

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 84/2010

**Coram: 1. Dr. Pramod Deo, Chairperson
2. Shri S.Jayaraman, Member
3. Shri V.S.Verma, Member
4. Shri M.Deena Dayalan, Member**

DATE OF HEARING: 7.12.2010

DATE OF ORDER: 12.7.2011

IN THE MATTER OF

Approval of generation tariff for Chamera-I Hydroelectric project, (540 MW) for the period from 1.4.2009 to 31.3.2014.

AND IN THE MATTER OF

NHPC Ltd, Faridabad

..... Petitioner

Vs

1. Punjab State Electricity Board, Patiala
2. Haryana Power Generation Corporation Ltd., Panchkula
3. BSES-Rajdhani Power Ltd., New Delhi
4. Uttar Pradesh Power Corporation Ltd, Lucknow
5. BSES-Yamuna Power Ltd., New Delhi
6. Rajasthan Rajya Vidyut Prasaran Nigam Ltd., Jaipur
7. North Delhi Power Ltd., Delhi
8. Uttaranchal Power Corporation of Ltd., Dehradun
9. Jaipur Vidyut Vitaran Nigam Ltd., Jaipur
10. Himachal Pradesh State Electricity Board, Shimla
11. Jodhpur Vidyut Vitaran Nigam Ltd., Jodhpur
12. Engineering Department, UT Secretariat, Chandigarh
13. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
14. Power Development Department, Govt of J&K, Jammu

....Respondents

The following were present:

1. Shri S.Balaji, NHPC
2. Shri A.K.Tewari, NHPC
3. Shri Ansuman Ray, NHPC
4. Shri S.K.Meena, NHPC
5. Ms. Reshma Hemrajan, NHPC
6. Shri K.K.Goel, NHPC
7. Shri M.M.Mishra, NHPC
8. Shri N.K.Chadha, NHPC
9. Shri Padamjit Singh, HPPC
10. Shri T.P.S.Bawa, HPPC



ORDER

This petition has been filed by the petitioner, NHPC Ltd, for approval of generation tariff for Chamera-I Hydroelectric project (540 MW) (hereinafter referred to as “the generating station”) for the period from 1.4.2009 to 31.3.2014 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as “the 2009 regulations”).

2. The generating station was commissioned on 1.5.1994. The tariff of the generating station for the period from 1.4.2004 to 31.3.2009 was approved by the Commission vide its order dated 9.5.2006 in Petition No.39/2005 and was revised by order dated 5.2.2007 in Review Petition No.64/2006 (in Petition No.39/2005). Thereafter, the Commission vide its order dated 21.12.2009 in Petition No.97/2009 revised the annual fixed charges for the generating station after considering the additional capital expenditure incurred during the years 2004-05 and 2005-06. Subsequently, by order dated 22.7.2010 in Petition No. 206/2009, the annual fixed charges were revised after considering the impact of additional capital expenditure for the period 2006-09, as under:

Particulars	(₹ in lakh)		
	2006-07	2007-08	2008-09
Depreciation	3624.12	3640.75	3648.74
Interest on Loan	0.00	0.00	0.00
Return on Equity	8623.21	8635.52	8642.69
Advance Against Depreciation	0.00	0.00	0.00
Interest on Working Capital	770.11	800.71	832.73
O & M Expenses	6418.00	6675.00	6942.00
TOTAL	19435.45	19751.98	20066.16

3. The annual fixed charges claimed by the petitioner for the period 2009-14 is as stated overleaf:

(₹ in lakh)					
Annual Fixed Charges	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	11584.30	11649.08	11708.93	11744.61	11744.60
Interest on Loan	31.71	89.52	138.73	161.80	149.68
Depreciation	3920.44	3972.47	4023.08	4054.92	4054.92
Interest on Working Capital	865.24	899.85	935.92	972.42	1008.76
O & M Expenses	10823.87	11443.00	12097.54	12789.52	13521.08
Total	27225.56	28053.92	28904.20	29723.26	30479.04

4. The respondent No.4, UPPCL has filed its reply to the petition.

CAPITAL COST

(A) Capital Cost as on 1.4.2009

5. 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.”

6. The Commission vide its order dated 3.9.2010 in Petition No. 206/2009 had approved the capital cost of ₹203272.04 lakh as on 31.3.2009 after taking into account the additional capital expenditure for the period 2006-09. Accordingly, in terms of the above proviso, the capital cost of ₹203272.04 lakh as on 31.3.2009 has been considered as the opening capital cost as on 1.4.2009.

(B) Additional Capital Expenditure for 2009-14

7. Regulation 9 of the 2009 regulations provides as under:

“9. Additional Capitalization. (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) Undischarged 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, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

(2) The capital expenditure 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.

8. The additional capital expenditure for the period 2009-14 claimed by the petitioner, is as under:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Expenditure necessary for successful and efficient plant operation-Regulation 9(2)(iv)	1182.00	1443.00	1058.00	368.00	255.00
Deletions	70.22	271.37	92.78	59.53	563.73
Additional Capital expenditure claimed	1111.78	1171.63	965.22	308.47	(-) 308.73

9. After examining the asset-wise details and justification for additional capitalization claimed by the petitioner under various categories, the reply of the respondents, the

admissibility of additional capital expenditure on prudence check, is discussed in the subsequent paragraphs.

Expenditure necessary for successful and efficient plant operation-Regulation 9(2)(iv)

10. The petitioner has claimed an amount of ₹1182.00 lakh, ₹1443.00 lakh, ₹1058.00 lakh, ₹368.00 lakh and ₹255.00 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively, under this head, in respect of assets like MIV servomotor, Up-gradation of plant monitoring system, special tools and tackles, construction of components for Sewerage Treatment Plant (STP) and sewage line, construction of frisking and visitor room, sports complex, CISF barrack, watch tower, high mast light, Security and surveillance system, wireless connectivity of LAN, centralized UPS System, telephone network, audio visual and training aides, hospital equipments, equipment for compliance of OHSAS and environment policy, hydraulic cylinder, air conditioner system, distribution transformer, vehicles, cranes, restoration and up-gradation of cooling system of turbine, hydraulic bolt tensioner, SCADA system, shopping complex, power factor correction panel, replacement of temporary B-type quarter, DG set, construction of executive field hostel/transit camp, printers, replacement of excitation system, replacement of vibration measurement system, modification/ up-gradation of power house ventilation system and some other assets.

