

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

- 1. Dr. Promod Deo, Chairperson**
- 2. Shri R. Krishnamoorthy, Member**
- 3. Shri S.Jayaraman, Member**

Petition No.87/2007

In the matter of

Approval of charges for Sub-load Despatch Centre at Modipuram under UPPCL.

And in the matter of

Power Grid Corporation of India Limited, Gurgaon**Petitioner**

Vs

Uttar Pradesh Power Corporation Ltd

.... **Respondents**

The following were present:

Shri U.K. Tyagi, PGCIL

Shri. M.M. Mondal, PGCIL

Shri V V Sharma, PGCIL

Shri Harmeet Singh, PGCIL

Shri R.P. Agrawal, UPPCL

Shri G.M. Agrawal, UPPCL

**ORDER
(DATE OF HEARING: 17.2.2009)**

The petition has been filed seeking approval of final charges for the Sub-load Despatch Centre at Modipuram (hereinafter referred to as “the Centre”) in the State of UP for the period from 1.9.2006, the date of commercial operation to 31.8.2021.

2. Consequent to the carving out of Uttarakhand State from the erstwhile Uttar Pradesh State, Rishikesh Sub-Load Despatch Centre became a part of

Uttarakhand. Thereupon, the respondent requested the petitioner to take up implementation of the centre at 220 kV Modipuram sub-station. Accordingly, the Board of Directors of the petitioner accorded investment approval vide memorandum dated 10.8.2004, at an estimated cost of Rs. 336 lakh including IDC of Rs. 9 lakh.

3. We have heard the parties and gone through the pleadings and accordingly propose to decide the matter.

4. After considerable deliberation, the methodology for computation of fee and charges for the Unified Load Despatch Centres has been recently evolved and applied in the following cases:

(a) Order dated 27.1.2009 in Petition No. 143/2005 relating to Southern Region.

(b) Order dated 29.1.2009 in Petition No. 139/2005 relating to Northern Region.

(c) Order dated 3.2.2009 in Petition No. 147/2005 relating to North Eastern Region.

5. In tune with the methodology adopted in the above orders, we propose to apply the under-mentioned principles for determination of fee and charges for the centre in the present case also:

(a) Annual capital cost recovery shall be based on the levelised fees and charges for 15 years through recovery factor = $i(1+i)^n / [(1+i)^n - 1]$

where, i = weighted average rate of interest and rate of return on equity
as the case may be and n = period.

(b) IWC shall not be levelised.

CAPITAL COST

6. The Commission, by its order dated 3.7.2008 directed the petitioner to submit the revised calculations based on capital cost as on 31.3.2008, along with approved revised cost estimate on affidavit by 31.7.2008, with advance copy to the respondent, who was to file its reply, if any, by 20.8.2008. In pursuance of the above, the petitioner vide its affidavit dated 11.12.2008 submitted the details of the revised capital cost supported by the audit certificate dated 4.12.2008, as under:

(Rs. In lakh)		
S.No	Details	Amount
(a)	Expenditure up to 31.8.2006 (Date of commercial operation)	269.96
(b)	Expenditure from date of commercial operation to 31.3.2007	81.92
(c)	Expenditure from 1.4.2007 to 31.3.2008	1.33
(d)	Total expenditure	353.21

7. Approval for the revised cost amounting to Rs. 353 lakh has been accorded vide Memorandum dated 11.12.2008. Capital cost as per the revised cost estimate is considered for the purpose of calculation of fee and charges in this order.

DEBT – EQUITY RATIO

8. The Revised Cost Estimate approved vide Memorandum dated 11.12.2008 confirms that the capital cost of the centre was funded through domestic borrowings (loans/bonds) and internal resources of the petitioner in

the ratio of 70:30. Details of the source of funding submitted by the petitioner are as under:

(Rs in Lakh)					
Expenditure:	Total	Loan	Equity	Debt %	Equity %
Upto 31.08.2006 (DOCO)	269.96	189.00	80.96	70.01%	29.99%
From DOCO to 31.03.2007	81.92	57.34	24.58	70.00%	30.00%
From 01.04.2007 to 31.03.2008	1.33	0.93	0.40	69.92%	30.08%
TOTAL	353.21	247.27	105.94	70.01%	29.99%

9. As regards the additional capital expenditure, for the period after 31.8.2006, it has been decided to apply the debt-equity ratio of 70:30 in tune with regulation 54 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter “the 2004 regulations”).

10. Accordingly, debt – equity ratio of the centre is taken as 70:30.

INTEREST ON LOAN

11. The petitioner has claimed fee and charges taking the weighted average rate of interest of 8.4177 % on loan. The same has been allowed and used in these calculations.

