

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

1. **Shri Bhanu Bhushan, Member**
2. **Shri A.H.Jung, Member**

**Petition No.84/2004
With I.A.No. 30/2005**

In the matter of

Approval of transmission charges for Kishenpur-Moga Transmission System in Northern Region for the period from 1.4.2004 to 31.3.2009.

And in the matter of

Power Grid Corporation of India Limited

..Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd, Jaipur
2. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
3. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
4. Jodhpur Vidyut Vitaran Nigam Ltd, Jodhpur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Vidyut Prasaran Nigam Ltd, Panchkula
8. Power Development Department, Govt. of J&K, Srinagar
9. Uttar Pradesh Power Corporation Ltd., Lucknow
10. Delhi Transmission Corporation Ltd, New Delhi
11. Chief Engineer, Chandigarh Administration, Chandigarh
12. Uttranchal Power Corporation Ltd, Dehradun
13. Northern Railway, New Delhi

.....Respondents

The following were present:

1. Shri P.C. Pankaj, PGCIL
2. Shri U.K. Tyagi, PGCIL
3. Shri C. Kannan, PGCIL
4. Shri M.M.Mandol, PGCIL
5. Shri Anand Mohan, PGCIL
6. Shri B.P.Kundu, PGCIL
7. Shri K.K.Mittal, RVPNL
8. Shri S.N.Joshi, JdVVNL
9. Shri A.S.Chauhan, JVVNL
10. Shri R.K.Arora, HPGCL
11. Shri V.K.Gupta, Consultant, PSEB
12. Shri T.P.S.Bawa, PSEB
13. Shri A.K. Tandon, EE, UPPCL

**ORDER
(DATE OF HEARING: 25.8.2005)**

The petition has been filed for approval for transmission charges for the Kishenpur-Moga Transmission System (the transmission system) in Northern Region

for the period from 1.4.2004 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 had also prayed that it be permitted to continue the billing of transmission charges on the same basis as charged on 31.3.2004, pending determination of tariff in the present petition. No other specific relief is prayed for.

2. I.A.No. 30/2005 has been filed for approval of additional capital expenditure incurred during 2001-04 and consequent revision of tariff. This I.A. was heard with main petition after notice.

3. The approval for the revised cost estimate of Rs. 93848.00, including IDC of Rs. 31044.00 lakh for the transmission system was accorded by Ministry of Power vide its letter dated 2.7.2002.

4. The annual transmission charges from 1.4.2001 to 31.3.2004 were decided by the Commission in its order dated 18.5.2004 in petition No.43/2002 at a total cost of Rs. 84361.41 lakh. The date of commercial operation of the transmission assets which form the subject matter of the present petition, and the line length and admitted capital cost are as stated below:

S. No.	Name of the transmission line	Date of commercial operation	Line length in Ckt-km (for O & M)	Admitted capital cost (Rs. in lakh)
(i)	800 kV Kishenpur-Moga transmission line -I along with associated bays	1.5.2000	275.38	43506.00
(ii)	800 kV Kishenpur-Moga transmission line -II along with associated bays	1.2.2001	287.12	39256.92
(iii)	420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV,250 MVA ICT III at Moga sub-station with associated bays	1.3.2000	-	1598.49
	Total		563.50	84361.41

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

(Rs.in lakh)

	800 kV Kishenpur-Moga transmission line -I along with associated bays					800 kV Kishenpur-Moga transmission line-II along with associated bays					420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV,250 MVA ICT III at Moga sub-station with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Advance Against Depreciation as per order dated 18.5.2004 in petition No.43/2002	1567.31	1567.31	1567.31	1567.31	1382.71	1503.16	1639.17	1639.17	1639.17	1525.97	0.00	14.87	45.47	45.47	38.87
Less: Adjustment of Excess Advance Against Depreciation due to refinancing of GOI loan	1324.57	-	-	-	-	1090.47					32.96				
Advance against Depreciation	242.74	1567.31	1567.31	1567.31	1382.71	412.69	1639.17	1639.17	1639.17	1525.97	(-)32.96	14.87	45.47	45.47	38.87
Interest on Loan	1743.11	1560.18	1377.25	1194.31	1023.97	1996.07	1787.74	1574.23	1360.72	1154.93	65.94	59.09	52.23	45.38	38.98
Return on Equity	706.73	706.73	706.73	706.73	706.73	1272.96	1272.96	1272.96	1272.96	1272.96	25.34	25.34	25.34	25.34	25.34
Interest on Working Capital	150.23	150.59	151.17	151.96	150.02	154.61	156.53	156.19	156.03	154.27	6.14	6.46	7.07	7.16	7.15
O & M Expenses	118.75	123.49	128.58	133.48	139.05	121.42	126.26	131.47	136.48	142.17	56.24	58.50	60.84	63.26	65.80
Total	4129.08	5275.82	5098.55	4921.31	4569.99	4975.24	6000.15	5791.50	5582.84	5267.79	177.77	221.33	248.03	243.69	233.22

