset installed for enhancing Plant operation efficiency- (no de-capitalization is applicable, since no asset is replaced) Regulation 9 (2)(iv)	44.27	123.78	301.46	44.97	257.95
(iii)	Regulatory requirements/ Govt. direction - Regulation 9 (2) (ii)	0.00	0.00	7.90	0.00	94.76
	Total additional capital expenditure claimed Total 1 (a) = (i + ii + iii)	47.56	127.41	313.31	52.58	352.71
2	Exclusions (not to be claimed for tariff)					
(a)	Addition (under exclusion)					
(i)	Staff welfare/Not related to core activity	5.30	21.25	1.25	0.00	6.26
(ii)	Minor assets	56.44	20.67	5.57	30.87	15.83
(iii)	PMT. Building constructed after cut-off date	55.55	117.61	0.00	140.38	363.48
(iv)	Assets of O&M nature	0.00	15.45	1.38	22.40	2.03
(v)	Assets of the nature of Stocks & Spares/ T&P	20.00	26.71	21.84	4.32	23.29
	Total 2 (a) = (i+ii+iii+iv+v)	137.29	201.69	30.04	197.97	410.89
(b)	Deletions (not considered for tariff)					
(i)	De-capitalization of the old assets replaced by the new assets covered under 2 (a) above	0.00	0.00	0.00	0.00	0.00
(ii)	De-capitalization of the old assets without any replacement by new assets	0.00	0.00	0.00	0.00	(-) 109.61
(iii)	Transfer to other office/unit	(-) 8.56	(-) 3.77	(-) 1.70	0.00	0.00
(iv)	Accounts rectification	0.00	(-) 7.88	(-) 2.24	0.00	0.00
	Total 2 (b) = (i+ii+iii+iv)	(-) 8.56	(-) 11.65	(-) 3.94	0.00	(-) 109.61
	Total Exclusions [Total 2 = 2(a) + 2(b)]	128.73	190.04	26.10	197.97	301.28
3	Net additional capital expenditure claimed (1 (a) + 2)	176.29	317.45	339.41	250.55	653.99
	Difference with books of accounts (3-A)	0.00	0.00	0.00	0.00	0.00



14. After examining the asset-wise details and justification for additional capital expenditure claimed by the petitioner under various categories, the reply of the respondent, APDCL and by applying prudence check, the admissibility of additional capitalization is discussed in the subsequent paragraphs.

2009-10

15. The details of the assets/works, the actual additional capital expenditure claimed against the works/assets along with the reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

<i>(₹ in lakh)</i>			
Sl. No.	Assets/Works	Actual Expenditure claimed	Reasons on admissibility
1	Footpath Step at Plan IV To Circular Road, Ph	2.77	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the expenditure is considered necessary for the safety and benefit of the employees working in remote areas of the generating station and in turn will facilitate the efficient and successful operation of the plant.
2	Security barrack at Hoz	3.30	
3	Construction of work shop building near godown no.3 at ph site.	7.97	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations, since the assets/ works are considered necessary for the successful and efficient operation of the generating station.
4	Construction of permanent Office room for HOP.	6.12	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations, since the work is considered necessary for the successful and efficient operation of the generating station.
5	2 nos of Digital current meter & 4nos of Self Recording Rain Gauge (S.R.R.G.)	0.96	Proviso to Regulation 9(2)(iv) of the 2009 Tariff Regulations provides that the expenditure on acquiring minor assets like tools and tackles etc., after the cut-off date shall not be considered for additional capitalization. Since these assets are in the nature of tools and tackles, the expenditure



			is not allowed
6	Supply of 420KV CT	10.83	Not allowed as the asset is in the nature of spares.
7	Submersible pump for Dikrong Power House	6.48	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations, since the assets/ works are considered necessary for the successful and efficient operation of the generating station.
8	40 HP Submersible Pump	1.80	
9	GPS clock system complete with all accessories.	6.16	
10	Toshniwal oil pump	0.82	Not allowed as the asset is of minor nature.
11	Chino make transformer recorder & rotor temperature indicator	0.36	
	Total amount claimed	47.56	
	Total amount allowed		34.60