11. Based on the submissions made by the parties and the documents available on record, the claims for additional capital expenditure for the respective years have been examined and our findings are as stated overleaf:

(₹ in lakh)

Year	Assets	Amount	Findings
2009-10	MIV Servomotor	450.00	Not allowed since the item is in the nature of spares.
	Up-gradation of plant and monitoring system	10.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Special tools and tackles	25.00	Not allowed as the expenditure is in the nature of minor assets.
	Replacement of air conditioning system	15.00	
	Replacement of printers, PCs and rack server	26.00	
	Replacement of centralized UPS system	5.00	
	Construction of components for STP and sewage line	125.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the directions of the State Pollution Control Board as regards connection of STP facility and complete treatment of sewerage.
	Purchase of equipments (water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
	Development of sports complex	30.00	Not allowed since it should form part of the original planning
	Audio visual equipment and training aids for hydro power training institute	15.00	Not allowed since it is not specific to this project.
Replacement of hospital equipment	25.00	Not allowed since the gross value of the original assets has also not been furnished by the petitioner.	
	Assets other than the above, like shaft sleeve, construction of frisking visitor room at power house, CISF barrack, watch tower at dam, high mast light, security and surveillance system, wireless connectivity, IP based telephone network etc.,	446.00	Allowed under Regulation 9(2)(iv)] as the expenditure is in respect of items/assets which are necessary to increase the efficiency and successful operation of the generating station.



Year	Assets	Amount	Findings
2010-11	Facilitate repair works of other pumps of cooling water system	90.00	Not allowed since these items are in the nature of spares.
	Additional hydraulic bolt tensioner	30.00	
	Oil filtration plant for Dam	10.00	
	Up-gradation of plant and monitoring system	9.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Replacement of SCADA system	200.00	Not allowed since the gross value of the original assets has not been furnished by the petitioner
	Replacement of hospital equipment	10.00	
	Special tools and Tackles	15.00	Not allowed as the expenditure is in the nature of minor assets
	Replacement of air conditioning system	15.00	
	Replacement of printers, PCs and rack server	15.00	
	Replacement of centralized UPS system	15.00	
	Development of sports complex	30.00	Not allowed since it should form part of the original planning
	Construction of shopping complex	10.00	
	Solar water system	10.00	Not allowed since the benefits which accrue from this asset is enjoyed by the petitioner only.
	Audio visual equipment and training aids for hydro power training institute	15.00	Not allowed since it is not specific to this project.
	Purchase of equipments (<i>water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation</i>)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
	Assets other than the above, like shaft sleeve, construction of frisking visitor room at power house, CISF barrack, watch tower at dam, high mast light, security and surveillance system, wireless LAN connectivity, IP based telephone network etc.,	959.00	Allowed under Regulation 9(2)(iv)] as the expenditure is in respect of items/assets which are necessary to increase the efficiency of the generating station.

Year	Assets	Amount	Findings
2011-12	Up-gradation of plant and monitoring system	5.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Replacement of SCADA system	100.00	Not allowed since the gross value of the original assets has not been furnished by the petitioner
	Replacement of hospital equipment	10.00	
	Special tools and Tackles	15.00	Not allowed as the expenditure is in the nature of minor assets
	Replacement of printers, PCs and rack server	15.00	
	Construction of executive field hostel/transit camp	200.00	Allowed being an additional requirement, since the existing guest house is not sufficient to meet the requirement of accommodation of the executives of the petitioner corporation who do not have families at site and that sufficient accommodation remain available to cater to the needs of the generating station.
	Construction of shopping complex	90.00	Not allowed since it should form part of the original planning
	Audio visual equipment and training aids for hydro power training institute	10.00	Not allowed since it is not specific to this project.
	Purchase of equipments (water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
	Assets other than the above, like security and surveillance system, wireless LAN connectivity, IP based telephone network etc., replacement of submersible pumps, excitation system, purchase of bottom handling device, distribution transformers, pole mounted 11 kV VCB, DG set, purchase of fire tenders, inspection vehicles (as replacement) etc.	603.00	Allowed under Regulation 9(2)(iv)] as the expenditure is in respect of items/assets which are necessary to increase the efficiency of the generating station.

Year	Assets	Amount	Findings
2012-13	Up-gradation of plant and monitoring system	5.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Special tools and Tackles	15.00	Not allowed as the expenditure is in the nature of minor assets.
	Replacement of printers, PCs and rack server	15.00	
	Audio visual equipment and training aids for hydro power training institute	10.00	Not allowed since it is not specific to this project.
	Purchase of equipments (<i>water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation</i>)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
	Assets other than the above, like wireless LAN connectivity, replacement of excitation system, up-gradation of power house ventilation system with humidity control, purchase of pumps for dams, vehicle (as replacements) etc.	313.00	Allowed under Regulation 9(2)(iv)] as the expenditure is in respect of items/assets which are necessary to increase the efficiency of the generating station.
2013-14	Up-gradation of plant and monitoring system	5.00	Not allowed since the expenditure for continuous up-gradation of monitoring system for monitoring the different parameters like Electrical Voltage & Current and Non-Electrical (Pressure, Temperature flow) are in the nature of minor assets and recurring in nature.
	Special tools and Tackles	15.00	Not allowed as the expenditure is in the nature of minor assets.
	Replacement of printers, PCs and rack server	10.00	
	Audio visual equipment and training aids for hydro power training institute	10.00	Not allowed since it is not specific to this project.
	Purchase of equipments (<i>water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation</i>)	10.00	Allowed in terms of Regulation 9(2)(ii) [instead of 9(2)(iv)] as the expenditure is in line with the requirements of the State pollution Control Board to meet the standards of OHSAS and environment certification.
	Assets other than the above, like wireless LAN connectivity, replacement of vibration	205.00	Allowed under Regulation 9(2)(iv)] as the expenditure is in respect of items/assets which are necessary to

	measurement system, up-gradation of power house ventilation system with humidity control, purchase of pumps for dams, fire tenders (as replacements) etc.		increase the efficiency of the generating station.
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12. Based on our findings in the table at para 11 above, the additional capital expenditure allowed for 2009-14 under Regulation 9(2)(ii) of the 2009 regulations is summarized as under:

Change in law- Regulation 9(2)(ii)

Year	Items/Assets	Amount (₹ in lakh)
2009-10	Purchase of equipments like water purification systems, waste disposal and treatment, air/water/soil pollution control and mitigation) to meet the standards of OHSAS and environment certification.	135.00
2010-11		10.00
2011-12		10.00
2012-13		10.00
2013-14		10.00

Deletions

13. In addition to the capitalization under the above categories, the petitioner has de-capitalized amounts of ₹70.21 lakh, ₹271.37 lakh, ₹92.78 lakh, ₹59.53 lakh, and ₹563.73 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively, in respect of gross value of original assets which were not in use.

