

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 251/2009**

**Coram:**

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

**DATE OF HEARING: 23.3.2010**

**DATE OF ORDER: 10.5.2010**

**In the matter of**

Determination of final transmission tariff and additional capital expenditure up to 31.3.2009 for 400 kV D/C Kota-Merta transmission line (Ckt I & II) along with associated bays under system Strengthening in South West part of Northern Grid (Part-A) Transmission System in Northern Region for the period from 1.2.2009 to 31.3.2009.

**And in the matter of**

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

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
2. Ajmer Vidyut Vitaran Nigam Ltd., Jaipur
3. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
4. Jodhpur Vidyut Vitaran Nigam Ltd, Jaipur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Power Purchase Centre, Panchkula
8. Power Development Department, Govt. of J&K, Jammu
9. Uttar Pradesh Power Corporation Ltd, Lucknow
10. Delhi Transco Ltd, New Delhi
11. BSES Yamuna Power Limited, New Delhi
12. BSES Rajdhani Power Ltd., New Delhi
13. North Delhi Power Ltd., New Delhi
14. Chandigarh Administration, Chandigarh
15. Uttarakhand Power Corporation Ltd, Dehradun
16. North Central Railway, Allahabad
17. New Delhi Municipal Council, New Delhi **.....Respondents**

**The following were present:**

1. Shri U.K.Tyagi, PGCIL
2. Shri M.M.Mondal, PGCIL
3. Shar Rakesh Prasad, PGCIL

## ORDER

This petition has been filed for approval of transmission charges for 400 kV D/C Kota-Merta transmission line (Ckt I & II) ( the transmission line) along with associated bays under system Strengthening in South West part of Northern Grid (Part-A) Transmission System ( the transmission system) in Northern Region from the date of commercial operation 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") after accounting for additional capitalization during 2008-09. The petitioner has also prayed for reimbursement, from the beneficiaries, of the expenditure incurred towards publishing of notices in newspapers and the petition filing fee.

2. The investment approval for the scheme was accorded by Board of Directors of the petitioner company vide Memorandum dated 27.10.2006 at an estimated cost of Rs. 38128 lakh, which included IDC of Rs. 1763 lakh (2<sup>nd</sup> quarter 2006 price level).

3. The date of commercial operation of the transmission assets, their apportioned approved cost and estimated completion cost, etc. are as under:

(Rs in lakh)

Date of commercial operation	Apportioned approved cost	Expenditure up to the date of commercial operation	Expenditure from the date of commercial operation to 31.3.2009	Balance expenditure	Estimated completion cost
1.2.2009	38128.00	28912.00	620.00	1430.00	30962.00

4. The petitioner has claimed the transmission charges as under:

(Rs. in lakh)

	<b>2008-09 (Pro rata)</b>
Depreciation	136.12
Interest on Loan	320.29
Return on Equity	204.55
Advance against Depreciation	0.00
Interest on Working Capital	21.20
O & M Expenses	44.61
<b>Total</b>	<b>726.77</b>

5. 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 (Pro rata)</b>
Maintenance Spares	289.12
O & M expenses	22.31
Receivables	726.77
<b>Total</b>	<b>1038.20</b>
Rate of Interest	12.25%
Interest	21.20

6. No reply has been filed by the respondents. In response to the public notices published by the petitioner in accordance with the procedure specified by the Commission, no comments have been received from the general public.

### **CAPITAL COST**

7. As per clause (1) of Regulation 52 of the 2004 regulations, subject to prudence check, the actual expenditure incurred on completion of the project shall form the basis for determination of final tariff. The final tariff shall be determined based on the admitted capital expenditure actually incurred up to the date of commercial operation of the transmission system and shall include capitalised initial spares subject to a ceiling norm of 1.5% of original

project cost. The regulation is applicable in case of the transmission system declared under commercial operation on or after 1.4.2004.

8. The petitioner has claimed tariff after accounting for additional capital expenditure in respect of capital expenditure from the date of commercial operation up to 31.3.2009 as given in the table below para 3 above.

#### **ADDITIONAL CAPITALIZATION 2008-09**

9. Clause (1) of Regulation 53 of the 2004 regulations provides-

“(1) The following capital expenditure within the original scope of work actually incurred after the date of commercial operation and up to the cut off date may be admitted by the Commission, subject to prudence check:

- (i) Deferred liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares in the original scope of works subject to the ceiling norm specified in regulation 52;
- (iv) Liabilities to meet award of arbitration or compliance of the order or decree of a court; and
- (v) On account of change in law:

Provided that original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff:

Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the transmission system.”

10. 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. 610.35 lakh Sub-station : Rs. 9.85 lakh	Balance and retention payments
Total	Rs. 620.35 lakh	

11. The additional capital expenditure claimed is within the original scope of work and is found to be in order as it was against the committed liability. Accordingly, capitalization of the additional expenditure claimed by the petitioner has been allowed for the transmission scheme.