2010-11

16. The details of the assets/works, the actual additional capital expenditure claimed against the works/assets along with the reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

(₹ in lakh)

Sl. No.	Assets/Works	Actual Expenditure claimed	Reasons on admissibility
1	Road from Powerhouse To Gowdown at Hoz	10.11	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/ works is considered necessary for the successful and efficient operation of the generating station.
2	Construction of Security Booth at Hoz	3.55	Allowed under Regulation 9(2)(iv) as the expenditure is considered necessary for the safety and benefit of the employees working in remote areas of the generating station and in turn will facilitate the efficient and successful operation of the plant.
3	Construction of Security Booth at Hoz Electrification work	0.07	
4	Construction of DG Set including RCC Culvert	3.67	
5	250 kVA 415 Volts DG Set	15.56	The petitioner has claim the item towards necessary infrastructure required for installation of DG set. It has submitted that the same is required for maintaining plant efficiency. Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/ works are considered necessary for the successful and efficient operation of the generating station.
6	Order for supply of Megger make automatic oil test set	9.31	Proviso to Regulation 9(2)(iv) of the 2009 Tariff Regulations provides that the expenditure on acquiring minor assets like tools and tackles etc after the cut-off date



			shall not be considered for additional capitalization. Since these assets are in the nature of tools and tackles, the expenditure is not allowed .
7	Order for supply, Erection, testing & commissioning of 625 kVA silent type DG Set for Dikrong Power House.	46.92	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/works is considered necessary for the successful and efficient operation of the generating station.
8	Order for supply of Megger make Battery Impedance Test Equipment	4.60	Since these assets are in the nature of tools and tackles, the expenditure is not allowed .
9	DCRM Circuit Breaker	15.98	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/works is considered necessary for the successful and efficient operation of the generating station.
10	Fevostate transmitter	0.57	Since these assets are in the nature of spares, the expenditure is not allowed .
11	Constant voltage Transformer(CVT)	0.11	Since these assets are in the nature of minor assets, the expenditure is not allowed .
12	Supply, erection, testing & commissioning of 625 KVA silent type D.G Set	3.21	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/works is considered necessary for the successful and efficient operation of the generating station.
13	Level indicator cum controller of turbine guide bearing.	1.69	Since these assets are in the nature of minor assets, the expenditure is not allowed .
14	Air compressor machine	3.48	Since these assets are in the nature of spares, the expenditure is not allowed .
15	BCH & L&T make spares	0.66	Since these assets are in the nature of tools and tackles, the expenditure is not allowed .
16	Air circulating Fan	0.22	Since these assets are in the nature of minor assets, the expenditure is not allowed .
17	2nos On Line UPS 6kVA	4.99	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/works is considered necessary for the successful and efficient operation of the generating station.
18	Supply, erection, testing, installation and commissioning of duct able Equipment Air Conditioning system For Power House	2.70	Since these assets are in the nature of minor assets, the expenditure is not allowed .
	Total amount claimed	127.41	
	Total amount allowed		104.06



2011-12

17. The details of the assets/works, the actual additional capital expenditure claimed against the works/assets along with the reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

(₹ in lakh)

Sl. No.	Assets/Works	Actual Expenditure claimed	Reasons on admissibility
1	Construction of Security Tower At Hoz	3.94	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the expenditure is considered necessary for the safety and benefit of the employees working in remote areas of the generating station and in turn will facilitate the efficient and successful operation of the plant.
2	Order for Design, Engg, supply, installation, Testing & Comm. & implementation of HMI system of Dikrong Power House.	275.66	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/ works is considered necessary for the successful and efficient operation of the generating station.
3	Megger make Karl Fischer moisture in oil test set.	7.30	Proviso to Regulation 9(2)(iv) of the 2009 Tariff Regulations provides that the expenditure on acquiring minor assets like tools and tackles etc after the cut-off date shall not be considered for additional capitalization. Since these assets are in the nature of tools and tackles, the expenditure is not allowed .
4	SF6 Gas filling Kit with 9Kg cylinder	2.24	Since these assets are in the nature of minor assets, the expenditure is not allowed .
5	SKF make Vibration pen	1.00	Proviso to Regulation 9(2)(iv) of the 2009 Tariff Regulations provides that the expenditure on acquiring minor assets like tools and tackles etc after the cut-off date shall not be considered for additional capitalization. Since these assets are in the nature of tools and tackles, the expenditure is not allowed .
6	KOSHA make Vibration meter & bearing analyser.	0.65	
7	2 Nos of Automatic Weather Stations	7.91	Allowed under Regulation 9 (2)(iv) of the 2009 Tariff Regulations, considering the fact that the expenditure has been incurred in compliance with the directions of the State Government of Assam.
8	Supply of 1 No automatic Digital Normal Plumb Line with all accessories	6.92	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/ works is considered necessary for the successful and efficient operation of the generating station.



