

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 77/2010

Coram:

- 1. Shri S.Jayaraman, Member**
- 2. Shri M.Deena Dayalan, Member**

DATE OF HEARING: 29.4.2010

DATE OF ORDER 16.6.2010

In the matter of

Revision of transmission tariff due to additional capital expenditure incurred during 2005-06 for Agra (Power Grid)-Agra (UPPCL) 400 kV D/C interconnection in Northern Region.

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. Chief Engineer, Chandigarh Administration, Chandigarh
15. Uttarakhand Power Corporation Ltd, Dehradun
16. North Central Railway, Allahabad
17. New Delhi Municipal Corporation, New Delhi

..Respondents

The following were present:

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

ORDER

This petition has been filed for revision of transmission tariff due to additional capital expenditure incurred during 2005-06 in respect Agra (Powergrid) –Agra (UPPCL) 400 kV D/C interconnection (the transmission line) in Northern Region during the period from 1.4.2005 to 31.3.2006, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "the 2004 regulations"). The petitioner has also prayed for reimbursement of the petition filing fee, licence fee and other expenditure in connection with the filing of the petition

2. The investment approval for construction of the transmission line was accorded by the Board of Directors of the petitioner company as per Memorandum dated 4.4.2001 at an estimated cost of Rs.4178.00 lakh, including IDC of Rs.241.00 lakh, based on 1st quarter 2000 price level. The date of commercial operation of the transmission line is 1.7.2003.

3. The transmission charges for the transmission line approved vide order dated 7.7.2006 in Petition No. 117/2005 were revised by the Commission vide its order dated 22.1.2007 in I.A.No. 2/2007 in Petition No. 117/2005. The summary of the transmission charges approved by the said order dated 22.1.2007 is extracted hereunder:

	(Rs. In lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	95.62	95.93	95.93	95.93	95.93
Interest on Loan	247.54	233.12	212.24	191.37	170.49
Return on Equity	85.14	85.37	85.37	85.37	85.37
Advance against Depreciation	0.00	47.79	118.88	118.88	118.88
Interest on Working Capital	14.19	15.11	16.34	16.35	16.39
O & M Expenses	125.88	130.93	136.20	141.58	147.30
Total	568.36	608.25	664.97	649.48	634.36

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

(Rs. in lakh)

Capital cost as on 1.4.2005	Additional Capital Expenditure during 2005-06	Capital cost as on 1.4.2006	Additional Capital Expenditure during 2006-07, 2007-08 and 2008-09	Capital cost as on 1.4.2009
3211.40	48.11	3259.51	0.00	3259.51

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

(Rs. in lakh)

Transmission Tariff	2005-06	2006-07	2007-08	2008-09
Depreciation	96.79	97.66	97.66	97.66
Interest on Loan	234.76	215.36	194.18	173.00
Return on Equity	86.39	87.40	87.40	87.40
Advance against Depreciation	46.93	120.30	120.30	120.30
Interest on Working Capital	15.16	16.49	16.49	16.52
O & M Expenses	130.93	136.20	141.58	147.30
Total	610.96	673.41	657.61	642.18

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

(Rs. in lakh)

Working Capital	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	35.17	37.28	39.51	41.88
O & M expenses	10.91	11.35	11.80	12.28
Receivables	101.83	112.24	109.60	107.05
Total	147.91	160.87	160.91	161.21
Rate of Interest	10.25%	10.25%	10.25%	10.25%
Interest	15.16	16.49	16.50	16.52

7. The reply to the petition has been filed by Uttar Pradesh Power Corporation Ltd. (UPPCL). UPPCL in its reply has prayed as under:

(a) To direct the petitioner to submit calculation of fixed charges for 2005-06 due to additional capital expenditure from the date of completion of works related to sub-station up to 31.3.2009;

(b) To direct the petitioner to submit auditors report as required under Companies Act, 1956;

(c) To direct the petitioner to submit CA's certificate of having reconciled the terms and conditions and loan documents with audited accounts of the company; and