### **Initial spares**

12. Clause (1) of the Regulation 52 of the 2004 regulations *inter alia* provides that,-

“(1) Subject to prudence check by the Commission, the actual expenditure incurred on completion of the project shall form the basis for determination of final tariff. The final tariff shall be determined based on the admitted capital expenditure actually incurred up to the date of commercial operation of the transmission system and shall include capitalized initial spares subject to a ceiling norm as 1.5% of original project cost”.

13. The value of initial spares for the transmission asset is within 1.50% of the expenditure as the cut off date is yet to be arrived at.

### **TOTAL CAPITAL COST**

14. Based on the above, gross block as given below has been considered for the purpose of tariff for the transmission assets, after allowing additional capital expenditure on works as claimed by the petitioner, which is within the limits of apportioned approved cost:

(Rs. in lakh)		
Capital expenditure as on the date of commercial operation	Additional capital expenditure up to 31.3.2009	Total Capital expenditure as on 1.4.2009
28912.22	620.35	29532.67

### **DEBT- EQUITY RATIO**

15. Clause (1) of Regulation 54 of the 2004 regulations *inter alia* provides that,-

“(1) In case of the existing projects, debt–equity ratio Considered by the Commission for fixation of tariff for the period ending 31.3.2004 shall be considered for determination of tariff with effect from 1.4.2004:

Provided that in cases where the tariff for the period ending 31.3.2004 has not been determined by the Commission, debt-equity ratio shall be as may be decided by the Commission:

Provided further that in case of the existing projects where additional capitalisation has been completed on or after 1.4.2004 and admitted by the Commission under Regulation 53, equity in the additional capitalisation to be considered shall be :-

- (a) 30% of the additional capital expenditure admitted by the Commission, or
- (b) equity approved by the competent authority in the financial package, for additional capitalisation, or
- (c) actual equity employed,

whichever is the least:

Provided further that in case of additional expenditure admitted under the second proviso, the Commission may consider equity of more than 30% if the transmission licensee is able to satisfy the Commission that deployment of such equity of more than 30% was in the interest of general public.”

16. Note 1 below Regulation 53 of the 2004 regulations lays down that any expenditure on account of committed liabilities within the original scope of work is to be serviced in the normative debt-equity ratio specified in Regulation 54.

17. The petitioner has considered debt-equity ratio of 70:30 for the transmission asset as actually deployed on the date of commercial operation. The petitioner has further considered the amount of additional capitalization in the debt-equity ratio of 70:30. The additional capital expenditure

approved in the ratio of 70:30 has been considered in accordance with the 2004 regulations. Accordingly, for the purpose of tariff, equity considered for the transmission asset is as under:

(Rs. in lakh)			
Equity on the date of commercial operation	Equity addition due to additional capital expenditure for the period 2008-09	Average equity for 2008-09	Equity considered as on 1.4.2009
8673.22	186.11	8766.27	8859.33

### **RETURN ON EQUITY**

18. 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.

19. Equity has been considered as on the date of commercial operation as given in the table in para 17 above. However, tariff for the period from date of commercial operation to 31.3.2009 has been allowed on average equity. Accordingly, the petitioner shall be entitled to return on equity of Rs. 204.55 lakh on pro rata basis for the transmission asset.

### **INTEREST ON LOAN**

20. Clause (i) 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."

21. 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 the petition.

(b) Notional loan arising out of additional capital expenditure has been added in loan amount as on the date of commercial operation



to arrive at total Notional loan. This adjusted Gross loan is considered as normative loan for tariff calculations.

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

$$\frac{\text{Actual repayment of actual loan during the year}}{\text{Opening balance of actual loan during the year}} \times \text{Opening balance of normative loan during the year}$$

(d) Moratorium in repayment of loan is 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, then depreciation including Advance Against Depreciation during the year is deemed as normative repayment of loan during the year.

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

22. Based on the above, the year-wise details of interest worked out are given hereunder:

	(Rs. in lakh)
	<b>2008-09</b> (Pro rata)
Gross Normative Loan	20239.00
Cumulative Repayment up to Previous Year/date of commercial operation	0.00
Net Loan-Opening	20239.00
Addition due to Additional Capitalisation	434.25
Repayment during the year	136.12
Net Loan-Closing	20388.06
Average Loan	9.43%
Weighted Average Rate of Interest on Loan	320.29
Interest	<b>20239.00</b>

23. The detailed calculations in support of the weighted average rate of interest in respect of transmission asset are contained in Annexure-I attached to this order.

### **DEPRECIATION**

24. 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.”

