

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

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

**Petition No.121/2005**

**In the matter of**

Revision of Annual Fixed Charges (AFC) on account of Additional capital expenditure incurred during the tariff period 2001-04 in respect of Rangit Hydroelectric project.

**And in the matter of**

National Hydroelectric Power Corporation Ltd.

**....Petitioner**

**Vs**

1. West Bengal State Electricity Board, Kolkata
2. Damodar Valley Corporation, Kolkata
3. Jharkhand State Electricity Board, Ranchi
4. Bihar State Electricity Board, Patna
5. Department of Power, Government of Sikkim, Gangtok
6. Grid Corporation of Orissa Limited, Bhubneshwar

**....Respondents**

**The following were present:**

1. Shri S.D.Tripathi, NHPC
2. Shri S.K. Meena NHPC
3. Shri C.Vinod, NHPC
4. Shri Naveen Samriya, NHPC
5. Shri P.Kumar, NHPC
6. Shri. Prashant Kaul, NHPC
7. Shri P.K.Bagchi, WBSEB
8. Shri P.C. Saha, WBSEB

**ORDER**

**(Date of Hearing 20.12.2005)**

Through this petition, the petitioner seeks approval for the additional capital expenditure of Rangit Hydroelectric Project (3X20 MW) (Rangit HEP) for the period 1.4.2001 to 31.3.2004 and subsequent revision of the Annual Fixed Charges (AFC) for the tariff period 2001-2004 after considering the impact of additional capitalization.

2. Rangit HEP comprising of three units of 20 MW each was commissioned on 15.2.2000.

3. The revised investment approval for Rangit HEP was accorded by Ministry of Power vide its letter dated 24.9.2003 for Rs. 492.26 crore, including IDC of Rs.112.47 crore.

**Capital cost admitted by the Commission as on 1.4.2001**

4. The capital cost as on 1.4.2001 admitted by Commission vide order dated 19.5.2004 in Petition No.63/2001 is Rs. 478.57 crore.

5. The year-wise details of additional capitalization on works (excluding FERV) claimed by the petitioner are as follows:

(Rs. in lakh)

Adtl. Capital expenditure claimed	2001-02	2002-03	2003-04	Total claimed
<b>1. Works within the scope of approved cost</b>				
(i) Balance payments	649.34	56.71	127.28	833.33
(ii) Balance works	503.55	-	-	503.55
(iii) New works	50.22	-	-	50.22
Sub-Total (1)	1203.11	56.71	127.28	1387.10
<b>2. Works not within the scope of approved cost</b>				
(i) Safety & Security	122.80	16.04	2.43	141.27
(ii) Improvement in efficiency & performance	38.18	54.40	14.11	106.69
(iii) Misc. assets including minor assets (less than Rs. 5000/-)	9.71	15.96	0.00	25.67
Sub-Total (2)	170.69	86.40	16.54	273.63
3. Capital spares	0.00	281.78	70.24	352.02
4. Deletions	18.30	51.82	55.15	125.27
Net addition (1+2+3-4)	1355.50	373.07	158.91	1887.48

6. The above does not include additional capital expenditure on account of FERV because the impact on account of FERV was billed directly to the beneficiaries as per the Commission's notification dated 26.3.2001.

7. Based on the above, the petitioner has claimed the revised fixed charges.

8. The petitioner's claim for additional capitalization and the revised fixed charges is based on clause 1.10 of the notification dated 26.3.2001, which *inter alia* provides

"1.10 Tariff revisions during the tariff period on account of capital expenditure within the approved project cost incurred during the tariff period may be entertained by the Commission only if such expenditure exceeds 20% of the approved cost. In all cases, where such expenditure is less than 20% tariff revision shall be considered in the next tariff period."

## **ADDITIONAL CAPITAL EXPENDITURE**

9. In the first instance we consider the admissibility of additional capital expenditure claimed in the present petition.