(d) To direct the petitioner to submit the categorization and consolidation of additional capital expenditure and details of balance and retention payments as the expenditure is beyond the cut off date to facilitate the prudence check;

8. The petitioner vide its rejoinder dated 28.4.2010 has submitted that additional capitalization claimed during the year has been incurred progressively during the year and it would not be possible to indicate date of incurring additional capital expenditure. As per the prevailing practice, the average of additional capital expenditure incurred during the year is being considered for calculation of tariff during that year. As regard para 7 (b) above, the petitioner has submitted that the details of corporate and Northern Region accounts for the year 2008-09 and auditors report have already been furnished in Petition No. 43/2010. In regard to para 7 (c), the petitioner has submitted that the details of capital cost have been submitted in auditor's certificates as per the 2004 regulations and details of balance and retention payments have been furnished as per the 2004 regulations in Form 9 in the petition. The petitioner has further submitted that this expenditure pertains to sub-station only. We have considered

the submission made by the UPPCL. This petition has been filed for revision of tariff due to additional capital expenditure incurred during 2005-06. Therefore, the requirements spelt out at para (a) and (d) above are not relevant. In regard to para (b) and (c) above, the petitioner has furnished the auditor certificate. As regards reimbursement of the petition filing fee and licence fee, the concern of UPPCL have been taken care of in the order.

CAPITAL COST

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

(Rs. in lakh)

Year	Amount (Rs. in lakh)	Nature and details of expenditure
2005-06	Sub-station= Rs. 48.11	Balance and retention payments

10. The petitioner has submitted audited capital cost up to 31.3.2009 duly certified by Chartered Accountant. The additional capital expenditure claimed is within the original scope of work and on account of retention/balance payments. The additional expenditure sought to be capitalised is allowed under Regulation 53 of the 2004 regulations.

TOTAL CAPITAL COST

11. Based on the above, capital cost for the purpose of tariff in respect of the transmission assets as on 31.3.2009 works out as under:

(Rs. in lakh)

Capital cost as on 1.4.2005	Additional Capital Expenditure during 2005-06	Capital cost as on 1.4.2006	Additional Capital Expenditure during 2006-07, 2007-08 and 2008-09	Capital cost as on 1.4.2009
3211.40	48.11	3259.51	0.00	3259.51

DEBT- EQUITY RATIO

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

(Rs. in lakh)

Equity as on 1.4.2005	Notional equity due to additional capital expenditure during 2005-06	Average equity 2005-06	Equity as on 1.4.2006	Notional equity due to additional capital expenditure during 2006-07, 2007-08 and 2008-09	Average equity for 2006-07, 2007-08 and 2008-09	Equity as on 1.4.2009
609.82	9.62	614.63	619.44	0.00	619.44	619.44

RETURN ON EQUITY

13. 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.

14. Equity as given in the table under para 12 above has been considered. However, tariff for 2005-06 and onwards has been allowed on average equity. Accordingly, return on equity of Rs. 46.43 lakh for the year 2005-06 and Rs. 120.76 lakh for the year 2006-07 and onwards has been allowed.

INTEREST ON LOAN

15. 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.”

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

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

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

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

17. Based on the above, the details of interest worked out are given hereunder:

(Rs. in lakh)

	2005-06	2006-07	2007-08	2008-09
Gross Normative Loan	2601.58	2640.07	2640.07	2640.07
Cumulative Repayment up to Previous Year/date of commercial operation	95.62	310.43	528.85	747.27
Net Loan-Opening	2505.96	2329.64	2111.22	1892.80
Addition due to Additional Capitalisation	38.49	0.00	0.00	0.00
Repayment during the year	214.81	218.42	218.42	218.42
Net Loan-Closing	2329.64	2111.22	1892.80	1674.38
Average Loan	2417.80	2220.43	2002.01	1783.59
Weighted Average Rate of Interest on Loan	9.72%	9.72%	9.72%	9.72%
Interest	234.99	215.81	194.58	173.35

18. The detailed calculations in support of the weighted average rate of interest for transmission line contained in Annexure attached.

DEPRECIATION

19. 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."

