

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

- 1. Shri. Ashok Basu, Chairman**
- 2. Shri K.N.Sinha, Member**
- 3. Shri Bhanu Bhushan, Member**
- 4. Shri. A.H. Jung, Member**

Petition No. 47/2005

In the matter of

Approval of generation tariff of Uri Hydroelectric Project for the period 1.4.2004 to 31.3.2009

And in the matter of

National Hydroelectric Power Corporation Ltd.

...Petitioner

Vs

1. Punjab State Electricity Board, Patiala
2. Haryana Vidyut Prasaran Nigam Ltd., Panchkula
3. Delhi Transco Ltd, Delhi
4. Uttar Pradesh Power Corporation Ltd., Lucknow
5. BSES Rajdhani Power Ltd., New Delhi
6. Rajasthan Rajya Vidyut Prasaran Nigam Ltd., Jaipur
7. BSES Yamuna Power Ltd., New Delhi
8. North Delhi Power Ltd., Delhi
9. Jaipur Vidyut Vitaran Nigam Ltd., Jaipur
10. Power Transmission Corporation of Uttaranchal Ltd., Dehradun
11. Jodhpur Vidyut Vitaran Nigam Ltd., Jodhpur
12. Himachal Pradesh State Electricity Board, Shimla
13. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
14. Chief Engineer & Secy, Engineering Deptt. Chandigarh
15. Power Development Deptt., Govt of Jammu & Kashmir, Jammu

...Respondents

The following were present

1. Shri C. Vinod, Engineer, NHPC
 2. Shri Ansuman Ray, NHPC
 3. Er. P. Kumar, Dy Manager, NHPC
 4. Shri Prashant Kaul, NHPC
 5. Shri Jayant Kumar, NHPC
 6. Shri Vijay Ranjan, NHPC
 7. Shri S.D. Tripathi, NHPC
 8. Shri R.S. Batra, NHPC
 9. Shri. S.K. Meena, NHPC
 10. Shri. Padamjit Singh, PSEB
 11. Shri T.P.S Bawa, OSD (Comml.), PSEB
 12. Shri V.K. Gupta, Consultant, PSEB
 13. Er. P.K. Gupta, Jodhpur Discom
 14. Er. S.K. Yadav, JVVNL
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ORDER
(DATE OF HEARING : 18.10.2005)

This petition has been filed by the petitioner, a generating company owned and controlled by the Central Government for approval of tariff in respect of Uri Hydroelectric Project (4x120 MW) in J&K, (hereinafter referred to as "the generating station") for the period from 1.4.2004 to 31.3.2009 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004, (hereinafter referred to as "the 2004 regulations")

2. The generating station was commissioned on 1.6.1997
3. The revised investment approval the generating station was accorded by Ministry of Power vide its letter dated 12.1.1998 at a cost of Rs.330000 lakh, including IDC of Rs.68150 lakh.
4. The tariff for the generating station for the period ending 31.3.2004 was approved by the Commission vide its order dated 10.3.2005 in Petition No 61/2001 based on capital cost of Rs.336383 lakh as on 31.3.2001. Subsequently, vide order dated 3.2.2006 in Petition No 88/2005, the Commission approved additional capitalisation of Rs. 979 lakh for the period 1.4.2001 to 31.3.2004 and arrived at the capital base of Rs. 337362 lakh (excluding FERV) as on 31.3.2004, for the purpose determination of tariff as on 1.4.2004. The details of the additional capitalisation approved are given hereunder:

(Rs. in lakh)	
2001-2002	657
2002-2003	107
2003-2004	215
Total	979

5. The details of the fixed charges claimed by the petitioner in the present petition are given hereunder:

(Rs. in lakh)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	8730.61	8730.61	8730.61	8730.61	8730.61
Interest on Loan	4163.58	3448.69	1838.37	334.80	243.41
Return on Equity	15111.59	15111.59	15111.59	15111.59	15111.59
Advance Against Depreciation	10783.48	5677.88	14713.09	0.00	0.00
Interest on Working Capital	1305.64	1240.29	1406.56	1164.06	1204.07
O & M Expenses	5178.85	5386.00	5601.44	5825.50	6058.52
TOTAL	45273.76	39595.06	47401.67	31166.57	31348.20

6. The details of working capital furnished by the petitioner and its claim for interest thereon are summarised hereunder:

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Spares	4760.70	5052.35	5355.50	5676.83	6017.44
O & M expenses - 1 month	431.57	448.83	466.79	485.46	504.88
Receivables- 2 months	7545.63	6599.18	7900.28	5194.43	5224.70
Total Working Capital	12737.90	12100.36	13722.57	11356.72	11747.02
Interest Rate	10.25%	10.25%	10.25%	10.25%	10.25%
Interest on Working Capital	1305.63	1240.29	1406.56	1164.06	1204.07

7. The reply to the petition was filed by Jodhpur Vidyut Vitaran Nigam Ltd., Ajmer Vidyut Vitaran Nigam Ltd., Jaipur Vidyut Vitaran Nigam Ltd., Uttar Pradesh Power Corporation Ltd., The other respondents have not filed their reply. The petitioner has published notices in accordance with the procedure specified by the Commission. However, no objections or suggestions have been received in response to these notices.

8. There is a general issue regarding treatment of depreciation when it exceeds repayment of loan in a year. The Commission in its separate order dated 9.5.2006 in Petition No.197/2004 (NHPC Vs PSEB and others) has decided that

when depreciation recovered in a year is more than the amount of repayment during that year, the entire amount of depreciation is to be considered as repayment of loan for tariff computation. Similar approach has been adopted by the Commission, while approving tariff in respect of the transmission assets of PGCIL, and in the interest of consistency and continuity of approach same methodology needs to be followed in case of the petitioner also. Accordingly, the decision arrived at in the order dated 9.5.2006 in Petition No.197/2004 will be followed in this case.

CAPITAL COST

9. As per the second proviso to Regulation 33 of the 2004 regulations in case of the generating stations existing up to 31.3.2004, the capital cost admitted by the Commission for determination of tariff prior to 1.4.2004 shall form the basis for determination of tariff.

10. The petitioner has considered the capital expenditure of Rs.342376.96 lakh after accounting for Rs.5993.96 lakh on account of additional capitalization on works over the capital expenditure of Rs. 336383.00 lakh admitted by the Commission in the order dated 10.3.2005 *ibid*.

11. The Commission vide its order dated 3.2.2006 in Petition No.88/2005 has approved the additional capital expenditure of Rs.979.44 lakh for the period 2001-04. This has been added to Rs.336383.00 lakh which was the capital cost adopted by Commission for the purpose of tariff for 2001-04. Accordingly, the capital cost as on 1.4.2004 has been worked out as Rs.337362.44 lakh (excluding

FERV) for the purpose of determination of tariff in the present petition. Now we consider the additional capitalisation on account of FERV.