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

(Rs.in lakh)

	800 kV Kishenpur-Moga transmission line -I along with associated bays					800 kV Kishenpur-Moga transmission line -II along with associated bays					420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV,250 MVA ICT III at Moga sub-station with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	546.79	579.60	614.38	651.24	690.32	487.35	516.59	547.58	580.44	615.26	20.09	21.29	22.57	23.93	25.36
O & M expenses	9.90	10.29	10.72	11.12	11.59	10.12	10.52	10.96	11.37	11.85	4.69	4.88	5.07	5.27	5.48
Receivables	908.94	879.30	849.76	820.22	761.67	1010.95	1000.02	965.25	930.47	877.96	35.12	36.89	41.34	40.61	38.87
Total	1465.63	1469.20	1474.85	1482.58	1463.57	1508.42	1527.13	1523.79	1522.28	1505.08	59.90	63.06	68.98	69.81	69.71
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	150.23	150.59	151.17	151.96	150.02	154.61	156.53	156.19	156.03	154.27	6.14	6.46	7.07	7.16	7.15

7. The replies to the petition have been filed by Punjab State Electricity Board, Jaipur Vidyut Vitran Nigam Ltd, Jodhpur Vidyut Vitran Nigam Ltd and Ajmer Vidyut Vitran Nigam Ltd. No comments or suggestion have been received from the general public in response to the notices published by the petitioner under section 64 of the Electricity Act, 2003.

I.A.No. 24/2005

8. In the present case, the petitioner has claimed an additional capitalization for the period 2001-2004. The details submitted by the petitioner in support of its claim for additional capital expenditure are given here under:

800 kV Kishenpur-Moga transmission line-I along with associated bays				800 kV Kishenpur-Moga transmission line -II along with associated bays		
Sl. No.	Year	Amount (Rs. in lakh)	Nature and details of expenditure	Year	Amount (Rs. in lakh)	Nature and details of expenditure
1.	2001-02	422.42	Erection payment for building and civil works = Rs.162.00 lakh Retention payment for transmission line = Rs.260.42 lakh	2001-02	709.42	Erection payment for building = Rs. 200 lakh Retention payment for transmission line = Rs.509.42 lakh
2.	2002-03	95.16	Payment for land = Rs.20.23 lakh Supply payment for transmission line = Rs. 66.58 lakh	2002-03	490.75	Erection payment for building and civil works = Rs.181.20 lakh Retention payment for transmission line = Rs.309.55 lakh
3.	2003-04	0.00		2003-04	159.31	Erection payment for building and civil works
	Total	517.58			1359.48	

9. The claim of additional capital expenditure of Rs. 1877.06 lakh is for erection payment for building and civil work and release of retention payment. The capital cost of the transmission assets up to the date of commercial operation considered in the order dated 18.5.2004 was without considering capital expenditure beyond the date of commercial operation. The capital expenditure incurred was within the scope of original work and is also found to be in order. Accordingly, the additional capital expenditure of Rs. 1877.06 as claimed has been allowed.

CAPITAL COST

10. As per clause (2) of Regulation 52 of the 2004 regulations in case of the projects existing up to 31.3.2004, the project cost admitted by the Commission for determination of tariff prior to 1.4.2004 shall form the basis for determination of tariff.

11. The petitioner has considered the capital expenditure admitted by the Commission in the order dated 18.5.2004 *ibid*. The petitioner has not claimed additional capitalisation on works for 420 kV 63 MVA Bus Reactor at Kishenpur sub-

station and 420/220 kV, 250 MVA ICT III at Moga sub-station. The petitioner has considered de-capitalisation on account of FERV. The additional capital expenditure and FERV considered by the petitioner for tariff purpose are given hereunder:

(Rs.in lakh)

Name of the Element	Capital cost as per order dated 18.5.2004	Additional Capitalization during 1.4.2001 to 31.3.2004	FERV for the period 1.4.2001 to 31.3.2004	Capital expenditure claimed
800 kV Kishenpur-Moga transmission line -I along with associated bays	43506.00	517.58	(-)397.62	43625.96
800 kV Kishenpur-Moga transmission line-II along with associated bays	39256.92	1359.48	(-)86.56	40529.84
420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV,250 MVA ICT III at Moga sub-station with associated bays	1598.49	-	(-)13.16	1585.33
Total	84361.41	1877.06	(-)497.34	85741.12

