

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No.66/2010**

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

**DATE OF HEARING: 19.8.2010**

**DATE OF ORDER: 27.1.2012**

**In the matter of**

Approval of generation tariff in respect of Chamera Hydroelectric Project, Stage-II (3 x 100 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-Yamuna Power Ltd., New Delhi
4. Uttar Pradesh Power Corporation Ltd, Lucknow
5. BSES-Rajdhani Power Ltd., New Delhi
6. Rajasthan Rajya Vidyut Prasaran Nigam Ltd., Jaipur
7. North Delhi Power Ltd., Delhi
8. Uttarakhand 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. Ms. Reshma Hemrajani, NHPC
4. Shri Ansuman Ray, NHPC
5. Shri S.K.Meena, NHPC
6. Shri M.M.Mishra, NHPC
7. Shri N.K.Chadha, NHPC
8. Shri K.K.Goel, NHPC
9. Shri Padamjit Singh, HPPC
10. Shri T.P.S.Bawa, HPPC
11. Shri A.N.Ghosh, Consultant, UPPCL
12. Shri K.Prasad, UPPCL



## ORDER

This petition has been filed by the petitioner, NHPC Ltd for approval of generation tariff in respect of Chamera Hydroelectric Project, Stage-II (3 x 100 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 comprises of three Units which were commissioned on 2.11.2003, 1.1.2004 and 31.3.2004. The tariff for 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 187/2004, based on capital cost of ₹195606 lakh (inclusive of FERV) as on 31.3.2004. Subsequently, by order dated 9.6.2009 in Petition No. 10/2009, the tariff for the generating station was revised after taking into account the impact of additional capital expenditure incurred for the years 2004-05 and 2005-06 respectively. Thereafter, the tariff of the generating station was further revised by Commission’s order dated 7.9.2010 in Petition No. 190/2009 after taking into account the additional capitalization /de-capitalization incurred for the years 2006-07, 2007-08 and 2008-09 respectively, based on the capital cost of ₹200334.77 lakh as on 31.3.2009. The annual fixed charges approved by order dated 7.9.2010 is as under:

	<i>(₹ in lakh)</i>		
	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	5524.86	5532.77	5547.47
Interest on Loan	10702.35	9498.96	8174.86
Return on Equity	8546.94	8558.93	8581.16
Advance Against Depreciation	6715.50	8263.48	8264.29
Interest on Working Capital	859.25	882.65	878.31
O & M Expenses	3173.00	3300.00	3432.00
<b>TOTAL</b>	<b>35521.89</b>	<b>36036.78</b>	<b>34878.09</b>

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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	1838.20	1868.90	1896.82	1910.14	1912.64
Interest on Loan	13.39	40.63	63.17	70.30	66.53
Depreciation	888.90	916.31	942.69	956.06	958.74
Interest on Working Capital	304.36	320.27	336.83	353.34	370.08
O & M Expenses	4942.63	5225.35	5524.24	5840.23	6174.29
<b>Total</b>	<b>7987.49</b>	<b>8371.46</b>	<b>8763.75</b>	<b>9130.07</b>	<b>9482.29</b>

4. Reply to the petition has been filed by the respondents, namely UPPCL (Respondent No.4), NDPL (Respondent No. 7) and Haryana Power Purchase Centre (HPPC) (on behalf of respondent Nos.2, HPGCL).

## **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. As stated above, the Commission vide its order dated 7.9.2010 in Petition No. 190/2009 had approved the capital cost of ₹200334.77 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 ₹200334.77 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 along with the corresponding de-capitalization of the gross value of the original assets replaced, is as under:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Regulation 9(2)(iv)</b>	64.00	80.00	69.00	4.00	8.00
Deletions/De-capitalization	12.12	13.29	0.00	0.00	2.02
<b>Total</b>	<b>51.88</b>	<b>66.71</b>	<b>69.00</b>	<b>4.00</b>	<b>5.98</b>

9. After examining the asset-wise details and justification for additional capitalization claimed by the petitioner under various categories and the reply submissions of the respondents HPPC, UPPCL and NDPL, the admissibility of the additional capital expenditure, based on prudence check is discussed in the subsequent paragraphs.

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

10. The claim of the petitioner year-wise under this head is examined and our findings are as under:

<b>2009-10</b>	Acoustics enclosure, auto main failure (AMF) panel etc. for 1MVA DG set as per environment requirement, purchase of oxygen concentrator, short wave diathermy (SWD), Ultrasonic therapy Unit, minor OT table etc. for hospital, construction of canteen building at dam, security barrier for CISF,	<b>30.00</b>	<b>Allowed</b> since these assets considered necessary for the efficient and successful operation of the generating station
	Street lighting energy saver system (conserve make)	<b>3.00</b>	<b>Not allowed.</b> The asset is in the nature of minor asset. Also, the asset would bring about 20 to 25% (approx) saving of energy in street lighting, thereby benefiting the petitioner. Hence, cost incurred for the asset is to be borne by the petitioner.
	Purchase of servers, server rack, computers, UPS, printer, network Switches etc. for ERP implementation and server and monitors 22" for power house	<b>31.00</b>	<b>Not allowed,</b> since the petitioner has not furnished the corresponding de-capitalization of the original assets.

2010-11	Raw water pump and motor KSB/Hyundai make, Model B 14D/3 150-340 B/40HP.	15.00	The petitioner has stated that there is no additional pump available in the raw water circuit of cooling water system and in case of failure of pump in any of the Unit, the machine would breakdown during repair. Hence, additional pump is required in order to ensure minimum down time in case of such eventuality. The expenditure in respect of an additional pump as spare in the raw water circuit of cooling water cannot be permitted after the cut-off date of the generating station. <b>Hence, not allowed</b>
	Drainage pump for Power house	32.00	The petitioner has submitted that 1 (one) drainage pump has worn out and shall be replaced with this new pump. As the original asset form part of main plant package, separate gross block of pump is not available. <b>Not allowed</b> , since the gross block of capitalized asset not available. However, the petitioner is at liberty to approach the Commission at the time of truing up with details, which shall be considered in accordance with law.
	Pump for drainage gallery at Dam	3.00	The petitioner has submitted that at present two pumps are provided in the drainage gallery to run alternatively due to heavy seepage in the dam gallery area. The pump is required as an additional one and shall be used in case of failure of any of the pumps. The expenditure in respect of an additional pump as spare, cannot be permitted after the cut-off date <b>of the generating station. Hence, not allowed.</b>
	Assets not included in the above	30.00	<b>Allowed</b> since these assets considered necessary for the efficient and successful operation of the generating station
2011-12	Erection of 11 kV line from power house to TRT.	50.00	The petitioner has submitted that there is no dedicated line available from power house to TRT for providing power supply to gate hoist and is presently being fed by HPSEB line, which is not reliable and vulnerable in view of security situation and during emergency when the gates is to be closed. Hence a dedicated line is envisaged to be built. <b>Allowed</b> , in view of the above justification and since the asset is considered necessary for efficient

