CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 33/2010

Coram:

- 1. Dr. Pramod Deo, Chairperson
- 2. Shri S.Jayaraman, Member
- 3. Shri V.S.Verma, Member
- 4. Shri M.Deena Dayalan, Member

DATE OF HEARING: 25.5.2010

DATE OF ORDER 20.7.2010

In the matter of

Revision of transmission tariff due to additional capital expenditure incurred during 2006-07, 2007-08 and 2008-09 for 400 kV D/C Ranganadi-Balipara Transmission Line under ATS of Ranganadi HEP in North Eastern Region.

Power Grid Corporation of India Ltd., Gurgaon Petitioner Vs

- 1. Assam State Electricity Board, Guwahati
- 2. Meghalaya State Electricity Board, Shillong
- 3. Government of Arunachal Pradesh, Itanagar
- 4. Power and Electricity Department, Govt. of Mizoram, Aizawl
- 5. Electricity Department, Govt. of Manipur, Imphal
- 6. Department of Power, Govt. of Nagaland, Kohima
- 7. Tripura State Electricity Corporation Limited, AgartalaRespondents

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 in respect of 400 kV D/C Ranganadi-

Balipara Transmission line (the transmission asset) under ATS of Ranganadi

HEP (the transmission system) in North Eastern Region during 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, licence fee and other expenditure in connection with the filing of the petition

2. The investment approval for the transmission system was accorded by Ministry of Home Affairs vide letter dated 9.4.1987 at an estimated cost of Rs.4734 lakh. Subsequently, revised cost estimate for the transmission system was approved by Ministry of Power vide its letter dated 27.8.2000 at an estimated cost of Rs. 17243 lakh, which included IDC of Rs. 3125 lakh. The transmission asset was declared under commercial operation on 1.2.2003.

3. The transmission charges for the transmission asset was approved vide order dated 19.8.2009 in Petition No. 84/2009 along with the 132 kV S/C Nirjuli-Dikrong transmission line. The summary of the revised transmission charges in respect of the transmission line approved by the said order dated 19.8.2009 is extracted hereunder:

				(Rs. In	lakh)
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	378.37	377.99	377.99	377.99	377.99
Interest on Loan	665.93	609.26	550.31	485.28	417.97
Return on Equity	994.49	993.88	993.88	993.88	993.88
Advance against Depreciation	0.00	0.00	52.10	83.35	83.35
Interest on Working Capital	54.82	54.91	55.95	56.58	56.72
O & M Expenses	131.76	137.01	142.68	148.09	154.29
Total	2225.37	2173.05	2172.92	2145.18	2084.20

4. The relevant details of the capital expenditure of the transmission

assets claimed by the petitioner are as under:

(Rs. in lakh)						
Capital cost	Additional	Capital	Additional	Capital	Additional	Capital
as on	Capital	cost as	Capital	cost as	Capital	cost as
1.4.2006	Expenditure	on	Expenditure	on	Expenditure	on
admitted	during 2006-	1.4.2007	during 2007-	1.4.2008	during 2008-	1.4.2009
vide order	07		08		09	
dated						
19.8.2009						
14186.60	18.90	14204.79	39.93	14244.72	4.89	14249.61

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

		(Rs. in lakh)		
Transmission Tariff	2006-07	2007-08	2008-09	
Depreciation	378.15	378.68	379.08	
Interest on Loan	551.24	402.00	282.91	
Return on Equity	994.26	995.48	996.42	
Advance against Depreciation	51.94	127.09	149.63	
Interest on Working Capital	55.98	55.94	55.58	
O & M Expenses	142.68	148.09	154.29	
Total	2174.25	2107.28	2017.91	

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	2006-07	2007-08	2008-09
Maintenance Spares	171.85	182.17	193.10
O & M expenses	11.89	12.34	12.86
Receivables	362.38	351.21	336.32
Total	546.12	545.72	542.28
Rate of Interest	10.25%	10.25%	10.25%
Interest	55.98	55.94	55.58

7. No reply has been filed by the respondents.

CAPITAL COST

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

			(Rs. in	lakh)
		Amount	Nature and o	details of
Year	(Rs. in lakh)		expendi	ture
2006-07	Building	= Rs. 18.19 lakh	Balance	and
		-		ments
2007-08	Building	= Rs. 39.93 lakh	Balance	and
			retention payments	
2008-09	Building	= Rs. 4.89 lakh	Balance	and
			retention pay	rments

9. 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

10. 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:

Capital cost	Additional	Capital	Additional	Capital	Additional	Capital
as on	Capital	cost as	Capital	cost as	Capital	cost as
1.4.2006	Expenditure	on	Expenditure	on	Expenditure	on
	during 2006-07	1.4.2007	during 2007-08	1.4.2008	during 2008-09	1.4.2009
14186.60	18.90	14204.79	39.93	14244.72	4.89	14249.61