FERV/Extra Rupee Liability during the years 2001-04

12. Regulation 1.13 (a) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2001 provided as under:

- (a) Extra rupee liability towards interest payment and loan repayment actually incurred, in the relevant year shall be admissible; provided it directly arises out of foreign exchange rate variation and is not attributable to Utility or its suppliers or contractors. Every utility shall follow the method as per the Accounting Standard-11 (Eleven) as issued by the Institute of Chartered Accountants of India to calculate the impact of exchange rate variation on loan repayment
- (b) Any foreign exchange rate variation to the extent of the dividend paid out on the permissible equity contributed in foreign currency, subject to the ceiling of permissible return shall be admissible. This as and when paid, may be spread over the twelve-month period in arrears.

13. Regulation 1.7 of the 2001 regulations further provided that recovery of foreign exchange rate variation would be done directly by the utilities from the beneficiaries without filing a petition before the Commission. In case of any objections by the beneficiaries to the amounts claimed on these counts, they may file an appropriate petition before the Commission.

14. The details of FERV claimed by the petitioner are as follows:

Year	Amount of FERV (Rs. In lakh)
2001-02	3906.14
2002-03	3133.19
2003-04	-2298.25
Total	4741.08

15. The petitioner's claim for capitalization of Rs. 4741.08 lakh on account of FERV, is matching with calculations submitted and is in accordance with AS-11 applicable up to 31.3.2004. The respondents have not objected to the petitioner's claim under this head. The claim has accordingly been admitted for tariff calculations.

16. Based on the above, after adjustment of FERV of Rs 4741.08 lakh, the gross block as on 1.4.2004 comes to Rs.342103.52 lakh as per details given hereunder:

	(Rs. in lakh)
Capital cost admitted as on 31.3.2001.	336383.00
Additional capitalization as approved for the years 2001-2004	979.44
FERV admitted for the tariff period 2001-2004	4741.08
Opening Capital cost as on 1.4.2004	342103.52

DEBT-EQUITY RATIO

17. Clause (1) of Regulation 36 of the 2004 regulations *inter alia* provides that in case of the existing generating stations, debt-equity ratio Considered by the Commission for fixation of tariff for the period ending 31.3.2004 shall be considered for determination of tariff.

18. The petitioner has claimed tariff on the basis of debt and equity of 68.47:31.53 as considered by the Commission in the order dated 10.3.2005 in petition No. 61/2001 while fixing tariff for the period 2001-04.

19. It is noted that the petitioner in Annexure to Form No. 1 in the petition has shown the capital cost, and financing of capital cost as under:

Particulars	Amount (Rs. in lakh)	Percentage
Capital cost as on 31.3.2004	342376.96	100.00%
Equity	106050.00	30.97%
Debt	230333.00	67.27%
FERV	4741.08	1.38%
Others	1252.86	0.37%
Total Funding	342376.94	100.00%

20. Debt and equity allowed to finance the capital expenditure by order dated 10.3.2005 has been considered in the calculation. Additional capitalization for the years 2001-02 to 2003-04 (taken en block) amounting to Rs.979.44 lakh and FERV for the years 2001-02, 2002-03 and 2003-04 (taken en block) amounting to Rs.4741.08 lakh have been segregated in such a way, so as to make the debt-equity ratio equal to 68.23:31.77 which was considered in Government of India notification for the tariff period 1999-2002. Accordingly, the adjusted debt-equity ratio is 68.23:31.77. The equity as on 1.4.2004, works out to Rs.108694.58 lakh and the normative loan to Rs.233408.93 lakh.

NORMATIVE CAPACITY INDEX

21. The generating station is operating as purely run-of-river type scheme. Its annual normative capacity index as per the 2004 regulations shall be taken as 90% for the tariff period 2004-09. There shall be *pro rata* recovery of capacity charge in case the generating station achieves capacity index below the normative levels. At zero capacity index during any month, no capacity charges shall be payable to the generating station.

RETURN ON EQUITY

22. As per clause (iii) of Regulation 38 of the 2004 regulations, return on equity shall be computed on the equity base determined in accordance with regulation 20 @ 14% per annum. Equity invested in foreign currency is to be allowed a return in the same currency and the payment on this account is made in Indian Rupees based on the exchange rate prevailing on the due date of billing.

23. The petitioner has claimed return on equity of Rs.15111.59 lakh after accounting for equity on account of additional capitalization on works and FERV for the period 1.4.2001 to 31.3.2004.

24. The equity as on 1.4.2004 works out to Rs.108694.58 lakh and the petitioner's entitlement towards return on equity @ 14% works out to Rs.15217.24 lakh per annum.

INTEREST ON LOAN

25. Clause (i) of regulation 38 of the 2004 regulations *inter alia* provides that,-

(a) Interest on loan capital shall be computed loan-wise on the loans arrived at in the manner indicated in regulation 20.

(b) The loan outstanding as on 1.4.2004 shall be worked out as the gross loan as per regulation 20 minus cumulative repayment as admitted by the Commission for the period up to 31.3.2004. The repayment for the period 2004-09 shall be worked out accordingly on normative basis.

(c) The generating company shall make every effort to swap the loan as long as it results in net benefit to the long-term transmission customers.

The costs associated with such swapping shall be borne by the long-term transmission customers.

(d) The changes to the loan terms and conditions shall be reflected from the date of such swapping and benefits passed on to the beneficiaries.

(e) In case any moratorium period is availed of by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

26. The petitioner has claimed interest on loan in the following manner:

(a) Gross notional loan, up to previous year as admitted by the Commission in the order dated 10.3.2005 has been adjusted after giving due consideration for notional loan of Rs. 4104.06 lakh arising out of additional capitalization and taken as the opening balance as on 1.4.2004. Cumulative repayment as on 1.4.2004 is also adjusted considering the effect of refinancing of GOI loans by M-series bonds in the year 2001-02 and WMB loan by N-series, Bank of Maharashtra and SBI-WCDL in 2002-03.

Normative repayment of loan during the year is calculated using formula:

$$\frac{\text{Actual repayment of loan} \times \text{Normative net loan at the beginning of the year}}{\text{Actual net loan at the beginning of the year}}$$

(b) On the basis of actual rate of interest on actual average loan, the weighted average rate of interest on loan is worked out for various years.

(c) Gross loan as corrected has been considered as notional loan and the weighted average rate of interest on loan for respective years as per above has been multiplied to arrive at interest on loan.

27. The petitioner has submitted loan details up to 31.3.2004 for the tariff period 2004-09 on 2.9.2005, 14.11.2005 and 20.12.2005. Accordingly, loan allocation statement as on 1.4.2004 was prepared on the basis of:

(a) Gross loan up to 31.3.2004, repayment up to 31.3.2004 and outstanding loan as on 31.3.2004 as worked out from the loan allocation statement for the year 2003-04.