Extra Rupee Liability during the years 2001-04:

12. Regulation 1.13 (a) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2001 provided as under:

- (a) Extra rupee liability towards interest payment and loan repayment actually incurred, in the relevant year shall be admissible; provided it directly arises out of foreign exchange rate variation and is not attributable to Utility or its suppliers or contractors. Every utility shall follow the method as per the Accounting Standard-11 (Eleven) as issued by the Institute of Chartered Accountants of India to calculate the impact of exchange rate variation on loan repayment
- (b) Any foreign exchange rate variation to the extent of the dividend paid out on the permissible equity contributed in foreign currency, subject to the ceiling of permissible return shall be admissible. This as and when paid, may be spread over the twelve-month period in arrears

13. Regulation 1.7 of the 2001 further provided that recovery of foreign exchange rate variation would be done directly by the utilities from the beneficiaries without filing

a petition before the Commission. In case of any objections by the beneficiaries to the amounts claimed on these counts, they may file an appropriate petition before the Commission.

14. FERV worked out by the petitioner is matching with calculations submitted by it, and is in accordance with the provision of AS-11, applicable for the period up to 31.3.2004 and is for the benefit of the respondents. The claim for de-capitalization has accordingly been admitted for tariff calculations.

15. Based on the above, gross block as claimed by the petitioner as per para 11 above has been considered for the purpose of tariff for each of the element.

DEBT- EQUITY RATIO

16. Regulation 54 of the 2004 regulations *inter alia* provides that,-

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

Provided that where deployment of equity is less than 30%, the actual equity deployed shall be considered for the purpose of determination of tariff.

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

- (3) In case of the transmission system for which investment approval is accorded on or after 1.4.2004, debt-equity in the ratio of 70:30 shall be considered for the purpose of determination of tariff:

Provided that where deployment of equity is less than 30%, the actual equity deployed shall be considered for the purpose of determination of tariff.

- (4) The debt and equity amount arrived at in accordance with above sub-clause (1), (2) or (3), as the case may be, shall be used for calculation of interest on loan, return on equity, advance against depreciation and foreign exchange rate variation.”

17. The petitioner has claimed tariff based on debt-equity ratio as considered by the Commission in its order dated 18.5.2004 *ibid*. Based on this, debt-equity ratio considered by the petitioner for different assets for the purpose of determination of tariff in the present petition is indicated below:

Name of the Element	(Rs.in lakh)
	Debt-equity ratio
800 kV Kishenpur-Moga transmission line -I along with associated bays	89.50:10.50
800 kV Kishenpur-Moga transmission line-II along with associated bays	80.29:19.71
420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV, 250 MVA ICT III at Moga sub-station with associated bays	88.58:11.42

18. The petitioner has stated in the petition that the approved debt-equity ratio for the transmission system is 80.87: 19.13. Therefore, in order to bring debt and equity close to the approved debt-equity ratio, additional capitalization on works and decapitalization of account of FERV has been adjusted. Therefore, debt-equity ratio and notional equity considered for tariff in each case as us under:

Name of the Element	Equity as per order dated 18.5.2004 (Rs. in lakh)	Notional equity on account additional capitalization (Rs. in lakh)	Notional equity on account of FERV (Rs. in lakh)	Total equity (Rs. in lakh)	Debt-equity ratio considered
800 kV Kishenpur-Moga transmission line -I along with associated bays	4567.56	517.58	0.00	5085.14	88.34:11.66
800 kV Kishenpur-Moga transmission line -II along with associated bays	7738.41	260.07	(-)16.56	7981.92	80.31:19.69
420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV, 250 MVA ICT III at Moga sub-station with associated bays	182.53	0.00	0.00	182.53	88.41:11.51

RETURN ON EQUITY

19. 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.

20. The petitioner has claimed return on the basis of order dated 18.5.2004 along with increase on account of additional capitalization and notional reduction in equity on account of FERV. The methodology followed by us for working out the equity has been narrated by us para 19 hereinabove. Thus, the return on equity each year during the tariff period is given hereunder:

(Rs. in lakh)

Name of the Element	Notional equity claimed	Notional equity allowed	Return on equity
800 kV Kishenpur-Moga transmission line -I along with associated bays	5048.08	5085.14	711.92
800 kV Kishenpur-Moga transmission line -II along with associated bays	9092.58	7981.92	1117.47
420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV, 250 MVA ICT III at Moga sub-station with associated bays	182.53	182.53	25.55

INTEREST ON LOAN

21. 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 as per regulation 54 minus cumulative repayment as admitted by the Commission for the period up to 31.3.2004. The repayment for the period 2004-09 shall be worked out accordingly on normative basis.