			operation of the generating station.
	Purchase of spare clean water pump and motor, and	<b>19.00</b>	The petitioner has stated that there is no spare pump available in the clean water circuit of cooling water system and in case of failure of pump in any of the Unit, the machine would breakdown during repair. Hence, additional pump is required in order to ensure minimum down time in case of such eventuality. The expenditure in respect of an additional pump as spare in the raw water circuit of cooling water cannot be permitted after the cut-off date of the generating station. <b>Hence, not allowed.</b>
<b>2012-13</b>	Purchase of monitor (22 inches) in the control room of power house	<b>4.00</b>	<b>Not allowed</b> since these are in the nature of minor assets
<b>2013-14</b>	Purchase of 1 (One) vehicle for HOP	<b>8.00</b>	The petitioner has submitted that the generating station has two vehicles and one vehicle which had run about 170000 km needs to be replaced. <b>Allowed,</b> in view of the above justification and since the asset is considered necessary for efficient operation of the generating station.

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

	(₹ in lakh)				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Regulation 9(2)(iv)	30.00	30.00	50.00	0.00	8.00
Deletions/De-capitalization	12.12	13.29	0.00	0.00	2.02
<b>Total additional Capital Expenditure allowed</b>	<b>17.88</b>	<b>16.71</b>	<b>50.00</b>	<b>0.00</b>	<b>5.98</b>

#### **Un-discharged/discharged liabilities**

12. Out of un-discharged liabilities amounting to ₹9165.34 lakh as on date of commercial operation, which is considered as 100% debt at the time of discharge of the aid liabilities, the petitioner has already discharged an amount of ₹8953.58 lakh up to 31.3.2007. Though the petitioner has discharged an additional amount of ₹4.34 lakh, then same has not been claimed in this petition. The petitioner is at liberty to

approach the Commission on this count, if so advised and the same would be considered in accordance with law.

13. The petitioner vide its affidavit dated 3.3.2010, has submitted that the liabilities pertaining to additional capital expenditure for the period 2004-09 amounting to ₹44.95 lakh has been proposed to be discharged during the year 2009-10.

**Additional capital expenditure after adjustment of un-discharged/discharged liabilities:**

14. The additional capital expenditure allowed after adjustment of un-discharged liabilities is as under:

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional Capitalization allowed (prior to adjustment on account of un-discharged liabilities)	17.88	16.71	50.00	0.00	5.98
(+) Liabilities discharged	44.95	0.00	0.00	0.00	0.00
<b>Additional Capital expenditure allowed</b>	<b>62.83</b>	<b>16.71</b>	<b>50.00</b>	<b>0.00</b>	<b>5.98</b>

**Capital Cost**

15. As stated above, the Commission has considered the capital cost of ₹200334.77 lakh as on 31.3.2009 in Petition No.190/2009. The same is considered as the opening capital cost as on 1.4.2009 for the purpose of tariff for the period 2009-14.

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

	<i>(₹ in lakh)</i>				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	200334.77	200397.60	200414.31	200464.31	200464.31
Additional Capitalization allowed for tariff	62.83	16.71	50.00	0.00	5.98
Capital Cost as on 31 <sup>st</sup> March of the financial year	<b>200397.60</b>	<b>200414.31</b>	<b>200464.31</b>	<b>200464.31</b>	<b>200470.29</b>

**Debt-Equity Ratio**

17. Regulation 12 of the 2009 regulations provides that:



*“(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.*

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

### **Return on Equity**

19. Regulation 15 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011 provides as under:

*“(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 Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

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

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

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

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

20. 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.

21. In this order, 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%. The computation of Return on equity is as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	61419.63	61438.48	61443.49	61458.49	61458.49
Additions due to additional capitalization	18.85	5.01	15.00	0.00	1.79
Closing Equity	61438.48	61443.49	61458.49	61458.49	61460.29
Average Equity	61429.06	61440.99	61450.99	61458.49	61459.39
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%
<b>Return on Equity</b>	<b>10738.13</b>	<b>10740.22</b>	<b>10741.97</b>	<b>10743.28</b>	<b>10743.44</b>

22. The petitioner's prayer for grossing up of the base rate of Return on Equity based on the tax rates viz, MAT, surcharge, any other cess, charges, levies etc as per the relevant Finance Act, will be guided by the provisions of Regulation 15 as extracted above.

**Interest on loan**

23. 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.*

24. The computation of interest on loan is as under:
- The opening gross normative loan as on date of commercial operation of each unit of the generating station has been arrived at in accordance with the 2009 regulations.
  - The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the generating station.
  - The repayment for the year of the tariff period 2009-14 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, which is annexed to this order.
25. Interest on loan is worked out as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross loan as per previous order	-	-	-	-	-
Less: Un-discharged liabilities as on 31.3.2009	-	-	-	-	-
Gross Normative Loan	138703.72	138747.70	138759.40	138794.40	138794.40
Cumulative Repayment upto previous year	55191.76	65683.43	76177.17	86672.67	97169.47
Net Loan-Opening	83511.96	73064.27	62582.22	52121.73	41624.93
Repayment during the year	10491.66	10493.75	10495.49	10496.80	10496.96
Addition due to Additional Capitalisation	43.98	11.70	35.00	0.00	4.19
Addition due to discharge of Un-discharged liabilities as on 31.3.2009	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	73064.27	62582.22	52121.73	41624.93	31132.15
Average Loan	78288.12	67823.25	57351.98	46873.33	36378.54
Weighted Average Rate of Interest on Loan	9.112%	9.118%	9.150%	9.151%	8.821%
<b>Interest on loan</b>	<b>7133.24</b>	<b>6184.34</b>	<b>5247.76</b>	<b>4289.30</b>	<b>3209.08</b>

### Depreciation

26. 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 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”.

27. The weighted average rate of depreciation of 5.2362% has been considered for the calculation of depreciation, in terms of the above provisions of the regulations.

