CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Coram:

- 1. Shri R.Krishnamoorthy, Member
- 2. Shri S.Jayaraman, Member
- 3. Shri V.S.Verma, Member

Petition No. 41/2009

In the matter of

Determination of revised transmission tariff due to additional capitalization incurred during 2006-07 and 2007-08 for 400 kV D/C Dhauliganga HEP-Bareilly (UPPCL) transmission line along with its associated bays at Bareilly (UPPCL) in Northern Region for the tariff block 2004-09.

And in the matter of

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

- 1. Rajasthan Rajya Vidyut Prasaran Nigam Limited, 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 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. Uttaranchal Power Corporation Ltd, Dehradun
- 16. North Central Railway, AllahabadRespondents

The following were present:

- 1. Shri U.K.Tyagi, PGCIL
- 2. Shri V.V.Sharma, PGCIL
- 3. Shri R.Prasad, PGCIL
- 4. Shri M.M.Mondal, PGCIL
- 5. Shri B.C.Pant, PGCIL
- 6. Shri S.N.Raju, PGCIL
- 7. Shri S.N. Singh, PGCIL

ORDER (DATE OF HEARING: 12.5.2009)

This petition has been filed for revision of transmission tariff on

account of additional capital expenditure incurred during 2006-07 and 2007-08

in respect of 400 kV D/C Dhauliganga-Bareilly (UPPCL) transmission line (hereinafter referred to as "the transmission line") along with its associated bays at Bareilly (UPPCL) in Northern Region for the period from 1.4.2006 to 31.3.2009, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004, (hereinafter referred to as "the 2004 regulations"). The petitioner has also prayed for reimbursement of the petition filing fee and other expenditure .in connection with the filing of the petition.

2. The investment approval for the transmission line was accorded by the Government of India, Ministry of Power under letter dated 1.1.2001 at an estimated cost of Rs. 15053 lakh, including IDC of Rs. 590 lakh. Subsequently, the revised cost estimates were approved by the Board of Directors of the petitioner company as per Memorandum dated 25.10.2006 at an estimated cost of Rs.18207 lakh, including IDC of Rs.1004 lakh. The transmission line was declared under commercial operation on 1.8.2005.

3. The transmission charges for the transmission line were approved by the Commission in its order dated 21.3.2007 in Petition No. 138/2006 .for the period 1.8.2005 to 31.3.2009 based on capital cost of Rs.15761.31 lakh as on the date of commercial operation and Rs. 16728.87 lakh as on 31.3.2006, after considering additional capital expenditure of Rs. 967.56 lakh for the period 1.8.2005 to 31.3.2006. The summary of the transmission charges approved by the said order dated 21.3.2007 is extracted hereunder:

(Rs in lakh)

	(RS. IN IAKN)				
	2005-06	2006-07	2007-08	2008-09	
	(Pro rata)				
Depreciation	284.88	440.71	440.71	440.71	
Interest on Loan	302.56	448.88	429.42	410.22	
Return on Equity	392.05	608.39	608.39	608.39	
Advance against Depreciation	0.00	0.00	0.00	0.00	
Interest on Working Capital	31.94	49.31	50.23	51.25	
O & M Expenses	151.82	237.10	246.16	256.40	
Total	1163.25	1784.39	1774.91	1766.97	

4. The relevant details of the approved apportioned cost, completion cost

etc. of the transmission assets claimed by the petitioner are as under:

(Rs.in lakh)

Capital expendi ture up to 1.8.200 5	Additional Capitaliza tion during 2005-06	Capital expenditu re as on 1.4.2006	Additional Capitalizati on during 2006-07	Capital expenditur e as on 1.4.2007	Additional Capitalizati on during 2007-08	Capital expenditu re as on 1.4.2008
15761. 31	967.56	16728.8 7	342.30	17071.17	44.87	17116.0 4

5. Based on the above additional capital expenditure, the petitioner has claimed the revised transmission charges for the period 2006-07 to 2008-09 as under:

			(Rs.in lakh)
	2006-07	2007-08	2008-09
Depreciation	445.30	450.48	451.06
.Interest on Loan	457.64	447.23	428.14
Return on Equity	615.58	623.71	624.65
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	49.67	50.98	52.03
O & M Expenses	237.10	246.16	256.40
Total	1805.29	1818.56	1812.28

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

			(Rs. in lakh)
	2006-07	2007-08	2008-09
Maintenance Spares	163.92	173.75	184.18
O & M expenses	19.76	20.51	21.37
Receivables	300.88	303.09	302.05
Total	484.56	497.35	507.60
Rate of Interest	10.25%	10.25%	10.25%
Interest	49.67	50.98	52.03

7. The reply to the petition has been filed by Uttar Pradesh Power Corporation Ltd., Ajmer Vidyut Vitran Nigam Limited, Jaipur Vidyut Vitran Nigam Limited and Jodhpur Vidyut Vitran Nigam Limited.