14. The first proviso to Regulation 7(1) of the 2009 regulations provides that *“the assets forming part of the project, but not in use shall be taken out of the capital cost.”*

15. It is observed that all the assets which are proposed for de-capitalization by the petitioner are linked to assets which are proposed to be replaced by new assets. After prudence check, the gross value of these original assets proposed to be taken out of service are taken out of deletions, as under:

2009-10: Some replaced minor assets like ‘Printer, PCs and Rack-server’ amounting to ₹26.00 lakh has been disallowed. The gross value of these original assets amounting to ₹14.50 lakh, as claimed as deletion by the petitioner is not allowed.

2010-11: Some replaced minor assets like 'Printer, PCs and Rack-server' amounting to ₹15.00 lakh has been disallowed. The gross value of these original assets amounting to ₹34.92 lakh, as claimed as deletion by the petitioner is not allowed.

2011-12: Some replaced minor assets like 'Printer, PCs and Rack-server' amounting to ₹15.00 lakh has been disallowed. The gross value of these original assets amounting to ₹18.14 lakh, as claimed as deletion by the petitioner, is not allowed.

2012-13: Some replaced minor assets like 'Printer, PCs and Rack-server' amounting to ₹15.00 lakh has been disallowed. The gross value of these original assets amounting to ₹3.19 lakh, as claimed as deletion by the petitioner, is not allowed.

2013-14: Some replaced minor assets like 'Printer, PCs and Rack-server' amounting to ₹10.00 lakh has been disallowed. The gross value of these original assets amounting to ₹8.91 lakh, as claimed in deletion by the petitioner, is not allowed.

16. As such, based on the prudence check, amounts of ₹55.71 lakh, ₹236.44 lakh, ₹74.63 lakh, ₹56.35 lakh, and ₹554.81 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively, is allowed as deletions.

17. In regard to some of the new replaced assets, the gross value of the original assets has not been proposed to be deducted during the respective years of the claim. These assets are as under:

(₹ in lakh)

Asset	Value of Replacement	Gross Value of Old Assets	Year of replacement	Reference
Hydraulic Cylinder	75.00	36.03	2009-10	Sl. No.19, Annexure-I, page-30
Total	75.00	36.03	2009-10	
B-type quarters	250.00	138.00	2010-11	Sl. No.34, Annexure-II, page-41
Total	250.00	138.00	2010-11	

18. The gross value of these assets amounting ₹36.03 lakh and ₹138.00 lakh which have not been proposed to be reduced in the respective years in which the assets were replaced, has been considered as 'assumed deletions' for the years 2009-10 and 2010-11 respectively, for the purpose of tariff. Accordingly, the adjustments are as stated overleaf:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Deletions claimed	70.22	271.37	92.78	59.53	563.73
Less: Deletions disallowed	14.50	34.92	18.14	3.19	8.91
Deletions allowed against claim	55.71	236.44	74.63	56.35	554.81
Add: Assumed Deletions	36.03	138.00	0.00	0.00	0.00
Total Deletions allowed	91.74	374.44	74.63	56.35	554.81

Un-discharged/Discharged Liability

19. The petitioner vide its affidavit dated 15.3.2010 has submitted that the un-discharged liabilities of ₹29.25 lakh for the period 2004-09 has been projected to be discharged during the year 2009-10. The projected discharge of un-discharged liability of ₹29.25 lakh in the year 2009-10 is allowed.

Additional capital expenditure for 2009-14

20. Based on the above discussions, the additional capital expenditure allowed after adjustment of un-discharged liabilities, is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
On account of change in law- Regulation 9(2)(ii)	135.00	10.00	10.00	10.00	10.00
Expenditure necessary for successful and efficient plant operation- Regulation 9 (2)(iv)	446.00	959.00	803.00	313.00	205.00
Deletions	91.74	374.44	74.63	56.35	554.81
Liabilities discharged during the year	29.25	0.00	0.00	0.00	0.00
Total additional capitalization allowed	518.51	594.56	738.37	266.65	(-) 339.81

Capital Cost

21. As stated at para 6 above, the Commission had considered the capital cost of ₹203272.04 lakh as on 31.3.2009 in Petition No.206/2009. The same has been considered as the opening capital cost as on 1.4.2009 for the purpose of tariff for the

period 2009-14. Accordingly, the capital cost approved by the Commission for the period 2009-14 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	203272.04	203790.55	204385.10	205123.47	205390.13
Additional Capitalization admitted for the purpose of tariff	518.51	594.56	738.37	266.65	(-) 339.81
Capital Cost as on 31 st March of the financial year	203790.55	204385.10	205123.47	205390.13	205050.31

Debt-Equity Ratio

22. Regulation 12 of the 2009 regulations provides as under:

“(1) For a project declared under commercial operation on or after 1.4.2009, 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 where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation.- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.

23. The petitioner has submitted that the additional capital expenditure has been financed through internal resources and others. In terms of the above said regulation, the debt-equity ratio of 70:30 has been considered on the additional capital expenditure allowed for the purpose of tariff.

Return on Equity

24. Regulation 15 of the 2009 regulations provides that:

“(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% to 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 normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be.

Provided that return on equity with respect to the actual 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 separately for each year of the tariff period along with the tariff petition filed for the next tariff period.

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

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

25. The petitioner has considered Rate of Return on Equity @ 18.674%, based on prevailing MAT rate (Basic rate of 15%+10% surcharge+3% education Cess = 16.995%) for 2009-10.

26. In terms of the provisions of the above regulations, Return on equity has been worked out @17.481% per annum on the normative equity, after accounting for the additional capital expenditure, considering the base rate of 15.5% and MAT rate of 11.33%. Return on equity has been worked out as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	61722.77	61878.32	62056.69	62278.20	62358.20
Addition due to Additional capitalization	155.55	178.37	221.51	80.00	(-) 101.94
Closing Equity	61878.32	62056.69	62278.20	62358.20	62256.25
Average Equity	61800.55	61967.51	62167.44	62318.20	62307.22
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Min Alt. Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity	10803.07	10832.26	10867.21	10893.56	10891.64

27. Any change in the rate of return on equity due to changes in the tax rate would however be considered at the time of truing up.

Interest on loan

28. Regulation 16 of the 2009 regulations provides as under:

“(1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

“(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

“(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year.

“(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project.

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered.

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

“(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

“(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

“(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

“(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute.

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.