## **WORKS WITHIN THE SCOPE OF APPROVED CAPITAL COST**

10. The petitioner has submitted that an expenditure of Rs. 833.33 lakh has been incurred during years 2001-2004 (Rs. 649.34 lakh in 2001-2002, Rs.56.71 lakh in 2002-2003 and Rs. 127.28 lakh in 2003-2004) on account of balance payments within the scope of the approved cost. These balance payments relate to works started earlier but completed and capitalized during the period 2001-04. These works include power house building containing generating plant and machinery, payments made to DFO for catchment area treatment works, erection and commissioning of HM gates, establishment charges on account of wage revision arrears with effect from 1.1.1997 paid in 2001-2002, purchase of cranes for use in power house and dam, final payments towards construction of gates, payments against arbitration award for commissioning of generating units and arbitration award for the work of pressure shaft.

11. The petitioner has submitted that excess capitalization for an amount of Rs. 43.58 lakh towards erection of gates and testing and commissioning of illumination and lighting system was made prior to commissioning of the project and in the year 2001-2002. However, after detection of the mistake the petitioner has made matching adjustment (de-capitalization) in the years 2002-03 and 2003-04. The Commission has taken a view in similar petitions filed by the petitioner that all such adjustments i.e.

de-capitalization of excess capitalization shall be made, in the year in which excess capitalization has been made so that the error, if any, on the part of the petitioner does not affect the beneficiaries. After de-capitalizing an amount of Rs. 43.58 lakh due to excess capitalization made prior to the date of commencement of operation and during the year 2001-02, capitalization of Rs. 789.75 lakh has been allowed as the balance payments. The capitalization claimed by the petitioner due to balance payments and that allowed is shown here under:

(Rs. in lakh)

Year	Capitalization Claimed	De- capitalization Allowed*	Net allowed
2001-02	649.34	43.58	605.76
2002-03	56.71	0.00	56.71
2003-04	127.28	0.00	127.28
Total	833.33	43.58	789.75

(\*)- due to adjustment made for excess capitalization

### **Balance Works**

12. The petitioner has claimed an amount of Rs. 503.55 lakh during the year 2001-02 on completion of certain balance works relating to the project. These works are construction of roads in the power house, dam and HRT part expenditure of which was capitalized at the time of commissioning of the project and balance amount capitalized in 2001-02 when work was finally completed. It also includes works regarding treatment of slide zones on the right bank of the dam and reservoir to arrest the loose fall of rocks, stabilization of the dam and reservoir and purchase of fire fighting equipment installed in the power house. In this case also the petitioner has made excess capitalization of an amount of Rs.40.51 lakh in the years 1999-2000 and 2001-02 towards balance works of

concrete dam but adjustment of the same has been made in the year 2003-04. However, as noted at para 11 above, the adjustment for excess capitalization has been considered in the year 2001-02 itself instead of year 2003-04. On consideration of the fact that balance works carried out are within the scope of approved project cost and after de-capitalizing an amount of Rs.40.51 lakh due to excess capitalization made in the years 1999-2000 and 2001-02, capitalization of an amount of Rs.463.04 lakh has been allowed.

### **NEW WORKS**

13. The petitioner has claimed an amount of Rs.50.22 lakh on account of the new works carried out during the year 2001-02 which were within the scope of approved project cost. The nature of works carried out include construction of a D.G. set room at the power house for housing DG set required for black start operation, modification in original design of diversion tunnel gates to arrest the seepage of water from the diversion tunnel closed after commissioning of the project, raising of stop log groove portion of spillway of dam structure to fit the stop log properly at the bottom seal seat. The above works are considered to be essential for efficient operation of the generating station. Therefore, capitalization of Rs. 50.22 lakh on account of new works undertaken during the period 2001-04 has been allowed.