9	Supply of 243 Mtr. Electrical Insulating Mats, including installation charges	7.71	Since these assets are in the nature of minor assets, the expenditure is not allowed .
	Total amount claimed	313.31	
	Total amount allowed		294.43

2012-13

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

<i>(₹ in lakh)</i>			
Sl. No.	Assets/Works	Actual Expenditure claimed	Reasons on admissibility
1	Construction of Security house at Hoz	7.61	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the expenditure is considered necessary for the safety and benefit of the employees working in remote areas of the generating station and in turn will facilitate the efficient and successful operation of the plant.
2	Order for supply of VPI make Transformer Oil Filtration plant of Capacity 1000 GPH	33.78	Allowed under Regulation 9 (2)(iv) of the 2009 Tariff Regulations as the projected expenditure had been allowed vide order dated 10.5.2011 in Petition No.296/2009 for 2010-11 on the ground that the said expenditure was necessary for the efficient and successful operation of the generating station.
3	Safety equipments	1.61	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the expenditure is considered necessary for the safety of the generating station and in turn will facilitate the efficient and successful operation of the plant.
4	Supply, Fabrication, erection & testing of Elect. Hoist	9.59	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/works is considered necessary for the successful and efficient operation of the generating station.
	Total amount claimed	52.58	
	Total amount allowed		52.58



2013-14

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

(₹ in lakh)			
Sl. No.	Assets/Works	Actual Expenditure claimed	Remarks on admissibility
1	Security fencing at Power House	9.83	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the expenditure is considered necessary for the safety and benefit of the employees working in remote areas of the generating station and in turn will facilitate the efficient and successful operation of the plant.
2	Material Handling T&P	3.30	Since the asset is in the nature of minor assets, the expenditure is not allowed .
3	EHG system for RGMO/ FGMO	76.16	This item/asset is allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations as the same is considered necessary for grid security.
4	Heavy duty D-shackle	6.39	Proviso to Regulation 9(2)(iv) of the 2009 Tariff Regulations provides that the expenditure on acquiring minor assets like tools and tackles etc after the cut-off date shall not be considered for additional capitalization. Since these assets are in the nature of tools and tackles, the expenditure is not allowed .
5	Supply of Battery bank	97.59	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/ works is considered necessary for the successful and efficient operation of the generating station. In the absence of the value of old asset, the petitioner has indicated 50% of the cost of new asset to be considered as the value of the old asset removed. As such, an amount of ₹48.80 lakh is considered as the de-capitalized value of the old asset.
6	Supply of Megger make Tan Delta Test Kit	41.74	Since these assets are in the nature of tools and tackles, the expenditure is not allowed .
7	Order for supply of Grid Energy Meter for RHEP	52.39	Allowed under Regulation 9 (2)(iv) of the 2009 Tariff Regulations, as the projected expenditure had been allowed vide order dated 10.5.2011 in Petition No.296/2009 for 2010-11 on the ground that the said expenditure was necessary for the efficient



			and successful operation of the generating station.
8	2Nos automatic rain Gauge	4.02	Allowed under Regulation 9 (2)(iv) of the 2009 Tariff Regulations, considering the fact that the expenditure has been incurred in compliance with the directions of the State Government of Assam.
9	Web Data Monitoring System	3.10	Allowed under Regulation 9(2)(iv) of the 2009 Tariff Regulations since the assets/works is considered necessary for the successful and efficient operation of the generating station.
10	LAN Connection	53.44	
11	1.2 kwp Solar PV Power Plant	4.76	Not allowed as the asset is not related to the operation of the plant.
	Total amount claimed	352.72	
	Total amount allowed		296.53

N.B : the amounts indicated under each heads for the period 2009-14 has been rounded off to the next decimal and hence the total may not be the arithmetic sum of individual items.

