

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

1. **Dr. Pramod Deo, Chairperson**
2. **Shri R.Krishnamoorthy, Member**
3. **Shri V.S.Verma, Member**

Petition No. 127/2008

In the matter of

Petition for approval of final transmission tariff of 400 kV S/C Vindhyachal-Korba Ckt-II along with associated bay equipment at Vindhyachal and Korba switchyards in Western Region for the period from 1.6.2007 to 31.3.2009

And in the matter of

Power Grid Corporation of India Limited, Gurgaon

..Petitioner

Vs

1. Madhya Pradesh Power Transmission Company Ltd., Jabalpur
2. Maharashtra State Electricity Distribution Co. Ltd., Mumbai
3. Gujarat Urja Vikas Nigam Ltd., Vadodara
4. Electricity Deptt., Govt., of Goa, Panaji
5. Electricity Department, Administration of Daman and Diu, Daman
6. Electricity Department, Administration of Dadra Nagar Haveli, Silvassa
7. Chhattisgarh State Electricity Board, Raipur
8. Madhya Pradesh Audyogik Kandra, Indore

.....Respondents

The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri V.V.Sharma, PGCIL
3. Shri S.K.Niranjana, PGCIL
4. Shri Mahesh Kumar, PGCIL

ORDER

(DATE OF HEARING: 12.3.2009)

The application has been made for approval of tariff for 400 kV S/C Vindhyachal-Korba transmission line, Ckt II, along with associated bays equipment at Vindhyachal and Korba switchyards (the transmission line) in Western Region for the period from 1.6.2007 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 2007-08. The petitioner has also prayed for

reimbursement of expenditure from the beneficiaries incurred towards publishing of notices in newspapers and the petition filing fee.

2. The investment approval for the transmission line was accorded by Board of Directors of the petitioner company vide Memorandum dated 19.2.2004 at an estimated cost of Rs.16402 lakh, which included IDC of Rs. 878.00 lakh. The transmission line was to be completed by February 2007. Subsequently, approval for the revised cost estimate was accorded by Board of Directors of the petitioner company vide letter dated 10.7.2007 for an estimated cost of Rs. 21253 lakh, which included IDC of Rs. 1447 lakh.

3. The transmission line was declared under commercial operation on 1.6.2007. The provisional transmission charges for transmission line were approved by the Commission in its order dated 18.10.2007 in Petition No.111/2007 based on audited capital cost of Rs. 17547.10 lakh as on 31.3.2007 since the audited capital cost data, as on the date of commercial operation was not produced. The apportioned approved cost and other details of cost submitted by the petitioner are as under:

(Rs. in lakh)				
Apportioned approved cost (as per original approved cost)	Expenditure up to date of commercial operation	Expenditure from 1.6.2007 to 31.3.2008	Balance estimated expenditure	Total
16402.00	17460.97	809.67	868.86	19139.50

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

(Rs. in lakh)		
	2007-08 (Pro rata)	2008-09
Depreciation	398.27	488.92
Interest on Loan	797.11	953.80
Return on Equity	626.08	768.30
Advance against Depreciation	0.00	0.00
Interest on Working Capital	59.73	73.47
O & M Expenses	114.13	142.67
Total	1995.31	2427.17

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

	(Rs. in lakh)	
	2007-08 (Pro rata)	2008-09
Maintenance Spares	174.61	183.34
O & M expenses	11.41	11.89
Receivables	399.06	404.53
Total	585.01	599.69
Rate of Interest	12.25%	12.25%
Interest	59.73	73.47

6. No reply has been filed by any respondents. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under section 64 of the Electricity Act, 2003.

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 as 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 additional capitalization of Rs.809.67 lakh on works for the period from 1.6.2007 to 31.3.2008 over the capital expenditure of Rs. 17460.97 lakh as on the date of commercial operation.

Cost over-run

9. The petitioner has submitted that the original cost estimate was revised mainly due to price variation and increase in the land compensation.

10. It has been observed from FORM-5B that most of the packages were awarded through “domestic competitive bidding” route with price escalation clause 13. The reasons given by the petitioner for increase in cost have been considered and found to be justified.

Time Over-run

11. As per the original approval, the entire scheme was scheduled to be commissioned by February 2007. However, the transmission asset was declared under commercial operation on 1.6.2007, with a delay of 3 months in the commissioning. The petitioner has explained that the delay in completion was due to time taken by the forest authorities in tree-cutting which were in substantial number in the entire corridor in the north Surguja forest stretch. The petitioner has submitted that the reasons for delay were beyond its control.

12. We have considered the matter. There is satisfactory explanation from the petitioner for the delay in completion of the transmission asset. Therefore, the delay in commissioning of the transmission asset is considered to be beyond the control of the petitioner and is condoned.

Additional Capitalization 2007-08

13. 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.”

