

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 41/2010**

**Coram:**

1. Dr. Pramod Deo, Chairperson
2. Shri S.Jayaraman, Member

**DATE OF HEARING: 23.3.2010**

**DATE OF ORDER: 26.4.2010**

**In the matter of**

Determination of revised transmission tariff due to additional capital expenditure incurred during 2008-09 for remaining part of Tala-Siliguri Transmission System Commission (Asset-2) in Eastern Region.

**And in the matter of**

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

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

**.... Respondents**

**The following were present:**

1. Shri U.K.Tyagi, PGCIL
2. Shri M.M.Mondal, PGCIL
3. Shri R.Prasad, PGCIL
4. Shri R.B.Sharma, Advocate, BSEB

**ORDER**

This petition has been filed for revision of transmission tariff on account of additional capital expenditure in respect of remaining part of Tala-Siliguri Transmission System (the transmission system) i.e. 400 kV D/C Tala-Siliguri line-II (India Portion) and LILO of 400 kV Bongaigaon-Malda at New Purnia sub-station (Asset-2) in Eastern Region during the

period from 1.4.2008 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"). The petitioner has also prayed for reimbursement of the petition filing fee, licence fee and other expenditure in connection with the filing of the petition.

2. The investment approval for the transmission system was accorded by the Board of Directors of the petitioner company vide Memorandum dated 17.7.2002 at an estimated cost of Rs.23153.00 lakh, which included IDC of Rs. 1789 lakh. Subsequently, revised cost estimate was approved by the Board of Directors of the petitioner company vide Memorandum dated 20.10.2006 at an estimated cost of Rs. 28779 lakh, which included IDC of Rs. 2377 lakh. The transmission line was declared under commercial operation on 1.5.2006.

3. The transmission charges for (i) 400 kV D/C Tala (Indo-Bhutan border)-Siliguri transmission line (Asset-I) and (ii) LLO of second ckt of Bongaigaon-Malda 400 kV D/C transmission line at Siliguri (Asset-II) approved vide order dated 23.5.2008 in Petition No. 136/2007 were revised by the Commission vide its order dated 29.1.2009 in Petition No. 99/2008. As there was no additional capital expenditure incurred during 2008-09 for Asset-I, through this petition, the petitioner has claimed additional capital expenditure incurred during 2008-09 for the Asset-II. The summary of the revised transmission charges approved by the said order dated 22.7.2009 is extracted hereunder:

(Rs. in lakh)

	Asset-II	
	2007-08	2008-09
Depreciation	388.47	391.23
Interest on Loan	807.37	771.04
Return on Equity	497.79	502.29
Advance against Depreciation	69.17	345.41
Interest on Working Capital	51.93	57.40
O & M Expenses	215.50	224.42
<b>Total</b>	<b>2030.22</b>	<b>2291.78</b>

4. The relevant details of the capital expenditure of the transmission system claimed by the petitioner are as under:

(Rs. in lakh)

Capital Expenditure as on 1.4.2008 ( As per order dated 29.1.2009 in Petition No. 61/2009)	Additional Capital Expenditure during 2008-09	Capital expenditure as on 31.3.2009
15222.81	74.90	15297.71

5. Based on the above additional capital expenditure, the petitioner has claimed the revised transmission charges for the year 2008-09 as under:

(Rs. in lakh)

	2008-09
Depreciation	392.19
Interest on Loan	772.97
Return on Equity	503.87
Advance against Depreciation	344.44
Interest on Working Capital	57.46
O & M Expenses	224.42
<b>Total</b>	<b>2295.35</b>

6. The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:

(Rs. in lakh)

	<b>2008-09</b>
Maintenance Spares	159.29
O & M expenses	18.70
Receivables	382.56
Total	560.55
Rate of Interest	10.25%
Interest	<b>57.46</b>

7. BSEB in its reply dated 12.3.2010 has submitted that the additional capital expenditure of Rs. 74.90 lakh is mainly on account of retention/final payments and a confirmation be taken from the petitioner that no part of the claim belongs to any other category not covered by Regulation 53 of the 2004 regulations. The petitioner in its rejoinder has confirmed that the expenditure shown in the petition for the year 2008-09 has been claimed as per Regulation 53 (2) of the 2004 regulation on account of final/retention payments. In view of the clarification of the petitioner, the objections of BSEB no more survive. The concern expressed by BSEB regarding wages revision and reimbursement of filing fee have been taken care of in this order.

