

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Shri D.P. Sinha, Member**
- 2. Shri G.S. Rajamani, Member**
- 3. Shri K.N. Sinha, Member**

Petition No.33/2002

In the matter of

Approval of tariff from 1.4.1997 to 31.3.2001 of Feroze Gandhi Unchaha r
Thermal Power Station

And in the matter of

National Thermal Power Corporation Ltd.

....Petitioner

Vs

1. Uttar Pradesh Power Corporation Ltd., Lucknow
2. Rajasthan Rajya Vidyut Prasaran Nigam Ltd, Jaipur
3. Delhi Vidyut Board, New Delhi
4. Haryana Vidyut Prasaran Nigam Ltd, Panchkula
5. Punjab State Electricity Board, Patiala
6. Himachal Pradesh State Electricity Board, Shimla
7. Power Development Department, J&K, Srinagar
8. Chief Engineer, Chandigarh Administration, Chandigarh
9. Uttaranchal Power Corporation Ltd., Dehradun Respondents

The following were present:

1. Shri K.K. Garg, GM (Comml), NTPC
2. Shri M.S. Chawla, DGM (Comml), NTPC
3. Shri C. Asokan, Sr. Manager, NTPC
4. Shri B. Dubey, Sr. Law Officer, NTPC
5. Shri D.D. Chopra, Advocate, UPPCL
6. Shri H.C. Verma, EE, UPPCL
7. Shri A.K. Tandon, Sr. A.E, UPPCL
8. Shri T.P.S. Bawa, PSEB,.
9. Shri R.K. Arora, HVPNL
10. Shri V.K. Gupta, SE (ISP), RVPNL
11. Shri S.C. Mehta, XEN (ISP), RVPNL

**ORDER
(DATE OF HEARING 14.3.2002)**

The petitioner has filed this petition for approval of tariff in respect of Feroze Gandhi Unchahar Thermal Power Station (FGU TPS) for the period from 1.4.1997 to 31.3.2001.

2. FGU TPS was taken over by the petitioner from the erstwhile Uttar Pradesh State Electricity Board on 13.2.1992. The Central Government in Ministry of Power accorded its approval for take over of FGU TPS at a cost of Rs.925 crores vide its letter dated 20.5.1993. The tariff for FGU TPS was notified by Ministry of Power vide notification dated 26.3.1994, which was subsequently amended vide notifications dated 15.12.1995, 30.11.1998 and 14.5.1999 to account for change in rate of depreciation, increase in return on equity from 12% to 16% and additional capitalisation based on audited accounts up to 1996-97. The notification dated 26.3.1994 was valid up to 31.3.1997, but was continued on ad hoc basis beyond 31.3.1997 in view of Clause 6 thereof.

3. The petitioner had filed Petition No. 80/2000 to claim revised fixed charges due to additional capital expenditure and FERV capitalised in respect of FGU TPS for the years 1997-98 to 2000-01. The said petition was disposed of vide order dated 2.1.2002, when the Commission directed the petitioner to file fresh petition for determination of tariff for the period from 1.4.1997 to 31.3.2001 based on the terms and conditions notified by Ministry of Power as per the notification dated 26.3.1994. The present petition has been filed in pursuance of these directions of the Commission contained in the order dated 2.1.2002.

CAPITAL COST

4. As noted above, the Central Government had accorded its approval for take over of FGU TPS at a cost of Rs.925.00 crores vide letter dated 20.5.1993. Subsequently, CEA accorded its approval for R&M of the station on Environmental Action Plan (EAP) for performance enhancement of ESP vide its letter dated 5.8.1996 at a cost of Rs.2.85 crores.

5. Ministry of Power while issuing tariff notification dated 26.3.1994 considered the project cost of Rs.909.71 crores, which included gross block of Rs.893.84 crores and initial spares of Rs.15.87 crores. Ministry of Power had allowed additional capitalisation of Rs.18.856 crores during 1992-93 to 1996-97. Therefore, the total admitted cost of the project, including the initial spares works out to Rs.928.566 crores as on 31.3.1997 and has been considered as the opening gross block for the purpose of present tariff petition. We may hasten to add that in Petition No.77/2001 (Tariff for Tanda TPS), the Commission had not allowed the entire transfer cost of Rs.1000 crores as the capital base for computation of tariff, and had limited the capital base to the cost as on the date of commercial operation of Tanda TPS. However, in the present case, the transfer price of Rs.909.71 crores has been considered for tariff calculations for the reason that the Central Government while notifying tariff for the period up to 31.3.1997 had taken this cost into account and we are not inclined to re-open this issue.

