

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 299/2010

**Coram: Shri S. Jayaraman, Member
Shri V.S. Verma, Member
Shri M .Deena Dayalan, Member**

Date of Hearing: 24.2.2011

Date of Order: 14.2.2012

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 for determination of transmission tariff for combined assets of Ckt-I (Asset-I), and Ck-II (Asset-II) of 400 kV; D/C Teesta (stage-V) Siliguri transmission line; 315 MVA, 400/220 kV, ICT-II at Baripada sub-station along with associated bays (Asset-III); and shifting of 50 MVAR Reactor from Rengali to Baripada end of transmission system associated with Teesta (stage-V) HEP (Asset-IV) in Eastern Region for the period from 1.4.2009 to 31.3.2014.

And

In the matter of:

Power Grid Corporation of India Ltd., Gurgaon**Petitioner**

Vs

1. Bihar State Electricity Board, Patna
2. West Bengal State Electricity Distribution Company Ltd., Calcutta
3. Grid Corporation of Orissa Ltd., Bhubaneswar
4. Damodar Valley Corporation, Calcutta
5. Power Department., Govt. of Sikkim, Gangtok
6. Jharkhand State Electricity Board, Ranchi**Respondents**

The following were present:

1. Shri S.S. Raju, PGCIL
2. Shri Rajeev Gupta, PGCIL

ORDER

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of transmission tariff for Combined Assets of Ckt-I



(Asset-I) and Ck-II (Asset-II) of 400 kV, D/C Teesta (Stage-V) Siliguri transmission line, 315 MVA, 400/220 kV, ICT-II at Baripada sub-station (Asset-III) along with associated bays and Asset-IV (anticipated date of commercial operation: 1.12.2010): shifting of 50 MVAR Reactor from Rengali to Baripada end of transmission system associated with Teesta (Stage-V) HEP (hereinafter referred to as "transmission assets") in Eastern Region for the period from 1.4.2009 to 31.3.2014, under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 (hereinafter referred to as "2009 regulations").

2. The actual date of commercial operation for Asset-I, Asset-II and Asset-III of the above transmission elements are 1.2.2008, 1.6.2008 and 1.5.2008 respectively. Notional date of commercial operation for Asset I and II is 1.6.2008. Asset IV is yet to be commissioned and the petitioner, vide affidavit 11.11.2011, has requested to approve tariff in respect of Combined Asset I and II and Asset III in advance. Accordingly, the tariff for Combined Asset I and II and Asset III is determined in the instant petition and the tariff for Asset IV shall be taken up separately after the asset is commissioned as per the request of the petitioner.

3. Details of the transmission charges claimed by the petitioner are as under:-

(₹ in lakh)

Combined Asset-I and II					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1453.66	1482.38	1483.83	1483.83	1483.83
Interest on Loan	1659.08	1557.03	1421.32	1282.97	1144.72
Return on equity	1443.09	1471.62	1473.06	1473.06	1473.06
Interest on Working Capital	103.79	103.36	101.13	98.81	96.53
O & M Expenses	176.70	186.83	197.52	208.81	220.71
Total	4836.32	4801.22	4676.86	4547.48	4418.85

(₹ in lakh)

Asset-III					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	60.46	61.51	62.57	62.57	62.57
Interest on Loan	67.12	62.85	58.49	52.80	47.11
Return on equity	60.05	61.10	62.15	62.15	62.15
Interest on Working Capital	8.37	8.58	8.80	8.96	9.15
O & M Expenses	89.08	94.18	99.57	105.26	111.28
Total	285.08	288.22	291.58	291.74	292.26

4. The details submitted by the petitioner in support of its claim for interest on for the working capital are given as under:-

(₹ in lakh)

Combined Asset- I and II					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	26.51	28.02	29.63	31.32	33.11
O & M expenses	14.73	15.57	16.46	17.40	18.39
Receivables	806.05	800.20	779.48	757.91	736.47
Total	847.28	843.80	825.57	806.64	787.97
Interest	103.79	103.37	101.13	98.81	96.53
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

(₹ in lakh)

Asset- III					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	13.36	14.13	14.94	15.79	16.69
O & M expenses	7.42	7.85	8.30	8.77	9.27
Receivables	47.51	48.04	48.60	48.62	48.71
Total	68.29	70.02	71.84	73.18	74.67
Interest	8.37	8.58	8.80	8.96	9.15
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

5. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under section 64 of the Electricity Act, 2003. Reply to the petition has been filed by Bihar State Electricity Board (BSEB), Respondent No.1.