### **CAPITAL COST**

8. The details submitted by the petitioner in support of its claim for additional capital expenditure are given hereunder:

Year	Amount (Rs. in lakh)	Nature and details of expenditure
2008-09	Transmission line = Rs. 74.90 lakh	Balance/Retention payments
	Total = Rs. 74.90 lakh	

9. It is found that the additional capital expenditure claimed is in respect of committed liabilities. These are part of the deferred liabilities relating to works/services which have since materialised, and are within the original scope of work. Therefore, the additional expenditure sought to be capitalised is allowed under clauses (1) and (2) of Regulation 53 of the 2004 regulations.

### **TOTAL CAPITAL COST**

10. Based on the above, capital cost for the purpose of tariff for the transmission line as on 31.3.2009 works out as under:

(Rs. in lakh)			
Capital expenditure as on 1.4.2008	Additional expenditure 2008-09	capital during	Capital expenditure as on 31.3.2009
15222.81		74.90	15297.71

### **DEBT- EQUITY RATIO**

11. The petitioner has considered the amount of additional capitalization in the debt-equity ratio of 70:30. This has been found to be in order. Accordingly, for the purpose of tariff, equity considered for the transmission assets is as under:

(Rs. in lakh)				
Equity as on 1.4.2008	Equity addition due to additional capital expenditure during 2008-09	Total equity considered 31.3.2009	equity as on	Average equity for 2008-09
3587.80	22.47		3610.27	3599.04

### **RETURN ON EQUITY**

12. As per clause (iii) of Regulation 56 of the 2004 regulations, return on equity shall be computed on the equity base determined in accordance

with regulation 54 @ 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.

13. Equity as given in the table under para 11 above has been considered. The tariff for the year 2008-09 has been allowed on average equity. Accordingly, revised return on equity of Rs. 503.87 lakh has been allowed for the year 2008-09.

### **INTEREST ON LOAN**

14. Clause (1) of Regulation 56 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 54.

(b) The loan outstanding as on 1.4.2004 shall be worked out as the gross loan in accordance with Regulation 54 minus cumulative repayment as admitted by the Commission or any other authority having power to do so, up to 31.3.2004. The repayment for the period 2004-09 shall be worked out on a normative basis.

(c) The transmission licensee shall make every effort to re-finance the loan as long as it results in net benefit to the beneficiaries. The costs associated with such re-financing shall be borne by the beneficiaries.

(d) The changes to the loan terms and conditions shall be reflected from the date of such re-financing and benefit passed on to the beneficiaries.

(e) In case of dispute, any of the parties may approach the Commission with proper application. However, the beneficiaries shall not withhold any payment ordered by the Commission to the transmission licensee during pendency of any dispute relating to re-financing of loan;

(f) 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.

(g) The transmission licensee shall not make any profit on account of re-financing of loan and interest on loan;

(h) The transmission licensee may, at its discretion, swap loans having floating rate of interest with loans having fixed rate of interest, or vice versa, at its own cost and gains or losses as a result of such swapping shall accrue to the transmission licensee:

Provided that the beneficiaries shall be liable to pay interest for the loans initially contracted, whether on floating or fixed rate of interest."

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

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual loan have been considered as per order dated 29.1.2009 in Petition No. 99/2008. There is no addition of actual loans.

(b) Notional loan arising out of additional capitalization for the year 2008-09 has been added in loan amount as on 31.3.2008 to arrive at total notional loan. This adjusted gross loan has been considered as normative loan for tariff calculations.