6. The petitioner has claimed the amounts as detailed below for additional capitalisation during the period from 1997-98 to 2000-01:

(Rs.in lakhs)

Financial Years	1997-98	1998-99	1999-00	2000-01	Total
New works					
(a) Within the scope of approved cost	0.00	0.00	0.00	0.00	0.00
(b) R&M under EAP	131.51	0.00	0.00	2.54	134.05
(c) Not in the scope of approved cost	623.18	572.49	281.46	212.87	1690.00
Total (a+b+c)	754.69	572.49	281.46	215.41	1824.05

7. The petitioner has furnished justification for the following expenditure under the New Works in the respective years:

(Rs.in lakhs)

Financial Years	1997-98	1998-99	1999-00	2000-01	Total
New works					
(a) Within the scope of approved cost	0.00	0.00	0.00	0.00	0.00
(b) R&M under EAP	131.51	0.00	0.00	2.54	134.05
(c) Not in the scope of approved cost	609.53	442.25	300.44	155.05	1507.27
Total (a+b+c)	741.04	442.25	300.44	157.59	1641.32

8. The following methodology has been adopted for allowing or disallowing the claim of the petitioner:

New Works:

(a) The expenditure incurred for the replacement of existing equipment/facility due to technology becoming obsolete or the equipment having outlived its utility in the normal course of operation, has been allowed for capitalisation.

(b) The expenditure on the works undertaken/on purchase of additional equipment/facility which is giving benefit exclusively to the petitioner without any apparent benefit to the beneficiaries has not been allowed, unless it is found that expenditure was necessary for the benefit of the employees for giving necessary facilities at the remote location of the power project.

(c) Any mandatory expenditure arising out of statutory obligation due to change of law, etc., has been allowed.

9. Based on the above methodology, the entire amount of Rs.134.05 lakhs on account of R&M expenditure on EAP has been allowed. This station was taken over by the petitioner and, therefore, the original design and engineering was not done by it. As such, the expenditure of Rs.257.63 lakhs incurred on design improvements, as per details given hereunder, which facilitates normal operations and would benefit the beneficiaries, has been allowed for capitalisation.

(Rs.in lakhs)

Ser No.	Details of Assets	1997-98	1998-99	1999-00	2000-01	Total
1.	Renovation and modernisation of C&I system	64.72	65.08	00.00	00.00	129.80
2.	Installation and commissioning of stator water polishing unit	0.00	29.77	0.00	0.00	29.77
3.	Air blaster for coal bunkers	00.00	20.49	2.66	00.00	23.15
4.	Measuring instruments	00.00	45.47	00.00	00.00	45.47
5.	Erection and commissioning of ventilation system	00.00	15.66	00.00	00.00	15.66
6.	Procurement of make up water pump	00.00	13.78	00.00	00.00	13.78
	Total	64.72	190.25	2.66	00.00	257.63

10. During the financial year 2000-01, the petitioner has sought capitalisation of spares to the extent of Rs.1.51 crores as new works. It has been clarified by the

petitioner that the capitalisation of spares is in accordance with the revised accounting standard, which became mandatory with effect from 1.4.1999. As per the present practice, only initial spares up to a certain amount, say 5% of the project cost are allowed to be capitalised. We would like to point out that maintaining accounts as per accounting standard is one thing and treating any expenditure to be eligible for tariff computation is another. The expenditure on spares subsequent to the date of commercial operation is to be accounted for as a part of O&M expenses in so far as tariff computation is concerned. Therefore, we do not allow the capitalisation of spares purchased after the date of commercial operation for tariff purpose. However, the petitioner should maintain a separate account for the yearly consumption of spares so that the same could be accounted for in the actual O&M for the respective years for the purpose of tariff.