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

Year 2007-08	Nature of expenditure	Justification
1.6.2007 to 31.3.2008	Transmission line = Rs. 703.85 lakh Sub-station = Rs. 101.08 lakh PLCC = Rs. 4.74 lakh	Payments of retention money and price variation.
	Total = Rs. 809.67 lakh	

15. Since the additional expenditure is within the approved scope of work, it has been found to be in order. Therefore, audited capital expenditure of Rs. 809.67 lakh from the date of commercial operation to 31.3.2008 has been considered for the purpose of tariff.

TOTAL CAPITAL COST

16. Against the above background, gross block of Rs. 18270.64 lakh as on 31.3.2008 has been worked out for the purpose of tariff over the gross block of Rs. 17460.97 lakh as on the date of commercial operation, after accounting for additional capitalisation of Rs. 809.67 lakh for the year 2007-08.

DEBT- EQUITY RATIO

17. Clause (2) of Regulation 54 of the 2004 regulations *inter alia* provides that,-

“(2) In case of the transmission system for which investment approval was accorded prior to 1.4.2004 and which are likely to be declared under commercial operation during the period 1.4.2004 to 31.3.2009, debt and equity in the ratio of 70:30 shall be considered:

Provided that where equity actually employed to finance the project is less than 30%, the actual debt and equity shall be considered for determination of tariff:

Provided further that the Commission may in appropriate cases consider equity higher than 30% for determination of tariff, where the transmission licensee is able to establish to the satisfaction of the Commission that deployment of equity higher than 30% was in the interest of general public.”

18. Note 1 below Regulation 53 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.

19. The petitioner has considered debt-equity ratio of 69.96:30.04 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 on the actual basis. In our calculations, debt-equity ratio has been restricted to 70:30 on the date of commercial operation, as also for additional capital expenditure approved. Accordingly, for the purpose of tariff, an amount of Rs. 5238.29 lakh has been considered as equity as on 1.6.2007 and Rs. 5481.19 lakh as on 1.4.2008.

RETURN ON EQUITY

20. 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.

21. For the reasons recorded in para 19 above, equity of Rs. 5238.29 lakh has been considered as on 1.6.2007 and from 1.4.2008 to 31.3.2009, equity of Rs. 5481.19 lakh has been considered. However, tariff for the period 1.6.2007 to 31.3.2008 has been allowed on average equity of Rs. 5359.74 lakh. Accordingly, the petitioner shall be entitled to return on equity of Rs. 625.30 lakh during 2007-08 on *pro rata* basis and Rs.767.37 lakh during 2008-09.

INTEREST ON LOAN

22. 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.”

23. The petitioner has claimed interest on loan in the following manner:
- (i) Gross loan opening has been considered from 2007-08.
 - (ii) On the basis of actual rate of interest on actual average loan, the weighted average rate of interest on loan has been worked out for various years.
 - (iii) Entire loan has been raised through Bonds redeemable at different points of time.
 - (iv) Gross loan at (i) above have been considered along with the loan utilised after date of commercial operation and weighted average rate of interest on loan for respective year as per above has been has been multiplied to arrive at interest on loan considering Deprecation as repayment.
 - (v) Bridge loan from ICICI has been replaced by Bond XXVI.
24. In our calculation, the interest on loan has been worked out as detailed below:
- (i) Weighted rate of interest for the purpose of tariff has been worked out by considering actual interest payable by the petitioner on actual average loan during the years 2007-08 and 2008-09.
 - (ii) For repayment during the year, normative repayment or depreciation whichever is higher has been considered.

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

Details of loan	(Rs. in lakh)	
	2007-08 (Pro rata)	2008-09
Opening Gross Loan	12222.68	12789.45
Cumulative Repayment up to date of commercial operation/previous year	0.00	398.27
Net Loan-Opening	12222.68	12391.18
Additions due to Additional Capitalisation	566.77	-
Repayment during the year	398.27	488.92
Net Loan-Closing	12391.18	11902.26
Average Loan	12306.93	12146.72
Weighted Average Rate of Interest on Loan	7.78%	7.86%
Interest	797.54	954.32

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

DEPRECIATION

27. 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.

28. Deprecation allowed has been worked out as shown below:

(Rs. in lakh)		
Details of Depreciation	2007-08 (Pro rata)	2008-09
Gross block at the beginning of the period	17460.97	18270.64
Additional Capitalisation during the period	809.67	-
Gross Block at the end of the period	18270.64	18270.64
Rate of Depreciation	2.6750%	2.6760%
Depreciable Value (90%)	16079.22	16443.58
Balance Useful life of the asset	-	-
Remaining Depreciable Value	16079.22	16045.31
Depreciation	398.27	488.92

ADVANCE AGAINST DEPRECIATION

29. 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

30. 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.

31. The petitioner has not claimed Advance Against Depreciation and, thereafter, Advance Against Depreciation has not been considered.