(c) Tariff has been worked out considering normative loan and normative repayments. Normative repayments have been worked out by the following formula:

Actual repayment of actual loan during the year  
----- X Opening balance of normative

(d) Moratorium in repayment of loan has been considered with reference to normative loan and if the normative repayment of loan during the year is less than the depreciation including Advance Against Depreciation during the year, it has been considered as moratorium and depreciation including Advance Against Depreciation during the year has been deemed as normative repayment of loan during the year.

(e) Weighted average rate of interest on actual loan worked out as per (a) above has been applied on the average loan during the year to arrive at the interest on loan.

16. Based on above, revised interest on loan for the year 2008-09 has been worked out as under:

(Rs. in lakh)	
Details	<b>2008-09</b>
Gross Normative Loan-Opening	11635.01
Cumulative Repayment up to Previous Year	802.21
Net Loan-Opening	10832.80
Addition due to Additional Capitalisation	52.43
Repayment during the year	736.63
Net Loan-Closing	10148.59
Average Loan	10490.69
Weighted Average Rate of Interest on Loan	7.37%
<b>Interest</b>	<b>772.97</b>

17. The detailed calculations in support of the weighted average rate of interest are contained in Annexure attached.

## **DEPRECIATION**



18. Sub-clause (a) of clause (ii) of Regulation 56 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."

19. Depreciation allowed has been worked out as below:

(Rs. in lakh)

	<b>2008-09</b>
Gross block as on 1 <sup>st</sup> April of the year	15222.81
Addition due to Additional Capitalisation during 2008-09	74.90
Gross Block	15297.71
Rate of Depreciation	2.5700%
Depreciable Value	13734.23
Balance Useful life of the asset	-
Remaining Depreciable Value	12932.02
<b>Depreciation</b>	<b>392.19</b>

### **ADVANCE AGAINST DEPRECIATION**

20. 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

21. 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.

22. Accordingly, in our calculation the Advance Against Depreciation has been worked as detailed below:

(a) 1/10th of gross loan is worked out from the Gross Notional Loan as per para 16 above.

(b) Repayment of notional loan during the year is considered as per para 16 above.

(c) Depreciation is worked out as per para 19 above.

(d) In the calculation of Advance Against Depreciation, cumulative depreciation/Advance Against Depreciation up to the preceding year along with the depreciation of the current year

have been considered for working out the Advance Against Depreciation.

23. Details of revised Advance Against Depreciation allowed are given hereunder:

(Rs. in lakh)	
	<b>2008-09</b>
1/10th of Gross Loan(s)	1163.50
Repayment of the Loan	736.63
Minimum of the above	736.63
Depreciation during the year	392.19
(A) Difference	344.45
Cumulative Repayment of the Loan	1538.84
Cumulative Depreciation/ Advance against Depreciation	1194.40
(B) Difference	344.45
Advance against Depreciation Minimum of (A) and (B)	<b>344.45</b>

### **OPERATION & MAINTENANCE EXPENSES**

24. In accordance with clause (iv) of Regulation 56 the 2004 regulations, the following norms are prescribed for O & M expenses:

	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses (Rs in lakh per ckt-km)	0.227	0.236	0.246	0.255	0.266
O&M expenses (Rs in lakh per bay)	28.12	29.25	30.42	31.63	32.90

25. O&M expenses as taken for the tariff calculations as per order 23.5.2008 in Petition No. 136/2007 have been considered, since line length and number of bays remain unchanged.

### **INTEREST ON WORKING CAPITAL**

26. 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. The maintenance spares as considered in the order dated 23.5.2008 in Petition No. 136/2007 have been considered.

**(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. O&M expenses as considered in the order dated 23.5.2008 in Petition No. 136/2007 have been considered.

**(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. Accordingly, in the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission 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.