6. BSEB in its reply, vide its affidavit dated 17.2.2011, has raised the issue of cut-off date for the purpose for working out the additional capital expenditure,



application filing fee, licence fee, revision of O&M norms and levies and duties, issue of grossing up the rate of return based on the tax rate of the respective years and tax holiday.

7. The petitioner in its rejoinder dated 9.3.2011, has clarified all the issues raised by the BSEB. As regards return on equity, the petitioner submitted that it has been calculated @ 17.481 as per the 2009 regulations. As regards the tax holiday, the petitioner has submitted that the issue has been decided by the Commission by its order dated 8.4.2011 in Petition No. 225/2010.

8. The objections raised by the petitioner and the clarifications submitted by the petitioner regarding additional capital expenditure, application filing fee, licence fee, revision of O&M norms and levies and duties and they have been dealt in relevant paragraphs of this order. Most of the issues have already been settled by various orders of the Commission and through the second amendment to the 2009 regulations.

CAPITAL COST

9. As regards capital cost, last proviso to Regulation 7(2) of the 2009 regulations as amended vide Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011 provides that-

“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 and the capital cost additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”

10. The tariff for the Asset I for the tariff block 2004-09, has been approved by the Commission vide order dated 1.6.2010 in Petition No. 24/2010 and for Asset-II and III by order dated 21.12.2009 in Petition No. 164/2009.

11. The details of admitted cost, incurred / projected expenditure during 2009-10 to 2011-12 are summarized below:-

(₹ in lakh)

Name of Asset	Approved cost (RCE)	Admitted cost as on 1.4.2009	Expenditure incurred/ proposed to be incurred in tariff petition			
			1.1.2009 to 31.3.2010	1.4.2010 to 31.3.2011	1.4.2011 to 31.3.2012	Total
Asset- I	26219.00	23313.92	1033.00	55.00	0.00	24401.92
Asset -II	3989.00	3687.02	0.00	0.00	0.00	3687.02
Asset -III	1307.00	1145.04	0.00	40.00	0.00	1185.04
Asset- IV	43.00	0.00	0.00	195.00	64.00	259.00
Total	31558.00	28145.98	1033.00	290.00	64.00	29532.98

In the instant petition Asset I and Asset II have been clubbed as Combined Asset II. Accordingly, capital expenditure of ₹ 27000.94 lakh for Combined Asset I and II and ₹ 1145.04 lakh for Asset III has been considered for determination of tariff for 2009-14 period as per Regulation 7 of 2009 regulations. As mentioned in Para 2 of this order, the tariff for Asset IV has not been determined in this order and accordingly, all issues raised by both the petitioner and the respondents relating to Asset IV are not discussed in this order.

ADDITIONAL CAPITAL EXPENDITURE

12. As per Regulation 9(1) of 2009 regulations-

“Additional Capitalisation: (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(i) *Undischarged liabilities;*



- (ii) XXX
- (iii) XXX
- (iv) XXX
- (v) XXX”

13. As per 2009 regulations,

“cut-off date means 31st March of the year closing after 2 years of the year of commercial operation of the project, and in-case of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation”.

Therefore, cut-off date for the above mentioned assets is 31.3.2010.

14. The petitioner has claimed additional capital expenditure for Asset I, III, IV on account of, balance/ retention payments expenditure incurred during 2009-10 and proposed to be incurred during 2010-2011 and 2011-12 towards transmission line/ substation/ shifting of Reactor from Rengali to Baripada. The details are given under:-

(₹ in lakh)			
Asset	Capital cost as on 31.3.2009	28145.98	Nature of expenditure
Asset-I	2009-10 (Balance/Retention payments)	1033.00	Transmission line
	2010-11 (Balance/Retention payments)	30.00	Transmission line
	2010-11 (Balance/Retention payments)	25.00	Sub-station
Asset-II		NIL	
Asset-III	2010-11 (Balance/Retention payments)	40.00	Sub-station
Asset-IV	2010-11	195.00	Sub-station (shifting of Reactor from Rengali to Baripada)
	2011-12	64.00	
Grand Total		29532.98	