29. The normative loan of the generation station has already been repaid. The normative loan on account of the additional capital expenditure allowed during the period 2009-14 have been considered to be paid in full, as the admitted depreciation is

more than the normative loan amount during the years. As such, the interest on loan during the period 2009-14 is 'Nil'.

Depreciation

30. Regulation 17 of the 2009 regulations provides that:

"(1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) 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 stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site.

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

(3) 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.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III 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 date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting 3[the cumulative depreciation including Advance against Depreciation] as admitted by the Commission upto 31.3.2009 from the gross depreciable value of the assets.

(6) 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".

31. The date of commercial operation of the generating station is 1.5.1994. Since the generating station has completed 12 years of operation as on 1.5.2006, the remaining depreciable value has been spread over the balance useful life of the assets. Assets amounting to ₹91.74 lakh, ₹374.44 lakh, ₹74.63 lakh, ₹56.35 lakh and ₹554.81 lakh have been de-capitalized (including assumed deletions) during 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively. The amount of cumulative depreciation allowed in tariff against these de-capitalized assets has been calculated on *pro rata* basis and

the same has been adjusted from the cumulative depreciation of the year of de-capitalization. Accordingly, 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	203272.04	203790.55	204385.10	205123.47	205390.13
Additional capital expenditure during 2009-14	518.51	594.56	738.37	266.65	(-) 339.81
Closing gross block	203790.55	204385.10	205123.47	205390.13	205050.31
Average gross block	203531.29	204087.82	204754.29	205256.80	205220.22
Land related cost	3894.13	3894.13	3894.13	3894.13	3894.13
Rate of Depreciation	5.0272%	5.0272%	5.0272%	5.0272%	5.0272%
Depreciable value @ 90%	179673.45	180174.33	180774.14	181226.40	181193.48
Balance useful life of the asset	20.1	19.1	18.1	17.1	16.1
Remaining Depreciable value	80687.95	77217.54	73996.71	70369.00	66248.46
Depreciation	4017.64	4046.32	4090.31	4119.14	4119.06

O&M Expenses

32. Sub-clause (i) of Clause (f) of Regulation 19 of the 2009 regulations provides for normative operation and maintenance expenses for hydro generating stations as under:

“(i) Operation and maintenance expenses, for the existing generating stations which have been in operation for 5 years or more in the base year of 2007-08, shall be derived on the basis of actual operation and maintenance expenses for the years 2003-04 to 2007-08, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission.

33. O&M expenses claimed by the petitioner for 2009-14 is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses	10823.87	11443.00	12097.54	12789.52	13521.08

34. The year-wise break-up of actual O&M expenses for the period 2003-08 furnished by the petitioner, based on which O&M expenses for the period 2009 to 2014 have been claimed is as stated overleaf:

(₹ in lakh)						
Sl. No	ITEMS	2003-04	2004-05	2005-06	2006-07	2007-08
Breakup of O & M expenses						
1	Consumption of Stores and Spares	97.57	556.41	290.89	196.83	471.79
2	Repair and Maintenance	765.82	1142.25	788.45	1,089.90	1,005.32
3	Insurance (Including Self Insurance)	1056.09	1054.11	1056.39	1059.94	1,062.84
4	Security	68.51	82.97	86.84	106.23	164.95
5	Administrative Expenses	332.48	313.62	374.64	260.42	303.61
6	Employee Cost	2659.42	3039.85	3228.29	3441.76	4027.51
7	Loss of store	-	-	-	-	-
8	Provisions	316.00	-	277.49	1191.41	254.16
9	Corporate office expenses allocation	247.19	259.08	86.65	74.62	86.34
10	Other Items	897.11	582.69	151.06	262.09	325.77
11	Total (1 to 10)	6440.19	7030.98	6340.70	7683.20	7702.29
12	Revenue/Recoveries, if any	108.38	63.45	94.56	152.78	84.80
13	Net O&M expenses	6331.81	6967.53	6246.14	7530.42	7617.49

35. The petitioner has furnished reasons wherever O&M expenses during a year exceed the expenses from the previous year. It is noticed that in case of Repair & Maintenance works and Consumption of Stores & Spares, Electricity charges etc, there has been variations in the expenditure during certain years. The admissibility of O&M expenses claimed by the petitioner is discussed in the succeeding paragraphs:

36. Details of expenditure stated to have been incurred by the petitioner under the heads "Consumption of Stores & Spares and Repairs & Maintenance" in respect of the generating station during the period 2003-08 is as under:

(₹ in lakh)						
		2003-04	2004-05	2005-06	2006-07	2007-08
1	Consumption of Stores & Spares	97.57	556.41	290.89	196.83	471.79
2	Repair & Maintenance	765.82	1142.25	788.45	1089.90	1005.32
	Total	863.39	1698.66	1079.34	1286.73	1477.11

37. Though the expenses towards consumption of Stores & Spares have been indicated separately, it is observed that the same includes certain expenses towards Repair &

Maintenance and *vice versa*. After re-allocation of these expenses to the appropriate heads, the claims of the petitioner as above, is revised as under:

		(₹ in lakh)				
		2003-04	2004-05	2005-06	2006-07	2007-08
1	Consumption of Stores & Spares	97.57	187.68	290.89	295.83	471.79
2	Repair & Maintenance	765.82	1510.98	788.45	990.9	1005.32
	Total	863.39	1698.66	1079.34	1286.73	1477.11

Consumption of Stores and Spares

38. It is observed that the expenditure during 2004-05 (₹187.68 lakh) towards Consumption of stores increased by over 20% in comparison to the expenses for 2003-04. Since no justification has been submitted by the petitioner, the expenses for 2004-05 are restricted to an increase of 20% over the expenses for 2003-04 (₹117.08 lakh only). The expenditure for Consumption of Stores during the years 2005-06, 2006-07 and 2007-08 are higher by more than 20%, in comparison to the revised expenses for 2004-05. Except for 2007-08, no explanation has been furnished by the petitioner for such an abnormal increase in expenses for the years 2005-06 and 2006-07. Therefore, the expenditure during the years 2005-06 and 2006-07 have been restricted to an increase of 20% over the expenses of the previous years. The increase in expenses during 2007-08 has been attributed to the change in accounting policy of the petitioner corporation, whereby, the capitalization of capital spares disallowed by the Commission continues to remain in capital base in the books of accounts and gets depreciated when consumed and is transferred to O & M expenses at their net value. The depreciation is added back to claim its original gross value for the purpose of tariff in O & M expenses. The petitioner has submitted that the expenses for ₹471.79 lakh during 2007-08 under Consumption of Stores & Spares also includes accumulated depreciation on capital spares of ₹0.11 lakh and consumption of capital spares of Governor System (Power house) amounting to ₹290.00 lakh as per accounting policy of the petitioner corporation. The

justification submitted by the petitioner has been accepted and the expenses for ₹471.79 lakh for 2007-08 is allowed.