(b) Installments of various loans for the year 2004-09 as furnished by the petitioner.

(c) Allocation of the above instalments on the basis of outstanding loan as on 31.3.2004.

(d) Applicable rate of interest as on 1.4.2004.

28. In the calculation, the interest on loan has been worked out as detailed below:

(a) Details of net outstanding loan as on 31.3.2004, repayment schedule for the period 2004-09, rate of interest as on 1.4.2004, exchange rate as on 31.3.2004 etc. have been taken from loan allocation statement out as above for working out weighted average rate of interest.

(b) Gross notional loan and cumulative repayment up to 31.3.2004 has been taken from the order dated 10.3.2005.

(c) Notional loan arising out of additional capitalisation and FERV during the years 2001-04 has been considered.

(d) Repayment of notional loan arising due to additional capitalisation and FERV during the years 2001-04 has been worked out in proportion to the repayment of actual loan during these years.

(e) Tariff is worked out considering normative loan and normative repayments. Once the normative loan is arrived at, it is considered for all purposes in the tariff. Normative repayment is worked out by the following formula:

$$\frac{\text{Actual repayment of actual loan during the year}}{\text{Opening balance of actual loan during the year}} \times \text{Opening balance of normative loan during the year}$$

(f) Moratorium in repayment of loan is considered with reference to normative loan and if the normative repayment of loan during the year is less than the depreciation including AAD during the year, then depreciation including AAD during the year is deemed as normative repayment of loan during the year.

(g) Weighted average rate of interest on actual loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.

(h) ABSEK loan and NIB loan carry the floating rate of interest and the rate of interest applicable as on 1.4.2004 has been considered in the calculation, subject to mutual settlement between the parties in case of any change/resetting of the interest rate during the tariff period.

(i) The financing charges, guarantee fees and margin as on 1.4.2004 have been considered in the interest rates in the calculation of actual weighted average interest rate.

(j) LIC loan amounting to Rs.5000.00 lakh has been refinanced by the petitioner with Dena Bank loan on 4.11.2004. As this loan is refinanced after 1.4.2004 it has not been considered while determining the tariff.

(k) GOI loan amounting to Rs. 29847.46 lakh has been refinanced with M-Series bonds on 7.1.2002 and WMB loan has been refinanced with Bank of Maharashtra, N-series bonds and WCDL on 18.3.2003, 15.3.2003 and 20.3.2003 respectively. As this refinancing has been found to be beneficial to the beneficiaries, the effect of this refinancing has been considered notionally in 2001-04 tariff period to arrive at the cumulative repayment as on 31.3.2004 and cumulative depreciation/AAD. However, the actual tariff for the period 2001-04 has not been re-determined.

29. The computations of interest on notional loan by applying weighted average interest rate are appended hereinbelow:

COMPUTATION OF INTEREST ON LOAN

(Rs. in lakh)

	Upto 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Gross loan-Opening	230333.22					
Increase/ Decrease due to Additional Capitalisation	526.61					
Increase/ Decrease due to FERV	2549.10					
Gross Normative loan	233408.93	233408.93	233408.93	233408.93	233408.93	233408.93
Cumulative repayments of Loans up to previous year		163348.96	182637.51	197212.97	225539.39	233408.93
Net loan opening		70059.97	50771.42	36195.96	7869.54	0.00
Repayments of Loans during the year		19288.55	14575.46	28326.42	7869.54	0.00
Net loan-Closing		50771.42	36195.96	7869.54	0.00	0.00
Average Net Loan		60415.69	43483.69	22032.75	3934.77	0.00
Weighted Average Rate of Interest on Loan		6.3018%	6.9465%	6.7267%	2.5238%	2.5238%
Interest on loan		3807.30	3020.61	1482.08	99.30	0.00

DEPRECIATION

30. Sub-clause (a) of clause (ii) of Regulation 38 of the 2004 regulations provides for computation of depreciation in the following manner, namely:

- (i) The value base for the purpose of depreciation shall be the historical cost of the asset.

(ii) Depreciation shall be calculated annually based on straight line method over the useful life of the asset and at the rates prescribed in Appendix II to these regulations. The residual value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the historical capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded from the capital cost while computing 90% of the historical cost of the asset. The historical capital cost of the asset shall include additional capitalisation on account of Foreign Exchange Rate Variation up to 31.3.2004 already allowed by the Central Government /Commission.

(iii) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.

(iv) Depreciation shall be chargeable from the first year of operation. In case of operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

31. The petitioner has claimed the depreciation at the weighted average rate of depreciation on the capital expenditure claimed by it.

32. The capital cost considered for working out the weighted average rate of depreciation for 2001-04 tariff is as given by the petitioner in Petition No.61/2001. As the admitted capital cost as on 1.4.2001 differs with the former cost, head-wise weights are proportionately reduced to the admitted capital cost level as on 1.4.2001 to keep consistency in weighted average depreciation rate. Further, head-wise separation of ACE and FERV is done and added to the capital cost of 1.4.2001 to arrive at the capital cost as on 31.3.2004. On the basis of this cost the

individual head-wise weights of depreciation have been determined for calculation of weighted average rate of depreciation as on 31.3.2004. New heads for computers and software are added and rates of depreciation considered for these heads is 18%.

33. The Commission vide order dated 3.2.2006 in Petition No. 88/2005 has approved deletion/decapitalisation of the Assets worth Rs.17.13 lakh from the capital cost. Cumulative depreciation amounting to Rs.5.66 lakh has been deducted on pro-rata basis from cumulative depreciation/AAD as on 31.3.2004 for determination of tariff.

34. The gross depreciable value of the asset, as per (ii) above, is $0.9 \times \text{Rs. } 342103.51 \text{ lakh} = \text{Rs. } 307893.16 \text{ lakh}$. Cumulative depreciation and AAD recovered in tariff up to 31.3.2004 is Rs. 113354.25 lakh. Remaining depreciable value as on 1.4.2004 is thus Rs.194538.91 lakh.

35. The entire loan gets repaid in 2007-08. Therefore, depreciation for the year 2008-09 has been spread over the balance useful life of the generating station. Weighted average life of the project has been worked out to 36.11 years and the mean date of commercial operation of the generating station has been taken as 1.6.1997. The balance useful life of the station works out to 25.11 years as on 1.4.2008.