CAPITAL COST

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

SI. No.	Year	(Rs. in lakh)		Nature and details of expenditure
1.	2006-07		= 11.68	Retention/balance payments
2.	2007-08	Transmission line	= 342.30 = 44.83 = 0.04	Retention/balance payments
		Total	= 44.87	

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

TOTAL CAPITAL COST

10. Based on the above, capital cost for the purpose of tariff for each of the transmission asset, works out as under, which is within the approved cost estimate:

						(Rs. in lakh)
Capital expenditure as on 1.8.2005	Additional Capitalization during 2005-06	Capital expenditure as on 1.4.2006	Additional Capitalization during 2006-07	Capital expenditure as on 1.4.2007	Additional Capitalization during 2007-08	Capital expenditure as on 1.4.2008
15761.31	967.56	16728.87	342.30	17071.17	44.87	17116.04

DEBT- EQUITY RATIO

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

							(R	s. in lakh)	
Equity as on 1.8.2005 (As per	Notional additional equity up to	Average equity during 2005.06	Equity as on 1.4.2006	Notional additional equity during	Average equity during 2006-07	Equity as on 1.4.2007	Notional additional equity during	Average equity for 2007- 08	Equity as on 1.4.2008

order dated 21.3.2007)	31.3.2006 (As per order dated			2006-07			2007-08		
	21.3.2007)								
4055.40	290.27	4200.53	4345.67	102.69	4397.01	4448.36	13.46	4455.09	4461.82

RETURN ON EQUITY

12. As per clause (iii) of Regulation 56 of the 2004 regulations, return on equity shall be computed on the equity base determined in accordance with regulation 54 @ 14% per annum. Equity invested in foreign currency is to be allowed a return in the same currency and the payment on this account is made in Indian Rupees based on the exchange rate prevailing on the due date of billing.

13. Equity as given the table under para 11 above has been considered. The tariff for the years 2006-07 and 2007-08 has been allowed on average equity. Accordingly, revised return on equity allowed each year is given as under:

		(Rs. in lakh)				
Return on equity						
2006-07	2007-08	2008-09				
615.58	623.71	624.65				

INTEREST ON LOAN

14. Clause (1) of regulation 56 of the 2004 regulations inter alia provides

that,-

(a) Interest on loan capital shall be computed loan wise on the loans arrived at in the manner indicated in regulation 54.

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

(c) The transmission licensee shall make every effort to re-finance the loan as long as it results in net benefit to the beneficiaries. The costs associated with such re-financing shall be borne by the beneficiaries. (d) The changes to the loan terms and conditions shall be reflected from the date of such re-financing and benefit passed on to the beneficiaries.

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

(f) In case any moratorium period is availed of by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

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

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

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

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

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual loan as per earlier order dated 21.3.21007 in Petition No.138/2006 have been considered.
 Bond XXII has been raised after date of the commercial operation for financing additional capital expenditure for the year 2006-07.

(b) Notional loan arising out of additional capital expenditure up to 31.3.2006 has been added in loan amount as on 14.2006 to arrive at total notional loan. This adjusted gross loan is considered as normative loan for tariff calculations.

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

Actual repayment of actual loan during the year

Opening balance of actual loan during the year loan during the year

(d) Notional loan arising out of additional capital expenditure for the years 2006-07 and 2007-08 has been added in loan amount as on 1.4.2006 and 1.4.2007 to arrive at total notional loans. This adjusted gross loan is considered as normative loan for tariff calculation.

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

Actual repayment of actual loan during the year

Opening balance of actual loan during the year loan during the year

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

(g) Weighted average rate of interest on actual loan worked out as per (i) above has been applied on the notional average loan during the year to arrive at the interest on loan. 16. Based on above, revised year-wise interest on loan has been worked out

as under:

		(Rs. in lakh)
Details	2006-07	2007-08	2008-09
Gross Normative Loan-Opening	12383.20	12622.8	12654.2
		1	2
Cumulative Repayment up to Previous	342.55	787.85	1238.33
Year/date of commercial operation			
Net Loan-Opening	12040.65	11834.9	11415.8
		6	9
Addition due to Additional Capitalisation	239.61	31.41	-
Repayment during the year	445.30	450.48	451.06
Net Loan-Closing	11834.96	11415.8	10964.8
		9	3
Average Loan	11937.80	11625.4	11190.3
-		2	6
Weighted Average Rate of Interest on Loan	3.83%	3.847%	3.83%
Interest	457.64	447.23	428.14

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

DEPRECIATION

18. Sub-clause (a) of clause (ii) of Regulation 56 of the 2004 regulations provides for computation of depreciation in the following manner, namely:

(a) The value base for the purpose of depreciation shall be the historical cost of the asset.