15. The petitioner, vide affidavit dated 10.1.2011, has submitted that the notional date of commercial operation of Combined Asset I and II was 1.6.2008 and the date of commercial operation of Asset III was 1.5.2008 and falls in 2008-09. The petitioner submitted that the tariff block 2004-09 expired on

31.3.2009 before the expiry of cut-off date as per Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "2004 regulations") and hence the definition of cut-off date as per 2009 regulations must be made applicable for these assets. Accordingly, 31.3.2011 may be taken as the cut-off date and allow additional capital expenditure for the Combined Asset I and II and Asset III for 2010-11, which is on account of final/balance retention payment i.e. undischarged liabilities and within the original scope of work.

16. The petitioner has claimed the additional capital expenditure on account of balance and retention payment during 2010-11 by relying on the cut-off date as per the 2009 regulations. The notional date of commercial operation of Combined Asset I and II was 1.6.2008 and the date of commercial operation of Asset III was 1.5.2008 and the cut-off date shall be reckoned as per the 2004 regulations. The additional capital expenditure has been incurred beyond the cut-off date. Therefore, the admissibility of expenditure has to be considered as per the 2009 regulations. Regulation 9(2)(viii) of the 2009 regulations provides as under:-

"9 (2) The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

XXX

(viii) Any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc."

17. The additional capital expenditure for 2010-11 projected to be incurred after the cut-off date is admissible under the Regulation 9(2)(viii) of the 2009

regulations. In terms of our order dated 8.2.2011 in Petition No. 176/2010, the expenditure is allowed to be capitalised during 2010-11 after it is incurred.

DEBT- EQUITY RATIO

18. Regulation 12 of the 2009 regulations provides that,

- (1) *For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

- (2) XXX.”

19. The details of debt-equity of asset considered for the purpose of tariff calculation as on the date of commercial operation are as under:-

Combined Asset I & II		
Admitted as on 31.3.2009		
	Amount (₹ in lakh)	%
Debt	18900.69	70.00
Equity	8100.25	30.00
Total	27000.94	100.00
Asset III		
Admitted as on 31.3.2009		
	Amount (₹ in lakh)	%
Debt	801.53	70.00
Equity	343.51	30.00
Total	1145.04	100.00

20. Details of debt-equity ratio considered for projected additional capital expenditure are as under:-

Combined Asset-I and II		
Notional additional capital expenditure		
	Amount (₹ in lakh)	%
2009-2010		
Debt	723.10	70.00
Equity	309.90	30.00
Total	1033.00	100.00
2010-2011		
Debt	38.50	70.00
Equity	16.50	30.00
Total	55.00	100.00



Asset-III		
Notional additional capital expenditure		
2010-2011	Amount (₹ in lakh)	%
Debt	28.00	70.00
Equity	12.00	30.00
Total	40.00	100.00

21. Details of debt-equity ratio as on 31.3.2014 are given hereunder:-

(₹ in lakh)		
Combined Asset I and II		
Cost as on 31.3.2014		
Particulars	Amount	%
Debt	19662.29	70.00
Equity	8426.65	30.00
Total	28088.94	100.00
Asset -III		
Cost as on 31.3.2014		
Debt	829.53	70.00
Equity	355.51	30.00
Total	1185.04	100.00

RETURN ON EQUITY

22. Regulation 15 of the 2009 regulations provides that:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation:

*Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:*

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

Provided that return on equity with respect to the actual tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up separately for each year of the tariff period along with the tariff petition filed for the next tariff period.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.



(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission.

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations"

23. The following amount of equity has been considered for calculation of return of equity is given as under:-

Combined Asset I and II	
Year	Amount (₹ in lakh)
2009-2010	1443.09
2010-2011	1471.62
2011-2012 to 2013-2014	1473.06
Asset III	
2009-2010	60.05
2010-2011	61.10
2011-2012 to 2013-2014	62.15

24. Return on equity has been calculated as per Regulation 15 of the 2009 regulations with pre-tax return on equity of 17.481%.

25. Petitioner's prayer to allow grossing up the base rate of return on equity based on the tax rates viz., MAT, surcharge, any other cess, charges, levies etc., as per the relevant Finance Act, shall be settled in accordance with the provisions of Regulation 15 of 2009 regulations as amended by Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011.