36. Accordingly, for the period 1.4.2004 to 31.3.2008 the depreciation works out to Rs. 8725.91 lakh each year by applying rate of depreciation of 2.5507 % as shown below and Rs. 5121.79 for the year 2008-09 by distributing remaining depreciation over the balance useful life:

(Rs. in lakh)

Details of Depreciation	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
As per order dated 10.3.2005	336383.00					
Addition during 2001-04 due to Additional Capitalisation	979.44					
Addition during 2001-04 due to FERV	4741.08					
Gross Block as on 31.3.2004	342103.51	342103.51	342103.51	342103.51	342103.51	342103.51
Rate of Depreciation		2.5507%	2.5507%	2.5507%	2.5507%	
Depreciable Value		307893.16	307893.16	307893.16	307893.16	307893.16
Balance Useful life of the asset		29.11	28.11	27.11	26.11	25.11
Remaining Depreciable Value		194538.91	175250.36	160674.90	137334.01	128608.10
Depreciation		8725.91	8725.91	8725.91	8725.91	5121.79

ADVANCE AGAINST DEPRECIATION

37. As per sub-clause (b) of clause (ii) of Regulation 56 of the 2004 regulations, in addition to allowable depreciation, the transmission licensee is entitled to Advance Against Depreciation, computed in the manner given hereunder:

AAD = Loan repayment amount as per regulation 56 (i) subject to a ceiling of 1/10th of loan amount as per regulation 54 minus depreciation as per schedule

38. It is provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year. It is further provided that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.

39. The petitioner has claimed Advance Against Depreciation in the following manner, namely:

(a) 1/10th of gross loan is worked out from the Gross Notional Loan admitted by the Commission in the order dated 10.3.2005 along with notional loan worked out by division of de-capitalisation/additional capitalisation into notional loan and equity.

(b) Cumulative loan as well as repayment of notional loan during the year has been considered.

(c) Depreciation as claimed in the petition.

(d) Cumulative depreciation up to 2003-04 as per order dated 10.3.2005 excluding Advance against Depreciation has been considered.. Depreciation on FERV for the period 2001-04 has not been added to arrive at total cumulative depreciation amount as on 31.03.2004.

40. In our calculations, Advance Against Depreciation has been worked in accordance with the following methodology, namely:

(a) 1/10th of gross loan is worked out from the gross notional loan.

(b) Repayment of notional loan during the year has been considered

(c) Depreciation is worked out as above.

(d) Cumulative depreciation up to 31.3.2004 is worked out considering cumulative depreciation/AAD up to 2003-04 as per the order dated 10.3.2004 and has been revised assuming the effect of refinancing of GOI loan and WMB loan bonds and depreciation recovered on FERV.

(e) Cumulative depreciation for calculation of AAD is worked out considering depreciation up to the year of calculation, excluding AAD of the year of calculation.

41. Based on the above, the petitioner is entitled to Advance Against Depreciation only during 2004-05 as shown hereunder:

	(Rs. in lakh)				
	2004-05	200506	2006-07	2007-08	2008-09
1/10 th of Gross Loan(s)	23340.89	23340.89	23340.89	23340.89	23340.89
Repayment of the Loan	19288.55	14575.46	28326.42	7869.54	0.00
Minimum of the above	19288.55	14575.46	23340.89	7869.54	0.00
Depreciation during the year	8725.91	8725.91	8725.91	8725.91	5121.79
(A) Difference	10562.64	5849.56	14614.99	-856.37	-5121.79
Cumulative Repayment of the Loan	182637.51	197212.97	225539.39	233408.93	233408.93
Cumulative Depreciation/ Advance against Depreciation	122080.16	141368.70	155944.17	179285.06	184406.85
(B) Difference	60557.35	55844.27	69595.23	54123.87	49002.08
Advance against Depreciation Minimum of (A) and (B)	10562.64	5849.56	14614.99	0.00	0.00

Deleted: ¶

O&M EXPENSES

42. According to clause (v) of Regulation 38 of the 2004 regulations, O&M expenses including insurance for the existing generating stations which have been in operation for 5 years or more in the base year of 2003-04 shall be derived on the basis of actual O&M expenses for the years 1998-99 to 2002-03, based on the audited balance sheets, excluding abnormal O&M expenses, if any, after prudence check by the Commission. The average of such normalized O&M expenses after prudence check, for the years 1998-99 to 2002-03 considered as O&M expenses for the year 2001-02 shall be escalated @ 4% per annum to arrive at the O&M expenses for the base year 2003-04. Further, the base O&M expenses for the year 2003-04 shall be further escalated at the rate of 4% per annum to arrive at permissible O&M expenses for the relevant year of tariff period.

43. The year-wise break-up of actual O&M expenses for the years 1998-99 to 2002-03 furnished by the petitioner based on which O&M

expenses for the period 2004-05 to 2008-09 have been claimed are as follows:

(Rs. in lakh)						
S.No	Items	1998-99	1999-00	2000-01	2001-02	2002-03
	1	2	3	4	5	6
	Break-up of O&M expenses					
1	Consumption of Stores and Spares	0	38.31	19.25	122.88	20.45
2	Repair and Maintenance	207.64	309.99	285.57	139.20	189.25
3	Insurance	1657.11	1704.67	1718.82	1744.30	1756.05
4	Security	507.36	897.17	603.44	719.41	472.76
5	Administrative Expenses					
	- Rent	5.90	7.03	9.19	10.02	13.52
	- Electricity Charges	24.67	43.23	19.78	19.17	2.04
	- Travelling and conveyance	20.88	14.72	22.79	25.30	32.87
	- Telephone, telex and postage	11.20	11.37	18.95	17.56	23.63
	- Advertising	3.18	2.90	2.06	7.50	7.11
	- Entertainment	0.27	0.34	0.39	1.02	1.02
	- Other Misc. Expenses	122.08	81.59	78.11	32.44	68.08
	Sub-Total (Administrative Expenses)	188.18	161.18	151.27	113.01	148.27
6	Employee Cost					
	a) Salaries, wages and allowances	984.66	610.88	918.27	902.15	1057.04
	b) Staff welfare expenses	192.33	106.35	127.36	142.60	208.97
	c) Productivity linked incentive	2.21	20.95	18.14	22.23	19.04
7	Corporate office expenses allocation	619.36	551.23	612.93	611.26	630.89
8	Total (1 to 7)	4358.85	4400.73	4455.05	4517.04	4518.28
	LESS: Recoveries, if any	43.98	19.17	5.60	21.52	25.17
9	Net Expenses	4314.87	4381.56	4449.45	4495.52	4493.11
	Less abnormal O&M expenses	-	-	-	-	-
	a) Siltation					
	b) Overstaffing					
	Total O&M Expenses	4314.87	4381.56	4449.45	4495.52	4493.11

44. The petitioner has furnished the following details of the employees:

Executives	102	92	75	79	72
Non-Executives	386	336	274	282	270
Total	488	428	349	361	342

45. Based on the methodology specified in the 2004 regulations, the petitioner has claimed following O&M expenses for the tariff period 2004-09.