(c) The transmission licensee shall make every effort to swap the loan as long as it results in net benefit to the long-term transmission customers. The costs associated with such swapping shall be borne by the long-term transmission customers.

(d) The changes to the loan terms and conditions shall be reflected from the date of such swapping and benefits passed on to the beneficiaries.

(e) 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.

22. The petitioner has claimed interest on loan in the following manner:

(i) Gross loans, cumulative loan repayment and outstanding balance up to previous year as admitted by the Commission in petition No. 72/2002 have been taken as the Opening Balance as on 1.4.2004.

(ii) The petitioner has adjusted the loan figures on account of replacement of GOI loan with Bond-XIV on 17.7.2003. This has resulted in difference in the figures of Gross loan, repayment during 2003-04 and closing balance on 31.3.2004/1.4.2004

(iii) On the basis of actual rate of interest on actual average loan, the weighted average rate of interest on loan is worked out for various years.

(iv) Loans as admitted by the Commission in petition No. 72/2002 have been considered as notional loan and the weighted average rate of interest on loan for the year 2004-05 as per above has been multiplied with average notional loan to work out interest on loan.

(v) Notional loan component of FERV up to 31.3.2001 as well as per para 2 as above have been considered separately and actual applicable rate of interest on Foreign Loan have been considered to workout the interest on this component.

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

- (i) Details of net outstanding loan as on 31.3.2004, repayment schedule for the period 2004-09, rate of interest as on 1.4.2004, exchange rate as on 31.3.2004 etc. have been taken from above loan allocation statement for working out weighted average rate of interest.
- (ii) Gross notional loan and cumulative repayment up to 31.3.2004 have submitted by the petitioner, been taken from the order dated 18.5.2004.
- (iii) Notional loan arising out of additional capitalization and FERV during the years 2001-04 has been considered.
- (iv) The repayment of notional loan during the years 2001-04 has been worked out in proportion to the repayment of actual loan during these years by the following formula:

$$\frac{\text{Actual repayment of actual loan during each year}}{\text{Opening balance of actual loans during corresponding year}} \times \frac{\text{Opening balance + addition during of normative loan during corresponding year}}{\text{year}}$$

- (v) Tariff is worked out considering normative loan and normative repayments. Once the normative loan is arrived at, it is considered for all purposes in the tariff. Normative repayment is worked out by the following formula:

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

- (vi) 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 during the year, it is considered as moratorium and depreciation during the year is deemed as normative repayment of loan during the year.
- (vii) Weighted average rate of interest on actual loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.
- (viii) The petitioner in its affidavit dated 1.9.2005 has submitted that in case of loan from ICICI Bank, the prevailing interest rate of 12.15% per annum payable quarterly has been reset at 7.32% per annum payable quarterly w.e.f. 28.6.2005, the same has been considered in tariff calculations. In case of year 2005-06, weighted average rate of interest of ICICI loan on days basis has been considered for tariff calculations.
- (ix) Corporation Bank, PNB and Bank of India, Cayman Island loans carry floating rate of interest and rate of interest as applicable as on 1.4.2004 has been considered in the calculation, subject to mutual settlement between the parties in case of any change/resetting of the interest rate during the tariff period.

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

(Rs.in lakh)

Details of loan	800 kV Kishenpur-Moga transmission line -I along with associated bays						800 kV Kishenpur-Moga transmission line -II along with associated bays						420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV,250 MVA ICT III at Moga sub-station with associated bays					
	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan																		
Gross Loan as on 1.4.2001	38938.44						31518.51						1415.95					
Addition due to Additional Capitalisation	0.00						1099.41						0.00					
Addition due to FERV	(-)397.63						(-)70.00						(-)13.16					
Gross Normative Loan	38540.81	38540.81	38540.81	38540.81	38540.81	38540.81	32547.92	32547.92	32547.92	32547.92	32547.92	32547.92	1402.79	1402.79	1402.79	1402.79	1402.79	1402.79
Cumulative Repayment up to Previous Year		7294.00	10022.17	12750.33	15478.49	18206.65		3349.05	5999.36	8753.33	11507.31	14261.29		232.29	334.62	436.95	539.28	641.61
Net Loan-Opening		31246.80	28518.64	25790.48	23062.32	20334.16		29198.87	26548.56	23794.58	21040.61	18286.63		1170.50	1068.17	965.84	863.51	761.18
Repayment during the year		2728.16	2728.16	2728.16	2728.16	2728.16		2650.31	2753.98	2753.98	2753.98	2636.62		102.33	102.33	102.33	102.33	95.74
Net Loan-Closing		28518.64	25790.48	23062.32	20334.16	17606.00		26548.56	23794.58	21040.61	18286.63	15650.00		1068.17	965.84	863.51	761.18	665.44
Average Loan		29882.72	27154.56	24426.40	21698.24	18970.08		27873.72	25171.57	22417.60	19663.62	16968.32		1119.34	1017.01	914.68	812.35	713.31
Weighted Average Rate of Interest on Loan		5.8187%	5.7314%	5.6245%	5.4908%	5.3587%		7.4236%	7.2133%	7.0883%	6.9890%	6.8807%		5.8783%	5.7976%	5.6988%	5.5752%	5.4539%
Interest		1738.80	1556.33	1373.86	1191.40	1016.55		2069.25	1815.70	1589.03	1374.28	1167.54		65.80	58.96	52.13	45.29	38.90