Repair and Maintenance work

39. It is observed that the expenses incurred towards Repair and Maintenance works (ten yearly) during 2004-05 includes major works like major overhauling of Main Inlet valve, Maintenance of gas insulated switchgear and annual maintenance of Units etc. These works were taken up during 2004-05 and payments have been made, as follows:

<i>(₹ in lakh)</i>	
Works/Assets	Amount
Condition monitoring of test on HIV electrical equipment by CPRI, Bangalore	17.99
Partial discharge test on Transformers & Reactors by Acoustic Emission Technique by CPRI, Bangalore	4.55
Engineering and supervision charges paid to M/s Alstom, Canada for Main inlet valve	62.19
Engineering and supervision charges paid to M/s Siemens Germany for Gas insulated switchgear	46.19
Painting work of Spiral Casing, Main Inlet Valve etc	5.61
Engineering service charges paid to M/s GE Power Services	3.71
Rewiring of Quarter of Banikhet & Chilly colony	34.71
Fabrication/ Installation of Steel / Brass fencing in Power House	7.16
Providing Grill, Stair case and painting of Gas Insulated Switchgear hall of switchyard	4.25
Increase in other miscellaneous works	1.03
Special repair / maintenance of main inlet valve by M/s Alstom, Canada for all three units	367.25
procurement for gas insulated switchgear from M/s Siemens, Germany	66.71
Total	621.35

40. From the above, it is noticed that the total expenditure of ₹621.35 lakh incurred in respect of the above works/assets during 2004-05 is a one-time expenditure and not recurring in nature. Hence, the expenditure of ₹621.35 lakh has not been allowed for the purpose of normalization of O&M expenses. Accordingly, out of the total expenses of ₹1510.98 lakh claimed for 2004-05, only an expenditure of ₹889.63 lakh (₹1510.98 lakh - ₹621.35 lakh) has been allowed during 2004-05, for normalization of O&M expenses.

41. The expenses incurred during 2005-06 are found reasonable and has been allowed. During 2006-07, the expenses increased by over 20% in comparison to that of the previous year. It has been submitted that the same is on account of tripping of unit, fault in Stator winding and repair of winding work, which involved a replacement of 47 Nos. of Stator bar/winding, thereby resulting in an expenditure of ₹99.00 lakh. The expenses for repair of Rotor pole coils amounting to ₹29.00 lakh, Special repair in Radial gates under water regulating system amounting to ₹15.00 lakh, repair of DG sets for ₹34 lakh are not a recurring expenditure and hence, an expenditure of ₹177.00 lakh has not been allowed for the purpose of normalization. The expenditure during 2007-08 (₹1005.32 lakh) increased by more than 20% in comparison to the normalized expenses of ₹813.90 lakh during 2006-07. In view of this, the expenses for 2007-08 have been restricted to an increase of 20% (₹976.68 lakh) over the expenses allowed for 2006-07 and the same has been allowed.

42. Based on the above discussions, the following expenses towards Consumption of Stores and Spares and Repair and Maintenance works for the period 2003-08 have been allowed for calculation of O&M expenses for the period 2009-14.

(₹ in lakh)

		2003-04	2004-05	2005-06	2006-07	2007-08
1	Consumption of Stores & Spares	97.57	117.08	140.5	168.6	471.79
2	Repair & Maintenance	765.82	889.63	788.45	813.90	976.68

Insurance Coverage

43. The petitioner has submitted the following details towards expenditure on insurance during the period 2003-08:

(₹ in lakh)

	2003-04	2004-05	2005-06	2006-07	2007-08
Insurance expenses	1056.09	1054.11	1056.39	1059.94	1062.84

44. The Commission in its order dated 9.5.2006 in Petition No.47/2005 pertaining to determination of tariff of the generation station of the petitioner for the period 2004-09 had observed that in terms of the policy of the petitioner corporation, there was a need to establish a self-insurance reserve/fund in respect of O & M of the projects by transferring on year to year basis an amount equal to 0.5% of the gross block of assets under O&M. This reserve/fund is to be utilized for losses of assets due to fire, storms, cyclones, earthquakes, landslides, terrorist activities (inserted from May, 2002), floods (inserted from September, 2005) and not for routine wear and tear, repairs and maintenance etc, accidents or breakdown of machinery or shortage of inventory or insurance for human life. According to the petitioner, it has also been decided that losses on account of natural calamities, as above, shall be assessed by a Committee to be constituted for this purpose by the Chairman & Managing Director of the petitioner corporation and the actual losses based on the recommendations of the Committee, duly accepted, shall be reimbursed from the fund. On prudence check, the justification towards the expenditure for insurance coverage and the nature of assets covered under the insurance, submitted by the petitioner is found to be in order. Hence, the expenses claimed under this head are allowed.

Security

45. The expenses incurred towards security claimed by the petitioner is as stated under:

	<i>(₹ in lakh)</i>				
	2003-04	2004-05	2005-06	2006-07	2007-08
Security Expenses (Other than salary & wages)	68.51	82.97	86.84	106.23	164.95

46. There is increase in the expenditure during the year 2004-05 by more than 20% over that of the expenses for 2003-04. The petitioner has attributed the said increase

towards payments made for private security and for charges for ammunition provided to CISF. Keeping in view the security considerations involved in the generating station, the expenditure claimed by the petitioner is allowed for the purpose of normalization. The expenditure incurred for other years under this head, is found reasonable and hence allowed.

Administrative expenses

47. The total administrative expenses claimed by the petitioner is as under:

	<i>(₹ in lakh)</i>				
	2003-04	2004-05	2005-06	2006-07	2007-08
Total administrative expenses	332.48	313.62	374.64	260.42	303.61

48. It is observed that there is an increase in expenses by more than 20% over that of the previous years towards Rent, Traveling charges, Communication expenses and Advertising during different years. The reasons for increase in various components of the administrative expenses submitted by petitioner are examined as under:

(a) The expenses towards rent during 2004-05 increased from ₹4.97 lakh to ₹7.01 lakh mainly on account of increase in the payment of lease amount ₹1.63 lakh to employee's accommodation. The increase from ₹7.01 lakh (2004-05) to ₹80.19 lakh during 2005-06 was on account of the implementation of change in the head of account with effect from 1.4.2005 such as the 're-allocation of transport expenses under rent-hiring of vehicles' which was booked earlier under Staff welfare expenses under 'Employees remuneration & benefits'. In view of the justification, the increase in the expenses is allowed.