### **WORKS NOT WITHIN THE SCOPE OF APPROVED CAPITAL COST**

## SAFETY AND SECURITY EXPENSES

15. The petitioner has incurred an expenditure of Rs. 141.27 lakh during the period 2001-04 (Rs. 122.80 lakh during 2001-02, 16.04 lakh during 2002-03 and Rs.2.43 lakh in 2003-04) towards safety and security. The nature of works include construction of a concrete shade on block no. 6 and 7 of the dam body and stop log yard to avoid the direct impact on dam body from the rolling stones for the purpose of safety of dam and workmen working in the area, river training works at left bank of dam in the downstream of stilling basin to protect erosion of the stilling basin as well as to protect the road of HRT upstream purchase of furniture for the security personnel deployed at the project, provision of proper water supply for the security personnel residing in the security barracks and construction of office building for security personnel. Though all the above expenses have been made beyond the original scope of works of the project, in view of the fact that these are meant for safety and security of the generating station, its employees and also for the benefit of security personnel deployed for the security of the project, capitalization of an amount of Rs. 141.27 lakh has been allowed.

## **IMPROVEMENT IN EFFICIENCY AND PERFORMANCE**

16. The petitioner has claimed additional capital expenditure of Rs. 106.69 lakh during the period 2001-04 (Rs. 38.18 lakh in 2001-02, Rs.54.40 lakh in 2002-03 and 14.11 lakh during 2003-04) for smooth operation of the power plant. The assets added are accessories for crane 5 ton capacity, lifting machine & hydraulic jack 40 ton capacity for use in dam/ PH, submersible pumps to meet the addl. requirement of

drainage and dewatering as existing pumps were not sufficient to cope up the excess seepage of water in dam gallery, jack hammer transferred from Teesta-V HEP for stop log modification at dam and road maintenance work, aluminum ladder for maintenance work, hydraulic pipe bending machine, UPS, fax machine, VSAT and Inmarsat communication equipment for providing efficient and effective communication and data transfer from the project to ERLDC and corporate office, digital MW meter and Mega Watt Meter for accurate measurement of MW at power station, construction of DG set control room at dam for housing DG set to meet emergency power supply, computers and LAN for the purpose of computerization and technological improvement in communication system, supply and erection of telephone cable between dam site and administration building for reliable communication system, construction of store for keeping day to day material at dam site, provision of automation system of radial gates to provide inflow and discharge data online to the power house which is used in forecasting and scheduling generation, welding set, work of modification of stop log seal beam of bay I,II and III of Rangit dam, wooden boat for cleaning of logs during flood at dam, water treatment plant for supply of pure and hygienic water to the residents of the project colony, voltage stabilizer and other electrical items required for air conditioning system in power house.

17. On prudence check it has been found that the claim of the petitioner under the head 'Improvement in Efficiency and Performance' has not been adequately substantiated in case of certain assets. Therefore, capitalization of these assets has not been allowed as claimed by the petitioner. However, additional capital expenditure of Rs.71.21 lakh has been considered necessary for reliable and smooth plant



operation, and hence has been allowed against the claim of Rs. 106.69 lakh of the petitioner. Year wise break up of the additional capitalization claimed and allowed is as follows :

(Rs. in lakh)			
Year	Capitalization Claimed	Capitalization Not allowed	Capitalization Allowed
2001-02	38.18	10.00	28.18
2002-03	54.40	19.68	34.72
2003-04	14.11	5.80	8.31
Total	106.69	35.48	71.21

**MISCELLANEOUS ASSETS INCLUDING MINOR ASSETS (COSTING LESS THAN RS.5000)**

18. The petitioner has claimed capitalization of additional capital expenditure of Rs. 25.67 lakh during the period 2001-04 (Rs 9.71 lakh in 2001-02 and Rs 15.96 lakh in 2002-03) on account of addition of miscellaneous assets including minor assets costing less than Rs. 5000. The miscellaneous assets / works claimed under this category include furniture for chief engineer's office, project school and training hall of project employees, projector along with television for in house training to O&M staff, construction of toilets and fencing at the project school, welding set for maintenance work at the colony, construction of incinerator room and provision of incinerator machine at the project hospital, coffee vending machines for employees canteen etc. In addition to above, the items added under the head minor assets costing less than Rs. 5000 are energy meters, pedestal fans, amplifiers, vacuum cleaner, Jack 20 ton capacity, UPS

for use in computer network in the PH and office, scanners not purchased along with computers, battery charger, steel almirah, refrigerator, steel cots required by security personnel of the project, computer tables and chairs newly purchased for use in office at dam control room and power house conference room, the old furniture was shifted to library room.