11. Based on above discussion and the criteria outlined in para 8 above, we allow the year-wise additional capitalisation as given below:

(Rs.in lakhs)

Financial Years	1997-98	1998-99	1999-00	2000-01	Total
New works					
(a) Within the scope of approved cost	0.00	0.00	0.00	0.00	0.00
(b) R&M under EAP	131.51	0.00	0.00	2.54	134.05
(c) Not in the scope of approved cost	571.57	255.76	231.10	2.44	1060.87
Total (a+b+c)	703.08	255.76	231.10	4.98	1194.92

12. The petitioner's claim for additional capitalisation on account of FERV has also been considered. The petitioner has claimed FERV as per the details given below:

(Rs. in lakhs)

1997-1998	4
1998-1999	11
1999-2000	6
2000-2001	(-) 1

13. FERV claimed is on account of IBRD loan which consists of IBRD- EQ loan, IBRD-USD loan, IBRD-DEM (Tranche-A loan) and IBRD-DEM (Tranche-B loan). It has been submitted on behalf of the petitioner that in IBRD pool loan, all currencies disbursed in individual loans are pooled in the central disbursement account and every loan is assigned a share of total of each currency outstanding, proportional to its share of the total outstanding in the pool. Thus at all times each loan reflects the same currency composition as that of the pool. Under the pool system, withdrawal outstanding are revalued at current value arrived at by applying exchange adjustments calculated by IBRD on daily basis which is informed to the borrowers at the end of a month. The exchange adjustments are, however, applied to loan balances and informed to the borrowers at the close of each year. As per this system, the historical balance of the loan could be different from the current balance of the loan calculated by IBRD after adjustment of exchange fluctuations. Since debt management is at corporate level, we accept the above methodology.

14. FERV on account of IBRD-loan has been worked out for the years 1999-2000 and 2000-01 considering the opening balance as on 1.4.1999 of IBRD-EQ loan, IBRD-USD loan, IBRD-DEM (Tranche A) loan, IBRD-DEM (Tranche B) loan. While considering FERV, the claim on that account has, however, been restricted to the amount capitalised and claimed in the petition. Accordingly, we allow the FERV as under:

(Rs. In lakhs)

Year	1997-98	1998-99	1999-2000	2000-01
FERV	4	11	5	(-1)

15. In view of the above, the capital cost allowed for the purpose of tariff is as under:

(Rs. in lakhs)

		1997-98	1998-99	1999-2000	2000-01
(i)	Opening Capital cost as on 1 st April	92857	93564	93830	94066
(ii)	Additions during the year due to				
(a)	Additional capitalisation	703	256	231	5
(b)	FERV	4	11	5	(-1)
(iii)	Closing Capital Cost as on 31 st March of the year	93564	93830	94066	94070

DEBT-EQUITY RATIO

16. Ministry of Power in its notification dated 26.3.1994 had considered the normative debt-equity ratio of 50:50. This debt-equity ratio was followed by Ministry of Power in its notification dated 14.5.1999 while allowing additional capitalisation up to 1996-97. For the purpose of calculation of fixed charges in this petition, same debt-equity ratio has been adopted by us.

RETURN ON EQUITY (ROE)

17. ROE of 12% per annum for the period from 1.4.1997 to 31.10.1998 and thereafter, ROE @ 16% per annum has been allowed as provided in the notification issued by Ministry of Power. The charges payable by the respondents on account of return on equity works out as under:

	(Rs. in lakhs)*
1997-98	5593
1998-99(1.4.1998 to 31.10.1998)	5622
1998-99 (1.11.1998 to 31.3.1999)	7496
1999-2000	7516
2000-2001	7525

* The amount relates to the whole year. For part of the year, pro-rata payments shall be made.

INTEREST ON LOAN

18. The Central Government while notifying tariff on 26.3.1994, considered the total cost of Rs.909.71 crores, including initial spares of Rs.15.87 crores. This total cost had been divided into normative debt and equity in the ratio of 50:50, that is, debt of Rs.454.86 crores and equity of Rs.454.86 crores. The normative debt of Rs.454.86 crores was considered as Gol loan (notional) and the same was repayable in 11 equal instalments of Rs.4135 lakhs each, starting from the year 1991-92, and the interest @ 12.08% p.a was considered.