25. It has been noticed that while approving tariff by order dated 18.5.2004, *ibid*, SBI-II loan and GOI loans were considered. These loans have since been re-financed by Bond XIII Option II on 31.7.2002 and Bond XIV on 17.7.2003, respectively. As the repayment schedule of SBI-II and Bond XIII Option II is same, refinancing does not have any impact on tariff for the period ending 31.3.2004. However, repayment schedule of Bond XIV and GOI loans are different thereby affecting closing balance, Advance Against Depreciation, Cumulative repayment and cumulative depreciation, etc. for the period 1.4.2001 to 31.3.2004. Therefore, these elements for the said period have been worked out afresh for computation of tariff for the current period. The, benefits, if any, accruing as a result of refinancing of above loans shall be passed on by the petitioner to the respondents.

DEPRECIATION

26. 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.

27. The calculations in support of depreciation allowed on the basis of capital cost as per para 12 above, are appended below:

(Rs.in lakh)

	4800 kV Kishenpur-Moga transmission line-I along with associated bays							800 kV Kishenpur-Moga transmission line-II along with associated bays							420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV,250 MVA ICT III at Moga sub-station with associated bays						
		Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09		Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09		Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
As per order dated 6.8.2003		43506.00							39256.92							1598.49					
Addition during 2001-04 due to Additional Capitalization		517.58							1359.48							0.00					
Addition during 2001-04 due to FERV		-397.63							-86.56							-13.16					
Gross Block as on 31.3.2004		43625.95	43625.95	43625.95	43625.95	43625.95	43625.95		40529.84	40529.84	40529.84	40529.84	40529.84	40529.84		1585.33	1585.33	1585.33	1585.33	1585.33	1585.33
Rate of Depreciation	2.67%							2.51%							3.600%						
Depreciable value	90%		38902.06	38902.06	38902.06	38902.06	38902.06	90%		35777.42	35777.42	35777.42	35777.42	35777.42	90%		1426.80	1426.80	1426.80	1426.80	1426.80
Balance useful life of the asset			-	-	-	-	-			-	-	-	-	-		-	-	-	-	-	-
Remaining Depreciable value			30389.91	28879.90	26151.74	23423.58	20695.42			31349.51	29778.07	27024.09	24270.11	21516.13			1058.91	1001.84	944.77	887.52	785.19
Depreciation			1167.32	1167.32	1167.32	1167.32	1167.32			1017.48	1017.48	1017.48	1017.48	1017.48			57.07	57.07	57.07	57.07	57.07

ADVANCE AGAINST DEPRECIATION

28. 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

29. 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.

30. In addition to Cumulative depreciation up to 2003-04 (excluding Advance Against Depreciation) as per last tariff setting, depreciation on FERV for the period 2001-04 has been added to arrive at total cumulative depreciation amount as on 31.03.2004.

31. In our calculation, the Advance Against Depreciation has been worked out as under:

- (i) 1/10th of gross loan is worked out from the gross notional loan along with notional loan worked out by division of FERV into notional loan and equity.
- (ii) Cumulative loan as well as repayment of notional loan during the year have been considered as at para 25 above.

- (iii) Depreciation as worked out as per para 28 above.

- (iv) In addition to cumulative depreciation up to 2003-04 (including Advance Against Depreciation), depreciation on FERV for the period 2001-04 has been added to arrive at total cumulative depreciation amount as on 31.03.2004.