DEBT- EQUITY RATIO

11. The petitioner has considered the amount of additional capital expenditure in the debt-equity ratio of 69.98:30.02, 70:30 and 69.94:30.06 for the years 2006-07, 2007-08 and 2008-09, respectively. The additional capital expenditure has been restricted in the ratio of 70:30 in accordance with the 2004 regulations. Accordingly, for the purpose of tariff, equity considered for the transmission assets is as under:

							(F	Rs. in lakh)	
Equity as on 1.4.2006	Equity addition due to additional capital expenditure during 2006-07	Average equity 2006-07	Equity as on 1.4.2007	Equity addition due to additional capital expenditure during 2007- 08	Average equity for 2007-08	Equity as on 1.4.2008	Equity addition due to additional capital expenditure during 2008-09	Total equity considere d as on 31.3.2009	Average equity for 2008- 09
7099.14	5.16	7101.87	7104.60	11.98	7110.59	7116.57	1.47	7188.04	7117.31

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 in the table under para 11 above has been considered. However, tariff for 2006-07 to 2008-09 has been allowed on average equity. Accordingly, return on equity allowed for the period 2006-07 to 2008-09 is given as under:

(Rs. in lakh					
2006-07	2007-08	2008-09			
994.26	995.48	996.42			

INTEREST ON LOAN

14. 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 refinancing 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 have

been considered as per order dated 19.8.2009 in Petition No. 84/2006.

There is no addition of actual loans.

(b) Notional loan arising out of additional capital expenditure for the years 2006-07, 2007-08 and 2008-09 has been added to the loan amount as on 31.3.2006 to arrive at total notional loans. This adjusted gross loan has been considered as normative loans for tariff calculations.

(c) Tariff has been 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:

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

(e) Weighted average rate of interest on actual loan worked out asper (a) above has been applied on the notional average loan duringthe year to arrive at the interest on loan.

(f) Govt of India Ioan @14.59% was replaced by LIC-III Ioan @ 10% w.e.f 13.9.2007. Weighted average rate of interest based on number of days has been considered for the year 2007-08.

(g) Loan repayments for the years 2007-08 and 2008-09 have been adjusted taking into account the replaced loan. The apportioned repayment instalment of Rs 76.00 lakh for the asset corresponding to repayment date of 1.4.2007 has been added to pro-rata loan instalment (Rs 262.70 lakh) of LIC-III loan as on 31.3.2008 to arrive at the repayment during 2007-08. LIC-III loan schedule has been referred to for working out the repayment instalment for 2008-09.

(h) It is noted that the transmission charges in respect of Nirjuli-Dikrong transmission line were also approved by the Commission vide order dated 19.8.2010 in Petition No. 84/2006. GOI loan has been replaced by LIC loan for this assets also. The benefit of loan swapping shall be passed on to the beneficiaries as per regulation 56 (i) of the 2004 regulations.

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

			(Rs. in lakh)
	2006-07	2007-08	2008-09
Gross Normative Loan	7087.46	7100.20	7128.15
Cumulative Repayment up to Previous	3100.56	3530.65	4036.51
Year/date of commercial operation			
Net Loan-Opening	3986.90	3569.54	3091.64
Addition due to Additional Capitalisation	12.73	27.95	3.42
Repayment during the year	430.09	505.85	528.77
Net Loan-Closing	3569.54	3091.64	2566.29
Average Loan	3778.22	3330.59	2828.97
Weighted Average Rate of Interest on	14.59%	12.07%	10.00%
Loan			
Interest	551.24	402.01	282.90

17. The detailed calculations in support of the weighted average rate of

interest for the transmission asset 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:

- "(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."
- 19. Depreciation allowed has been worked out as below:

		(Rs	. in lakh)
	2006-07	2007-08	2008-09
Gross block as on the date of commercial operation	14186.60	14204.79	14244.72
Additional Capitalisation during 2008-09	18.19	39.93	4.89
Gross Block at the end of the year	14204.79	14244.72	14249.61
Rate of Depreciation	2.664%	2.662%	2.661%
Depreciable Value	12776.13	12802.28	12822.45
Balance Useful life of the asset	-		-
Remaining Depreciable Value	11547.62	11143.68	10657.99
Depreciation	378.15	378.68	379.08

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. 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 16 above.

(b) Repayment of notional loan during the year is considered as per para 16 above.

(c) Depreciation is worked out as per para 19 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

		(Rs. in lakh)			
Advance against Depreciation	2006-07	2007-08	2008-09		
1/10th of Gross Loan(s)	708.75	710.02	712.81		
Repayment of the Loan	430.09	505.85	528.77		
Minimum of the above	430.09	505.85	528.77		
Depreciation during the year	378.15	378.68	379.08		
(A) Difference	51.94	127.18	149.69		
Cumulative Repayment of the Loan	3530.65	4036.51	4565.28		
Cumulative Depreciation/ Advance against Depreciation	1606.66	2037.28	2543.53		
(B) Difference	1923.99	1999.23	2021.74		
Advance against Depreciation Minimum of (A) and (B)	51.94	127.18	149.69		

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

OPERATION & MAINTENANCE EXPENSES

24. 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	

25. O&M expenses as taken for the tariff calculations in the order dated 19.8.2009 in Petition No. 84/2006 has been considered, since line length and number of bays remain unchanged.