19. Since the project was commissioned recently in February 2000 and certain essential works/ assets as mentioned above, not in the original scope of works, were added during the period 2001-04. The justification given by the petitioner for addition of these assets has been found to be in order.

20. In view of the above, capitalization of assets for total amount of Rs. 25.76 lakh under the head miscellaneous and minor assets during the period 2001-04 has been allowed.

### **CAPITALIZATION OF SAPRES**

21. Rangit HEP was commissioned in February, 2000 and cost on the date of commercial operation of the generating station as claimed by the petitioner is Rs.475.85 crore. This capital cost includes capitalized initial spares for an amount of Rs.3.46 crore. At the time of approval of tariff for the period 2001-04, the petitioner had not asked for requirement of additional spares for capitalization.

22. The petitioner has now claimed an amount of Rs. 3.52 crores (Rs. 2.82 crore during the year 2002-03 and Rs. 0.70 crore in 2003-04) towards capitalization of spares, as per its accounting policy and as per AS-2 of ICAI. At the end of tariff period

2001-04, the project was just about 4 years old and capitalization of additional spares desired by the petitioner would be over and above the initial capitalized spares of Rs. 3.46 crore, included in the approved capital cost of the project. As such, capitalization of additional spares has not been allowed as has been decided by the Commission in other similar cases. However, the spares to the extent actually consumed during the years 2002-03 and 2003-04 may be intimated by the petitioner for working out the permissible O&M expenses for the tariff period 2004-09.

### **DELETION OF ASSETS**

23. The petitioner has submitted details of deletions of assets amounting to Rs. 125.27 lakh during the period 2001-04 (Rs. 18.30 lakh in 2001-02, 51.82 lakh in 2002-03 and Rs. 55.15 lakh in 2003-04). The petitioner has submitted that certain assets have either been de-capitalized or transferred to Teesta low dam project of NHPC which is presently under construction. These assets are- air conditioners, tables, chairs, refrigerators, sofa sets, almirahs, TVs, photocopy machines, stabilizers, geysers, batteries, vehicles, construction equipment like road roller, dozers, loaders, crane, excavators. It also includes deduction due to excess capitalization on certain works made in the years 1999-2000 and 2001-02. However, all excess capitalization has been adjusted under the heads balance payments and balance works in the year 2001-02 since these pertain to works within the approved cost of the project. Year-wise break up of de-capitalized amount is as follows:

(Rs. in lakh)

Year	De-Capitalization Claimed	De-capitalization Adjusted*	De-capitalization Allowed
2001-02	18.30	0.00	18.30
2002-03	51.82	42.67	9.15
2003-04	55.15	41.74	13.41
Total	125.27	84.41	40.86

(\*)- These relate to adjustment of excess capitalization on certain assets/works.

24. An amount of Rs. 40.86 lakh on account of de-capitalization of various assets has been allowed during the period 2001-04 after making adjustment of excess capitalization for an amount of Rs.84.41 lakh.

**ADDITIONAL CAPITAL EXPENDITURE ALLOWED DURING THE PERIOD 2001-04**

25. Following additional capital expenditure has been allowed based on discussions in the preceding paragraphs:

(Rs. in lakh)