Deletions

20. No deletions have been indicated/ claimed by the petitioner for the purpose of tariff for the period 2009-14. However, the petitioner vide affidavit dated 1.6.2015 has submitted the gross value of the old asset (Battery bank) amounting to ₹48.80 lakh as 50% of the value of new asset claimed in 2013-14. Accordingly, as the old battery bank does not render any useful service in the operation of the generating station, the said amount of ₹48.80 lakh has been considered as deletion in 2013-14 for the purpose of tariff as against the capitalization of the new battery bank for ₹97.59 lakh.

Exclusions

Exclusions in additions (Expenditure incurred but not claimed for the purpose of tariff)

21. The exclusions claimed by the petitioner under this head for the purpose of tariff are as under:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Exclusions in additions	137.29	201.69	30.04	197.97	410.89



22. The petitioner has incurred expenditure for acquiring minor assets, assets of O&M nature, spares, assets not allowed on projected basis in order dated 10.5.2011 in Petition No. 296/2009, assets for Staff welfare, assets not related to core activity and wrong double entry of ₹7.88 lakh during 2009-10 etc. However, as the expenditure incurred towards procurement of minor assets, assets of O&M nature, etc after the cut-off date is not permissible in terms of the 2009 Tariff Regulations, the petitioner has not claimed the said expenditure for the purpose of tariff. Accordingly, the petitioner has considered these additions under exclusion category. As such, the exclusions of positive entries under the head are in order and are allowed for the purpose of tariff.

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

23. The petitioner has de-capitalized the following amounts in the books of accounts pertaining to the de-capitalization of old assets without any replacement by new assets, transfer to other units and account rectification entry of (-) ₹7.88 lakh during 2010-11 and (-) ₹2.24 lakh during 2011-12.

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
De-capitalization of the old assets without any replacement by new assets	0.00	0.00	0.00	0.00	(-)109.61
Transfer to other office/unit	(-) 8.56	(-) 3.77	(-)1.70	0.00	0.00
Accounts rectification	0.00	(-) 7.88	(-) 2.24	0.00	0.00
Total exclusions	(-) 8.56	(-)11.65	(-) 3.94	0.00	(-) 109.61

24. As regards the exclusion of (-) ₹109.61 lakh claimed against the de-capitalization of old assets without any replacement by new assets in 2013-14, it is observed that the assets de-capitalized are bull dozer, road roller, generating set, compressor, vehicles and photocopying machine. Except for photocopying machine, the capitalization of all other assets are allowed for the purpose of tariff under Regulation 9(2)(iv) of the 2009 Tariff Regulations as replacement of the old asset with a new asset. As such, these old



assets on becoming unserviceable do not render any useful service in the operation of the generating station and hence the exclusion/ignoring of negative entries are not allowed. In other words, their de-capitalization would be considered for the purpose of tariff. As regards the negative entry of (-) ₹1.54 lakh due to de-capitalization of old photocopying machine, we allow the exclusion/ignoring of this amount for the purpose of tariff, considering the fact that additional capital expenditure on replacement/ purchase of new assets towards such minor assets is not allowed for the purpose of the tariff.

25. As regards exclusions made on account of transfer of assets to other offices / plants, the petitioner was directed to clarify as to whether these transfers are temporary or permanent in nature. In response, the petitioner vide affidavit dated 1.6.2015 has clarified that these assets are of a permanent nature. As these assets do not render any useful service in the operation of the generating station on being transferred permanently to other offices/plants, the exclusion/ignoring of negative entries is not allowed. In other words, their de-capitalization would be considered for the purpose of tariff.