32. The details of Advance Against Depreciation allowed for each element are given hereunder:

(Rs. in lakh)

	800 kV Kishenpur-Moga transmission line-I along with associated bays					800 kV Kishenpur-Moga transmission line-II along with associated bays					420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV,250 MVA ICT III at Moga sub-station with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Advance against Depreciation Up to 31.3.2004															
1/10th of Gross Loan(s)	3854.08	3854.08	3854.08	3854.08	3854.08	3254.79	3254.79	3254.79	3254.79	3254.79	140.28	140.28	140.28	140.28	140.28
Repayment of the Loan	2728.16	2728.16	2728.16	2728.16	2728.16	2650.31	2753.98	2753.98	2753.98	2636.62	102.33	102.33	102.33	102.33	95.74
Minimum of the above	2728.16	2728.16	2728.16	2728.16	2728.16	2650.31	2753.98	2753.98	2753.98	2636.62	102.33	102.33	102.33	102.33	95.74
Depreciation during the year	1167.32	1167.32	1167.32	1167.32	1167.32	1017.48	1017.48	1017.48	1017.48	1017.48	57.07	57.07	57.07	57.07	57.07
(A) Difference	1560.84	1560.84	1560.84	1560.84	1560.84	1632.83	1736.50	1736.50	1736.50	1619.14	45.26	45.26	45.26	45.26	38.67
Cumulative Repayment of the Loan	10022.17	12750.33	15478.49	18206.65	20934.81	5999.36	8753.33	11507.31	14261.29	16897.92	334.62	436.95	539.28	641.61	737.35
Cumulative Depreciation/ Advance against Depreciation	9679.47	11189.48	13917.64	16645.81	19373.97	5445.40	7016.84	9770.82	12524.80	15278.77	424.96	482.03	539.10	596.35	698.68
(B) Difference	342.69	1560.84	1560.84	1560.84	1560.84	553.96	1736.50	1736.50	1736.50	1619.14	-90.34	-45.08	0.18	45.26	38.67
Advance against Depreciation Minimum of (A) and (B)	342.69	1560.84	1560.84	1560.84	1560.84	553.96	1736.50	1736.50	1736.50	1619.14	0.00	0.00	0.18	45.26	38.67

OPERATION & MAINTENANCE EXPENSES

33. 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

34. The petitioner has claimed O & M expenses for 563.50 (275.38+287.12) ckt-km of line length and 6 bays (3 each at Kishenpur and Moga sub-stations), which have been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

(Rs. in lakh)

	800 kV Kishenpur-Moga transmission line-I along with associated bays					800 kV Kishenpur-Moga transmission line-II along with associated bays					420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV,250 MVA ICT III at Moga sub-station with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses for line length	62.51	64.99	67.74	70.20	73.25	65.18	67.76	70.63	73.22	76.37	-	-	-	-	-
O&M expenses for bays	56.24	58.50	60.84	63.26	65.80	56.24	58.50	60.84	63.26	65.80	56.24	58.50	60.84	63.24	65.80
TOTAL	118.75	123.49	128.28	133.48	139.05	121.42S	126.26	131.47	136.48	142.17	56.24	58.50	60.84	63.24	65.80

35. 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 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

36. 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. The necessary details are given hereunder:

Name of the Element	Date of Commercial Operation	Capital Expenditure (Rs. in lakh) on the date of commercial operation	Escalated spares Cost (Rs. in lakh)
800 kV Kishenpur-Moga transmission line-I along with associated bays	1.5.2000	42748.77	537.15
800 kV Kishenpur-Moga transmission line-II along with associated bays	1.2.2001	38817.69	466.95
420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV,250 MVA ICT III at Moga sub-station with associated bays	1.3.2000	1583.28	20.09

(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 @ 10.25% based on SBI PLR as on 1.4.2004, which is in accordance with the 2004 regulations and has been allowed.

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

(Rs.in lakh)

	800 kV Kishenpur-Moga transmission line -I along with associated bays					800 kV Kishenpur-Moga transmission line-II along with associated bays					420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV, 250 MVA ICT III at Moga sub-station with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance & Spares	537.15	569.38	603.54	639.75	678.14	466.95	494.97	524.66	556.14	589.51	20.09	21.29	22.57	23.93	25.36
O & M expenses	9.90	10.29	10.72	11.12	11.59	10.12	10.52	10.96	11.37	11.85	4.69	4.88	5.07	5.27	5.48
Receivables	701.24	878.22	848.75	819.27	791.25	835.69	994.53	957.50	922.49	869.09	35.13	34.38	33.68	40.60	38.86
Total	1248.28	1457.89	1463.00	1470.15	1480.97	1312.76	1500.01	1493.12	1490.01	1470.45	59.91	60.55	61.32	69.80	69.70
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	127.95	149.43	149.96	150.69	151.80	134.56	153.75	153.04	152.73	150.72	6.14	6.21	6.28	7.15	7.14

TRANSMISSION CHARGES

38. A summary sheet showing basic details of capital cost and other related aspects is annexed to this order. The transmission charges being allowed for the transmission system are summarized below.