(b) The travelling expenses during 2006-07 significantly increased from ₹49.92 lakh to ₹61.18 lakh. The petitioner has submitted that the Stator winding of Unit-III of the generating station was damaged due to inter turn fault and in order to restore the same as early as possible, the executives of the generating station were sent to different places for collection of materials, tools & tackles etc, thereby resulting in an increase in the expenditure. In view of the justification, the increase on this count is allowed.

(c) The expenses during 2004-05 towards Communication increased from ₹16.58 lakh to ₹20.22 lakh (26%). This was on account of international telephone calls made by the petitioner corporation to M/s Alstom, Canada and M/s Siemens, Germany during Special maintenance, thereby resulting in an increase in telephone & telex Charges. The increase is allowed for the reasons stated by the petitioner. However, for the increase in expenses from ₹16.58 lakh to ₹20.22 (22%) lakh during 2005-06, no proper justification has been submitted by the

petitioner. Hence, the expenses on this count is restricted to an increase of 20% over the expenses of the previous year during 2005-06 (i.e. ₹19.90 lakh)

(d) There is increase of advertisement expenses during the years 2004-05 and 2006-07 (i.e from ₹12.45 lakh to ₹17.38 lakh) (40%) and from ₹13.54 lakh to ₹18.31 (35%) from the expenses of the previous years. Since, proper justification has not been submitted by the petitioner, the expenses incurred are restricted to an increase of 20% over the expenses of the previous years. Accordingly, the expenditure towards advertising is worked out as ₹14.94 lakh for 2004-05 and ₹ 16.25 lakh for 2006-07 and the same has been allowed.

(e) As there is no significant increase in expenses under any other heads for the period 2003-08, the same has been allowed.

(f) The claim of the petitioner for ₹25.00 lakh on account of fees for filing the tariff petition before the Commission has not been considered and the same would be dealt with separately in terms of Regulation 42 of the 2009 Regulations.

49. Based on the above, the total administrative expenses allowed for computation of O&M expenses is as under:

	<i>(₹ in lakh)</i>				
	2003-04	2004-05	2005-06	2006-07	2007-08
Total Administrative Expenses	332.48	311.18	349.32	258.36	303.61

Employee cost

50. The expenses on account of Employee cost forms a major part of the total O&M expenses, and comprises of Salaries, wages & allowances, honorarium, leave encashment, provident fund contribution, compensation under statutory provision, gratuity and provision on account of gratuity made on actuarial valuation basis every year, VRS and also arrears of wage revision of employees, etc. It also covers, Staff welfare expenses such as LTC, medical reimbursement, liveries & uniform, ex-gratia, grants & subsidies to sports & canteen, new year gifts, project school & hospital expenses, transport expenses etc. productivity-linked incentive, which are paid as per policy of the petitioner corporation. The year-wise break up of employees cost claimed by petitioner is as stated overleaf:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Employee Cost	2659.42	3039.85	3228.29	3441.76	4027.51

51. The respondent No.4, UPPCL has submitted that the petitioner has not submitted the calculation certified by Chartered Accountant indicating that the actual rise in wage revision from 1.1.2007 was 35% in order to justify the moderation of O&M expenses for 2009-10. The petitioner has submitted that the provision for employee cost should be considered in terms of the provisions of the 2009 regulations. The provisions made on account of pay revision of employees' during 2005-06 and 2007-08 has not been considered and has been dealt separately as per relevant provisions of the 2009 regulations. Accordingly, the O&M expenses have been calculated in terms of the provisions of the 2009 regulations.

52. It is observed that the expenses on employee cost had remained more or less constant except during 2007-08. The increase in 2007-08 has been attributed by the petitioner to the pay revision arrears amounting to ₹799.82 lakh. This amount is being deducted from the claim of the petitioner, since expenses towards salary is considered in terms of Regulation 19(f) of the 2009 regulations. Similarly, an amount of ₹12.63 lakh is also deducted on this count for the claim during 2006-07.

53. Ex-gratia, VRS expenses, productivity-linked Incentive and Salary, Wages and Allowances (Allocation of Corporation office & Regional Office) are not being considered for the reasons given as under:

(a) Ex-gratia is an incentive and is required to be paid from the profits of the petitioner corporation. The expenses on new year gifts should be borne by the petitioner company out of its profits and not loaded to the beneficiaries. VRS expenses are not of regular nature, particularly when the petitioner has not indicated the likely pattern of expenses on this account during the period 2009-14.

(b) The expenses on account of productivity-linked Incentive (under section 31 A of Payment of Bonus Act), included under the category staff welfare expenses, are

not allowed for the purpose of tariff since expenses incurred under this head are on account of incentive paid to the employees for maintaining high availability of the generating station which are recovered from the beneficiaries.

(c) The proportionate employee cost under Corporate expenses and Regional expenses allocation is considered for Salary, Wages and Allowances of Corporate office and Regional office as submitted by the petitioner and the balance other expenses for Corporate Office and Regional Office would be considered under Corporate Office and Regional office expenses allocation.

54. Based on the above, the Employee Cost expenses allowed for 2003-08 for normalization of O&M expenses, is as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Employee Cost allowed	2788.50	2956.78	3038.36	3270.40	3006.72

Corporate Office Expenses

55. The petitioner has submitted that as per policy of the petitioner corporation, the Corporate Office expenses allocated to the running generating stations are taken @ 1% of sale of energy for the year excluding taxes and duties and in case of construction projects @ 5% of the project expenditure during the year. The year-wise details of the total Corporate Office expenses incurred and its apportionment to the running generating stations, construction projects and other activities of the petitioner and proportionate corporate expenses charged to the generating station are as under:

Sl. No.	Items	(₹ in lakh)				
		2003-04	2004-05	2005-06	2006-07	2007-08
(A)	Breakup of Corporate expenses (aggregate at Corporate level)					
1	Employee Expenses	6637.00	7652.00	10513.00	10171.00	12411.37
2	Administrative expenses	2683.57	2851.15	2783.09	2704.96	3319.75
3	Security	29.07	38.24	38.22	45.01	70.97
4	Provision	0.00	0.00	6.41	6.89	0.76
5	Others	680.62	551.26	738.79	661.98	713.05
	Total (1 to 6)	10029.8	11092.45	14079.83	13589.88	16515.9
6	Less: Recoveries	433.51	459.26	469.43	601.46	472.87
7	Net Corporate expenses (aggregate)	9596.29	10633.19	13610.40	12988.42	16043.03
(B)	Allocation of Corporate expenses to various functional activities					
1	O&M	1392.91	1575.52	1644.49	1801.33	2171.50
2	Contract & Consultancy	104.44	63.42	68.53	202.78	187.74
3	Construction	8098.94	8994.25	11897.38	10984.31	13683.79
	Total	9596.29	10633.19	13610.4	12988.42	16043.03
(C)	Allocation of Corporate expenses relating to functional activity of power generation to various generating stations					
4	CHAMERA-I (the generating station)	247.19	259.08	297.52	261.06	268.64