26. As regards exclusions due to "Account Rectification", the negative entry of (-) ₹7.88 lakh for 2010-11 has been ignored for the purpose of tariff, in view of the fact that the corresponding positive entry of ₹7.88 lakh has been excluded for the purpose of tariff under "Exclusions in additions" for 2009-10. However, the exclusion of (-) ₹2.24 lakh claimed in 2011-12 has not been allowed as there is no corresponding positive entry which can be ignored for the purpose of tariff. As per auditor certificate, this entry pertains to recovery made from the contractor and shall accordingly be considered for reduction in capital cost. In other words, the de-capitalization on account of recovery would be considered for the purpose of tariff.



27. Based on the above discussions, the de-capitalization allowed to be excluded/ ignored for the purpose of tariff is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
De-capitalization of the old assets without any replacement by new assets	0.00	0.00	0.00	0.00	(-)1.54
Transfer to other office/unit	0.00	0.00	0.00	0.00	0.00
Accounts rectification	0.00	(-) 7.88	0.00	0.00	0.00
De-capitalization exclusion allowed	0.00	(-) 7.88	0.00	0.00	(-)1.54
De-capitalization exclusion not allowed	(-) 8.56	(-) 3.77	(-) 3.94	0.00	(-)108.07

28. Accordingly, the additional capital expenditure considered for the purpose of tariff is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure allowed (a)	34.60	104.07	294.43	52.58	296.53
Deletions considered for tariff (b)	0.00	0.00	0.00	0.00	(-) 48.80
De-capitalization exclusion not allowed for the purpose of tariff (c)	(-) 8.56	(-) 3.77	(-) 3.94	0.00	(-)108.07
Un-discharged liabilities in the above additional capital expenditure (d)	5.14	0.00	0.00	0.00	0.00
Discharge of liabilities during the year (e)	0.00	4.59	0.00	7.26	293.73
Additional capital expenditure allowed for the purpose of tariff (f)=(a)+(b)+(c)-(d)+(e)	20.90	104.89	290.49	59.84	433.39

Capital Cost for 2009-14

29. Based on the above, the capital cost considered for the purpose of the tariff is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	145849.72	145870.62	145975.51	146266.00	146325.84
Additional Capital Expenditure	20.90	104.89	290.49	59.84	433.39
Closing Capital Cost	145870.62	145975.51	146266.00	146325.84	146759.23



Debt-Equity Ratio

30. The petitioner has submitted that the funding of the additional capital expenditure has been made through internal resources and others. Accordingly, in terms of Regulation 12 of the 2009 Tariff Regulations, the debt-equity ratio of 70:30 has been considered on the admitted additional capital expenditure after adjustment of un-discharged liability.

Return on Equity

31. The petitioner has considered the rate of Return on Equity as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Base Rate	15.5%	15.5%	15.5%	15.75%	16.5%
Applicable Tax Rate #	16.995%	19.931%	20.008%	20.008%	20.961%
Rate of ROE (pre-tax)	18.674%	19.358%	19.377%	19.689%	20.876%

(# Impact of Education cess and surcharge has been considered)

32. The Base Rate has been changed from 15.5% to 16.5% for storage type generating stations, including pumped storage hydro generating stations and run of river generating station with pondage in terms of the 2009 Tariff regulations, amended on 31.12.2012. The base rate of ROE (pre-tax) for the year 2012-13 is 15.75%, which is the composite rate calculated for the year i.e. 15.50% from April to December, 2012 and 16.50% from January, to March, 2013. The petitioner has also submitted the actual tax rate applicable for each year of the tariff period and the same has been considered for the purpose of tariff. Accordingly, Return on Equity has been computed as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	72833.19	72839.46	72870.93	72958.07	72976.03
Addition due to additional capital expenditure	6.27	31.47	87.15	17.95	130.02
Closing Equity	72839.46	72870.93	72958.07	72976.03	73106.04
Average Equity	72836.32	72855.19	72914.50	72967.05	73041.03
Return on Equity (Base Rate)	15.5%	15.5%	15.5%	15.75%	16.5%
Tax rate for the year (MAT)	16.995%	19.931%	20.008%	20.008%	20.961%



Rate of Return on Equity	18.674%	19.358%	19.377%	19.689%	20.876%
Return on Equity	13601.46	14103.31	14,128.64	14,366.48	15248.05

Interest on loan

33. Interest on loan has been computed considering the following:

- The opening gross normative loan as on 1.4.2009 has been arrived at in accordance with the provisions of Regulation 16 of the 2009 Tariff Regulations.
- The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of the respective year.
- The repayment for the year has been considered equal to the depreciation allowed for that year.
- The interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest.

