

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Shri Bhanu Bhushan, Member**
- 2. Shri. R. Krishnamoorthy, Member**

**Review Petition No. 144/2006
in
Petition No. 171/2004**

In the matter of

Review of order dated 4.10.2006 in Petition No. 171/2004, for approval of tariff of Loktak HE Project for the period from 1.4.2004 to 31.3.2009

And in the matter of

National Hydroelectric Power Corporation Limited,

. . . **Petitioner**

Vs

1. Assam State Electricity Board, Guwahati
2. Department of Power, Govt. of Arunachal Pradesh, Itanagar
3. Electricity Department, Govt. of Mizoram, Aizwal
4. Tripura State Electricity Corporation Ltd, Agartala
5. Meghalaya State Electricity Board, Shillong
6. Electricity Department, Govt. of Manipur, Imphal
7. Electricity Department, Govt. of Nagaland, Kohima. **Respondents**

The following were present:

1. Shri Prashant Kaul, NHPC
2. Shri Y.S.Goela, NHPC
3. Shri Ansuman Ray, NHPC
4. Shri T.K.Mohanty, NHPC
5. Shri C.Vinod, NHPC
6. Shri V.N.Tripathi, NHPC
7. Shri Sanjay Kumar, NHPC
8. Shri D.Chakraborty, NHPC
9. Shri Kame Kapur, NHPC
10. Shri Naveen Samriya, NHPC
11. Shri P.K.Hazarika, ASEB
12. Shri K.Goswami, ASEB

ORDER
(DATE OF HEARING: 12.6.2007)

This application for review has been filed by the petitioner, National Hydroelectric Power Corporation Ltd, (NHPC), a generating company, for review of order dated 4.10.2006, in Petition No. 171/2004, determining the tariff in respect of Loktak Hydroelectric Project, for the period 1.4.2004 to 31.3.2009.

2. The petitioner has contended that there are certain fundamental errors in the said order dated 4.10.2006 and accordingly has sought review of the order on certain aspects, discussed in the succeeding paras.

ALLOCATION OF ADDITIONAL CAPITALIZATION TOWARDS DEBT AND EQUITY

3. Tariff for the period 2001-04 in respect of the generating station was determined vide the Commission's Order dated 1.11.2002 in Petition No. 59/2001 based on the actual debt - equity ratio of 53.06:46.94. In the petition for determination of tariff for the period 2004-09, the petitioner had claimed additional capital expenditure amounting to Rs.1001.46 lakh. Against the above claim, the Commission allowed additional capitalization of Rs. 820.05 lakh only. After deducting the assets not in use amounting to Rs.238.26 lakh, net additional capitalization of Rs.581.79 lakh was allowed for arriving at the capital cost as on 31.3.2004. The Commission in para 15 of its order dated 4.10.2006 segregated the above mentioned additional capital into debt and equity in the following manner:

“15. Debt and equity allowed to finance the capital expenditure in the Commission’s order dated 1.11.2002 in Petition No. 59/2001 has been considered in calculation of tariff. Additional capitalisation for the years 2001-02 to 2003-04 amounting to Rs. 820.05 lakh, decapitalization amounting to Rs.238.26 lakh on account of the assets not in use declared by the petitioner as on 1.4.2004 have been segregated in such a way, so as to keep overall debt-equity ratio close to the ratio of 70:30 as the approved debt-equity ratio or the actual equity employed have not been given by the petitioner. Accordingly, the adjusted debt-equity ratio is 54.98:45.02. In this manner equity component for tariff purpose, as on 1.4.2004 works out to Rs.6393.00 lakh...”

4. The petitioner in its Review petition has urged that segregating additional capitalization in such a way as to bring overall debt – equity ratio close to the ratio of 70:30 is not in conformity with regulations 36 and 34 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "the 2004 regulations"). The petitioner was directed vide Commission's order dated 12.6.2007 to submit the following:

- a) Final Revised Cost Estimate or any valid document showing approval of the debt-equity ratio for the generating station and
- b) Details showing financing of the additional capital expenditure supported by necessary documentary evidence.

5. The petitioner has vide its affidavit dated 17.7.2007 submitted the above information. Govt. of India, Ministry of Irrigation & Power (Deptt. of Power) letter dated 29.3.1985 submitted under the above affidavit, does not explicitly state the approved debt-equity ratio. However, the petitioner has claimed that the additional capital expenditure be adjusted in the debt-equity ratio of 53.06:46.94, considered by the Commission for determination of tariff for the period 2001-04. We accept the plea of the petitioner and segregate additional capital expenditure in the debt-equity ratio of 53.06:46.94 as considered for tariff determination for the period 2001-04.

