

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 335/2010

**Coram: Dr. Pramod Deo, Chairperson
Shri V.S. Verma, Member
Shri M. Deena Dayalan, Member**

Date of Hearing: 19.7.2011

Date of Order: 9.11.2011

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 (i) 400/220 kV ICT-I at Wardha Sub-station with associated bays (DOCO: 1.4.2009) and (ii) combined assets of 400/220 kV ICT-I at Wardha Sub-station with associated bays (DOCO: 1.4.2009) & 400/220 kV ICT-II at Wardha Sub-station with associated bays (anticipated DOCO: 1.12.2010) (notional DOCO: 1.12.2010) under SIPAT-II Supplementary Transmission System in Western Region for tariff block 2009-14 period.

And

In the matter of:

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

Vs

1. Madhya Pradesh Power Trading Company Ltd., Jabalpur
2. Maharashtra State Electricity Distribution Co. Ltd., Mumbai
3. Gujarat Urja Vikas Nigam Ltd., Vadodara
4. Electricity Department, Govt. of Goa, Panaji
5. Electricity Department, Govt. of Daman & Diu, Daman
6. Electricity Department, Govt. of Dadra Nagar Haveli, Silvassa
7. Chhattisgarh State Electricity Board, Chhattisgarh
8. Madhya Pradesh Audyogik Kendra, Indore**Respondents**

The following were present:

1. Shri. S.S. Raju, PGCIL
2. Shri. Gunjan Agrawal, PGCIL
3. Shri. M.M. Mondal, PGCIL
4. Shri. Rajeev Gupta, PGCIL



ORDER

This petition has been filed seeking approval of transmission tariff for (i) 400/220 kV ICT-I at Wardha Sub-station with associated bays (date of commercial operation : 1.4.2009) and (ii) combined assets of 400/220 kV ICT-I at Wardha Sub-station with associated bays (date of commercial operation: 1.4.2009) & 400/220 kV ICT-II at Wardha Sub-station with associated bays (hereinafter referred to as "transmission assets") (anticipated date of commercial operation : 1.12.2010) (notional date of commercial operation : 1.12.2010) under SIPAT-II Supplementary Transmission System in Western Region for tariff block 2009-14 period. The petitioner has also sought the following reliefs:-

- (a) In case of the assets being combined to calculate the transmission charges, allow the petitioner to recover full depreciation (90% of the Gross Block) of the assets during its useful life (25 years for Sub-station and 35 years for Transmission Lines) reckoning from its actual date of commercial operation. Permit the petitioner to treat the recovery of depreciation after achieving the useful life by an asset (to be reckoned from the actual date of commercial operation);

- (b) Allow grossing up of base rate of return with the applicable tax rate as per the Finance Act for the relevant year and direct settlement of tax liability between the generating company/ transmission licensee and the beneficiaries/ long term transmission customers on year to year basis;

- (c) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee and publishing of notices in newspapers in terms of Regulation 42 of 2009 regulations and other expenditure (if any) in relation to the filing of petition;
- (d) Allow the petitioner to bill and recover service tax on transmission charges separately from the respondents, if at any time exemption from service tax is withdrawn and transmission of power is notified as a taxable service;
- (e) Allow the petitioner to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2009-14 period, if any, from the respondents; and
- (f) Allow the petitioner to bill and recover licensee fee separately from the respondents.

2. The investment approval for Sipat II supplementary Transmission system was accorded by the Government of India vide their letter no. 12/24/2009-PG dated 24.6.2005 at an estimated cost of ₹ 81367 lakh including Interest During Construction of ₹ 3504 lakh (based on 4th quarter 2004 prices level). Revised Cost Estimate was accorded by the Board of Directors of the petitioner vide their letter No. C/CP/RCE/Sipat II dated 3.9.2010 at an estimated cost of ₹ 98224 lakh including Interest During Construction of ₹ 7357 lakh (based on 2nd quarter, 2010 price level).