20. Depreciation allowed has been worked out as below:

	(Rs. in lakh)			
	2005-06	2006-07	2007-08	2008-09
Gross block as on the date of commercial operation	3211.40	3259.51	3259.51	3259.51
Additional Capitalisation during 2008-09	48.11	0.00	0.00	0.00
Gross Block at the end of the year	3259.51	3259.51	3259.51	3259.51
Rate of Depreciation	2.9916%	2.9961%	2.9961%	2.9961%
Depreciable Value	2911.91	2933.56	2933.56	2933.56
Balance Useful life of the asset	-	-	-	-
Remaining Depreciable Value	2745.20	2623.13	2404.71	2186.29
Depreciation	96.79	97.66	97.66	97.66

ADVANCE AGAINST DEPRECIATION

21. 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

22. 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.

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

- (a) 1/10th of gross loan is worked out from the Gross Notional Loan as per para 17 above.
- (b) Repayment of notional loan during the year is considered as per para 17 above.
- (c) Depreciation is worked out as per para 20 above.
- (d) In the calculation of Advance Against Depreciation, cumulative depreciation/Advance Against Depreciation up to the preceding year along with the depreciation of the current year have been considered for working out the Advance Against Depreciation

24. The Advance Against Depreciation has been worked as under:

(Rs. in lakh)

Advance against Depreciation	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	260.16	264.01	264.01	264.01
Repayment of the Loan	214.81	218.42	218.42	218.42
Minimum of the above	214.81	218.42	218.42	218.42
Depreciation during the year	96.79	97.66	97.66	97.66
(A) Difference	118.02	120.76	120.76	120.76
Cumulative Repayment of the Loan	310.43	528.85	747.27	965.69
Cumulative Depreciation/ Advance against Depreciation	263.51	408.09	626.51	844.93
(B) Difference	46.93	120.76	120.76	120.76
Advance against Depreciation Minimum of (A) and (B)	46.93	120.76	120.76	120.76

OPERATION & MAINTENANCE EXPENSES

25. 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

26. O&M expenses as taken for the tariff calculations in the orders dated 7.7.2006 in Petition No. 117/2005 has been considered, since line length and number of bays remain unchanged.

INTEREST ON WORKING CAPITAL

27. 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. For the purpose of computation of maintenance spares, the historical cost is being taken as the cost on the date of commercial operation. Maintenance spares on additional capital expenditure are not being considered for the present. Accordingly, maintenance spares have been worked out on the historical cost and by providing escalation from the 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. O&M expenses as considered in the orders dated 7.7.2006 in Petition No. 117/2005 have been considered.

(iii) Receivables

As per Regulation 56(v)(1)(c) of the 2004 regulations, receivables will be equivalent to two months` average billing calculated on target availability level. Accordingly, in the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(iv) Rate of interest on working capital

As per Regulation 56(v) (2) of the 2004 regulations, rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2004 or on 1st April of the year in which the project or part thereof (as the case may be) is declared under commercial operation, whichever is later. The interest on working capital is payable on normative basis notwithstanding whether or not the transmission licensee has 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.

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

(Rs. in lakh)

Working Capital	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	35.17	37.28	39.51	41.88
O & M expenses	10.91	11.35	11.80	12.28
Receivables	101.81	112.27	109.63	107.05
Total	147.88	160.90	160.94	161.21
Rate of Interest	10.25%	10.25%	10.25%	10.25%
Interest	15.16	16.49	16.50	16.52

TRANSMISSION CHARGES

29. The transmission charges being allowed for the three transmission assets are summarised below:

(Rs. in lakh)

Transmission Tariff	2005-06	2006-07	2007-08	2008-09
Depreciation	96.79	97.66	97.66	97.66
Interest on Loan	234.99	215.81	194.58	173.35
Return on Equity	86.05	86.72	86.72	86.72
Advance against Depreciation	46.93	120.76	120.76	120.76
Interest on Working Capital	15.16	16.49	16.50	16.52
O & M Expenses	130.93	136.20	141.58	147.30
Total	610.84	673.64	657.80	642.32

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

31. 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 the petitioner shall not be allowed reimbursement of the petition filing fee. The decision on reimbursement of the licence fee shall be communicated separately.