(Rs.in lakh)

	800 kV Kishenpur-Moga transmission line-I along with associated bays					800 kV Kishenpur-Moga transmission line-II along with associated bays					420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 KV,250 MVA ICT III at Moga sub-station with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	1167.32	1167.32	1167.32	1167.32	1167.32	1017.48	1017.48	1017.48	1017.48	1017.48	57.07	57.07	57.07	57.07	57.07
Interest on Loan	1738.80	1556.33	1373.86	1191.40	1016.55	2069.25	1815.70	1589.03	1374.28	1167.54	65.80	58.96	52.13	45.29	38.90
Return on Equity	711.92	711.92	711.92	711.92	711.92	1117.47	1117.47	1117.47	1117.47	1117.47	25.55	25.55	25.55	25.55	25.55
Advance against Depreciation	342.69	1560.84	1560.84	1560.84	1560.84	553.96	1736.50	1736.50	1736.50	1619.14	0.00	0.00	0.18	45.26	38.67
Interest on Working Capital	127.95	149.43	149.96	150.69	151.80	134.56	153.75	153.04	152.73	150.72	6.14	6.21	6.28	7.15	7.14
O & M Expenses	118.75	123.49	128.58	133.48	139.05	121.42	126.26	131.47	136.48	142.17	56.24	58.50	60.84	63.26	65.80
Total	4207.43	5269.34	5092.48	4915.65	4747.48	5014.13	5967.16	5744.99	5534.94	5214.53	210.80	206.29	202.05	243.59	233.15

39. 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. These transmission charges shall be included in the regional transmission tariff for Northern Region and shall be shared by the regional beneficiaries in accordance with the 2004 regulations.

40. The petitioner by an affidavit dated 31.5.2005 has sought approval for the reimbursement of expenditure of Rs. 1, 60,046/- incurred on publication of notices in the newspapers. The petitioner shall claim reimbursement of the said expenditure directly from the respondents in one instalment in the ratio applicable for sharing of transmission charges. The petitioner has also sought reimbursement of filing fee of Rs.5.20 lakh paid. A final view on reimbursement of filing fee is yet to be taken by the Commission for which views of the stakeholder have been received. The view taken

on consideration of the comments received shall apply in the present case as regards reimbursement of filing fee.

Impact of additional capitalization for the years 2001-04

41. In the petitions filed by NTPC for approval of revised fixed charges for additional capitalization for the period 1.4.2001 to 31.3.2004, the Commission has decided that additional capital expenditure be added to the gross block as on 1.4.2001 to arrive at gross block as on 1.4.2004 for the purpose of fixation of tariff for the period 2004-05 to 2008-09. The Commission has further ordered that NTPC would be entitled to earn return on equity @ 16% on equity portion of additional capitalization approved and interest on loan at the rate as applicable during 2001-02 to 2003-04. The return on equity and interest on loan are payable on additional capitalization from 1st April of the financial year following the financial year to which additional capital expenditure relates. Impact of additional capitalization for the years 2001-04 in respect of 800 kV Kishenpur-Moga transmission line ckt-I and 800 kV Kishenpur-Moga transmission line ckt-II as shown below, shall be recovered by the petitioner from the respondents along with tariff for the current period:

(Rs. in lakh)

	800 kV Kishenpur-Moga transmission line-I along with associated bays				800 kV Kishenpur-Moga transmission line-II along with associated bays			
	2001-02	2002-03	2003-04	Total	2001-02	202-03	2003-04	Total
Additional Capitalisation	422.42	95.16	0.00	517.58	709.42	490.75	159.31	1359.48
Financing of Additional Capitalisation								
Notional Loan	0.00	0.00	0.00	0.00	573.71	396.87	128.83	1099.141
Notional Equity	422.42	95.16	0.00	517.58	135.71	93.88	30.48	260.07
Total	422.42	95.16	0.00	517.58	709.42	490.75	159.31	1359.48
Effective Additional Capitalisation								
Opening Loan Balance	0.00	0.00	0.00		0.00	535.25	924.80	
Addition of Loan	0.00	0.00	0.00	0.00	573.71	396.87	128.83	1099.41
Repayment of Loan	0.00	0.00	0.00	0.00	38.46	7.32	33.13	78.91
Closing Loan Balance	0.00	0.00	0.00		535.25	924.80	1020.50	
Effective Loan		0.00	0.00			535.25	924.80	
Weighted Average Rate of Interest on Loan	13.76%	13.45%	8.62%		13.74%	13.55%	9.43%	
Effective Equity		422.42	517.58			135.71	229.59	
Interest on Loan		0.00	0.00	0.00		72.53	87.18	159.71
Return on Equity	16%	-	67.59	82.81	150.40	16%	-	21.71
Impact of Additional Capitalisation		-	67.59	82.81	150.40		-	94.24
								123.92
								218.16

42. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's interim directions. The provisional billing of tariff shall be adjusted in the light of final tariff now approved by us.