3. The details of the elements of the Sipat II supplementary transmission system and their respective dates of commercial operation are as under:-

Srl. No.	Asset	DOCO
1	765 kV S/C Seoni- Wardha Transmission Line with associated bays 400 kV D/C Wardha Akola Transmission Line with associate bays	1.4.2009
2	ICT-I at 400/220 kV Sub-Station at Wardha with associated bays (hereinafter " Asset-1 ")	1.4.2009
3	400 kV D/C Akola-Aurangabad Transmission Line at Akola and Aurangabad and 400 kV Bus reactor at Wardha Sub-Station	1.12.2009
4	ICT-II 400/220 kV at Wardha Sub-Station with associated bays (hereinafter " Asset-2 ")	1.2.2011

4. The transmission tariff for the assets mentioned at Srl. No.1, 2 and 3, above was determined by order dated 15.3.2011 in Petition No.182/2010. The transmission tariff for the assets at Srl. No. 2 (Asset 1) and 4 (Asset 2), above are allowed in this instant petition. The actual date of commercial operation of Asset-1 and Asset-2 was 1.4.2009 and 1.2.2011, respectively and their notional date of commercial operation of Combined Assets-1 & 2 is 1.2.2011. Asset 1 and Asset 2 are combined together for the purposes of tariff calculation as per the Commission's letter Ref. No. C-7/189/2040/2009-CERC dated 23.10.2009, wherein the procedure for combining of assets for the purpose of tariff determination for 2009-14 is prescribed.

5. The transmission tariff of Asset 1 computed in Petition No. 182/2010 is applicable from April 2009 to January 2011 and it is superseded by the tariff allowed in the instant petition. The transmission tariff for Combined Assets 1 & 2 has been computed for the period 1.2.2011 to 31.3.2014.

6. The details of apportioned approved cost, the admitted cost as on the date of commercial operation and additional capital expenditure projected to be incurred for the assets covered in the petition is summarized overleaf:-

(₹ in lakh)

Name of the asset	Apportioned approved cost as per RCE	Expenditure upto date of commercial operation	Expenditure for 2009-10	Expenditure from 1.4.2010 to 30.11.2010	Proposed Expenditure from 1.12.2010 to 31.3.2011	Total estimated completion cost
Asset-1	3375.23	2185.35	307.94	56.72	825.21	3375.22
Asset-2	2456.75	1991.86	NA	NA	226.84	2218.70
TOTAL	5831.98					5593.92

7. Capital cost of Asset 1 on the date of commercial operation is inclusive of the initial spares amounting to ₹ 89.14 lakh and it has already been considered in Petition No. 182/2010.

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

(₹ in lakh)

Asset-1		
	2009-10	2010-11 (pro-rata for 8 months)
Depreciation	123.67	155.10
Interest on Loan	64.22	74.03
Return on equity	122.67	153.87
Interest on Working Capital	14.60	16.57
O & M Expenses	162.44	171.74
Total	487.60	571.31

(₹ in lakh)

Combined Asset- 1 & 2				
	2010-11 (pro-rata for 4 months)	2011-12	2012-13	2013-14
Depreciation	89.30	295.67	295.67	295.367
Interest on Loan	33.31	104.98	95.09	84.99
Return on equity	88.59	293.36	293.36	293.36
Interest on Working Capital	9.71	31.27	32.07	32.92
O & M Expenses	114.49	363.14	383.88	405.84
Total	335.40	1088.42	1100.07	1112.78



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

(₹ in lakh)

Asset- 1		
	2009-10	2010-11 (pro-rata)
Maintenance Spares	24.37	25.76
O & M expenses	13.54	14.31
Receivables	81.27	95.22
Total	119.18	135.29
Interest	14.60	16.57
Rate of Interest	12.25%	12.25%

(₹ in lakh)

Combined Asset -1 & 2				
	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Maintenance Spares	51.52	54.47	57.58	60.87
O & M expenses	28.62	30.26	31.99	33.82
Receivables	167.70	181.40	183.35	185.46
Total	247.84	266.13	272.92	280.15
Interest	4.85	31.27	32.07	32.92
Rate of Interest	11.75%	11.75%	11.75%	11.75%

10. 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.

11. None of the respondents have filed any reply to the petition.

CAPITAL COST

12. As regards the capital cost, Regulation 7(1) of the 2009 regulations provides as under:-

“The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.”

13. In the instant petition, petitioner has claimed revised tariff for Asset-1 from the date of commercial operation i.e. 1.4.2009 to anticipated date of commercial operation of Asset II, i.e. 1.12.2010 and tariff for Combined Asset-1 & 2 from the notional date of commercial operation to 31.3.2014. The petitioner was directed to submit CA Certificate for capital cost and the revised forms as on the actual date of commercial operation. The petitioner submitted, vide affidavit dated 22.3.2011 that the revised auditor's cost certificates and revised forms for the combined ICT-I and ICT-II at Wardha sub-station shall be filed at the time of truing up.

14. As the petitioner has not submitted the details of the expenditure incurred from December 2010 to January 2011, capital cost of both the assets as on 1.12.2010 has been clubbed and considered for the purpose of tariff calculation.