Additional Capital expenditure	Total ACE claimed	Additional Capital Expenditure allowed			
		2001-02	2002-03	2003-04	Total
<b>1.Works within the scope of approved cost</b>					
(i) Balance payments	833.33	605.76	56.71	127.28	789.75
(ii) Balance works	503.55	463.03	-	-	463.03
(iii) New works	50.22	50.22	-	-	50.22
<b>Sub-Total (1)</b>	1387.10	1119.01	56.71	127.28	1303.00
<b>2. Works not within the scope of approved cost</b>					
(i) Safety & security measures	141.27	122.80	16.04	2.43	141.27
(ii) Improvement in efficiency & performance	106.69	28.18	34.72	8.31	71.21
(iii) Misc. including minor assets	25.67	9.39	15.96	0.00	25.35
<b>Sub-Total ( 2)</b>	273.63	160.37	66.72	10.74	237.83
<b>3. Capital spares</b>	352.02	0.00	0.00	0.00	0.00
<b>4.Deletions (De-capitalization)</b>	125.27	18.30	9.15	13.41	40.86
<b>5. Net addition (1+2+3-4)</b>	1887.48	1261.08	114.28	124.61	1499.97

26. Thus net capitalization allowed during the period 2001-04 works out to Rs. 1499.97 lakh, against the petitioner's claim of Rs. 1887.48 lakh.

#### **ASSETS NOT IN USE AS ON 31.3.2004**

27. At the hearing, the petitioner was directed by the Commission to submit list of assets (including construction machinery and equipment) not in use as on 31.3.2004. The petitioner subsequently submitted that there are total 18 assets with gross value of Rs. 201.92 lakh (Rs. 2.02 crore) which are surplus and are not in use as on 31.3.2004. These assets are loaders, tripper wagon, transit mixtures, D.G. Set, truck,

crane, air compressors. De-capitalization of above assets amounting to Rs. 2.02 crore, which are surplus and not in use as on 31.3.2004 has been allowed.

**CAPITAL COST AS ON 1.4.2004 FOR THE TARIFF PERIOD 2004-09**

28. Taking into account additional capital expenditure for the period 2001-04 allowed the capital cost as on 1.4.2004 (excluding FERV) is worked out as follows :

(Rs. in crore)

Capital cost as on 1.4.2001 admitted by CERC	478.57
Additional capitalization for 2001-02	12.61
Capital cost as on 1.4.2002	491.18
Additional capitalization for 2002-03	1.14
Capital cost as on 1.4.2003	492.32
Additional capitalization for 2003-04	1.25
Capital cost as on 1.4.2004	493.57
Assets not in use	(-)2.02
Net Capital cost as on 1.4.2004	491.55

29. Thus, after allowing net capitalization of Rs. 15.00 crore during the period 2001-04 and de-capitalization of assets of value Rs. 2.02 crore not in use as on 31.3.2004, the opening capital cost of Rangit HEP as on 1.4.2004 for the purpose of tariff for the period 2004-09 shall be Rs. 491.55 crore (excluding FERV).

**REVISION OF FIXED CHARGES**

30. Next arises the question of revision of fixed charges for the period 1.4.2001 to 31.3.2004. In the order dated 31.3.2005 in petition No. 139/2004 (NTPC –Vs- UPPCL & Others), the Commission has held that the additional capital expenditure during the tariff period, not exceeding 20% of the approved capital cost does not qualify for revision of tariff for this period. In the present, the additional capital expenditure is less than 20% of the approved cost. For the reasons given in the said order dated 31.3.2005, the revision of fixed charges for the period 1.4.2001 to 31.3.2004 is not warranted. However, cost of servicing of investment on this additional expenditure is to be reimbursed to the petitioner during tariff for 2004-09. Therefore, as per the decision in Petition No.139/2004, the impact of capitalization/de-capitalization of expenditure on return on equity and interest on loan for the period 1.4.2001 to 31.3.2004 will be worked out while approving tariff for Rangit HEP for the period 1.4.2004 to 31.3.2009.

31. With the above observations the petition stands disposed of.

**Sd/-**  
**(A.H. JUNG)**  
**MEMBER**

**Sd/-**  
**(BHANU BHUSHAN)**  
**MEMBER**

**Sd/-**  
**(K.N. SINHA)**  
**MEMBER**

**Sd/-**  
**(A.K. BASU)**  
**CHAIRPERSON**

**New Delhi dated the 9<sup>th</sup> May,2006**