19. The petitioner raised various bonds-7th issue, 8th issue and 9th issue on 22.1.1992, 20.3.1992 and 31.3.1992 respectively alongwith other bonds-7th issue and 9th issue were cancelled. It is presumed that the funds raised from these bonds were utilised for financing the additional capitalisation. The cumulative repayment of Gol loan of Rs.248.11 crores is considered as per the petition. The repayment of bonds-7th issue (cancelled) of Rs.28 lakhs and 9th issue (cancelled) of Rs.34 lakhs are in addition to the Gol loan. In view of this, the total cumulative repayment of loan upto the year 1996-97 has been arrived at Rs.248.73 crores.

20. In view of the above, the annual repayment amount from the year 1997-98 to 2000-01 has been worked out as follows :

= Annual repayment (Actual repayment of bonds plus notional repayment of Gol loan) during the year x normative loan at the beginning of the year/Actual loan plus notional Gol loan at the beginning of the year.

21. The amount of annual repayment for calculation of interest on loan is considered as worked out by the above formula, or as given in the petition, whichever is higher. Accordingly, the annual repayment considered for the calculation of interest on loan, is as follows :

(Rs. In lakhs)

Year	1997-98	1998-99	1999-2000	2000-01
Repayment	4208	4536	4329	4386

22. The charges payable by the respondents to the petitioner on account of interest on loan are computed hereinbelow :

(Rs. in lakhs)

Particulars	1997-98	1998-99		1999-2000	2000-01
		From 1.4.98 to 31.10.98	From 1.11.98 to 31.3.99		
Loan					
Gross loan-Opening	46428	46782		46915	47033
Cumulative repayments of Loans upto previous year	24873	29081		33617	37946
Net loan-Opening	21555	17701		13298	9087
Increase/Decrease due to FERV	2	6		3	(-1)
Increase/Decrease due to Additional Capitalisation	352	128		116	2
Total	21909	17834		13416	9089
Repayments of Loans during the year	4208	4536		4329	4386
Net loan-Closing	17701	13298		9087	4703
Average Net Loan	19628	15499		11193	6895
Rate of Interest on Loan	12.09%	12.03%		11.95%	11.85%
Interest on loan*	2373	1865		1338	817

* The amount reflects the payment for the whole year. For part of the year, pro-rata payments shall be made.

DEPRECIATION

23. The details of depreciation amount as furnished in the petition up to 31.3.1992 as per the accounts maintained have been taken into account. Depreciation recovered in tariff from 1.4.1992 to 31.3.1997 as notified by Ministry of Power has also been taken into account. Ministry of Power had allowed depreciation @ 7.69% and the same rate has been followed for the purpose of calculation of fixed charges from 1.4.1997 to 31.3.2001. The year-wise amount of depreciation to be recovered from the respondents in tariff are detailed below:

	Asset Value	Rate	(Rs. in lakhs) Depreciation***
1997-98	92857	7.69%	7141
1998-99(1.4.1998 to 31.10.1998)	93564	7.69%	7195
1998-99 (1.11.1998 to 31.3.1999)			7195
1999-2000	93830	7.69%	7216
2000-2001	94066	7.69%	7234

*** The figures relate to full year. For part of the year pro-rata payment shall be made.

O&M EXPENSES

24. Keeping in view the methodology adopted by the Ministry of Power for various stations of NTPC, the actual O&M expenses of Rs.5633 lakhs, including water charges for the year 1996-97 as per the audited balance sheet in respect of FGU TPS has been taken as the base and an escalation factor of 10% per annum has been applied to work out O&M expenses for the year 1997-98 to 2000-01. In the light of the above, water charges have not been considered separately. Based on this methodology, the charges payable by the beneficiaries on account of O&M are as under:

	(Rs. in lakhs) @
1997-98	5188
1998-99(1.4.1998 to 31.10.1998)	5707
1998-99 (1.11.1998 to 31.3.1999)	5707
1999-2000	6278
2000-2001	6906

@ The amount relates to full year. For part of the year, pro-rata payments shall be made.