RETURN ON EQUITY

12. The petitioner has claimed return on equity @14%. The same has been allowed and used in these calculations also.

CAPITAL RECOVERY FACTOR

13. The petitioner has worked out the annual capital recovery charges considering the following recovery factor for loan and equity:

For Capital Expenditure	Recovery Factor for Loan	Recovery Factor for Equity
Up to Date of Commercial operation	0.119826	0.162809
Additional capital expenditure 2006-07	0.121228	0.164002
Additional capital expenditure 2007-08	0.125893	0.168035

14. It appears that the petitioner has worked out the capital recovery factors corresponding to the additional capital expenditure by considering the expenditure during mid year. Accordingly the recovery period is shown as 14.67 years and 13.67 years respectively and the recovery factor has been calculated accordingly. In our calculations, additional capital expenditure for the complete year has been considered and the recovery period is the total of complete years and the remaining year in fractions. This is the main reason for difference in the value of recovery factors as worked out vis-à-vis the petitioner's calculations.

OPERATION AND MAINTENANCE EXPENSES

15. The petitioner has not claimed any O&M charges. Accordingly, no amount is awarded in the fee in this regard.

INTEREST ON WORKING CAPITAL

16. The components of the working capital and the interest thereon are discussed hereunder:

(i) Maintenance spares

Regulation 56(v)(1)(b) of the 2004 regulations provides for maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation. However, in the present case, the petitioner has not claimed maintenance spares. Accordingly, this component of working capital is taken as NIL.

(ii) O & M expenses

Regulation 56(v)(1)(a) of the 2004 regulations provides for operation and maintenance expenses for one month as a component of working capital. However as O&M expenses has been taken as NIL in these calculations as stated above, this component of the working capital is also taken as NIL..

(iii) Receivables

As per Regulation 56(v)(1)(c) of the 2004 regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis 2 months' charges claimed in the petition. In the fees and charges being allowed, receivables have been worked out on the basis 2 months' charges.

(iv) Rate of interest on working capital

As per Regulation 56(v)(2) of the 2004 regulations, rate of interest on working capital shall be on 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 project or part thereof (as the case may be) is declared under commercial operation, whichever is later. The interest on working capital is payable on normative basis notwithstanding that the transmission licensee has not taken working capital loan from any outside agency. The petitioner has claimed interest on working capital @ 10.25% based on SBI PLR as on 1.4.2004, which is in accordance with the 2004 regulations and has been allowed.

17. The detailed calculation in support of interest on working capital are as under:

(Rs. in lakh)			
	On Capital expenditure up to Date of Commercial operation	On Capital expenditure from date of commercial operation to 31.3.2007	On Capital expenditure from 1.4.2007 to 31.3.2008
Maintenance spares	0.00	0.00	0.00
O&M Expenses	0.00	0.00	0.00
Receivables	6.08	1.88	0.03
Total	6.08	1.88	0.03
Rate of Interest on Working Capital	10.25%	10.25%	10.25%
Interest on Working Capital	0.623	0.192	0.003

18. Based on the foregoing principles and methodologies, the annual fees and charges for the centre are calculated as under:

(Rs. in lakh)

Particulars	On Capital expenditure up to Date of Commercial operation	On Capital expenditure from date of commercial operation to 31.3.2007	On Capital expenditure from 1.4.2007 to 31.3.2008
Capital Cost	269.96	81.92	1.33
Notional Loan	189.00	57.34	0.93
Notional Equity	80.96	24.58	0.40
Years	15.00000	14.416667	13.416667
Recovery Factors -Loan	0.119826	0.122327	0.127179
Annual Capital Recovery Charge - Loan	22.65	7.01	0.12
Recovery Factors -Equity	0.162809	0.164943	0.169163
Annual Capital Recovery Charge - Equity	13.18	4.05	0.07
Annual Capital Recovery Charge - Total	35.83	11.07	0.19
O&M Expenses	0.00	0.00	0.00
Interest on Working Capital [†]	0.62	0.19	0.00
Total Annual charges	36.45	11.26	0.19

19. During the hearing, the respondent pointed out that at times the data was not being received correctly. This was attributed to defect in the equipment or the software. Accordingly, the respondent requested that the fee and charges be awarded only after the rectification of the defects. In response to this, the petitioner submitted that no problem of this nature surfaced during the preceding two weeks when people of the supplier company were stationed at Modipuram. The representative of the petitioner added that at times such operational problems could occur, but would be taken care of by the petitioner. We hope that the petitioner will abide by its assurance.

20. In addition to the above charges the petitioner shall be entitled to other charges like income-tax, incentive, surcharge and other cess and taxes in accordance with the 2004 regulations.

21. It is to be noted that as the full capital cost is being recovered over a period of 15 years with interest/return. After full recovery, the assets shall be transferred to the respondent at nominal value

22. This disposes of Petition No. 87/2007

Sd/=
(S. Jayaraman)
Member

Sd/=
(R. Krishnamoorthy)
Member

Sd/=
(Dr. Pramod Deo)
Chairperson

New Delhi, dated 18th March 2009