27. The necessary computations in support of revised interest on working capital, as revised, are appended herein below:

(Rs. in lakh)	
	<b>2008-09</b>
Maintenance Spares	159.29
O & M expenses	18.70
Receivables	382.56
Total	560.55
Rate of Interest	10.25%
Interest	<b>57.46</b>

#### **TRANSMISSION CHARGES**

28. The revised transmission charges being allowed for the transmission line for the year 2008-09 are summarised below:

(Rs. in lakh)	
	<b>2008-09</b>
Depreciation	392.19
Interest on Loan	772.97
Return on Equity	503.87
Advance against Depreciation	344.45
Interest on Working Capital	57.46
O & M Expenses	224.42
<b>Total</b>	<b>2295.35</b>

29. The petitioner shall recover from the respondent the additional transmission charges in one instalment and these charges shall be shared in accordance with the 2004 regulations.

30. The petitioner has also sought reimbursement of filing fee paid. The Commission by its separate general order dated 11.9.2008 in Petition No. 129/2005 (Suo-motu) has decided that petition filing fee shall not be reimbursed during the tariff period 2004-09 as the same has been factored in the O & M norms. Accordingly, filing fee has not been allowed to be reimbursed. The decision on licence fee as and when taken shall be communicated separately.

31. In addition to the transmission 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.

32. This order disposes of Petition No. 41/2010.

Sd/-  
**(S.JAYARAMAN)**  
**MEMBER**

sd/-  
**(Dr. PRAMOD DEO)**  
**CHAIRPERSON**

Details of calculations in support of the weighted revised average rate of interest.

(Rs. in lakh)

	Details of Loan	2008-09
<b>1</b>	<b>BOND XIII-OPTION-I</b>	
	Gross Loan opening	876.00
	Cumulative Repayment up to the date of commercial operation /previous year	146.00
	Net Loan-Opening	730.00
	Additions during the year	0.00
	Repayment during the year	73.00
	Net Loan-Closing	657.00
	Average Loan	693.50
	Rate of Interest	8.63%
	Interest	59.85
	Repayment Schedule	12 annual instalments from 31.7.2006
<b>2</b>	<b>BOND XVI</b>	
	Gross Loan opening	4757.00
	Cumulative Repayment up to the date of commercial operation /previous year	396.42
	Net Loan-Opening	4360.58
	Additions during the year	0.00
	Repayment during the year	396.42
	Net Loan-Closing	3964.16
	Average Loan	4162.37
	Rate of Interest	6.68%
	Interest	278.05
	Repayment Schedule	12 annual installments w.e.f. 23-2-2008
<b>3</b>	<b>BOND XVI</b>	
	Gross Loan opening	2757.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	2757.00
	Additions during the year	0.00
	Repayment during the year	275.70
	Net Loan-Closing	2481.30
	Average Loan	2619.15
	Rate of Interest	7.10%
	Interest	185.96
	Repayment Schedule	12 Annual Instalments from 18.2.2009
<b>4</b>	<b>BOND XVII</b>	
	Gross Loan opening	960.00

	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	960.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	960.00
	Average Loan	960.00
	Rate of Interest	7.39%
	Interest	70.94
	Repayment Schedule	10 annual installments w.e.f. 22-9-2009
<b>5</b>	<b>BOND XVIII</b>	
	Gross Loan opening	1600.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	1600.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1600.00
	Average Loan	1600.00
	Rate of Interest	8.15%
	Interest	130.40
	Repayment Schedule	12 annual installments w.e.f. 9-3-2010
<b>6</b>	<b>BOND XXIV(ADD CAP FOR 2006-2007)</b>	
	Gross Loan opening	550.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	550.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	550.00
	Average Loan	550.00
	Rate of Interest	9.95%
	Interest	54.73
	Repayment Schedule	12 annual installments w.e.f. 26-3-2011
	Gross Loan opening	11500.00
	Cumulative Repayment up to the date of commercial operation/previous year	542.42
	Net Loan-Opening	10957.58
	Additions during the year	0.00
	Repayment during the year	745.12
	Net Loan-Closing	10212.46
	Average Loan	10585.02
	Rate of Interest	7.3682%
	Interest	779.92