26. In view of the above, the following amount of equity has been considered for calculation of return of equity is given overleaf:-

(₹ in lakh)

Combined Asset- I and II	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	8100.25	8410.15	8426.65	8426.65	8426.65
Addition due to Additional Capitalization	309.90	16.50	0.00	0.00	0.00
Closing Equity	8410.15	8426.65	8426.65	8426.65	8426.65
Average Equity	8255.20	8418.40	8426.65	8426.65	8426.65
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	1443.09	1471.62	1473.06	1473.06	1473.06

(₹ in lakh)

Asset III	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	343.51	343.51	355.51	355.51	355.51
Addition due to Additional Capitalization	0.00	12.00	0.00	0.00	0.00
Closing Equity	343.51	355.51	355.51	355.51	355.51
Average Equity	343.51	349.51	355.51	355.51	355.51
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	60.05	61.10	62.15	62.15	62.15

INTEREST ON LOAN

27. Regulation 16 of the 2009 regulations provides that,-

"16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest



and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

28. In these calculations, interest on loan has been worked out as detailed is given as under:-

- (a) Details of net outstanding loan as on 31.3.2009, cumulative repayment up to 31.3.2009, repayment schedule for the loans, rate of interest etc. have been taken from the dated 01.06.2010 in petition no 24/2010 for Asset-I and for Assets-II and III vide order dated 21.12.2009 in Petition No. 164/2009 for working out weighted average rate of interest;
- (b) Tariff has been worked out considering normative loan and normative repayments. Depreciation allowed has been taken as normative repayment for the tariff period 2009-14; and
- (c) Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.

29. Detailed calculations of the weighted revised average rate of interest have been in Annexure-I and II to this order.

30. Details of the interest on loan worked on the above basis are given as under:-

(₹ in lakh)

Combined Asset I and II	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	18900.69	19623.79	19662.29	19662.29	19662.29
Cumulative Repayment up to Previous Year	729.03	2182.68	3665.06	5148.90	6632.73
Net Loan-Opening	18171.66	17441.11	15997.23	14513.39	13029.56
Addition due to Additional Capitalization	723.10	38.50	0.00	0.00	0.00
Repayment during the year	1453.66	1482.38	1483.83	1483.83	1483.83
Net Loan-Closing	17441.11	15997.23	14513.39	13029.56	11545.73
Average Loan	17806.38	16719.17	15255.31	13771.48	12287.64
Weighted Average Rate of Interest on Loan	9.3173%	9.3129%	9.3169%	9.3161%	9.3160%
Interest	1659.08	1557.03	1421.32	1282.97	1144.72

(₹ in lakh)

Asset III	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	801.53	801.53	829.53	829.53	829.53
Cumulative Repayment up to Previous Year	33.61	94.07	155.58	218.15	280.72
Net Loan-Opening	767.92	707.46	673.94	611.37	548.80
Addition due to Additional Capitalization	0.00	28.00	0.00	0.00	0.00
Repayment during the year	60.46	61.51	62.57	62.57	62.57
Net Loan-Closing	707.46	673.94	611.37	548.80	486.23
Average Loan	737.69	690.70	642.66	580.09	517.52
Weighted Average Rate of Interest on Loan	9.0981%	9.0990%	9.1010%	9.1023%	9.1028%
Interest	67.12	62.85	58.49	52.80	47.11

DEPRECIATION

31. Petitioner has claimed actual depreciation as a component of Annual Fixed Charges. However, Regulation 17 (4) of the 2009 regulations provides as under:-

"Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31th March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the asset".

32. The assets covered in the instant petition were put under commercial operation in 2004-2009 period and accordingly will not complete 12 years in



2009-14 period and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix–III of 2009 regulations.