25. Based on the above, depreciation allowed has been worked out as below:

	(Rs. in lakh)
	<b>2008-09 (Pro rata)</b>
Gross block as on the date of commercial operation	28912.22
Addition due to Additional Capitalisation during 2008-09	620.35
Gross Block at the end of the year	29532.57
Rate of Depreciation	2.7949%
Depreciable Value	26300.16
Balance Useful life of the asset	-
Remaining Depreciable Value	26300.16
Depreciation	<b>136.12</b>

## **ADVANCE AGAINST DEPRECIATION**

26. 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

27. 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.

28. The petitioner has not claimed Advance Against Depreciation and accordingly, Advance Against Depreciation has not been considered.

## **OPERATION & MAINTENANCE EXPENSES**

29. 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

30. The petitioner has claimed O & M expenses for four bays and 511.458 ckt km, which have been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

(Rs. in lakh)	
	2008-09 (Pro-rata)
O&M expenses for 4 bays	21.933
O&M expenses for 511.458 ckt km.	22.675
<b>Total</b>	<b>44.61</b>

31. The petitioner has submitted that the wage revision of its employees is due with effect from 1.1.2007. Therefore, according to the petitioner, O & M expenses should be subject to revision on account of revision of employee cost from that date. In the alternative, it has been prayed that the increase in employee cost due to wage revision be allowed as per actual based on the auditor's certificate for such extra employee cost. We are not expressing any view, as this issue does not arise for consideration at this stage. The petitioner may approach for relief in this regard at an appropriate stage in accordance with law.

### **INTEREST ON WORKING CAPITAL**

32. 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. In the present case, element wise capital expenditure on the date of commercial operation which has been considered as the historical cost for the purpose of the

present petition and maintenance spares have been worked out accordingly by escalating 1% of the historical cost @ 6% per annum. In this manner, the value of maintenance spares works out to Rs. 289.12 lakh as on date of commercial operation.

**(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. The petitioner has claimed O&M expenses for 1 month of O&M expenses of the respective year as claimed in the petition. This has been considered in the working capital.

**(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 of 2 months' transmission charges claimed in the petition. 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 @ 12.25% based on SBI PLR as on 1.4.2008, which is in accordance with the 2004 regulations and has been allowed.

33. The necessary computations in support of interest on working capital are appended herein below:

	(Rs. in lakh)
	<b>2008-09 (Pro rata)</b>
Maintenance Spares	289.12
O & M expenses	22.31
Receivables	726.77
Total	1038.19
Rate of Interest	12.25%
Interest	<b>21.20</b>

### **TRANSMISSION CHARGES**

34. The transmission charges being allowed for the two transmission assets are summarised below:

	(Rs. in lakh)
	<b>2008-09 (Pro rata)</b>
Depreciation	136.12
Interest on Loan	320.29
Return on Equity	204.55
Advance against Depreciation	0.00
Interest on Working Capital	21.20
O & M Expenses	44.61
Total	<b>726.77</b>

35. 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.

36. The petitioner has sought approval for the reimbursement of expenditure of Rs. 3,12,921/- incurred on publication of notices in the newspapers. The petitioner shall claim reimbursement of the said expenditure directly from the respondents in one installment in the ratio applicable for sharing of transmission charges.

37. 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 O & M norms. The decision applied in the present case also. The decision on licence fee shall be communicated separately.

38. This order disposes of Petition No. 251/2009.

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

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

## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

		Rs. in lakh)
	Details of Loan	2008-09
<b>1</b>	<b>Bond-XXVIII</b>	
	Gross Loan opening	7912.00
	Cumulative Repayment up to the date of commercial operation/previous year	0.00
	Net Loan-Opening	7912.00
	Additions during the year	79.00
	Repayment during the year	0.00
	Net Loan-Closing	7991.00
	Average Loan	7951.50
	Rate of Interest	9.33%
	Interest	741.87
	Repayment Schedule	12 Annual instalments from 15.12.2012
<b>2</b>	<b>Bond-XXVII</b>	
	Gross Loan opening	11875.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	11875.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	11875.00
	Average Loan	11875.00
	Rate of Interest	9.47%
	Interest	1124.56
	Repayment Schedule	12 Annual instalments from 31.3.2012
<b>3</b>	<b>Bond-XXIV</b>	
	Gross Loan opening	452.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	452.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	452.00
	Average Loan	452.00
	Rate of Interest	9.95%
	Interest	44.97
	Repayment Schedule	12 Annual instalments from 26-3-2011
	<b>Total Loan</b>	
	Gross Loan opening	20239.00
	Cumulative Repayment up to the date of commercial operation	0.00
	Net Loan-Opening	20239.00
	Additions during the year	79.00
	Repayment during the year	0.00
	Net Loan-Closing	20318.00
	Average Loan	20278.50
	Rate of Interest	9.43%
	<b>Interest</b>	1911.41