(Rs. in lakh)	
Year	O&M
2004-05	5179
2005-06	5386
2006-07	5601
2007-08	5826
2008-09	6059

Major constituents of O&M expenses are:

- (a) Consumption of stores and spares
- (b) Repairs & maintenance
- (c) Insurance
- (d) Security
- (e) Employees cost
- (f) Corporate office's expenses

46. The petitioner has furnished reasons wherever O&M expenses during a year exceed the expenses for the previous year. During the hearing of the petition, it was noticed that in case of repairs and maintenance works and consumption of stores and spares, there were fluctuations in expenditure during certain years. It was observed that the reasons furnished by the petitioner regarding higher O&M expenses in such cases was either inadequate or not satisfactory. The petitioner was directed to furnish additional details of O&M expenses claimed under the above categories for the years 1998-99 to 2002-03 for prudence check.

47. It was further noted that in Petition No. 88/2005, regarding additional capitalization of expenditure for the generating station for the period 2001-04, the petitioner had claimed sums of Rs. 128 lakh and Rs. 97 lakh on account of capitalization of spares during the years 2002-03 and 2003-04 respectively. In its order dated 3.2.2006 in Petition No. 88/2005, the Commission has disallowed

the additional capital expenditure claimed on account of capitalization of spares during the years 2002-03 and 2003-04. However, actual amount of spares consumed for the purpose of Repairs & Maintenance during the years 2002-03 and 2003-04 are to be considered under "O&M expenses" of the generating station. The petitioner has submitted a list of spares amounting to Rs. 20.45 lakh and Rs. 24.63 lakh actually consumed during the years 2002-03 and 2003-04 respectively.

48. Further, according to the information given by the petitioner in the previous tariff period, expenses on insurance were on account of corporate policy of providing insurance coverage to all fixed assets of the generating station. Since the expenses of about Rs. 1700 lakh per year on insurance coverage appeared to be of high order, the petitioner was directed to furnish details of the terms and conditions of insurance coverage, including the exigencies for insurance of various assets.

49. It was also noted that during the year 1998-99, expenses on salaries, wages and allowances including welfare expenses and productivity-linked incentive were about Rs. 1200 lakh. These expenses had gone down to Rs 750 lakh in the year 1999-00 and again increased to Rs. 1300 lakh during 2002-03. The petitioner was directed to clarify the reasons for the same along with details of arrears on account of hike in salaries, wage, etc. included in employee cost during different years.

50. The petitioner subsequently furnished the requisite details vide affidavit dated 18.1.2006 and further clarifications dated 1.3.2006.

51. The O&M expenses claimed by the petitioner with reference to the table given above are discussed in the following paragraphs.

Consumption of Stores & Spares and Repairs & Maintenance

52. The 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 years 1998-99 to 2002-03 is as follows:

(Rs. in lakh)

Year	1998-99	1999-00	2000-01	2001-02	2002-03
Consumption of Stores & Spares	0	38.31	19.25	122.88	20.45
Repairs & Maintenance	207.64	309.99	285.57	139.20	189.25

53. The petitioner has clarified that by virtue of their nature these expenses are liable to be erratic because of the fact that some of routine expenditures are to be regular in nature whereas others shall be as per actual repairs and maintenance requirement based on planning of repair and maintenance works varying from year to year.

54. The nature of repair and maintenance (R&M) expenses covered are- R&M of plant & machinery, R&M of office buildings, staff colonies, PH building, vehicles like buses, trucks, cars, R&M of roads & bridges, electrical installations, water supply, furniture & fixture, computer, barrage etc. The quantum of these variations shall further depend upon the number of generating units taken on major capital maintenance, quantity and type of spares consumed for replacement of damaged components during the year, special repairs of civil structures, if any, like spillway, silt excluder gallery, intake area, HRT, hydro mechanical equipments i.e. radial & penstock gates etc. of the power plant to be undertaken during the year as per site requirement; frequency of specified repair and maintenance cycles of each

components; besides other repair & maintenance works such as white washing, painting of residential and non-residential buildings and other civil works to be taken as per pre-determined cycles (whose expenses may not be incurred every year).

55. Apart from above, sometime replacement of any major component like lower ring, top cover, turbine shaft, bearing pads etc may shoot up the quantum of expenditure incurred in a particular year. Therefore, such increase/ decrease in O&M expenses are very common and normal feature as per yearly requirements and cannot be considered abnormal.

56. Higher expenditure in consumption of stores and spares during the years 1999-00 and 2001-02 has been attributed to following works:

1999-00: Due to repair of two nos. stator windings amounting to Rs.73.5 lakh

Due to repair of and 400 kV oil filled cable amounting to Rs.21 lakh

2001-02: Due to repair of DG set for Rs.11 lakh

Due to repair of hydro-mechanical works amounting to Rs.19 lakh

57. The justification provided by the petitioner is found to be satisfactory, and hence expenditure on repair and maintenance works and consumption of stores and spares has been allowed for calculation of O&M for the tariff period 2004-09.

Insurance coverage

58. Expenditure on account of Insurance coverage submitted by the petitioner is as follows:

(Rs. in lakh)

Year	1998-99	1999-00	2000-01	2001-02	2002-03
Insurance	1657.11	1704.67	1718.82	1744.30	1756.05

59. The petitioner vide affidavit dated 18.1.2006 has submitted that as per its policy, it was to establish a self-insurance reserve/fund in respect of O.M. projects by transferring on year to year basis an amount equal to 0.5% of the gross block of assets of O.M. projects. This reserve/fund is to be utilized for losses of assets due to fire, storm, cyclones, earthquake, landslides, terrorist activities (added in May, 2002), floods (added in September, 2005), but not for the routine wear and tear, repair and maintenance etc, accidents or breakdown of machinery or shortage of inventory or insurance of human life. According to the petitioner, it was also decided that losses of nature mentioned above shall be assessed by a Committee to be constituted for the purpose by its CMD and actual losses based on accepted recommendations of the Committee shall be reimbursed from the fund.

60. The reasons for insurance coverage and nature assets covered as submitted by the petitioner are satisfactory. Further, the annual expenditure incurred on insurance coverage (around Rs. 1700 lakh) is around 0.5% of the capital cost of the the generating station admitted by the Commission as on 1.4.2001. Hence expenses towards insurance coverage have been allowed.

Security

61. Expenditure on account of security claimed by the petitioner is as follows:

(Rs. in lakh)

Year	1998-99	1999-00	2000-01	2001-02	2002-03
Security expenses	507.36	897.17	603.44	719.41	472.76

62. The petitioner has submitted that the generating station is located in most sensitive area. Security charges are being paid to CISF on the basis of bills raised by them. Besides cost of security establishment of CISF, during 1999-00 an amount of Rs. 259 lakh was provided on account of supervision charges of CISF and Rs. 41 lakh on account of clothing to security personnel.