6. Based on the above, debt and equity component of the capital are as under:

(Rs in lakh)	
Capital cost admitted in tariff order dated 1.11.2002	13620.00
Additional capitalization during 2001-04 minus decapitalisation	581.79
Total	14201.79
Debt (53.06%)	7535.71
Equity (46.94%)	6666.08

INTEREST ON LOAN

7. As a consequence of the reallocation of additional capital expenditure between debt and equity, the loan amount works out to Rs.7535.71 lakh and consequently, the interest on loan works out as under:

(Rs. in lakhs)						
	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Gross loan	7227.00					
Addition due to Additional capitalization	308.71					
Addition due to FERV	0.00					
Gross normative loan	7535.71	7535.71	7535.71	7535.71	7535.71	7535.71
Cumulative repayment upto previous year		7296.73	7535.71	7535.71	7535.71	7535.71
Net loan opening		238.97	0.00	0.00	0.00	0.00
Repayment during the year		238.97	0.00	0.00	0.00	0.00
Net loan closing		0.00	0.00	0.00	0.00	0.00
Average loan		119.49	0.00	0.00	0.00	0.00
Weighted average rate of interest on loan		14.5%	14.5%	0.00%	0.00%	0.00%
Interest		17.33	0.00	0.00	0.00	0.00

RETURN ON EQUITY

8. The petitioner's prayer for review of return on equity flows from its prayer for review of apportionment of additional capital expenditure between debt and equity. Since review of debt-equity ratio has been allowed, as a consequence, review of return on equity as claimed by the petitioner is warranted.

9. Accordingly, equity as on 1.4.2004 works out to Rs.6666.08 lakh and the petitioner's entitlement towards return on equity works out to Rs.933.25 lakh per year during the tariff period.

O&M EXPENSES

10. The 2004 regulations provide that O&M expenses for the existing generating stations, in operation for five years or more in the base year of 2003-04 are to be derived based on actual expenses for the years 1998-99 to 2002-03, excluding abnormal expenses, if any. The normalized expenses so arrived at are taken as expenses for the year 2000-01 and are escalated successively @ 4% every year to arrive at O&M expenses for the relevant year. This methodology was followed while allowing O&M expenses by order dated 4.10.2006 and certain expenses, considered to be abnormal were excluded for computation of normalized O&M expenses.

11. The petitioner has submitted that the Commission, while working out the normative O&M expenses, has excluded the actual expenditure under the category "Consumption of Stores and Spares", "Administrative Expenses", "Employees Cost for VRS", "Productivity Linked Incentive" and "Corporate Office Expenses" incurred during the years 1998-99 to 2002-03, thereby putting the petitioner to loss. It is averred that the Commission has ignored the fact that the disallowed expenditure pertains to the previous periods and has already been incurred by the petitioner, as certified by the statutory auditors. The petitioner has, therefore, sought review of the O & M expenses.

Consumption Of Stores and Spares

12. The amounts claimed towards consumption of stores and spares by the petitioner during the years 1998-99 to 2002-2003 and those considered by the Commission for normalisation of O&M expenses are as follows:

	(Rs. In lakh)				
	1998-99	1999-00	2000-01	2001-02	2002-03
Expenses claimed	8.70	14.11	20.38	41.91	30.77
Expenses considered	8.70	14.11	20.38	41.91	29.81

13. For the years 1998-99 to 2001-02, the amounts claimed by the petitioner have been allowed by the Commission after prudent check. As regards consumption of stores and spares for the year 2002-03, the Commission has considered an amount of Rs.29.81 lakh against the claim of Rs.30.77 lakh as the petitioner by affidavit dated 25.4.2006 had submitted details of spares for an amount of Rs 29.81 lakh only. However, it has been brought to the notice of the Commission now that in addition to the amount of Rs.29.81 lakh an additional amount of Rs.0.96 lakh towards spares were also consumed by the petitioner under this head. After prudent check, it has been found that the claim of additional spares amounting to Rs.0.96 lakh, in addition to the amount of Rs.29.81 lakh already allowed under this head is justified. Hence, the total amount of is Rs.30.77 lakh claimed under this head for the year 2002-03, is allowed.

EX-gratia and VRS to employees

14. The expenditure on VRS has not been allowed for normalization because these expenses are not of recurring or regular nature and vary from year to year.