43. This order disposes of Petition No.84/2004 and I.A.No. 30/2005.

Sd/-
(A.H.JUNG)
MEMBER

sd/-
(BHANU BHUSHAN)
MEMBER

New Delhi dated the 24th February 2006

SUMMARY SHEET

Name of the Company:		PGCIL											
Name of the Element:		800 kV Kishenpur-Moga transmission line ckt-I along with associated bays			800 kV Kishenpur-Moga transmission line ckt-II along with associated bays			420 kV 63 MVAR Bus Reactor at Kishenpur sub-station with associated bays and 420/220 kV, 250 MVAR ICT III at Moga sub-station with associated bays					
Actual DOCO:		1.4.2000			1.1.2000			1.12.2000					
Petition No.:		73/2004			73/2004			73/2004					
Tariff setting Period:		2004-09			2004-09			2004-09					
					(Rs.in lakh)						(Rs.in lakh)		
1 Capital Cost of the Project					93848.00 @			93848.00 @			93848.00 @		
4 Admitted Capital Cost as on 1. 4.2004 for Calculation of Debt and Equity					43506.00			39256.92			1598.49		
5 Additional Capitalisation(works)					517.58			1359.48			0.00		
2001-02					422.42			709.42			0.00		
2002-03					95.16			490.75			0.00		
2003-04					0.00			159.31			0.00		
Total					517.58			1359.48			0.00		
6 Additional Capitalisation(FERV)					(-)397.63			(-)86.56			(-)13.16		
2001-02					321.82			70.05			10.65		
2002-03					(-)174.83			(-)38.06			(-)5.79		
2003-04					(-)544.61			(-)118.55			(-)18.02		
Total					(-)397.63			(-)86.56			1585.32		
7 Total Capital Cost as on 1. 4.2004(2+3+4)					43625.95			40529.84			1585.33		
8 Means of Finance :													
Debt					88.34% 38540.81			80.31% 32547.92			88.94% 1402.79		
Equity					11.66% 5085.14			19.69% 7981.92			11.51% 182.53		
Total					100.00% 43625.95			100.00% 40529.84			100.00% 1585.32		
9 Gross Loan as on 1. 4.2004					38540.81			32547.92			1402.79		
Cumulative Repayment up to 31.3.2009 :					20934.81			16897.92			737.35		
Repaid up to 31. 3.2004					7258.93			3268.50			231.36		
1. 4.2001 to 31. 3.2004 (ACE & FERV)					35.07			80.55			0.93		
From 1. 4.2004 to 31. 3.2009					13640.80			13548.87			505.07		
Total					20934.81			16897.92			737.35		
10 Balance Loan to be repaid beyond 31. 3.2009 :					17606.00			15650.00			665.44		
11 Depreciation recovered up to 31. 3.09 :					20934.81			16897.92			737.35		
					Dep AAD Total			Dep AAD Total			Dep AAD Total		
Recovered up to 31. 3.2004					5681.68 2823.23 8504.91			3303.02 1123.42 4426.44			307.12 60.45 367.57		
1. 4.2001 to 31. 3.2004 (ACE & FERV)					7.24 0.00 7.24			1.48 0.00 1.48			0.32 0.00 0.32		
1. 4.2004 to 31. 3.2009					5836.59 6586.06 12422.66			5087.41 7382.59 12470.00			285.36 84.11 369.47		
Total					20934.81			16897.92			737.35		
12 Balance Depreciation to be recovered beyond 31. 3.2009 :					17967.26			18879.51			689.44		
Capital cost for the purpose of Depreciation					43506.00			39256.92			1598.49		
ACE + FERV					119.95			1272.92			(-)13.16		
Capital cost as 1. 4.2004					43625.95			40529.84			1585.33		
Less: Land Cost					401.43			777.15			0.00		
					43224.52			39752.69			1585.33		
90% of Capital Cost as above					38902.06			35777.42			1426.80		
Cum. Depreciation to be recovered up to 31. 3.2009					20934.81			16897.92			737.35		
Balance					17967.26			18879.51			689.44		

@ For the entire transmission system.