63. In view of the strategic location of the generating station, security expenses as claimed have been allowed.

Administrative expenses

64. Details of Administrative expenses incurred are as below:

(Rs. in lakh)

Administrative Expenses	1998-99	1999-00	2000-01	2001-02	2002-03
Rent	5.90	7.03	9.19	10.02	13.52
Electricity Charges	24.67	43.23	19.78	19.17	2.04
Traveling and conveyance	20.88	14.72	22.79	25.30	32.87
Telephone, telex and postage	11.20	11.37	18.95	17.56	23.63
Advertising	3.18	2.90	2.06	7.50	7.11
Entertainment	0.27	0.34	0.39	1.02	1.02
Other Misc. expenses	122.08	81.59	78.11	32.44	68.08
Total (Administrative Expenses)	188.18	161.18	151.27	113.01	148.27

65. There is no significant variation in the expenses like rent, electricity charges, traveling charges, telephone, telex & postage entertainment etc. The "Other Misc. expenses" include - printing & stationery, loss on sale of assets, consultancy charges, income tax on consultant, books & journals, legal expenses, departmental meetings, environment & ecology, payment of compensation of land awarded by district judge etc. The other miscellaneous

expenses of Rs.122.08 lakh claimed in the year 1998-99 are very high compared to other years. The petitioner has not given any justification for this high miscellaneous expenses. Thus average of the remaining four year is taken for the purpose of calculation. Further, following expenses are not being considered for normalization:

(Rs. in lakh)					
Year	1998-99	1999-00	2000-01	2001-02	2002-03
i) loss on sale of assets	-	-	1.84	1.33	20.42
ii) Compensation of land awarded by district judge	-	3.45	-	-	-
Total	-	3.45	1.84	1.33	20.42

66. Details of the above expenses and the reasons for their non-inclusion are as under:

(a) Loss of sale of assets- Any loss of stores and other assets should be borne by the company any should not be charged to beneficiaries.

(b) Payments of compensation of land awarded by district judge: Such type of expenses have been claimed in respect of various petitions for claiming Additional capital expenditure by NHPC during the period 2001-04 and the same have been allowed by the Commission after prudence check. It is not justified to claim such type of expenses under O&M cost. Hence not considered here.

67. Thus, the following administrative expenses during the period 1998-99 to 2002-03 have been allowed for calculation of O&M cost .

(Rs. in lakh)					
Year	1998-99	1999-00	2000-01	2001-02	2002-03
Total Administrative Expenses claimed	188.18	161.18	151.27	113.01	148.27
Total Administrative Expenses allowed	131.15	157.73	149.43	111.68	127.85

Employees cost

68. The expenses on account of employees cost forms major part of the total O&M expenses, the average employee cost being about 24% of the total average O&M cost during 1998-99 to 2002-03. Employee cost of Uri HEP is, however, better as compared to other projects of NHPC, as may be seen from table below.

Project	Average Employee Cost (Rs. in lakh)	Average Total O&M Cost (Rs. in lakh)	% age of Avg. Employee cost to Total avg. O&M cost during 1998-99 to 2002-03
Tanakpur	1132	1968	58%
Baira siul	1782	2664	67%
Chamera-I	2825	5619	50%
Loktak	2322	2782	83%
Salal	4277	6474	66%
Uri	1067	4427	24%

69. The table below gives the ratio of employees/ MW of installed capacity in case of the petitioner's generating stations. In case of Uri HEP the ratio is quite reasonable.

Project	Capacity (MW)	Number of employees as on 2002-03	Employee per MW
Tanakpur	94.2	479	5
Bairasiul	198	679	3.4
Chamera-I	540	750	1.4
Loktak	105	844	8
Salal	690	1153	1.7
Uri	480	342	0.7

70. Employees cost comprises -

- (a) Salaries, wages & allowances- which apart from Salaries & wages and include honorarium, leave encashment, provident fund contribution, compensation under statutory provision, gratuity and provision on a/c of gratuity made on actuarial valuation basis every year, VRS and also arrear of wage revision of employees.
-

(b) Staff welfare expenses- include LTC, medical reimbursement, liveries & uniform, ex-gratia, grants & subsidies to sports & canteen, new year gifts, project school & hospital expenses, transport expenses etc.

(c) productivity-linked incentive- These are paid as per policy of the petitioner company.

71. Year-wise break up of employees cost is as below:

(Rs. in lakh)					
Year	1998-99	1999-00	2000-01	2001-02	2002-03
Salaries, wages and allowances	984.66	610.88	918.27	902.15	1057.04
Staff welfare expenses	192.33	106.35	127.36	142.60	208.97
Productivity linked incentive	2.21	20.95	18.14	22.23	19.04
Total	1179.20	738.18	1063.77	1066.98	1285.05

72. It would be seen from above table that except in the year 1999-00, total employees cost has remained more or less constant. The petitioner has not given any reason for reduction in employees cost in 1999-00 except that there has been reduction in employees from 488 in 1998-99 to 428 in 1999-00. The expenditure in 2002-03 was about 20% higher than during 2001-02.

73. On prudence check, the following expenses have been excluded from consideration towards O&M expenses :

(Rs. in lakh)					
Year	1998-99	1999-00	2000-01	2001-02	2002-03
Ex-gratia	-	1.68	6.87	6.24	1.00
New year gifts	-	-	-	-	1.24
VRS	-	-	-	22.43	5.40
Productivity linked incentive	2.21	20.95	18.14	22.23	19.04
Total	2.21	22.63	25.01	50.90	26.68

74. The reasons for not considering the above expenses for normalisation are that

- (a) Ex-gratia is an incentive and should be paid out of profit of the company.
- (b) The expenses on new year gifts should be borne by the petitioner company out of its profits and not loaded to the beneficiaries.
- (c) 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 2004-09.
- (d) 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 tariff purpose for the reason that expenses incurred under this head are on account of incentive paid to the employees for maintaining high availability of the generating station to achieve higher generation from the generating station, for which incentive payment is made separately to the generating station and claimed in the bill of the beneficiaries.