33. Details of the depreciation worked out are as under:-

(₹ in lakh)

Combined Asset-I and II	2009-10	2010-11	2011-12	2012-13	2013-14
Gross block as per last order	27000.94	28033.94	28088.94	28088.94	28088.94
Addition during 2009-14 due to projected additional capitalization	1033.00	55.00	0.00	0.00	0.00
Gross block	28033.94	28088.94	28088.94	28088.94	28088.94
Average gross block	27517.44	28061.44	28088.94	28088.94	28088.94
Rate of Depreciation	5.2827%	5.2826%	5.2826%	5.2826%	5.2826%
Depreciable Value	24765.70	25255.30	25280.05	25280.05	25280.05
Remaining Depreciable Value	24036.67	23072.61	21614.98	20131.15	18647.32
Depreciation	1453.66	1482.38	1483.83	1483.83	1483.83
Cumulative depreciation	2182.68	3665.06	5148.90	6632.73	8116.56

(₹ in lakh)

Asset III	2009-10	2010-11	2011-12	2012-13	2013-14
Gross block as per last order	1145.04	1145.04	1185.04	1185.04	1185.04
Addition during 2009-14 due to projected additional capitalization	0.00	40.00	0.00	0.00	0.00
Gross block	1145.04	1185.04	1185.04	1185.04	1185.04
Average gross block	1145.04	1165.04	1185.04	1185.04	1185.04
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	1030.54	1048.54	1066.54	1066.54	1066.54
Remaining Depreciable Value	996.92	954.47	910.95	848.38	785.81
Depreciation	60.46	61.51	62.57	62.57	62.57
Cumulative depreciation	94.07	155.58	218.15	280.72	343.29

OPERATION & MAINTENANCE EXPENSES

34. Clause (g) of Regulation 19 of the 2009 regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. Norms prescribed in respect of the elements covered in the instant petition are given overleaf:-

(₹ in lakh)

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C twin conductor, T/Line (₹ in lakh/ km.)	0.627	0.663	0.701	0.741	0.783
400 kV bay (₹ in lakh/ bay.)	52.40	55.40	58.57	61.92	65.46
220 kV bay (₹ in lakh/ bay.)	36.68	38.78	41.00	43.34	45.82

35. As per the above mentioned norms the allowable operation and maintenance expenses for the assets covered in the petition works out as follows:-

(₹ in lakh)

Combined Asset- I & II					
Element	2009-10	2010-11	2011-12	2012-13	2013-14
114.67 km., 400 kV D/C twin conductor Transmission line (₹ in lakh/ km.)	71.90	76.03	80.38	84.97	89.79
Two Nos. 400 kV bays (₹ in lakh/ km.)	104.80	110.80	117.14	123.84	130.92
Total O&M for Asset-I	176.70	186.83	197.52	208.81	220.71

(₹ in lakh)

Asset- III					
Element	2009-10	2010-11	2011-12	2012-13	2013-14
One no. 400 kV bay (₹ in lakh / bay.)	52.40	55.40	58.57	61.92	65.46
One no. 220 kV bay (₹ in lakh /bay)	36.68	38.78	41.00	43.34	45.82
Total O&M for Asset-II	89.08	94.18	99.57	105.26	111.28

36. The Petitioner has stated that O&M expenditure for 2009-14 tariff block had been arrived on the basis of normalized actual O&M expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also

considered while calculating the O&M charges for tariff period 2009-14. The petitioner has submitted that it would right to approach the Hon'ble Commission for suitable revision in the norms for O&M expenditure in case the impact of wage hike w.e.f 1.1.2007 is more than 50%. BSEB in its reply has submitted that any further increase in employee cost due to wage revision must be taken care by the petitioner by increasing its productivity, so that the beneficiaries are not unduly burdened over and above the provisions made in 2009 regulations. It is clarified that, if any, application for revision of norms of O&M expenditure is filed by the petitioner in future it will be dealt with in accordance with law.

INTEREST ON WORKING CAPITAL

37. As per the 2009 regulations the components of the working capital and the interest thereon are discussed are given as under:-

(i) **Receivables:** As per Regulation 18(1) (c) (i) of the 2009 regulations, receivables will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) **Maintenance spares:** Regulation 18(1)(c)(ii) of the 2009 regulations provides for maintenance spares @ 15% per annum of the O & M expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) **O & M expenses:** Regulation 18(1) (c) (iii) of the 2009 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 the respective year as claimed in the petition. This has been considered in the working capital.

(iv) **Rate of interest on working capital:** In these calculations, the SBI PLR as on 1.4.2009, i.e., interest rate of 12.25 % has been considered in accordance with the 2009 regulations, as amended vide the second amendment regulations notified in June 2011, for calculating interest on working capital.