32. 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.

33. This order disposes of Petition No. 77/2010.

Sd/-
(M.DEENA DAYALAN)
MEMBER

sd/-
(S.JAYARAMAN)
MEMBER

Annexure

(Rs. in lakh)

	Details of Loan	2005-06	2006-07	2007-08	2008-09
1	Bonds - X				
	Gross Loan opening	415.00	415.00	415.00	415.00
	Cumulative Repayment up to previous year	34.58	69.16	103.74	138.32
	Net Loan-Opening	380.42	345.84	311.26	276.68
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	34.58	34.58	34.58	34.58
	Net Loan-Closing	345.84	311.26	276.68	242.10
	Average Loan	363.13	328.55	293.97	259.39
	Rate of Interest	10.90%	10.90%	10.90%	10.90%
	Interest	39.58	35.81	32.04	28.27
	Repayment Schedule	12 Annual instalments from 21.6.2004			
2	Bond-XI- Option - I				
	Gross Loan opening	443.00	443.00	443.00	443.00
	Cumulative Repayment up to previous year	0.00	36.92	73.84	110.76
	Net Loan-Opening	443.00	406.08	369.16	332.24
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	36.92	36.92	36.92	36.92
	Net Loan-Closing	406.08	369.16	332.24	295.32
	Average Loan	424.54	387.62	350.70	313.78
	Rate of Interest	9.80%	9.80%	9.80%	9.80%
	Interest	41.60	37.99	34.37	30.75
	Repayment Schedule	12 Annual instalments from 7.12.2005			
3	Bond- XII				
	Gross Loan opening	1281.00	1281.00	1281.00	1281.00
	Cumulative Repayment up to previous year	0.00	106.75	213.50	320.25
	Net Loan-Opening	1281.00	1174.25	1067.50	960.75
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	106.75	106.75	106.75	106.75
	Net Loan-Closing	1174.25	1067.50	960.75	854.00
	Average Loan	1227.63	1120.88	1014.13	907.38
	Rate of Interest	9.70%	9.70%	9.70%	9.70%
	Interest	119.08	108.72	98.37	88.02
	Repayment Schedule	12 Annual instalments from 28.3.2006			
4	Oriental Bank Of Commerce				
	Gross Loan opening	204.00	204.00	204.00	204.00
	Cumulative Repayment up to previous year	17.00	34.00	51.00	68.00
	Net Loan-Opening	187.00	170.00	153.00	136.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	17.00	17.00	17.00	17.00
	Net Loan-Closing	170.00	153.00	136.00	119.00
	Average Loan	178.50	161.50	144.50	127.50
	Rate of Interest	8.60%	8.60%	8.60%	8.60%

	Interest	15.35	13.89	12.43	10.97
	Repayment Schedule	12 Annual instalments from 22.3.2005			
5	Punjab National Bank- II				
	Gross Loan opening	245.00	245.00	245.00	245.00
	Cumulative Repayment up to previous year	20.42	40.84	61.26	81.68
	Net Loan-Opening	224.58	204.16	183.74	163.32
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	20.42	20.42	20.42	20.42
	Net Loan-Closing	204.16	183.74	163.32	142.90
	Average Loan	214.37	193.95	173.53	153.11
	Rate of Interest	8.60%	8.60%	8.60%	8.60%
	Interest	18.44	16.68	14.92	13.17
	Repayment Schedule	12 Annual instalments from 8.3.2005			
	Total Loan				
	Gross Loan opening	2588.00	2588.00	2588.00	2588.00
	Cumulative Repayment up to previous year	72.00	287.67	503.34	719.01
	Net Loan-Opening	2516.00	2300.33	2084.66	1868.99
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	215.67	215.67	215.67	215.67
	Net Loan-Closing	2300.33	2084.66	1868.99	1653.32
	Average Loan	2408.17	2192.50	1976.83	1761.16
	Rate of Interest	9.7191%	9.7192%	9.7192%	9.7193%
	Interest	234.05	213.09	192.13	171.17