56. Some of the components of the employee cost are required to be borne from the profits of the petitioner corporation, as stated above, which have been excluded. Also, after excluding the expenses on ex-gratia and donations paid by the petitioner, the Corporate Office expenses have been allowed as O&M expenses of the generating station for the period 2003-04 to 2004-08 as under:

(₹ in lakh)						
Sl. No	Items	2003-04	2004-05	2005-06	2006-07	2007-08
Breakup of Corporate expenses (aggregate at Corporate level)						
1	Employee Expenses	6550.00	7506.00	9007.00	9564.00	11408.00
2	Administrative Expenses	2683.57	2717.054	2710.084	2699.282	3128.764
3	Security	29.07	34.88	38.22	45.01	54.01
4	Donation	0.00	0.00	0.00	0.00	0.00
5	Provision	0.00	0.00	0.00	0.00	0.00
6	Others	680.62	551.26	661.51	661.98	713.05
	Total (1 to 6)	9942.76	10809.098	12416.896	12969.99	15303.97
8	Less: Recoveries	433.51	459.26	469.43	601.46	472.87
9	Net Corporate O&M Expenses (aggregate)	9509.25	10349.84	11947.47	12368.53	14831.10

57. Based on the above, the ratio between the corporate expenses claimed by the petitioner and that allowed is computed as under:

(₹ in lakh)					
	2003-04	2004-05	2005-06	2006-07	2007-08
Total corporate expenses claimed	9596.29	10633.19	13610.4	12988.42	16043.03
Total corporate expenses allowed	9509.25	10349.84	11947.47	12368.53	14831.10
Total corporate expenses [allowed-v-claimed] ratio (r)	0.99093	0.97335	0.87782	0.95227	0.92446

58. Applying the above ratio, the proportionate corporate office expenses in respect of the generating station is as under:

(₹ in lakh)					
	2003-04	2004-05	2005-06	2006-07	2007-08
Total corporate expenses claimed for the generating station	247.19	259.08	297.52	261.06	268.64
Total corporate expenses (Proportional) allowed for the generating station.	244.95	252.18	261.17	248.60	248.35
Employee Cost allowed	168.75	182.88	196.90	192.22	191.03
Expenses other than employee cost allowed	76.20	69.30	64.27	56.38	57.32

Regional Office expenses

59. The petitioner has submitted the year-wise details of the total Regional Office (at Benikhhet) expenses incurred, its apportionment to the running generating stations, construction projects and other activities of the petitioner and proportionate regional expenses charged to the generating station as stated overleaf:

(₹ in lakh)						
Sl. No.	Items	2003-04	2004-05	2005-06	2006-07	2007-08
	Net Corporate Expenses (aggregate)	327.37	451.27	600.59	652.42	1030.40
(B)	Allocation of Region-II expenses to various functional activities					
1	O&M	72.12	270.49	265.08	227.32	264.79
2	Contract & Consultancy					
3	Construction	255.25	180.78	335.51	425.10	765.61
	Total	327.37	451.27	600.59	652.42	1030.40
(C)	Allocation of Region-II expenses to power stations/projects falling under Region-II					
1	Chamera-IHEP (the generating station)	247.19	259.08	297.52	261.06	268.64

60. The petitioner has stated that for the years 2003-04 and 2004-05, the Regional Office expenses were shown under the natural head of expenditure by the generating station. Thus, these expenditure forms part of expenses of generating station.

61. The expenditure on account of depreciation and prior period adjustment are not allowed. The expenses under Administrative heads has been restricted to an increase of 20% over the expenses of the previous years, particularly on expenses towards Travelling & Conveyance and others and also where no proper justification has not been submitted by the petitioner. Further, expenses towards Corporate Social Responsibility (CSR) have not been considered as the same is required to be borne by the petitioner from its own resources.

62. Based on the above, Regional office expenses after normalization works out as stated overleaf:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Net Regional Office expenses (aggregate)	315.92	427.12	574.61	597.11	929.87
Employee cost (aggregate)	256.38	351.23	492.13	528.53	807.75

63. Based on the above, the ratio between the regional office expenses claimed and that considered is computed as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Total Regional Office expenses claimed	327.37	451.27	600.59	652.42	1030.40
Total Regional Office expenses allowed	315.92	427.12	574.61	597.11	929.87
Total Regional Office expenses [allowed-v-claimed] ratio (r)	0.95674	0.91522	0.90244	0.95674	0.91522

64. Based on the above, the proportionate Regional Office expenses is worked out as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Total Regional office expenses claimed for the generating station. (A)	Considered in natural head		106.70	95.12	115.43
Total Regional expenses (proportional) allowed for the generating station (B) = (A * r)			102.08	87.06	104.17
Employee Cost Allowed (E)			87.43	77.06	90.49
Expenses other than employee cost allowed (B-E)			14.65	10.00	13.68

Other (Specific/Administrative) expenses

65. The petitioner's claim for Other administrative expenses is as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Other Expenses	897.11	582.69	151.06	262.09	325.77

66. The expenses claimed towards loss on sale of fixed assets have not been allowed since any loss on sale of assets is required to be borne by the petitioner. Similarly, Stores (written-off) is also required to be borne by the petitioner and has not passed on to the beneficiaries. It is observed that there is significant variation in the expenses

claimed under 'Other Miscellaneous expenses' which includes printing and stationery, consultancy chares, etc. In the absence of proper justification for the expenses on this count, the claims under these heads have been restricted to an increase of 20% over the expenses of the previous year.