38. Necessary computations in support of interest on working capital are appended hereunder:-

(₹ in lakh)					
Combined Asset-I and II	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	26.51	28.02	29.63	31.32	33.11
O & M expenses	14.73	15.57	16.46	17.40	18.39
Receivables	806.05	800.20	779.48	757.91	736.47
Total	847.28	843.80	825.57	806.64	787.97
Rate of interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	103.79	103.37	101.13	98.81	96.53

(₹ in lakh)					
Asset III	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	13.36	14.13	14.94	15.79	16.69
O & M expenses	7.42	7.85	8.30	8.77	9.27
Receivables	47.51	48.04	48.60	48.62	48.71
Total	68.29	70.02	71.84	73.18	74.67
Rate of interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	8.37	8.58	8.80	8.97	9.15

TRANSMISSION CHARGES

39. The transmission charges being allowed for the transmission lines are summarized as given overleaf:-



(₹ in lakh)

Combined Asset-I and II	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1453.66	1482.38	1483.83	1483.83	1483.83
Interest on Loan	1659.08	1557.03	1421.32	1282.97	1144.72
Return on equity	1443.09	1471.62	1473.06	1473.06	1473.06
Interest on Working Capital	103.79	103.37	101.13	98.81	96.53
O & M Expenses	176.70	186.83	197.52	208.81	220.71
Total	4836.32	4801.23	4676.86	4547.48	4418.85

(₹ in lakh)

Asset III	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	60.46	61.51	62.57	62.57	62.57
Interest on Loan	67.12	62.85	58.49	52.80	47.11
Return on equity	60.05	61.10	62.15	62.15	62.15
Interest on Working Capital	8.37	8.58	8.80	8.97	9.15
O & M Expenses	89.08	94.18	99.57	105.26	111.28
Total	285.07	288.22	291.57	291.74	292.25

FILING FEE AND THE PUBLICATION EXPENSES

40. The respondent, BSEB has submitted that the petitioner's request for reimbursement of application filing fee and the expenses incurred on publication of notices may be rejected as per the Commission's order dated 11.9.2008 in Petition No.129/2005. It is clarified that the order dated 11.9.2008 is applicable for the tariff block 2004-09. As regards the tariff period 2009-14, the Commission has allowed reimbursement of filing fee in its order dated 11.1.2010 in Petition No. 109/2009. Accordingly, the petitioner shall be entitled to recover the filing fee and publication expenses from the beneficiaries on pro-rata basis.

LICENSE FEE

41. The petitioner has submitted that in O&M norms for tariff block 2009-14, the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. The respondent, BSEB has submitted that the petitioner's request for

reimbursement for license fee should be rejected as license fee forms part of the O&M expenses and as there is no specific provision for recovery of license fee in the 2009 regulations. It is clarified that reimbursement of license fee the same shall be dealt with in accordance with our order dated 25.10.2011 in Petition No.21/2011 and 22/2011.

SERVICE TAX

42. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents if it is subjected to such service tax in future. We consider the prayer pre-mature and accordingly this prayer is rejected.

SHARING OF TRANSMISSION CHARGES

43. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shared by the beneficiaries in accordance with Regulation 33 of the 2009 regulation up to 30.6.2011. With effect from 1.7.2011, the billing, collection & disbursement of the transmission charges shall be governed by the provision of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 as amended.

44. This order disposes of Petition No.299/2010.

Sd/-

(M. Deena Dayalan)
Member

Sd/-

(V.S. Verma)
Member

Sd/-

(S. Jayaraman)
Member



ANNEXURE I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
COMBINED ASSET I&II