We are of the considered view that the expenditure on VRS incurred during the years 1998-99 to 2002-03 cannot be taken into account for working out the normative O&M expenses for 2004-09 and review sought on this ground is not maintainable. The petitioner is not in a position to give the details of likely expenses on account of VRS during the period in question because it is not certain about the number of employees likely to take VRS. The petitioner has, therefore, prayed that the actual expenses incurred during 1998-99 to 2002-03 may be reimbursed. The present prayer does not flow from the petition filed for approval of tariff for the period 2004-09. However, the petitioner is at liberty to approach the Commission post facto with complete details of expenditure and savings on account of VRS, if so advised, for the period 2004-09, in accordance with law, for the Commission's consideration and decision.

Maintenance spares for computation of interest on working capital

15. Under regulation 38(v) (a) (iii) of the 2004 regulations, working capital covers maintenance spares @1% of historical cost escalated @ 6% per annum from the date of commercial operation. The relevant portion of the order dated 4.10.2006 regarding maintenance spares is as below:

"78(a)... Maintenance spares: The petitioner has claimed the maintenance spares @ 1%of capital cost for the year 1999-2000 as base and escalated the same @ 6% per annum onwards, whereas in the first year of escalation it should have been on prorata basis as the date of commercial operation is 1.6.1983. Accordingly, maintenance spares have been worked out based on the historical cost of Rs.11577 lakh on date of commercial operation..."

16. The maintenance spares claimed in the petition and allowed by the Commission in its order dated 4.10.2006 are as follows:

Year		2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance claimed	spares	393.57	417.18	442.22	468.75	496.87
Maintenance considered	spares	371.29	393.57	417.18	442.21	468.75

17. The petitioner has stated that the value of maintenance spares considered in the order is not as per regulation 38(v)(a) of the 2004 regulations. The petitioner has submitted that there is a typographical error in para 78(a) of the order as they have claimed maintenance spares @ 1% of the capital cost for the year 1983-84 and not 1999-2000 as stated in the order. The petitioner has not claimed escalation for the year 1983-84 and hence the question of escalation on pro- rata basis in the first year is not applicable.

18. The submission of the petitioner that the year 1983-84 shall be taken as the base year and 6% escalation should be made applicable from the year 1984-85 for computation of maintenance spares cannot be allowed. The date of commercial operation of the generating station is 1.6.1983 and the capital cost as on the date of commercial operation is not available. The Commission in its order dated 4.10.2006 has considered the available cost after the date of commercial operation of the generating station as Rs.11577 lakh (as on 31.3.1984) based on the tariff petition filed by the petitioner for the tariff period 2001-04 and for computation of cost of maintenance spares for working capital, the year 1984-85 has been considered as the base year and escalation of 6% has been considered from the year 1985-86. This methodology adopted by the Commission cannot be faulted. However, the typographical error in para 78(a) of the order regarding base year being shown as 1999-2000 requires to be

corrected and accordingly the base year is corrected and is to be read as 1984-85 instead of 1999-2000. Except for the correction of this typographical error, the petitioner's plea for review on other counts is not tenable.

19. Based on the above, the petitioner shall be entitled to the revised O & M expenses, in supersession of O & M expenses allowed in order dated 4.10.2006, as follows :

(Rs. in lakh)					
	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses	3144.18	3269.94	3400.74	3400.74	3400.74

20. As a consequence of revision of return on equity, interest on loan and O & M expenses, the petitioner's entitlement to interest on working capital shall also stand revised. The revised entitlement, in this regard, shall be as under:-

(Rs. in lakh)					
	2004-05	2005-06	2006-07	2007-08	2008-09
Spares	371.29	393.57	417.18	442.21	468.75
O & M expenses	262.02	272.50	283.40	283.40	283.40
Receivables	791.29	810.25	833.02	833.46	833.92
Total	1424.60	1476.31	1533.60	1559.07	1586.06
Interest on working capital	146.02	151.32	157.19	159.80	162.57
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%

21. A summary sheet showing the capital cost and other related details is annexed to this order. The revised summary of Annual Fixed Charges to which the petitioner is entitled to, is appended below:

(Rs. in lakh)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	506.96	506.96	506.96	506.96	506.96
Interest on loan	17.33	0.00	0.00	0.00	0.00
Return on Equity	933.25	933.25	933.25	933.25	933.25
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working capital	146.02	151.32	157.19	159.80	162.57
O&M expenses	3144.18	3269.94	3400.74	3400.74	3400.74
TOTAL	4747.74	4861.48	4998.15	5000.76	5003.53