75. Thus, the employees cost considered for normalization for the reasons explained above shall work out as follows:

Year	(Rs. lakh)				
	1998-99	1999-00	2000-01	2001-02	2002-03
Employees cost claimed	1179.20	738.18	1063.77	1066.98	1285.05
Expenses not considered	2.21	22.63	25.01	50.90	26.68
Total Employee Cost considered	1176.99	715.55	1038.76	1016.08	1258.37

Corporate Office expenses

76. The petitioner has submitted that 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. Year-wise details of total Corporate Office expenses incurred, 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 given hereunder:

(Rs. in lakh)					
Corporate Office expenses	1998- 99	1999-00	2000- 01	2001-02	2002- 03
Total expenses	4523	4401	6206	7276	8676
Running stations	1336	1217	1276	1310	1282
Const. stations	3020	2432	3781	5665	7261
Other activities	167	752	1148	301	133
Charged to URI HEP	619	551	613	611	631

77. The petitioner's balance sheets indicate that amounts of Rs. 270 lakh during the year 1999-00 and Rs. 70 lakh during 2000-01 were paid towards donation. Although it is appreciable for the benefit of society or for the social cause, donation cannot be directly attributed to the business of power generation. Accordingly donation cannot be passed on to the beneficiaries. Therefore, donation amounts have not been considered in the Corporate Office expenses for tariff purpose. Further, ex-gratia has also not been considered because it is an incentive and should be borne out of profit of the petitioner company. After excluding proportionate expenses on account of ex-gratia and donation paid by the petitioner, the following Corporate Office expenses have been considered towards O&M expenses of the generating station for the period 1998- 99 to 2002-03

(Rs. in lakh)					
Year	1998- 99	1999- 00	2000- 01	2001-02	2002-03
As claimed	619	551	613	611	631
Less Donations	0	34	7	0	0
Less ex-gratia	8	6	6	5	6
As considered	611	511	600	606	625

O&M expenses considered during 1998-99 to 2002-03

78. Based on the above discussions and after prudence check, the following O&M expenses have been considered for the period 1998-99 to 2002-03 for calculation of O&M expenses for the tariff period 2004-09.

Year	(Rs. lakh)					Average Base on 2000-01
	1998-99	1999-00	2000-01	2001-02	2002-03	
Consumption of Stores & Spares	0	38.31	19.25	122.88	20.45	
Repairs & Maintenance	207.64	309.99	285.57	139.20	189.25	
Insurance	1657.11	1704.67	1718.82	1744.30	1756.05	
Security	507.36	897.17	603.44	719.41	472.76	
Administrative Expenses	131.15	157.73	149.43	111.68	127.85	
Employee Cost	1176.99	715.55	1038.76	1016.08	1258.37	
Corporate expenses	611	511	600	606	625	
LESS: Recoveries	43.98	19.17	5.60	21.52	25.17	
Less abnormal O&M expenses						
a) Siltation	-	-	-	-	-	
b) Overstaffing						
Total O&M expenses Considered	4247	4315	4409	4438	4425	4367
Total O&M claimed	4315	4382	4449	4496	4493	4427

79. Accordingly, the year-wise O&M expenses for the generating station, applying escalation @ 4%, for the tariff period 2004-09 work out as follows-

Year	(Rs. in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses	5109	5313	5526	5747	5977

80. The petitioner has submitted that the wage revision of its employees is due with effect from 1.1.2007. Therefore, O &M expenses should be subject to revision on account of revision of employee cost from that date. In the alternative, it has been prayed that the increase in employee cost due to wage revision be allowed as per actuals for extra cost to be incurred consequent to wage revision. We are not expressing any view, as this issue does not arise for consideration at this

stage. The petitioner may approach for a relief in this regard at an appropriate stage in accordance with law.

INTEREST ON WORKING CAPITAL

81. In accordance with clause (v) of Regulation 38 of the 2004 regulations, working capital in case of hydro generating stations shall cover:

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- (i) Operation and Maintenance expenses for one month;
- (ii) Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation; and
- (iii) Receivables equivalent to two months of fixed charges for sale of electricity, calculated on normative capacity index.

Deleted: Coal based/Lignite-fired generating stations

82. Under the 2004 regulations, the rate of interest on working capital shall be on a normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2004 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.

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

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¶

- (a) **Maintenance Spares:** As per the order dated 10.3.2005 in Petition No. 61/2001 for the tariff period 2001-04, the gross block of Rs. 316614 lakh as on 31.3.1998 was considered for the purpose of fixation of tariff for the period 2001-04, (cost on the date of commercial operation of the

generating station i.e. 1.6.1997 was not available). Thus, the cost of maintenance spares for calculation of IWC, for the tariff period 2004-09 shall work out as follows:

(Rs. in lakh)					
Year	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance spares	4491.23	4760.70	5046.35	5349.13	5670.07

(b) O&M Expenses: O&M expenses for working capital have been worked out for 1 month of O&M expenses approved above are considered in working capital of the respective year:

(c) Receivables: The receivables have been worked out on the basis of two months of fixed and variable charges.

84. The average SBI PLR of 10.25% as on 1.4.2004 has been considered as the rate of interest on working capital during the tariff period 2004-05 to 2008-09.

85. The necessary details in support of calculation of interest on working capital are appended below:

Calculation of Interest on Working Capital

(Rs. in lakh)

	2004-2005	2005-2006	2006-07	2007-2008	2008-09
Spares	4491.23	4760.70	5046.35	5349.13	5670.07
O & M expenses	425.75	442.75	460.50	478.92	498.08
Receivables	7448.25	6555.26	7822.07	5152.49	4569.44
Total Working Capital	12,365.23	11,758.72	13,328.92	10,980.54	10,737.60
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest on Working Capital	1,267.44	1,205.27	1,366.21	1,125.50	1,100.60

ANNUAL FIXED CHARGES

86. A statement showing summary of the capital cost and other related matters is annexed to this order. The annual fixed charges for the period 1.4.2004 to 31.3.2009 allowed in this order are summed up as below:

s. in lakh)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	8725.91	8725.91	8725.91	8725.91	5121.79
Interest on Loan	3807.30	3020.61	1482.08	99.30	0.00
Return on Equity	15217.24	15217.24	15217.24	15217.24	15217.24
Advance Against Depreciation	10562.64	5849.56	14614.99	0.00	0.00
Interest on Working Capital	1267.44	1205.27	1366.21	1125.50	1100.60
O & M Expenses	5109.00	5313.00	5526.00	5747.00	5977.00
TOTAL	44689.52	39331.58	46932.43	30914.96	27416.63

Primary Energy Rate

87. As per Regulation 39 the 2004 regulations, rate of primary energy for all hydroelectric generating stations, except for pump storage generating stations, shall be equal to the previous Financial year's lowest variable charges of the central sector thermal power generating stations of the concerned region and the primary energy charge shall be computed based on the primary energy rate and saleable scheduled primary energy. In case the primary energy rate recoverable by applying the above primary energy rate exceeds the Annual Fixed Charges of a generating station, the primary energy rate for such generating station shall be calculated by the following formula:

$$\text{Primary energy rate} = \frac{\text{Annual Fixed Charges}}{\text{Saleable Primary energy}}$$

88. The lowest variable charge of Central Sector Thermal generating stations of Northern Region are found to be varying from month to month basis. The petitioner has calculated the primary energy rate of the generating station for the first year of tariff period namely 2004-05 as average of preceding 12 months (i.e. April, 2003 to March, 2004) lowest variable charges of Central Sector Thermal generating stations of Northern Region. Based on this methodology, the lowest variable charge for the year 2003-04 has been worked out at 69.47 paise/ kWh. This has been considered as the primary energy rate for Northern Region for the year 2004-05. This rate has also been agreed by the respondents in 115th