(₹ in lakh)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	Bond XVII					
	Gross loan opening	10.00	10.00	10.00	10.00	10.00
	Cumulative Repayment up to DOCO/previous year	0.00	1.00	2.00	3.00	4.00
	Net Loan-Opening	10.00	9.00	8.00	7.00	6.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	1.00	1.00	1.00	1.00	1.00
	Net Loan-Closing	9.00	8.00	7.00	6.00	5.00
	Average Loan	9.50	8.50	7.50	6.50	5.50
	Rate of Interest	7.39%	7.39%	7.39%	7.39%	7.39%
	Interest	0.70	0.63	0.55	0.48	0.41
	Rep Schedule	10 Annual installments from 22-09-2009				
2	Bond XIX					
	Gross loan opening	1400.00	1400.00	1400.00	1400.00	1400.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	116.67	233.33	350.00
	Net Loan-Opening	1400.00	1400.00	1283.33	1166.67	1050.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	116.67	116.67	116.67	116.67
	Net Loan-Closing	1400.00	1283.33	1166.67	1050.00	933.33
	Average Loan	1400.00	1341.67	1225.00	1108.33	991.67
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	129.50	124.10	113.31	102.52	91.73
	Rep Schedule	12 Annual installments from 24-07-2010				
3	Bond XX					
	Gross loan opening	4581.00	4581.00	4581.00	4581.00	4581.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	381.75	763.50	1145.25
	Net Loan-Opening	4581.00	4581.00	4199.25	3817.50	3435.75
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	381.75	381.75	381.75	381.75
	Net Loan-Closing	4581.00	4199.25	3817.50	3435.75	3054.00
	Average Loan	4581.00	4390.13	4008.38	3626.63	3244.88
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	409.08	392.04	357.95	323.86	289.77
	Rep Schedule	12 Annual installments from 07-09-2010				
4	Bond XXIII					
	Gross loan opening	3391.00	3391.00	3391.00	3391.00	3391.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	282.58	565.17	847.75



	Net Loan-Opening	3391.00	3391.00	3108.42	2825.83	2543.25
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	282.58	282.58	282.58	282.58
	Net Loan-Closing	3391.00	3108.42	2825.83	2543.25	2260.67
	Average Loan	3391.00	3249.71	2967.13	2684.54	2401.96
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	313.67	300.60	274.46	248.32	222.18
	Rep Schedule	12 Annual installments from 09-02-2011				
5	Bond XXIV					
	Gross loan opening	191.00	191.00	191.00	191.00	191.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	15.92	31.83	47.75
	Net Loan-Opening	191.00	191.00	175.08	159.17	143.25
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	15.92	15.92	15.92	15.92
	Net Loan-Closing	191.00	175.08	159.17	143.25	127.33
	Average Loan	191.00	183.04	167.13	151.21	135.29
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	19.00	18.21	16.63	15.05	13.46
	Rep Schedule	12 Annual installments from 26-03-2011				
6	Bond XXV					
	Gross loan opening	2786.00	2786.00	2786.00	2786.00	2786.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	232.17	464.33
	Net Loan-Opening	2786.00	2786.00	2786.00	2553.83	2321.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	232.17	232.17	232.17
	Net Loan-Closing	2786.00	2786.00	2553.83	2321.67	2089.50
	Average Loan	2786.00	2786.00	2669.92	2437.75	2205.58
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%
	Interest	281.39	281.39	269.66	246.21	222.76
	Rep Schedule	12 Annual installments from 12-06-2011				
7	Bond XXVI					
	Gross loan opening	3374.00	3374.00	3374.00	3374.00	3374.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	281.17	562.33
	Net Loan-Opening	3374.00	3374.00	3374.00	3092.83	2811.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	281.17	281.17	281.17
	Net Loan-Closing	3374.00	3374.00	3092.83	2811.67	2530.50
	Average Loan	3374.00	3374.00	3233.42	2952.25	2671.08
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	313.78	313.78	300.71	274.56	248.41
	Rep Schedule	12 Annual installments from 07.03.2012				
8	Bond XXVIII					