IMPACT OF ADDITIONAL CAPITALIZATION FOR THE YEARS 2001-04

22. As debt-equity ratio considered has been revised, its impact on return on equity and interest on loan for the period 2001-04 too needs correction in tariff. Based on the above, impact of additional capitalization has been worked out as under which the petitioner shall recover from the respondents along with tariff up to 31.3.2009:

CALCULATION OF IMPACT OF ADDITIONAL CAPITALISATION DURING THE YEAR 2001-04					
					(Rs. in Lakh)
		2001-02	2002-03	2003-04	Total
Period		1.00	1.00	1.00	
Additional Capitalisation		131.42	432.58	256.05	820.05
Financing of Additional Capitalisation					
Notional Loan		69.73	229.54	135.86	435.13
Notional Equity		61.69	203.05	120.18	384.92
Total		131.42	432.58	256.05	820.05
Effective Additional Capitalisation					
Opening Loan Balance		0.00	0.00	229.54	
Addition of Loan		69.73	229.54	135.86	435.13
Repayment of Loan		69.73	0.00	0.00	69.73
Closing Loan Balance		0.00	229.54	265.40	
Effective Loan			0.00	229.54	
Weighted Average Rate of Interest on Loan		14.50%	14.50%	14.50%	
Effective Equity			61.69	264.73	
Interest on Loan			0.00	33.28	33.28
Return on Equity	16%		9.87	42.36	52.23
Impact of Additional Capitalization			9.87	75.64	85.51

FILING FEE

23. As regards refund of filing fee of Rs.25 lakh claimed by the petitioner, the matter has already been considered at Para 104 of the order dated 4.10.2006. No fresh order in this regard is necessary.

24. With the above, the present application for review stands disposed of.

Sd/-
(R.KRISHNAMOORTHY)
MEMBER

Sd/-
(BHANU BHUSHAN)
MEMBER

New Delhi dated the 5th September, 2007

Summary Sheet				
Name of the Company:		NHPC		
Name of the Project		LOKTAK HEP		
Actual DOCO:		01.06.1983		
Petition No.:		RP 144-2006 in petition 171/2004		
Tarrif setting Period:		2004-09		
(Rs.in lacs)				
1	Admitted Capital Cost as on 1.4.2004 for Calculation of Debt and Equity			13620.00
2	Additional Capitalisation(works)			581.79
	For the year 2001-02			131.42
	For the year 2002-03			432.58
	For the year 2003-04			256.05
	Assets not in use as on 1.4.2004			-238.26
	Total			581.79
3	Additional Capitalisation(FERV)			0.00
	For the year 2001-02			0.00
	For the year 2002-03			0.00
	For the year 2003-04			0.00
	Total			0.00
4	Total Capital Cost as on 1.4.2004(2+3+4)			14201.79
5	Means of Finance¹ :			
	Debt	53.06%		7535.71
	Equity	46.94%		6666.08
	Total	100.00%		14201.79
6	Gross Loan as on 1.4.2004			7535.71
7	Cumulative Repayment upto 31.3.2009 :			7535.71
	Repaid upto 31.3.2004			7227.00
	From 1.4.2001 to 31.3.2004 (ACE & FERV)			69.73
	From 1.4.2004 to 31.3.2009			238.97
	Total	7535.707672		7535.71
8	Balance Loan to be repaid beyond 31.3.2009 :			0.00
9	Depreciation recovered upto 31.3.2009 :			8183.04
		Dep	AAD	Total
	Recovered upto 31.3.2004	5768.00	0.00	5768.00
	From 1.4.2001 to 31.3.2004 (ACE & FERV) / Assets not in use as on 1.4.2004 / Deletions	-119.77	0.00	-119.77
	From 1.4.2004 to 31.3.2009	2534.82	0.00	2534.82
	Total	8183.043052		8183.04
10	Balance Depreciation to be recovered beyond 31.03.2009 :			4562.67
	Capital cost for the purpose of Depreciation			13620.00
	ACE + FERV			581.79
	Capital cost as 1.4.2004			14201.79
	Less: Land Cost			39.89
				14161.90
	90% of Capital Cost as above			12745.71
	Cum. Depreciation to be recovered up to 31.3.2009			8183.04
	Balance Depreciation to be recovered beyond 31.3.2009			4562.67