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	200334.77	200397.60	200414.31	200464.31	200464.31
Additional capital expenditure during 2009-14	62.83	16.71	50.00	0.00	5.98
Closing gross block	200397.60	200414.31	200464.31	200464.31	200470.29
Average gross block	200366.19	200405.96	200439.31	200464.31	200467.30
Rate of Depreciation	5.2362%	5.2362%	5.2362%	5.2362%	5.2362%
Depreciable value @ 90%	179854.62	179890.41	179920.43	179942.93	179945.62
Balance useful life of the asset	30.0	29.0	28.0	27.0	26.0
Remaining depreciable value	126939.94	116487.90	106029.07	95556.08	85061.97
<b>Depreciation</b>	<b>10491.66</b>	<b>10493.75</b>	<b>10495.49</b>	<b>10496.80</b>	<b>10496.96</b>

## O&M Expenses

28. Sub-clauses (i) to (iv) 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.*

*“(ii) The normalized operation and maintenance expenses after prudence check, for the years 2003-04 to 2007-08, shall be escalated at the rate of 5.17% to arrive at the normalized operation and maintenance expenses at the 2007-08 price level respectively and then averaged to arrive at normalized average operation and maintenance expenses for the 2003-04 to 2007-08 at 2007-08 price level. The average normalized operation and maintenance expenses at 2007-08 price level shall be escalated at the rate of 5.72% to arrive at the operation and maintenance expenses for year 2009-10:*

*Provided that operation and maintenance expenses for the year 2009-10 shall be further rationalized considering 50% increase in employee cost on account of pay revision of the employees of the Public Sector Undertakings to arrive at the permissible operation and maintenance expenses for the year 2009- 10.*

*“(iii) The operation and maintenance expenses for the year 2009-10 shall be escalated further at the rate of 5.72% per annum to arrive at permissible operation and maintenance expenses for the subsequent years of the tariff period.*

*“(iv) In case of the hydro generating stations, which have not been in commercial operation for the period of five years as on 1.4.2009, operation and maintenance expenses shall be fixed at 2% of the original project cost (excluding cost of rehabilitation and resettlement works). Further, in such case, operation and maintenance expenses in first year of commercial operation shall be escalated @ 5.17% per annum up to the year 2007-08 and then averaged to arrive at the O & M expenses in respective year of the tariff period. [The impact of pay revision on employee cost for arriving at the operation and maintenance expenses for the year 2009-10 shall be considered in accordance with the procedure given in proviso to sub-clause (ii) of clause (f) of this regulation.]”*

29. The year-wise break-up of actual O&M expenses claimed by the petitioner for the period 2003-08 is as follows:

(₹ in lakh)

	Items	2003-04	2004-05	2005-06	2006-07	2007-08
1	2	3	4	5	6	7
(A)	<b>Breakup of O &amp; M Expenses</b>					
1	Consumption of Stores & Spares	0.00	0.92	13.78	41.37	9.44
2	Repair & Maintenance	26.01	153.43	265.20	447.55	308.55
3	Insurance	405.13	1004.15	1025.46	1024.88	1026.19
4	Security Expenses (Other than salary & wages)	0.00	48.93	27.74	31.19	35.33
5	<b>Administrative Expenses</b>					
a	Rent	2.18	11.66	35.34	26.58	22.18

b	Electricity Expenses	9.77	100.32	116.35	126.04	129.03
c	Travelling & Conveyance	11.23	42.76	25.33	37.14	22.27
d	Communication Expenses	4.50	11.76	21.95	33.55	36.19
e	Advertising	0.70	12.69	5.33	12.63	6.52
f	Foundation Laying & inauguration	0.00	0.00	0.00	0.00	0.00
g	Donations	0.00	0.00	0.00	0.00	0.00
h	Entertainment	0.87	0.90	0.51	0.00	
i	Filing Fee	0.00	24.9	0.00	0.00	0.00
	<b>Sub-total (Administrative Expenses)</b>	<b>29.25</b>	<b>204.99</b>	<b>204.81</b>	<b>235.94</b>	<b>216.19</b>
6	<b>Employee Cost</b>					
a (i)	Salaries, wages & allowances (Project)	590.91	1893.83	1794.27	1529.83	1915.20
a (ii)	Salaries, wages & allowances (Allocation of Corporation Office & Regional Office)	0.00	0.00	313.78	371.50	351.97
a (iii)	Salaries, wages & allowances - CISF & Kendriya Vidyalaya	42.46	178.68	214.55	271.35	425.57
b	Staff welfare expenses	84.64	315.82	201.86	276.95	198.20
c	Productivity linked incentive	17.38	33.78	130.74	96.07	99.80
d	Expenditure on VRS	0.00	0.0	7.81	0.0	44.47
e	Ex-gratia	0.00	303.95	0.00	0.00	0.00
	<b>Sub-total (Employee cost)</b>	<b>735.39</b>	<b>2726.06</b>	<b>2663.01</b>	<b>2545.70</b>	<b>3035.21</b>
7	Loss of Store	0.00	0.00	0.00	0.00	0.00
8	Provisions	0.00	0.00	0.00	0.00	0.00
9	Corporate office expenses allocation	34.48	271.90	102.05	100.79	103.02
10	Others ( Specify items)	15.28	209.74	92.07	128.32	236.40
11	<b>Total (1 to 10)</b>	<b>1245.54</b>	<b>4620.12</b>	<b>4394.33</b>	<b>4558.45</b>	<b>4970.33</b>
12	Revenue/recoveries, if any	4.92	35.29	27.15	40.48	48.79
13	<b>Net O&amp;M Expenses</b>	<b>1240.62</b>	<b>4584.83</b>	<b>4367.18</b>	<b>4517.97</b>	<b>4921.54</b>

30. The date of commercial operation of the generating station is 31.3.2004. Hence, in order to consider the claims of the petitioner under Regulation 19(f)(i) of the 2009 regulations, the petitioner was directed by letter dated 29.9.2011, to submit information on affidavit on the following:

- (a) Details of actual O&M expenses for the period 2003-04 to 2007-08 in Form-15 B;
- (b) Details of expenditure at Corporate/Regional level for the above period.

31. In compliance with the above, the petitioner vide its affidavit dated 14.10.2011 has furnished the above information. As machines have been operated for a very short period during the year 2003-04, no logical comparison can be made with the O & M expenses of the year 2004-05 with respect to the O & M expenses for 2003-04. As such, O & M expenses of 2004-05 as indicated by the petitioner have been considered

for the purposed of normalization of O & M expenses. The normalization of O&M expenses for subsequent years has been undertaken with reference to the expenses for the previous years, as discussed hereunder:

### **Consumption of Stores & Spares Repairs & Maintenance**

32. The expenditure incurred by the petitioner under the head “Consumption of Stores & Spares “ in respect of the generating station during the period 2003-08 is as under:

<i>(₹ in lakh)</i>					
	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>
Consumption of Stores & Spares	0.00	0.92	13.78	41.37	9.44

33. The increase in expenditure from ₹13.78 lakh during 2005-06 to ₹41.37 lakh during 2006-07 constitute to 200% (approx) increase and the petitioner has submitted that the said increase was on account of capital maintenance of Unit No.1 of the generating station. In view of the justification, the expenditure of ₹41.37 lakh for 2006-07 is allowed. The expenses in respect of other years are found reasonable and are allowed.