	Gross loan opening	3380.00	3380.00	3380.00	3380.00	3380.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00	281.67
	Net Loan-Opening	3380.00	3380.00	3380.00	3380.00	3098.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	281.67	281.67
	Net Loan-Closing	3380.00	3380.00	3380.00	3098.33	2816.67
	Average Loan	3380.00	3380.00	3380.00	3239.17	2957.50
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	315.35	315.35	315.35	302.21	275.93
	Rep Schedule	12 Annual installments from 15-12-2012				
9	Bond XXX (Add-Cap 2009-10)					
	Gross loan opening	0.00	398.00	398.00	398.00	398.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	398.00	398.00	398.00	398.00
	Additions during the year	398.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	33.17
	Net Loan-Closing	398.00	398.00	398.00	398.00	364.83
	Average Loan	199.00	398.00	398.00	398.00	381.42
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	17.51	35.02	35.02	35.02	33.56
	Rep Schedule	12 annual Installments from 29.09.2013				
10	Bond XXXI (Add-Cap 2009-10)					
	Gross loan opening	0.00	325.00	325.00	325.00	325.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	325.00	325.00	325.00	325.00
	Additions during the year	325.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	27.08
	Net Loan-Closing	325.00	325.00	325.00	325.00	297.92
	Average Loan	162.50	325.00	325.00	325.00	311.46
	Rate of Interest	8.90%	8.90%	8.90%	8.90%	8.90%
	Interest	14.46	28.93	28.93	28.93	27.72
	Rep Schedule	12 annual Installments from 25.02.2014				
	Total Loan					
	Gross loan opening	19113.00	19836.00	19836.00	19836.00	19836.00
	Cumulative Repayment up to DOCO/previous year	0.00	1.00	798.92	2110.17	3703.08
	Net Loan-Opening	19113.00	19835.00	19037.08	17725.83	16132.92
	Additions during the year	723.00	0.00	0.00	0.00	0.00
	Repayment during the year	1.00	797.92	1311.25	1592.92	1653.17
	Net Loan-Closing	19835.00	19037.08	17725.83	16132.92	14479.75
	Average Loan	19474.00	19436.04	18381.46	16929.38	15306.33
	Weighted Average Rate of Interest	9.3173%	9.3129%	9.3169%	9.3161%	9.3160%
	Interest	1814.45	1810.05	1712.57	1577.16	1425.94



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR ASSET III
(₹ in lakh)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	Bond-XIX					
	Gross loan opening	250.00	250.00	250.00	250.00	250.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	20.83	41.67	62.50
	Net Loan-Opening	250.00	250.00	229.17	208.33	187.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	20.83	20.83	20.83	20.83
	Net Loan-Closing	250.00	229.17	208.33	187.50	166.67
	Average Loan	250.00	239.58	218.75	197.92	177.08
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	23.13	22.16	20.23	18.31	16.38
	Rep Schedule	12 Annual installments from 24.07.2010				
2	Bond XX					
	Gross loan opening	310.00	310.00	310.00	310.00	310.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	25.83	51.67	77.50
	Net Loan-Opening	310.00	310.00	284.17	258.33	232.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	25.83	25.83	25.83	25.83
	Net Loan-Closing	310.00	284.17	258.33	232.50	206.67
	Average Loan	310.00	297.08	271.25	245.42	219.58
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	27.68	26.53	24.22	21.92	19.61
	Rep Schedule	12 Annual installments from 07.09.2010				
3	Bond-XXIII					
	Gross loan opening	9.00	9.00	9.00	9.00	9.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.75	1.50	2.25
	Net Loan-Opening	9.00	9.00	8.25	7.50	6.75
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.75	0.75	0.75	0.75
	Net Loan-Closing	9.00	8.25	7.50	6.75	6.00
	Average Loan	9.00	8.63	7.88	7.13	6.38
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	0.83	0.80	0.73	0.66	0.59
	Rep Schedule	12 Annual installments from 09.02.2011				
4	Bond XXVIII					
	Gross loan opening	55.00	55.00	55.00	55.00	55.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00	4.58
	Net Loan-Opening	55.00	55.00	55.00	55.00	50.42
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	4.58	4.58
	Net Loan-Closing	55.00	55.00	55.00	50.42	45.83
	Average Loan	55.00	55.00	55.00	52.71	48.13



Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
Interest	5.13	5.13	5.13	4.92	4.49
Rep Schedule	12 Annual installments from 15.12.2012				
Total Loan					
Gross loan opening	624.00	624.00	624.00	624.00	624.00
Cumulative Repayment up to DOCO/previous year	0.00	0.00	47.42	94.83	146.83
Net Loan-Opening	624.00	624.00	576.58	529.17	477.17
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	47.42	47.42	52.00	52.00
Net Loan-Closing	624.00	576.58	529.17	477.17	425.17
Average Loan	624.00	600.29	552.88	503.17	451.17
Rate of Interest	9.0981%	9.0990%	9.1010%	9.1023%	9.1028%
Interest	56.77	54.62	50.32	45.80	41.07