INTEREST ON WORKING CAPITAL

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

(a) Fuel Cost, Coal Stock and Oil stock: The petitioner has not furnished the details of Calorific Value (CV) of Coal/Oil in the petition, by stating "Not applicable". However, the petitioner has filed an affidavit on 8.10.2002 furnishing the details of GCV of the fuels. Since the Variable Charge is not being revised and the order is for Revised Fixed Charges for the period 1.4.1997 to 31.3.2001, the element of working is provided on the same basis as was provided for in the calculation of tariff in the previous tariff setting by the Central Government.

(b) O&M Expenses: O&M expenses for working capital has been considered for 1 month of the respective year.

(c) Spares: The actual spares for the year 1996-97 as per the audited balance sheet of FGU TPS have been considered in the working for the years 1997-98 to 2000-01.

(d) Receivables: Receivables have been worked out on the basis of two months of fixed and variable charges. In view of the position explained in sub-para (a) above, variable charges component of the receivables in the working capital have been estimated on the basis of variable charge in the previous tariff period. The fixed charge component of the receivables are based on the calculations for the current tariff period.

26. Based on the above, the details of working capital considered are as given hereunder :

WORKING CAPITAL

	1997-98	1998-99		1999-2000	2000-01
		1.4.98 to 31.10.98	1.11.98 to 31.3.1999		
Fuel cost	1061	1061	1061	1061	1061
Cost of coal stock	369	369	369	369	369
Cost of oil stock	147	147	147	147	147
O&M expenses	432	476	476	523	576
Spares	1292	1292	1292	1292	1292
Receivables	5716	5718	6037	6036	6052
Total	9017	9063	9382	9428	9497

27. Ministry of Power in its notification dated 26.3.1994 had not considered the working capital margin. This has been followed for the purpose of calculating working capital for the years 1997-98 to 2000-01. The average SBI PLR of the respective year has been considered as the rate of interest on working capital. The rate of interest adopted during the years 1997-98, 1998-99, 1999-2000 and 2000-01 is 14%, 13%,

12% and 11.5% respectively. Based on the above methodology, the year-wise details of interest on working capital payable by the respondents to the petitioner are as under:

(Rs. in lakhs) @@

1997-98	1262
1998-99(1.4.1998 to 31.10.1998)	1178
1998-99 (1.11.1998 to 31.3.1999)	1220
1999-2000	1131
2000-2001	1092

@@ The amount relates to the whole year. For part of the year, prorata payments shall be made.

28. Annual fixed charges for the period 1.4.1997 to 31.3.2001 are allowed as below:

(Rs. in lakhs)

	Particulars	1997-98	1998-99		1999-2000	2000-01
			1.4.1998 to 31.10.1998	1.11.1998 to 31.3.1999		
1	Interest on Loan	2373	1865	1865	1338	817
2	Interest on Working Capital	1262	1178	1220	1131	1092
3	Depreciation	7141	7195	7195	7216	7234
4	Return on Equity	5593	5622	7496	7516	7525
5	O&M Expenses	5188	5707	5707	6278	6906
	Total	21557	21567	23483	23479	23574

The payments for part of the year shall be made on pro-rata basis.

29. The fixed charges decided by us in the preceding paras shall be shared by the respondents in the ratio of energy drawn from FGU TPS during the relevant period. The petitioner has already recovered fixed charges from the respondents in view of continuation of tariff notification dated 26.3.1994 on ad-hoc basis beyond 31.3.1997.

The amount already recovered shall be adjusted against the fixed charges decided by us through this order.

30. The petitioner has not indicated energy charges payable in the respective year and it has been stated that it is not required as the tariff is for the past period and recalculation will have no effect because operational norms remain unchanged. The respondents also did not raise the issue during the pleadings. In view of this, petitioner/respondents shall not have the option to reopen this issue later on.

31. This order disposes of Petition No. 33/2002.

Sd/-
(K.N. SINHA)
MEMBER

Sd/-
(G.S. RAJAMANI)
MEMBER

Sd/-
(D.P. SINHA)
MEMBER

New Delhi dated the 30th October, 2002