### **Repairs & Maintenance**

34. The expenditure incurred under the heads “Repair & Maintenance “ in respect of the generating station during the period 2003-08 is as under:

<i>(₹ in lakh)</i>					
	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>
Repair & Maintenance	26.01	153.43	265.20	447.55	308.55

### **2005-06**

35. The increase in expenditure by 73% (approx) during 2005-06 as compared to the year 2004-05 is in respect of works like painting, road carpeting which are undertaken once in three years. The expenditure for ₹14.22 lakh towards painting and repair of residential/non-residential buildings, ₹14.46 lakh for painting of Power house building and ₹24.60 lakh for premix carpeting of colony road and expenditure



for ₹46.70 lakh towards the inspection of desilting basin and the removal of RBM deposit has been incurred. As the expenditure is not a regular expenditure and is undertaken once in three/four years, the same is considered reasonable even though higher in comparison to the previous year. In view of this, the expenditure is allowed for the purpose of normalization.

### **2006-07**

36. There is an increase in expenditure by 68% as compared to the expenditure during 2005-06. The increase in expenditure by ₹182.41 lakh during 2006-07 was due to the carrying out the capital maintenance of Unit No.1 of the generating station, which include an expenditure of ₹100.00 lakh towards annual maintenance of Power House, repair of runners, re-baiting of pads and ₹9.50 lakh towards the repair on HM equipment. Also, an expenditure of ₹19.45 lakh was incurred on repair of buildings, ₹18.12 lakh on repair of electrical installations and ₹14.18 lakh for repair of Guest House building and the balance amount is towards the impact on account of regular revision of minimum wages for routine repair jobs. In view of the justification, the expenditure is allowed and is considered for normalization. Accordingly, the expenditure claimed for the period 2003-08 has been allowed for the purpose of normalization.

### **Insurance**

37. The expenditure on account of insurance claimed by the petitioner as under is allowed for normalization, as no abnormal increase in expenses has been noticed during the period 2003-08.

	<i>(₹ in lakh)</i>				
	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>
Insurance	405.13	1004.15	1025.46	1024.88	1026.19

## Security Expenses

38. Expenditure on account of Security (Other than Salary & wages) claimed by petitioner as under has been allowed as reimbursement /pay on actual basis for the purpose of normalization:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Security Expenses (Other than Salary & wages)	0.00	48.93	27.74	31.19	35.33

## Administrative expenses

39. The details of administrative expenses incurred and claimed by the petitioner is as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Rent	2.18	11.66	35.34	26.58	22.18
Electricity Charges	9.77	100.32	116.35	126.04	129.03
Travelling and Conveyance	11.23	42.76	25.33	37.14	22.27
Communication Expenses	4.50	11.76	21.95	33.55	36.19
Advertising	0.70	12.69	5.33	12.63	6.52
Entertainment	0.87	0.90	0.51	0.00	
Filing Fees	0.00	24.9	0.00	0.00	0.00
<b>Sub Total (Administrative Expenses)</b>	<b>29.25</b>	<b>180.09</b>	<b>204.81</b>	<b>235.94</b>	<b>216.19</b>

## Rent

### 2005-06

40. The expenditure incurred on hiring of vehicles used to be booked by the petitioner under the head of Staff welfare till the year 2004-05. From the year 2005-06, the expenditure towards rent was re-grouped due to the change in accounting policy of the company and the expenditure for hiring of vehicle (for ₹31.13 lakh) was booked under administrative expenses (Rent). In view of this, the expenditure of ₹35.34 lakh has been allowed for the purpose of normalization. Expenses on this count for other years are considered reasonable and are allowed for normalization.

## **Communication Expenses**

### **2005-06**

41. There is significant increase in the expenses towards Communication during the year 2005-06 as compared to the previous year (i.e from ₹11.76 lakh to ₹21.95 lakh). This increase is on account of the debit for an expenditure of ₹10.19 lakh towards Satellite PAMA (Permanently Assigned Multiple Access) charges and Internet charges paid to M/s HFCL. Since, the generating station had commenced full operation from 2004-05 and the charges towards Satellite PAMA and Internet charges were claimed by the service provider (M/s HFCL) from 2005-06, the expenditure claimed has been allowed for normalization.

### **2006-07**

42. The expense for 2003-04 and 2004-05 are considered reasonable and is allowed for normalization. However, there is significant increase in the expenses towards Communication during 2006-07 as compared to the previous year (i.e from ₹21.95 lakh to ₹33.55 lakh). This increase is on account of an adjustment of ₹5.00 lakh towards Internet charges and the balance due to repair work of OFC cable at project sites, which are a onetime expenditure. Based on this justification, the expenditure during 2006-07 is restricted to an increase of 20% over the expenses for the previous year (₹26.34 lakh) and allowed for normalization.

### **2007-08**

43. Consequent upon the restriction of expenses to an increase of 20% during 2006-07, as above, the expenditure during 2007-08 is also restricted to an increase of 20% over the expenses for the previous year (₹31.61 lakh) and has been allowed for normalization

## **Advertisement**

### **2006-07**

44. There is a nominal increase in the advertisement expenses during the year 2006-07 as compared to the previous year (i.e from ₹5.33 lakh to ₹12.63 lakh). The said increase is on account of publishing of press tenders of Building & other works. In view of this, the expenditure for 2006-07 is allowed or normalization. The expenses for the other years are considered reasonable and have also been considered for the purpose of normalization.

### **Filing fees**

45. Filing fee of ₹24.9 lakh has not been considered for the purpose of normalization.

46. Based on the above, the Administrative expenses allowed for the purpose of normalization is as under:

	<i>(₹ in lakh)</i>				
	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>
<b>Administrative Expenses</b>	29.25	180.09	204.81	228.73	211.61

### **Employee Cost**

47. The expenses towards Employee cost form a major part of the total O&M expenses. Employees cost comprises of Salaries, Wages & Allowances, which, apart from Salaries & Wages, include honorarium, leave encashment, provident fund contribution, Compensation payment under statutory provisions, gratuity and provision on a/c of gratuity made on actuarial valuation basis every year, VRS and also arrears of wage revision of employees.

48. Staff welfare expenses include LTC, medical reimbursement, liveries & uniform, ex-gratia, grants & subsidies to Sports & canteen, New Year gifts, school projects & Hospital expenses, Transport expenses etc. The productivity-linked incentive is paid as

per policy of the petitioner company. The year-wise break up of Employees Cost claimed by petitioner is as under:

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
<b>Employee Cost</b>	735.39	2726.06	2663.01	2545.70	3035.21

**Salaries, wages & allowances (Project)**

**2006-07 and 2007-08**

49. The employee cost claimed by petitioner during the years 2006-07 and 2007-08 under this head including Wage revision/arrears of ₹8.42 lakh and ₹468.15 lakh respectively, have been deducted from the expenses claimed for the respective years and considered for normalization.