Commercial Committee meeting of NREB held in September, 2004. The details of the primary energy rate arrived at are given in the following table:

STATION	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV	DEC	JAN	FEB	MAR.
SINGRAULI	68.53	68.28	71.05	70.79	72.23	71.48	74.77	75.79	75.84	75.8	74.9	76.7
RIHAND	67.06	71.37	68.89	68.41	68.33	65.17	65.98	63.53	78.99	80.6	73	73.3
FGUPTS	100.7	101.86	102.88	102.02	104.4	105.98	104.7	108.9	112.2	106	110	109
NCTPS	155.27	154.77	152.05	148.69	148.8	142.65	153.5	146.8	146.1	141	145	141
ANTA GPS	97.13	100.24	114.38	113.56	111.9	110.29	137.9	143.4	144.7	167	179	153
AURAIYA GPS	128.26	101.38	114.35	127.36	143	146.62	147.9	140.4	154.8	167	200	95.5
DADRI GAS	110.64	111.64	161.33	104.35	165.1	171.85	202.2	197.4	95.38	94.4	94.4	94.4
FGUPTS-II	100.64	101.72	102.18	101.46	102.9	104.46	102.9	106.6	110.3	104	108	107
Lowest of the month	67.06	68.28	68.89	68.41	68.33	65.17	65.98	63.53	75.84	75.8	73	73.3

89. The primary energy rates for the remaining years of the tariff period shall be determined on the same basis as considered above, by the petitioner in consultation with the beneficiary states. No petition for this purpose is required to be filed. However, in case the parties are unable to agree to primary energy rate, any one of them may approach the Commission for a decision by filing an appropriate petition.

Design Energy

90. The quantum of energy generated in excess of the design energy at the generating station on annual basis is the secondary energy. For the computation of monthly secondary energy and the secondary energy charge, month-wise details of design energy are indicated in the following table:

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

91. The rate of secondary energy shall be the same as rate of primary energy.

Impact of additional capitalization for the years 2001-04

92. In Petition No 88/2005 filed by the petitioner for approval of revised fixed charges for additional capitalization for the period 1.4.2001 to 31.3.2004, the Commission has decided that additional capital expenditure be added to the gross block as on 1.4.2001 to arrive at gross block as on 1.4.2004 for the purpose of fixation of tariff for the period 2004-05 to 2008-09. The Commission has further ordered that the petitioner would be entitled to earn return on equity @ 16% on equity portion of additional capitalization approved and interest on loan at the rate as applicable during 2001-02 to 2003-04. The return on equity and interest on loan are payable on additional capitalization from 1st April of the financial year following the financial year to which additional capital expenditure relates.

93. Based on the above, the petitioner shall be entitled to recover the following amounts from the respondents through tariff on account of return on equity and interest on loan on additional equity on account of additional capitalisation on works.:

(Rs. in lakh)					
Additional Capitalisation		656.93	107.42	215.09	979.44
Financing of Additional Capitalisation					
Notional Loan		353.21	57.75	115.65	526.61
Notional Equity		303.72	49.66	99.44	452.83
Total		656.93	107.42	215.09	979.44
Effective Additional Capitalisation					
Opening Loan Balance		0.00	353.21	383.09	
Addition of Loan		353.21	57.75	115.65	526.61
Repayment of Loan		0.00	27.87	0.00	27.87
Closing Loan Balance		353.21	383.09	498.73	
Effective Loan			353.21	383.09	
Weighted Average Rate of Interest on Loan		13.2680%	14.5229%	11.0469%	
Effective Equity			303.72	353.39	
Interest on loan			51.30	42.32	93.62
Return on Equity			48.60	56.54	105.14
Impact of Additional Capitalisation			99.89	98.86	198.75

94. The petitioner has also sought reimbursement of filing fee of Rs.25 lakh paid. A final view on reimbursement of filing fee is yet to be taken by the Commission for which views of the stakeholder have been called for. The view taken on consideration of the comments received shall apply in the present case as regards reimbursement of filing fee.

95. In addition to the charges approved above, the petitioner is entitled to recover other charges also like incentive, claim for reimbursement of Income-tax, other taxes, cess levied by a statutory authority, and other charges in accordance with the 2004 regulations, as applicable.

96. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's interim directions. The provisional billing of tariff shall be adjusted in the light of final tariff now approved by us.

97. This order disposes of Petition No.47/2005.

Sd/-
(A.H. JUNG)
MEMBER

Sd/-
(BHANU BHUSHAN)
MEMBER

Sd/-
(K.N. SINHA)
MEMBER

Sd/-
(ASHOK BASU)
CHAIRPERSON

New Delhi dated the 9th May 2006

Summary Sheet			
Name of the Company:		NHPC	
Name of the Project		URI HEP	
Actual DOCO:		1.6.1997	
Petition No.:		47/2005	
Tarrif setting Period:		2004-09	
(Rs.in lakh)			
1 Capital Cost of the Project		336383.00	
4 Admitted Capital Cost as on 1.4.2004 for Calculation of Debt and Equity¹		336383.00	
5 Additional Capitalisation(works)		979.44	
2001-02		656.93	
2002-03		107.42	
2003-04		215.09	
Total		979.44	
6 Additional Capitalisation(FERV)		4741.08	
2001-02		3906.14	
2002-03		3133.19	
2003-04		-2298.25	
Total		4741.08	
7 Total Capital Cost as on 1.4.2004(2+3+4)		342103.51	
8 Means of Finance¹ :			
Debt	68.23%	233408.93	
Equity	31.77%	108694.58	
Total	100.00%	342103.51	
9 Gross Loan as on 1.4.2004		233408.93	
Cumulative Repayment upto 31.3.2009 :		233408.93	
Repaid upto 31.3.2004		163064.40	
1.4.2001 to 31.3.2004 (ACE & FERV)		284.56	
From 01.04.2004 to 31.03.2009		70059.97	
Total		233408.93	
10 Balance Loan to be repaid beyond 31.3.2009 :		0.00	
11 Depreciation recovered upto 31.3.2009 :		184406.85	
	Dep	AAD	Total
Recovered upto 31.3.2004	55438.00	57583.31	113021.31
1.4.2001 to 31.3.2004 (ACE & FERV)	332.95	0.00	332.95
1.4.2004 to 31.3.2009	40025.41	31027.18	71052.60
Total			184406.85
12 Balance Depreciation to be recovered beyond 31.3.2009 :		123486.31	
Capital cost for the purpose of Depreciation		336383.00	
ACE + FERV		5720.51	
Capital cost as 1.4.2004		342103.51	
Less: Land Cost		0.00	
		342103.51	
90% of Capital Cost as above		307893.16	
Cum. Depreciation to be recovered upto 31.3.2009		184406.85	
Balance Depreciation to be recovered beyond 31.3.2009		123486.31	