(b) 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.

(c) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.

(d) Depreciation shall be chargeable from the first year of operation.In case of operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

19. Depreciation allowed has been worked out as below:

			(Rs. in lakh)
	2006-07	2007-08	2008-09
Rate of Depreciation	2.6349%	2.6354%	2.6353%
Depreciable Value	15210.02	15384.24	15404.44
Balance Useful life of the asset	-	-	-
Remaining Depreciable Value	14925.14	14654.06	14223.77
Depreciation	445.30	450.48	451.06

ADVANCE AGAINST DEPRECIATION

20. As per sub-clause (b) of clause (ii) of Regulation 56 of the 2004 regulations, in addition to allowable depreciation, the transmission licensee is entitled to Advance Against Depreciation, computed in the manner given hereunder:

AAD = Loan repayment amount as per regulation 56 (i) subject to a ceiling of 1/10th of loan amount as per regulation 54 minus depreciation as per schedule

21. It is provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year. It is further provided that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.

22. The petitioner has not claimed Advance Against Depreciation and,

thereafter, Advance Against Depreciation has not been considered.

OPERATION & MAINTENANCE EXPENSES

23. 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		

24. O&M expenses as taken for the tariff calculations as per order dated 21.3.2007 in Petition No. 138/2006 have been considered, since line length and number of bays remain unchanged.

INTEREST ON WORKING CAPITAL

25. The components of the working capital and the interest thereon are discussed hereunder:

(i) Maintenance spares

Regulation 56(v) (1) (b) of the 2004 regulations provides for maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation. The petitioner has claimed maintenance spares after accounting for additional capital expenditure. 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. Therefore, the petitioner's claim in this regard is not being allowed. Accordingly, maintenance spares have been worked out on the historical cost and 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 order dated 21.3.2007 in Petition No. 138/2006 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 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 1.4.2005, which is in accordance with the 2004 regulations and has been allowed.

26. The necessary computations in support of interest revised on

working capital, as revised, are appended herein below:

		(Rs. in lakh)		
	2006-07	2007-08	2008-09	
Maintenance Spares	163.92	173.75	184.18	
O & M expenses	19.76	20.51	21.37	
Receivables	300.88	303.09	302.05	
Total	484.56	497.36	507.59	
Rate of interest	10.25%	10.25%	10.25%	
Interest	49.67	50.98	52.03	

TRANSMISSION CHARGES

27. The revised transmission charges being allowed for the transmission line for the period 2006-07 to 2008-09 are summarised below:

		(F	Rs. in lakh)
	2006-07	2007-08	2008-09
Depreciation	445.30	450.48	451.06
Interest on Loan	457.64	447.23	428.14
Return on Equity	615.58	623.71	624.65
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	49.67	50.98	52.03
O & M Expenses	237.10	246.17	256.41
Total	1805.29	1818.56	1812.29

28. The petitioner shall recover from the beneficiaries the additional transmission charges in three monthly instalments. 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 has decided that the petitioner shall not be allowed reimbursement of the petition filing fee.

29. 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.

30. This order disposes of Petition No. 41/2009.

sd/-	sd/-	sd/-
(V.S.VERMA	(S.JAYARAMAN)	(R.KRISHNAMOORTHY)
MEMBER	MEMBER	MEMBER
New Delhi dated the	9 th June 2009	