OPERATION & MAINTENANCE EXPENSES

32. 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

33. The petitioner has claimed O & M expenses for 288.94 Ckt km line length and two bays which have been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

(Rs. in lakh)

	Year	
	2007-08 (Pro rata)	2008-09
O&M expenses for 288.94 Ckt km line length	61.41	76.87
O&M expenses for 2 bays	52.72	65.80
Total	114.13	142.67

34. The petitioner has submitted that the wage revision of its employees is due with effect from 1.1.2007. Therefore, 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 actuals for extra cost to be incurred consequent to wage revision. We are not expressing any view, as this issue does not arise for consideration at this

stage. The petitioner may approach for a relief in this regard at an appropriate stage in accordance with law.

INTEREST ON WORKING CAPITAL

35. 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, the capital expenditure on the date of commercial operation is Rs. 17460.97 lakh, 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. 174.61 lakh as on 1.6.2007.

(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 2

months' transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis 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 1.4.2007, which is in accordance with the 2004 regulations and has been allowed.

36. The necessary computations in support of interest on working capital are appended hereinbelow:

	(Rs. in lakh)	
	2007-08 (Pro rata)	2008-09
Maintenance Spares	174.61	183.34
O & M expenses	11.41	11.89
Receivables	398.99	404.46
Total	585.01	599.69
Rate of Interest	12.25%	12.25%
Interest	59.72	73.46

TRANSMISSION CHARGES

37. The transmission charges being allowed for the transmission line are summarised below:

(Rs. in lakh)

	2007-08 (Pro rata)	2008-09
Depreciation	398.27	488.92
Interest on Loan	797.54	954.32
Return on Equity	625.30	767.37
Advance against Depreciation	0.00	0.00
Interest on Working Capital	59.72	73.46
O & M Expenses	114.13	142.67
Total	1994.96	2426.75

38. 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. .

39. The petitioner has sought approval for the reimbursement of expenditure of Rs. 1,25,800/- incurred on publication of notices in the newspapers. The petitioner shall claim reimbursement of the said expenditure directly from the respondent in one installment. The petitioner has also sought reimbursement of filing fee of Rs. 5 lakh paid. The Commission by its separate general order dated 11.9.2008 in Petition No. 129/2005 (suo motu) has decided that the petitioner shall not be allowed reimbursement of the petition filing fee.

40. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's order dated 18.10.2007 in Petition No.111/2007. The provisional billing of tariff shall be adjusted in the light of final tariff now approved by us.

41. The petition stands disposed of in above terms.

Sd/-
(V.S.VERMA)
MEMBER

sd/-
(R.KRISHNAMOORTHY)
MEMBER

sd/-
(DR.PRAMOD DEO)
CHAIRPERSON

New Delhi dated the 9th April 2009

Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(Rs. in lakh)

	Details of Loan	2007-08	2008-09
1	Bond-XVII		
	Gross Loan opening	9416.00	9416.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00
	Net Loan-Opening	9416.00	9416.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	9416.00	9416.00
	Average Loan	9416.00	9416.00
	Rate of Interest	7.39%	7.39%
	Interest	695.84	695.84
	Repayment Schedule	10 Annual instalments from 22.9.2009	
2	Bond-XX		
	Gross Loan opening	2000.00	2000.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2000.00	2000.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2000.00	2000.00
	Average Loan	2000.00	2000.00
	Rate of Interest	8.93%	8.93%
	Interest	178.60	178.60
	Repayment Schedule	12 Annual instalments from 7.9.2010	
3	Bond-XXII		
	Gross Loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	100.00	100.00
	Average Loan	100.00	100.00
	Rate of Interest	8.68%	8.68%
	Interest	8.68	8.68
	Repayment Schedule	12 Annual instalments from 7.12.2010	
4	Bond-XXIII		
	Gross Loan opening	700.00	700.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00
	Net Loan-Opening	700.00	700.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	700.00	700.00
	Average Loan	700.00	700.00
	Rate of Interest	9.25%	9.25%
	Interest	64.75	64.75
	Repayment Schedule	12 Annual instalments from 9.2.2011	
5	Bond-XXV		

	Gross Loan opening	0.00	0.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	67.00
	Additions during the year	67.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	67.00	67.00
	Average Loan	33.50	67.00
	Rate of Interest	10.10%	10.10%
	Interest	3.38	6.77
	Repayment Schedule	12 Annual instalments fro 12-6-2011	
4	Bond- XXVI w.e.f 7.03.08 in replacement of 8.00% bridge loan from ICICI bank w.e.f 20.8.2007		
	Gross Loan opening	0.00	720.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	720.00
	Additions during the year	720.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	720.00	720.00
	Average Loan	360.00	720.00
	Rate of Interest	8.14%	9.30%
	Interest	29.32	66.96
	Repayment Schedule	12 Annual instalments from 7-3-2012	
	Total Loan		
	Gross Loan opening	12216.00	13003.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	12216.00	13003.00
	Additions during the year	787.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	13003.00	13003.00
	Average Loan	12609.50	13003.00
	Rate of Interest	7.78%	7.86%
	Interest	980.58	1021.60