67. Based on the above, the other Expenses allowed for the period 2003-08 for calculation of O&M expenses is as under:

(₹ in lakh)					
	2003-04	2004-05	2005-06	2006-07	2007-08
Other Expenses	95.57	112.98	135.57	165.97	187.94

68. Based on the above, the O&M expenses during the period 2003-08 allowed for calculation of O&M expenses for the period 2009-14, is as under:

(₹ in lakh)						
Sl. No.	Items	2003-04	2004-05	2005-06	2006-07	2007-08
Breakup of O & M expenses						
1	Consumption of Stores and Spares	97.57	117.08	140.50	168.60	471.79
2	Repair and Maintenance	765.81	889.63	788.45	813.90	976.68
3	Insurance (including Self Insurance)	1056.09	1054.11	1056.39	1059.94	1062.84
4	Security	68.51	82.97	86.84	106.23	164.95
5	Administrative Expenses	332.48	311.18	349.32	258.36	303.61
6	Employee Cost	2788.50	2956.78	3038.36	3270.40	3006.72
7	Loss of stores	0.00	0.00	0.00	0.00	0.00
8	Provisions	0.00	0.00	0.00	0.00	0.00
9	Corporate & Regional office expenses allocation other than employee cost	76.20	69.30	78.92	66.38	71.00
10	Other items	112.98	135.58	165.97	187.94	187.94
11	Total (1 to 10)	5221.94	6239.47	5776.22	6169.60	6203.17
12	Revenue/Recoveries, if any	108.38	63.45	94.56	152.78	84.80
13	Net O&M expenses	5113.56	5483.88	5531.27	5712.59	6089.73

69. Accordingly, the year-wise O&M expenses for the generating station, after applying escalation @ 5.72% from 2008-09 and 50% increase of employee cost by considering the

percentage of employee cost (54%) of the normalized employee cost during the period 2003-08, for the tariff period 2009-14 is allowed as under:

	(₹ in lakh)					
	2003-04	2004-05	2005-06	2006-07	2007-08	Average normalized at 2007-08 Price level
Employee cost allowed	2788.50	2956.78	3038.36	3270.40	3006.72	
Average normalized Employee cost at 2007-08 Price level	3411.44	3439.49	3360.65	3439.48	3006.72	3331.56
O&M expenses allowed	5113.56	5483.88	5531.27	5712.59	6089.73	
Average normalized O&M at 2007-08 Price level	6255.92	6379.16	6117.99	6007.93	6089.73	6170.14
Escalation rate (Esc) %	5.17	5.17	5.17	5.17	5.17	
Percentage of employee cost (3331.56 / 6170.14*100 = 54 %)						

O & M Expenses for 2009-14

70. Accordingly, after applying the escalation @ 5.72% from 2008-09 and the 50% increase of employee cost by considering the percentage of employee cost (74 %) in the year 2009-10, the year-wise O&M expenses for the generating station for the tariff period 2009-14 is allowed as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O&M Expenses	8758.11	9259.07	9788.69	10348.60	10940.54

Interest on Working Capital

71. 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.*

72. Clauses (3) and (4) of Regulation 18 of the 2009 regulations, the rate of interest on working capital 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. Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency.

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

(a) **Receivables:** In terms of the provisions of the above regulations, receivables equivalent to two months of fixed cost, considered for the purpose of tariff, is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Receivables	4054.30	4151.82	4257.93	4365.31	4468.56

(b) **Maintenance Spares:** In terms of the provisions of the above regulations, maintenance spares considered for the purpose of tariff, is as stated below:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	1313.72	1388.86	1468.30	1552.29	1641.08

(c) **O&M Expenses:** In terms of the provisions of the above regulations Operation and maintenance expenses for one month considered for the purpose of tariff, is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses	729.84	771.59	815.72	862.38	911.71

74. 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.

75. Necessary computations in support of calculation of interest on working capital is as under:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	1313.72	1388.86	1468.30	1552.29	1641.08
O & M expenses (1 month)	729.84	771.59	815.72	862.38	911.71
Receivables	4054.30	4151.82	4257.93	4365.31	4468.56
Total	6097.86	6312.27	6541.96	6779.98	7021.35
Rate of interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest on working capital	746.99	773.25	801.39	830.55	860.12

Annual Fixed Charges

76. The annual fixed charges approved for the generating station for the period from 1.4.2009 to 31.3.2014 is as under:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	10803.07	10832.26	10867.21	10893.56	10891.64
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	4017.64	4046.32	4090.31	4119.14	4119.06
Interest on Working Capital	746.99	773.25	801.39	830.55	860.12
O & M Expenses	8758.11	9259.07	9788.69	10348.60	10940.54
Total	24325.81	24910.90	25547.60	26191.85	26811.36

77. The petitioner shall be entitled to compute and recover the annual fixed charges and energy charges in accordance with Regulation 22 of the 2009 regulations.

78. The recovery of the annual fixed charges shall be subject to truing up, in terms of Regulation 6 of the 2009 regulations.

Design Energy

79. The month-wise details of design energy in respect of the generating station is indicated in the table as under:

Month	Design Energy (MUs)
April	99.02
May	184.54
June	183.46
July	279.62
August	340.25
September	168.17
October	96.93
November	65.91
December	59.93

January	64.45
February	58.13
March	64.15
Total	1664.55

80. Monthly energy charges shall be computed in terms of the provisions contained in Regulation 22 of the 2009 regulations.

Application fee and the publication expenses

81. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition for determination of tariff for the generating station. However, the details of the actual expenditure incurred for publication of notice in the newspapers, has not been submitted by the petitioner.

82. Regulation 42 of the 2009 regulations provides as under:

“The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company or the transmission licensee, as the case may be, directly from the beneficiaries or the transmission customers, as the case may be.”

83. The Commission in its order dated 11.1.2010 in Petition No.109/2009 (pertaining to approval of tariff for SUGEN power plant for the period from DOCO to 31.3.2014) had decided that filing fees in respect of main petitions for determination of tariff and the expenses on publication of notices are to be reimbursed.

84. Accordingly, the expenses incurred by the petitioner on application filing fees amounting to ₹10.80 lakh each for the years 2009-10 and 2010-11 respectively, in connection with the present petition, shall be directly recovered from the beneficiaries, on *pro rata* basis. The reimbursement of charges towards the publication of notices in newspapers shall be recovered on *pro rata* basis, on submission of documentary proof of the same.

85. The difference between the provisional annual fixed charges already recovered by the petitioner and the annual fixed charges determined by this order shall be payable by the respondents in installments within a period of six months, in terms of the proviso to Clause (3) of Regulation 5 of the 2009 regulations.

86. Petition No.84/2010 is disposed of in terms of the above.

Sd/-
[M.DEENA DAYALAN]
MEMBER

Sd/-
[V.S.VERMA]
MEMBER

Sd/-
[S. JAYARAMAN]
MEMBER

Sd/-
[DR.PRAMOD DEO]
CHAIRPERSON