34. Based on the above, interest on loan has been worked out as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	73016.53	73031.16	73104.59	73307.93	73349.82
Cumulative Repayment	48541.76	57594.15	66649.86	73307.93	73349.82
Net Loan-Opening	24474.77	15437.01	6454.73	0.00	0.00
Repayment during the year	9052.39	9055.70	6658.07	41.89	303.37
Additional Capital Expenditure	14.63	73.42	203.34	41.89	303.37
Net Loan-Closing	15437.01	6454.73	0.00	0.00	0.00
Average Loan	19955.89	10945.87	3227.36	0.00	0.00
Weighted Average Rate of Interest	8.747%	8.966%	9.307%	-	-
Interest on Loan	1745.48	981.38	300.37	0.00	0.00

Depreciation

35. In terms of Regulation 17 of the 2009 Tariff Regulations, the weighted average rate of depreciation has been considered for the calculation of depreciation. Accordingly, depreciation has been worked out as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	145849.72	145870.62	145975.51	146266.00	146325.84
Additional capital expenditure during the period	20.90	104.89	290.49	59.84	433.39



Closing gross block	145870.62	145975.51	146266.00	146325.84	146759.23
Average gross block	145860.17	145923.07	146120.76	146295.92	146542.54
Rate of Depreciation	6.206%	6.206%	6.205%	6.204%	6.202%
Depreciable Value	131274.16	131330.76	131508.68	131666.33	131888.29
Remaining Depreciable Value	90215.73	81222.88	72346.63	63439.43	54585.40
Depreciation	9052.39	9055.70	9066.68	9075.99	9089.23

Operation & Maintenance Expenses

36. The O&M expenses allowed vide order dated 10.5.2011 in Petition No. 296/2009 has been considered as under:

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
5551.91	5869.48	6205.21	6560.15	6935.39

Interest on Working Capital

37. In accordance with sub-clause (c) of clause (1) of Regulation 18 of the 2009 regulations, working capital in case of hydro generating stations shall cover:

- (i) *Receivables equivalent to two months of fixed cost;*
- (ii) *Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 19;*
- (iii) *Operation and maintenance expenses for one month.*

38. In terms of Clauses (3) and (4) of Regulation 18 of the 2009 regulations, the SBI PLR as on 1.4.2009 was 12.25%. This has been considered by the petitioner. The same interest rate has been considered in the calculations, for the purpose of tariff. Necessary computations in support of calculation of interest on working capital are as under:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	832.79	880.42	930.78	984.02	1040.31
O & M expenses	462.66	489.12	517.10	546.68	577.95
Receivables	5122.91	5134.44	5083.50	5136.56	5354.45
Total	6418.36	6503.98	6531.38	6667.26	6972.71
Interest on Working Capital @12.25%	786.25	796.74	800.09	816.74	854.16



Annual Fixed Charges

39. The annual fixed charges approved for the generating station for the period 2009-14 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	13601.46	14103.31	14128.64	14366.48	15248.05
Interest on Loan	1745.48	981.38	300.37	0.00	0.00
Depreciation	9052.39	9055.70	9066.68	9075.99	9089.13
Interest on Working Capital	786.25	796.74	800.09	816.74	854.16
O & M Expenses	5551.91	5869.48	6205.21	6560.15	6935.39
Total	30737.48	30806.61	30501.00	30819.36	32126.72

40. The difference between the annual fixed charges recovered by the petitioner in terms of the order dated 10.5.2011 in Petition No. 296/2009 and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 6(6) of the 2009 Tariff Regulations.

41. Petition No.457/GT/2014 is disposed of in terms of the above.

-Sd/-
(A.S. Bakshi)
Member

-Sd/-
(A.K.Singhal)
Member

-Sd/-
(Gireesh B. Pradhan)
Chairperson