INTEREST ON WORKING CAPITAL

26. 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. 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 19.8.2009 in Petition No. 84/2006 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 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.

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

		((Rs. in lakh)
Working Capital	2006-07	2007-08	2008-09
Maintenance Spares	171.85	182.17	193.10
O & M expenses	11.89	12.34	12.86
Receivables	362.38	351.23	336.33
Total	546.12	545.74	542.28
Rate of Interest	10.25%	10.25%	10.25%
Interest	55.98	55. 9 4	55.58

TRANSMISSION CHARGES

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

		(Rs. in lakh)		
Transmission Tariff	2006-07	2007-08	2008-09	
Depreciation	378.15	378.68	379.08	
Interest on Loan	551.24	402.01	282.90	
Return on Equity	994.26	995.48	996.42	
Advance against Depreciation	51.94	127.18	149.69	
Interest on Working Capital	55.98	55.94	55.58	
O & M Expenses	142.68	148.09	154.29	
Total	2174.25	2107.37	2017.96	

29. 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.

30. 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.

31. 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.

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

sd/-	sd/-	sd/-	sd/-
(M.DEENA DAYALAN)	(V.S.VERMA)	(S.JAYARAMAN)	(Dr. PRAMOD DEO)
MEMBER	MEMBER	MEMBER	CHAIRPERSON

	Annex			
		1	<u>(Rs. in la</u>	
	Details of Loan	2006-07	2007-08	2008-09
1	BOND-III SERIES (2nd) (9.75%)			
	Gross Loan opening	230.00	230.00	230.00
	Cumulative Repayment up to previous year	230.00	230.00	230.00
	Net Loan-Opening	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00
	Rate of Interest			
	Interest	0.00	0.00	0.00
2	BOND-III SERIES (1st)			
	Gross Loan opening	37.00	37.00	37.00
	Cumulative Repayment up to previous year	37.00	37.00	37.00
	Net Loan-Opening	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00
	Rate of Interest	0.00	0.00	0.00
	Interest	0.00	0.00	0.00
3	Bond-I (Issue-I)	0.00	0.00	0.00
3	Gross Loan opening	128.00	128.00	128.00
	Cumulative Repayment up to previous year	128.00	128.00	128.00
	Net Loan-Opening	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00
	Rate of Interest	0.00	0.00	0.00
	Interest	0.00	0.00	0.00
4	Bond-I (Issue-II)	0.00	0.00	0.00
4		107.00	107.00	107.00
	Gross Loan opening	107.00	107.00	107.00
	Cumulative Repayment up to previous year	107.00	107.00	107.00
	Net Loan-Opening	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00
	Rate of Interest			6.55
	Interest	0.00	0.00	0.00
5	Bond-I (Issue-III)			
	Gross Loan opening	249.00	249.00	249.00
	Cumulative Repayment up to previous year	249.00	249.00	249.00
	Net Loan-Opening	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00
	Rate of Interest			
	Interest	0.00	0.00	0.00

6	Bond-II (Issue-II)			
	Gross Loan opening	27.00	27.00	27.00
	Cumulative Repayment up to previous year	27.00	27.00	27.00
	Net Loan-Opening	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00
	Rate of Interest			
	Interest	0.00	0.00	0.00
7	UTI			
	Gross Loan opening	291.00	291.00	291.00
	Cumulative Repayment up to previous year	291.00	291.00	291.00
	Net Loan-Opening	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00
	Rate of Interest	0100	0100	0100
	Interest	0.00	0.00	0.00
	GOI Loan @ 14.59% up to 12.09.2007			
8	replaced with LIC-III @ 10% on 13.09.2007			
	Gross Loan opening	3101.00	3101.00	3101.00
	Cumulative Repayment up to previous year	422.00	711.00	1049.70
	Net Loan-Opening	2679.00	2390.00	2051.30
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	289.00	338.70	350.84
	Net Loan-Closing	2390.00	2051.30	1700.46
	Average Loan	2534.50	2220.65	1875.88
	Rate of Interest	14.59%	12.07%	10.00%
	Interest	369.78	268.04	187.59
9	BOND-II (ISSUE-I)			
	Gross Loan opening	457.00	457.00	457.00
	Cumulative Repayment up to previous year	457.00	457.00	457.00
	Net Loan-Opening	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00
	Rate of Interest			
	Interest	0.00	0.00	0.00
	Total Loan			
	Gross Loan opening	4627.00	4627.00	4627.00
	Cumulative Repayment up to previous year	1948.00	2237.00	2575.70
	Net Loan-Opening	2679.00	2390.00	2051.30
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	289.00	338.70	350.84
	Net Loan-Closing	2390.00	2051.30	1700.46
	Average Loan	2534.50	2220.65	1875.88
	Rate of Interest	14.5900%	12.0701%	10.0000%
	Interest	369.78	268.04	187.59