**Salaries, wages & allowances (CISF & KV)**

**2006-07 and 2007-08**

50. The employee cost claimed by petitioner during 2006-07 and 2007-08 under this head which includes wage revision/arrears and prior adjustments. The effect of revision of pay has been considered in the 2009 Tariff Regulations and the prior adjustments made are a onetime activity. Based on this, the expenses claimed have been restricted to an increase of 20% over that of the expenses of the previous year (i.e ₹257.46 lakh and ₹308.95 lakh respectively for 2006-07 and 2007-08) respectively and allowed for normalization. The expenses for the other years have been considered for normalization.

**Staff welfare expenses**

**2006-07**

51. There is significant increase (37% approx) in the Staff welfare expenses during 2006-07 as compared to the previous year (from ₹201.86 lakh to ₹276.95 lakh) This increase is on account of provision made towards medical expenses for retired employees of the petitioner company. Since, the said provision has not been

considered, the same has been restricted to an increase of 20% over the expense of the previous year which works out to ₹242.23 lakh. This amount has been considered for the purpose of normalization. The expenses for the other years have been considered for normalization.

52. Ex-gratia is an incentive and is required to be borne from the profits of the petitioner company. The expenses incurred towards New Year gifts should be borne by the petitioner company and the beneficiaries are not to be burdened on this count. The expenses on account of VRS are not of a regular nature, more so, when the petitioner has not indicated the likely pattern of expenses on this account during the period 2009-14.

53. Expenses on account of productivity-linked incentive (under Section 31 A of the Payment of Bonus Act), which has been included under the category of Staff welfare expenses, has not been allowed for the purpose of tariff for the reason that the expenses incurred are on account of incentive paid to the employees for maintaining high availability of the generating station to achieve higher generation. Moreover, the payment of incentive is made separately and claimed in the bill of the beneficiaries.

54. On prudence check, the Employee Cost of the project allowed towards O&M expenses is as under:

		<i>(₹ in lakh)</i>				
		<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>
a (i)	Salaries, wages and allowances ( <i>Project</i> )	590.91	1893.83	1794.27	1521.41	1447.05
a (iii)	Salaries, wages and allowances ( <i>CISF / Kendriya Vidyalaya</i> )	42.46	178.68	214.55	257.46	308.95
b	Staff Welfare expenses	84.64	315.82	201.86	242.23	198.20
c	Productivity linked incentives	0.00	0.00	0.00	0.00	0.00
d	Expenditure on VRS	0.00	0.00	0.00	0.00	0.00
e	Ex-gratia	0.00	0.00	0.00	0.00	0.00
	<b>Total (<i>for Project</i>)</b>	<b>78.01</b>	<b>2385.33</b>	<b>2210.68</b>	<b>2021.10</b>	<b>1954.20</b>

55. The Employee cost allocation in proportion to the corporate expenses and proportionate Regional expenses has been considered for Salary, Wages and Allowances of Corporate office (CO) and Regional office (RO) as submitted by petitioner and the remaining other expenses for Corporate Office and Regional office has been considered for Corporate Office and Regional office expenses allocation.

### Corporate Office expenses

56. The petitioner has submitted that the as per its policy, 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 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:

		(₹ in lakh)				
Sl. No.		2003-04	2004-05	2005-06	2006-07	2007-08
<b>(A)</b>	<b>Breakup of Corporate Expenses (Aggregate at Company level)</b>					
1	<b>Employee Expenses</b>					
a	Salary, Wages, Allowances and Benefits	5730.96	6664.58	8946.98	8229.27	10379.71
b	Staff Welfare Expenses	818.54	841.32	1112.04	1415.42	1533.02
c	productive linked incentive	0.35	0.00	440.48	447.66	459.56
d	Expenditure on VRS	0.00	56.96	7.48	78.69	36.86
e	Ex-gratia	86.69	88.94	6.34	0.00	2.22
	<b>Sub-total</b>	<b>6637</b>	<b>7652</b>	<b>10513</b>	<b>10171</b>	<b>12411.37</b>
2	<b>Administrative Expenses</b>					
a	Repair & Maintenance	355.55	340.93	332.96	331.75	472.43
b	Training and Recruitment	285.30	470.69	281.66	259.97	428.62
c	Communication	166.65	181.02	290.23	182.99	173.21
d	Travelling & Conveyance	541.18	552.85	536.42	563.46	672.43
e	Rent	71.42	91.47	37.11	50.21	10.78
f	Others	1263.47	1214.19	1304.71	1316.58	1562.28
	<b>Sub-Total (Administrative Expenses)</b>	<b>2683.57</b>	<b>2851.15</b>	<b>2783.09</b>	<b>2704.96</b>	<b>3319.75</b>
3	Security	29.07	38.24	38.22	45.01	70.97
4	Donation	0.00	0.00	0.00	0.00	0.00
5	provision	0.00	0.00	6.41	6.89	0.76
6	Others	680.62	551.26	738.79	661.98	713.05
	<b>Total (1 to 6)</b>	<b>10029.8</b>	<b>11092.45</b>	<b>14079.83</b>	<b>13589.88</b>	<b>16515.9</b>
8	Less: Recoveries	433.51	459.26	469.43	601.46	472.87
9	<b>Net Corporate Expenses (Aggregate)</b>	<b>9596.29</b>	<b>10633.19</b>	<b>13610.40</b>	<b>12988.42</b>	<b>16043.03</b>
<b>(B)</b>	<b>Allocation of Corporate Expenses to various Functional Activities</b>					

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
	<b>Total</b>	<b>9596.29</b>	<b>10633.19</b>	<b>13610.4</b>	<b>12988.42</b>	<b>16043.03</b>
<b>(C)</b>	<b>Allocation of Corporate Expenses relating to functional activity of Power Generation to various generating stations</b>					
1	LOKTAK	44.60	44.27	49.97	64.85	58.88
2	BAIRASIUL	51.53	47.54	55.40	66.54	59.02
3	SALAL - I	206.40	225.51	227.02	210.98	203.92
4	CHAMERA-I	247.19	259.08	297.52	261.06	268.64
5	TANAKPUR	54.50	54.10	53.13	57.79	47.95
6	URI	609.68	546.12	444.31	520.79	331.91
7	RANGIT	144.53	127.00	91.10	42.94	48.06
8	CHAMERA II	34.48	271.90	338.36	408.14	384.95
9	DHAULI GANGA	0.00	0.00	87.68	168.25	194.92
10	DULHASTI	0.00	0.00	0.00	0.00	566.51
11	TEESTA-V	0.00	0.00	0.00	0.00	6.73
	<b>TOTAL</b>	<b>1392.91</b>	<b>1575.52</b>	<b>1644.49</b>	<b>1801.34</b>	<b>2171.49</b>