<u>Annexure</u>

	Details of Loan	2005-06	2006-07	2007-08	2008-09
1	Bond X				
-	Gross Loan opening	225.00	225.00	225.00	225.00
	Cumulative Repayment up to DOCO/previous year	37.50	37.50	56.25	75.00
	Net Loan-Opening	187.50	187.50	168.75	150.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	18.75	18.75	18.75
	Net Loan-Closing	187.50	168.75	150.00	131.25
	Average Loan	187.50	178.13	159.38	140.63
	Rate of Interest	10.90%	10.90%	10.90%	10.90%
	Interest	20.438	19.416	17.372	15.328
	Repayment Schedule		instalments		
2	Bond XI Option-I				
~	Gross Loan opening	240.00	240.00	240.00	240.00
	Cumulative Repayment up to DOCO/previous year	0.00	20.00	40.00	60.00
	Net Loan-Opening	240.00	220.00	200.00	180.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	20.00	20.00	20.00	20.00
	Net Loan-Closing	220.00	200.00	180.00	160.00
	Average Loan	230.00	210.00	190.00	170.00
	Rate of Interest	9.80%	9.80%	9.80%	9.80%
	Interest	22.540	20.580	18.620	16.660
	Repayment Schedule		instalments		
3	Bond XII			10111 7.12.2	005
3	Gross Loan opening	17.00	17.00	17.00	17.00
	Cumulative Repayment upto DOCO/previous year	0.00	1.42	2.84	4.26
	Net Loan-Opening	17.00	15.58	14.16	12.74
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	1.42	1.42	1.42	
	Net Loan-Closing	15.58	14.16	12.74	11.32
	Average Loan	16.29	14.87	13.45	12.03
	Rate of Interest	9.70%	9.70%	9.70%	9.70%
	Interest	1.580	1.442	1.305	1.167
	Repayment Schedule PNB-II	12 Annuai	instalments	from 28.03.	2006
4		400.00	400.00	400.00	400.00
	Gross Loan opening	132.00	132.00	132.00	132.00
	Cumulative Repayment up to DOCO/previous year	11.00	22.00	33.00	44.00
	Net Loan-Opening	121.00	110.00	99.00	88.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	11.00	11.00	11.00	11.00
	Net Loan-Closing	110.00	99.00	88.00	77.00
	Average Loan	115.50	104.50	93.50	82.50
	Rate of Interest	8.60%	8.60%	8.60%	8.60%
	Interest	9.933	8.987	8.041	7.095
_	Repayment Schedule	12 Annual instalments from 8. 3.2005			202
5	OBC	140.00	110.00	110.00	110.00
	Gross Loan opening	110.00	110.00	110.00	110.00
	Cumulative Repayment upto DOCO/previous year	9.17	18.34	27.51	36.68
	Net Loan-Opening	100.83	91.66	82.49	73.32
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	9.17	9.17	9.17	9.17
	Net Loan-Closing	91.66	82.49	73.32	64.15
	Average Loan	96.25	87.08	77.91	68.74
	Rate of Interest	8.60%	8.60%	8.60%	8.60%

	Interest	8.277	7.488	6.700	5.911
	Repayment Schedule	12 Annual instalments from 22. 3.2005			2005
6	JBIC Loan (including additional dates of Drawal 9. 9.2005,20. 9.2005, 4.11.2005 & 26.12.2005)				
	Gross Loan opening	10981.91	11949.47	11949.47	11949.47
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	149.16	447.01
	Net Loan-Opening	10981.91	11949.47	11800.30	11502.45
	Additions during the year	967.56	0.00	0.00	0.00
	Repayment during the year	0.00	149.16	297.85	297.85
	Net Loan-Closing	11949.47	11800.30	11502.45	11204.60
	Average Loan	11465.69	11874.88	11651.38	11353.53
	Rate of Interest	3.50%	3.50%	3.50%	3.50%
	Interest	401.30	415.62	407.80	397.37
	Repayment Schedule	Half Year	Installments	from 20. 2.2	2007
7	Bond XXII (add cap for 2006-07)				
	Gross Loan opening	0.00	0.00	185.00	185.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	185.00	185.00
	Additions during the year	0.00	185.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	185.00	185.00	185.00
	Average Loan	0.00	92.50	185.00	185.00
	Rate of Interest	8.68%	8.68%	8.68%	8.68%
	Interest	0.000	8.029	16.058	16.058
	Repayment Schedule	12 Annual instalments from 7. 12.010			010
	Gross Loan opening	11705.91	12673.47	12858.47	12858.47
	Cumulative Repayment upto DOCO/previous year	57.67	99.26	308.76	666.95
	Net Loan-Opening	11648.24	12574.21	12549.70	12191.51
	Additions during the year	967.56	185.00	0.00	0.00
	Repayment during the year	41.59	209.50	358.19	358.19
	Net Loan-Closing	12574.21	12549.70	12191.51	11833.32
	Average Loan	12111.22	12561.95	12370.61	12012.42
	Rate of Interest	3.832%	3.834%	3.847%	3.826%
	Interest	464.067	481.563	475.894	459.593