57. Ex-gratia and performance based Productive Link incentive has not been considered since these are required to be borne out of from the profits of the petitioner. After excluding these expenses and also the expenses towards payment of ex-gratia and donation, the following Corporate Office expenses have been allowed towards O&M expenses of the generating station for the period 2003-08:

58. Accordingly, the proportional ratio of the year-wise total corporate office expenses claimed and allowed is as under:

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

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Total corporate expenses for the generating station (Chamera HE) claimed	34.48	271.9	338.36	408.14	384.95
Total corporate expenses proportioned for (Chamera HE) (considered)	34.17	264.65	297.02	388.66	355.87
Employee Cost (Considered)	23.54	191.87	223.95	300.43	273.66
Other expenses (Considered)	10.63	72.78	73.07	88.23	82.21



## Regional Office expenses

59. The petitioner has submitted the year-wise details of total Regional Office (*at Benikhet*) expenses incurred and its apportionment to the running generating stations, construction projects and other activities of the petitioner and proportionate regional expenses charged to the generating station are given here under:

(₹ in lakh)						
Sl. No.		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>B</b>	<b>Allocation of Region-II Expenses to various Functional Activities</b>					
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
	<b>Total</b>	<b>327.37</b>	<b>451.27</b>	<b>600.59</b>	<b>652.42</b>	<b>1030.40</b>
<b>(C)</b>	<b>Allocation of Region-II Expenses to Power Stations/Projects falling under Region-II</b>					
1	<b>Chamera II</b>	182.67	160.07	86.57	64.15	70.04

60. The petitioner has submitted that for the years 2003-04 and 2004-05, the regional office expenses were considered under the natural head of expenditure by the project under the region. Thus, these expenditures form part of the expenses of the generating station.

61. The expenditure on account of depreciation and adjustments for prior periods has not been allowed. The expenses under the head 'administrative expenses' has been limited to an increase of 20% specifically on expenses towards travelling & conveyance charges and others, where proper justification has not submitted by the petitioner. Also the expenditure towards 'Corporate Social Responsibility' (CSR) has not been considered since is required to be borne by the petitioner from its own resources.

62. Based on the above, the regional office expenses (normalized) are worked out as under:

(₹ 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
Ratio of (Employee cost /Regional Office Expenses)	-	-	0.8565	0.8851	0.8687

(₹ 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 (Considered)	315.92	427.12	574.61	597.11	929.87
Total Regional Office expenses Considered to claimed ( r )	0.96502	0.94681	0.95674	0.91522	0.90244
Total Regional Office for Chamera II (claimed)	Included in the natural head of plant		86.57	64.15	70.04
Total Regional Office proportioned for Chamera II (considered)			82.83	58.71	63.21
Employee Cost Regional Office (considered)			70.94	51.97	54.91
Other expenses Regional Office (considered)			11.89	6.74	8.30

63. In view of above the following employee cost has been considered for purpose of normalization:

(₹ in lakh)

		2003-04	2004-05	2005-06	2006-07	2007-08
a (i)	Salaries, wages and allowances (Project)	590.91	1893.83	1794.27	1521.41	1447.05
(ii)	Employee Cost (Corporate)	23.54	191.87	223.95	300.43	273.66
	Employee Cost Regional Office	0.00	0.00	70.94	51.97	54.91
a (iii)	Salaries, wages and allowances (CISF / Kendriya Vidyalaya)	42.46	178.68	214.55	257.46	308.95
b	Staff Welfare expenses	84.64	315.82	201.86	242.23	198.20
c	Productivity linked incentives	0.00	0.00	0.00	0.00	0.00
d	Expenditure on VRS	0.00	0.00	0.00	0.00	0.00
e	Ex-gratia	0.00	0.00	0.00	0.00	0.00
	<b>Employee Cost</b>	<b>741.55</b>	<b>2580.20</b>	<b>2505.57</b>	<b>2373.50</b>	<b>2282.77</b>

#### Other expenses (Specific items)

64. The Other expenses claimed are as under:

(₹ in lakh)

	2003-04	2004-05	2005-06	2006-07	2007-08
Other (Specific items)	15.28	209.74	92.07	128.32	236.40

65. Loss on sale of fixed assets: Any loss on sale on assets and other assets should be borne by the petitioner and the beneficiaries cannot be burdened on this count. Similarly, Stores (written-off) should be borne by the company. Prior adjustments are a onetime expenditure and hence not considered. Other expenses where proper justification has not been submitted by the petitioner, the expenditure has been

restricted to an increase of 20%, over the expenses of the previous years. Accordingly, the 'Other expenses' allowed during the period 2003-04 to 2007-08 for calculation of O&M expenses for 2009-14 is as under.

	(₹ in lakh)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Other Specific items	15.28	86.34	91.57	94.54	113.45

#### **O&M expenses considered during 2003-04 to 2007-08**

66. Based on the above discussions and after prudence check, the following O&M expenses have been considered for the period 2003-04 to 2004-08 for calculation of O&M expenses for the tariff period 2009-14.

		(₹ in lakh)				
		2003-04	2004-05	2005-06	2006-07	2007-08
(A)	<b>Breakup of O &amp; M Expenses</b>					
1	Consumption of Stores & Spares	0.00	0.92	13.78	41.37	9.44
2	Repair & Maintenance	26.01	153.43	265.20	447.55	308.55
3	Insurance	405.13	1004.15	1025.46	1024.88	1026.19
4	Security Expenses (Other than salary & wages)	0.00	48.93	27.74	31.19	35.33
5	Administrative Expenses	29.25	180.09	204.81	228.73	211.61
6	Employee Cost (CO + RO)	741.55	2580.20	2505.57	2373.50	2282.77
7	Loss of Store	0	0	0	0	0
8	Provisions	0	0	0	0	0
9	Corporate office expenses allocation	10.63	72.78	73.07	88.23	82.21
	Regional office expenses allocation	0.00	0.00	11.89	6.74	8.30
10	Others ( Specify items)	15.28	86.34	91.57	94.54	113.45
11	<b>Total (1 to 10)</b>	<b>1227.85</b>	<b>4126.84</b>	<b>4325.43</b>	<b>4415.56</b>	<b>4169.19</b>
12	Revenue/recoveries, if any	4.92	35.29	27.15	40.48	48.79
13	<b>Net Expenses</b>	<b>1222.93</b>	<b>4091.55</b>	<b>4191.93</b>	<b>4296.26</b>	<b>4029.06</b>

67. 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 (59%) of normalized employee cost during years 2003-04 to 2007-08, for the tariff period 2009-14 work out as follows:

## Employee Cost percentage

(₹ in lakh)

	2003-04	2004-05	2005-06	2006-07	2007-08	Average normalized at Avg.2007-08 Price level
Employee cost (Considered)	741.55	2580.20	2505.57	2373.50	2282.77	
Avg. normalized Employee cost at 2007-08 price level	2192.93*	3001.44	2771.34	2496.21	2282.77	2548.94
O&M Expense (Considered)	1222.93	4091.55	4191.93	4296.26	4029.06	
Average normalized O&M at 2007-08 price level	3616.46*	4759.53	4636.58	4518.37	4029.06	4312.00
	(P1)X(Esc) <sup>4</sup>	(P2)X(Esc) <sup>3</sup>	(P3)X(Esc) <sup>2</sup>	(P4)X(Esc)	(P5)	
Escalation rate (Esc)%	5.17	5.17	5.17	5.17	5.17	
Percentage of employee cost $(2548.94 / 4312.00 * 100 = 59\%$ (approx)						

\* Proportion to full year as during this year machine #1 ran only for 151 days, machine #2 for 91 days and machine #3 for 1 day.

68. Based on the above discussions, the O&M expenses allowed are as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses	6241.13	6598.12	6975.53	7374.53	7796.35

## Interest on Working Capital

69. 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.*

70. Clauses (3) and (4) of Regulation 18 of the 2009 regulations, as amended on 21.6.2011 provides as under:

"(3) Rate of interest on working capital shall be on normative basis and shall be considered as follows:

- (i) *SBI short-term Prime Lending Rate as on 01.04.2009 or on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the unit or station whose date of commercial operation falls on or before 30.6.2010.*

- (ii) SBI Base Rate plus 350 basis points as on 1.7.2010 or as on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the units or station whose date of commercial operation lies between the period 1.7.2010 to 31.3.2014:

Provided that in cases where tariff has already been determined on the date of issue of this notification, the above provisions shall be given effect to at the time of truing up.

(4) 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.

71. 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	5917.92	5819.65	5726.95	5634.15	5524.23

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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	936.17	989.72	1046.33	1106.18	1169.45

- (a) **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
<b>O &amp; M expenses</b>	520.09	549.84	581.29	614.54	649.70

72. 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.

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

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	936.17	989.72	1046.33	1106.18	1169.45
O & M expenses (1 month)	520.09	549.84	581.29	614.54	649.70
Receivables	5917.92	5819.65	5726.95	5634.15	5524.23
Total	7374.18	7359.22	7354.57	7354.87	7343.38
Rate of interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest on working capital</b>	<b>903.34</b>	<b>901.50</b>	<b>900.94</b>	<b>900.97</b>	<b>899.56</b>

### Annual Fixed Charges

74. 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)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	10738.13	10740.22	10741.97	10743.28	10743.44
Interest on Loan	7133.24	6184.34	5247.76	4289.30	3209.08
Depreciation	10491.66	10493.75	10495.49	10496.80	10496.96
Interest on Working Capital	903.34	901.50	900.94	900.97	899.56
O & M Expenses	6241.13	6598.12	6975.53	7374.53	7796.35
<b>Total</b>	<b>35507.50</b>	<b>34917.93</b>	<b>34361.69</b>	<b>33804.89</b>	<b>33145.39</b>

75. 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.

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

### Design Energy

77. The month-wise details of design energy in respect of the generating station is indicated in the following table:

Month	Design Energy (MUs)
April	188.65
May	212.04
June	149.31
July	212.04
August	212.04
September	152.23
October	69.95

November	48.98
December	39.55
January	39.29
February	56.43
March	119.38
<b>Total</b>	<b>1499.89</b>

78. The 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**

79. The petitioner has sought approval for the reimbursement of fees of ₹6.00 lakh each paid by it for the years 2009-10 and 2010-11 towards filing of 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.

80. 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.”*

81. 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.

82. Accordingly, the expenses incurred by the petitioner on application filing fees amounting to ₹6.00 lakh each for the years 2009-10, 2010-11 and 2011-12 in connection with the present petition, shall be directly recovered from the beneficiaries, on *pro rata* basis. The expenditure on filing fees for the balance years of the tariff period shall be recovered after payment of the same based on the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2008 and/or its amendment.

The reimbursement of charges towards publication of notices in newspapers shall also be recovered on *pro rata* basis on submission of documentary proof of the same.

83. The difference between the provisional annual fixed charges already recovered by the petitioner and the annual fixed charges determined by this order shall be liquidated by the respondents in terms of the decision contained in our order dated 26.8.2011 in Petition No. 175/2011(*suo motu*).

84. Petition No.66/2010 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**



**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

Sl no	Particulars	Existing 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
	<b>Loan-1 STATE BANK OF INDIA</b>						
	Gross loan - Opening	15000.00	15000.00	15000.00	15000.00	15000.00	15000.00
	Cumulative repayments of Loans upto previous year	4285.72	6428.56	8571.40	10714.24	12857.08	15000.00
	Net loan - Opening	10714.28	8571.44	6428.60	4285.76	2142.92	
	Add: Drawal(s) during the Year	0	0	0	0	0	
	Less: Repayment (s) of Loans during the year	2142.84	2142.84	2142.84	2142.84	2142.92	
	Net loan - Closing	8571.44	6428.60	4285.76	2142.92	0	
	Average Net Loan	9642.86	7500.02	5357.18	3214.34	1071.46	
	Rate of Interest on Loan	11.56%	10.50%	10.50%	10.50%	10.50%	
	Interest on loan	1114.91	835.58	610.58	386.51	160.59	
	<b>Loan-2 PNB</b>						
	Gross loan - Opening	15000	15000	15000	15000	15000	15000
	Cumulative repayments of Loans upto previous year	5250	6750	8250	9750	11250	12750
	Net loan - Opening	9750	8250	6750	5250	3750	2250
	Add: Drawal(s) during the Year	0	0	0	0	0	0
	Less: Repayment (s) of Loans during the year	1500	1500	1500	1500	1500	1500
	Net loan - Closing	8250	6750	5250	3750	2250	750
	Average Net Loan	9000	7500	6000	4500	3000	1500
	Rate of Interest on Loan	9.89%	8.75%	8.75%	8.75%	8.75%	8.75%
	Interest on loan	889.91	632.52	501.27	370.92	238.77	107.52
	<b>Loan-3 PSB</b>						
	Gross loan - Opening	10000	10000	10000	10000	10000	10000
	Cumulative repayments of Loans upto previous year	1,500	2,500	3,500	4,500	5,500	6,500
	Net loan - Opening	8500	7500	6500	5500	4500	3500
	Add: Drawal(s) during the Year	0	0	0	0	0	0
	Less: Repayment (s) of Loans during the year	1000	1000	1000	1000	1000	1000
	Net loan - Closing	7500	6500	5500	4500	3500	2500
	Average Net Loan	8000	7000	6000	5000	4000	3000
	Rate of Interest on Loan	11.06%	11.00%	11.00%	11.00%	11.00%	11.00%
	Interest on loan	884.94	763.29	653.29	544.65	433.29	323.29
	<b>Loan-4 SBH</b>						
	Gross loan - Opening	5000	5000	5000	5000	5000	5000
	Cumulative repayments of Loans upto previous year	1071.43	1785.71	2499.99	3214.27	3928.55	4642.83
	Net loan - Opening	3928.57	3214.29	2500.01	1785.73	1071.45	357.17
	Add: Drawal(s) during the Year	0	0	0	0	0	0
	Less: Repayment (s) of Loans during the year	714.28	714.28	714.28	714.28	714.28	357.17
	Net loan - Closing	3214.29	2500.01	1785.73	1071.45	357.17	0
	Average Net Loan	3571.43	2857.15	2142.87	1428.59	714.31	178.59
	Rate of Interest on Loan	11.59%	11.00%	11.00%	11.00%	11.00%	11.00%
	Interest on loan	413.88	315.69	237.11	158.87	79.97	10.44
	<b>Loan-5 BOI</b>						
	Gross loan - Opening	10000	10000	10000	10000	10000	10000
	Cumulative repayments of	1500	2500	3500	4500	5500	6500

Loans upto previous year						
Net loan - Opening	8500	7500	6500	5500	4500	3500
Add: Drawal(s) during the Year	0	0	0	0	0	0
Less: Repayment (s) of Loans during the year	1000	1000	1000	1000	1000	1000
Net loan - Closing	7500	6500	5500	4500	3500	2500
Average Net Loan	8000	7000	6000	5000	4000	3000
Rate of Interest on Loan	11.15%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest on loan	892.17	728.31	625.81	524.65	420.81	318.31
<b>Loan-6 CBI</b>						
Gross loan - Opening	10000	10000	10000	10000	10000	10000
Cumulative repayments of Loans upto previous year	4000	5000	6000	7000	8000	9000
Net loan - Opening	6000	5000	4000	3000	2000	1000
Add: Drawal(s) during the Year	0	0	0	0	0	0
Less: Repayment (s) of Loans during the year	1000	1000	1000	1000	1000	1000
Net loan - Closing	5000	4000	3000	2000	1000	0
Average Net Loan	5500	4500	3500	2500	1500	500
Rate of Interest on Loan	9.89%	9.50%	9.50%	9.50%	9.50%	9.50%
Interest on loan	544.05	412.01	317.01	222.53	127.01	32.01
<b>Loan-7 SBP</b>						
Gross loan - Opening	5000	5000	5000	5000	5000	5000
Cumulative repayments of Loans upto previous year	1071.43	1785.71	2499.99	3214.27	3928.55	4642.83
Net loan - Opening	3928.57	3214.29	2500.01	1785.73	1071.45	357.17
Add: Drawal(s) during the Year	0	0	0	0	0	0
Less: Repayment (s) of Loans during the year	714.28	714.28	714.28	714.28	714.28	357.17
Net loan - Closing	3214.29	2500.01	1785.73	1071.45	357.17	0
Average Net Loan	3571.43	2857.15	2142.87	1428.59	714.31	178.59
Rate of Interest on Loan	11.50%	10.75%	10.75%	10.75%	10.75%	10.75%
Interest on loan	410.58	313.35	236.56	160.09	82.99	12.62
<b>Loan-8 HDFC</b>						
Gross loan - Opening	10000	10000	10000	10000	10000	10000
Cumulative repayments of Loans upto previous year	2142.86	3571.42	4999.98	6428.54	7857.1	9285.66
Net loan - Opening	7857.14	6428.58	5000.02	3571.46	2142.9	714.34
Add: Drawal(s) during the Year	0	0	0	0	0	0
Less: Repayment (s) of Loans during the year	1428.56	1428.56	1428.56	1428.56	1428.56	714.34
Net loan - Closing	6428.58	5000.02	3571.46	2142.9	714.34	0
Average Net Loan	7142.86	5714.30	4285.74	2857.18	1428.62	357.17
Rate of Interest on Loan	11.30%	10.50%	10.50%	10.50%	10.50%	10.50%
Interest on loan	806.91	617.88	467.88	318.50	167.88	27.54
<b>EDC-LOAN IN INR</b>						
Gross loan - Opening	61238.84	61238.84	61238.84	61238.84	61238.84	61238.84
Cumulative repayments of Loans upto previous year	20997.38	26829.96	32548.73	38267.50	43986.28	49705.05
Net loan - Opening	40241.46	36323.92	30605.15	24886.38	19167.61	13448.84
Add: Drawal(s) during the Year	0.00	0.00	0.00	0.00	0.00	0.00
ADD: ERV	1915.04	0.00	0.00	0.00	0.00	0.00
Less: Repayment (s) of Loans during the year	5832.58	5718.77	5718.77	5718.77	5718.77	5718.77
Net loan - Closing	36323.92	30605.15	24886.38	19167.61	13448.84	7730.06
Weighted Average Loan	38282.69	33464.54	27745.76	22026.99	16308.22	10589.45
Rate of Interest on Loan	6.01%	6.01%	6.01%	6.01%	6.01%	6.01%
Interest on loan	2481.79	2088.29	1743.65	1402.64	1054.37	709.73
Financing Charges GF	482.90	435.89	367.26	298.64	230.01	161.39

<b>Total Loan</b>						
Gross loan - Opening	141238.84	141238.84	141238.84	141238.84	141238.84	141238.84
Cumulative repayments of Loans upto previous year	41818.82	57151.36	72370.09	87588.82	102807.56	118026.37
Net loan - Opening	99420.02	86002.52	70783.79	55565.06	40346.33	25127.52
Add: Drawal(s) during the Year	0.00	0.00	0.00	0.00	0.00	0.00
ADD: ERV	1915.04	0.00	0.00	0.00	0.00	0.00
Less: Repayment (s) of Loans during the year	15332.54	15218.73	15218.73	15218.73	15218.81	11647.45
Net loan - Closing	86002.52	70783.79	55565.06	40346.33	25127.52	13480.06
Average Net Loan	92711.27	78393.16	63174.42	47955.69	32736.92	19303.79
Interest on loan	8922.03	7142.81	5760.44	4387.99	2995.70	1702.85
<b>Weighted average Rate of Interest on Loans</b>	9.623%	<b>9.112%</b>	<b>9.118%</b>	<b>9.150%</b>	<b>9.151%</b>	<b>8.821%</b>