TIME OVER-RUN

15. As per the investment approval for the system by the Ministry of Power on 24.6.2005 the system was scheduled to be commissioned within 36 months i.e. by June, 2008. The petitioner has submitted that ICT-II 400/220 kV at Wardha Sub-station along with associated bays was commissioned on 1.2.2011 after a delay of 31 months. That ICT-2 was ready for commissioning by March 2009 along with Wardha sub-station and Akola Line. Accordingly, all works had been completed by February 2009 and pre-commissioning test carried out before charging of elements of Grid.

16. The petitioner has submitted that during the pre-commissioning test in March 2009, it was found that "Tan-Delta Value" of tertiary winding was very high

and violating its acceptable limit. That M/s BHEL initially tried to repair the ICT at site but eventually it had to be taken back to factory for further repairs. The repair of ICT took more time at BHEL works, who scheduled the same considering the time lines for readiness of the downstream transmission system of Maharashtra and new on-going works for other transmission projects. The repaired ICT was delivered by BHEL on 14.9.2010. The ICT was commissioned on 1.2.2011. The petitioner has also submitted that the first ICT commissioned at Wardha is loaded below 50% with LILO of 220 kV Wardha- Badnera.

17. The petitioner has submitted, vide affidavit dated 18.5.2011, that two nos. of 220 kV Transmission Lines along with one 400/220 kV ICT for each transmission line were placed for the Wardha sub-station as per the standard norms. Even though ICT I was put under commercial operation on 1.4.2009, first set of two nos. of 220 kV lines were connected by MSETCL at Wardha sub-station only on 20.1.2010. ICT II was put under commercial operation on 1.2.2011 and the balance two nos. of 220 kV Lines are yet to provided by MSETCL. It has also submitted that in the absence of downstream system, the loading of ICT is 50-80 MW only. That even though there was delay in commissioning of ICT II due to problem during pre-commissioning stage, there was no constraint in power evacuation to the downstream system at Wardha sub-station. The delay is attributable to MSETCL as it is not able to draw power even after commissioning of ICT II at Wardha. The petitioner has further submitted that levy of liquidated damages as per the provisions of the contract with BHEL for delay in delivery of ICT is under process and same shall be adjusted in the project cost in due course.

18. The delay in commissioning of the ICT II due to failure during the pre-commissioning test was a bilateral issue between the petitioner and the supplier. The consumers cannot be made to pay for the IDC and IEDC which has accrued on account of the non-commissioning of the assets due to defective ICT. The IDC and IEDC, for the delayed period of 23 months on account of repair of ICT by BHEL, are disallowed.

19. Details of IDC and IEDC disallowed are as under:-

(₹ in lakh)

Detail of IDC and IEDC as per CA Certificate dated 2.8.2010		
	IEDC	IDC
Up to 31.3.2010	60.10	159.59
From 1.4.2010 to DOCO	21.26	50.08
Total IDC and IEDC Claimed	81.36	209.67
Detail of IDC and IEDC disallowed for 23 months		
From March 2009 to March 2010 (for 13 months)	13.71	36.40
From April 2010 to Jan 2011 (for 10 months)	21.26	50.08
Total Disallowed IDC and IEDC (for 23 months)	34.97	86.48

20. Initial spares have already been allowed in Petition No 182/2010 considering both the assets covered in the instant petition. Details of opening capital cost considered for the purpose of tariff calculation are as follows:-

(₹ in lakh)

Name of the asset	DOCO	Exp. upto DOCO	Excess Initial Spares Restricted in Petition No. 182/2010	Disallowed IDC and IEDC	Capital Cost excluding Excess Initial Spares and disallowed IDC and IEDC	Exp. for 2009-10	Exp. from 1.4.2010 to 31.1.2011
Asset-1	1.4.2009	2185.35	5.31	-	2180.04	307.94	56.72
Asset-2	1.2.2011	1991.86	-	121.44	1870.42		
Combined Asset-1&2		-	-	-	4415.11		

ADDITIONAL CAPITAL EXPENDITURE

21. With regard to additional capital expenditure, Regulation 9(1) of 2009 regulations provides as under:-



“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”*

22. 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”.

23. As per the above definition, the cut-off date for the above mentioned assets is 31.3.2014. The petitioner has claimed additional capital expenditure of ₹ 881.93 lakh for 2010-11 for Asset-1 and ₹ 226.84 lakh for 2010-11 for Asset-2. The additional capital expenditure claimed falls within the cut-off date. Accordingly, the same has been considered for the purpose of tariff calculation.

DEBT- EQUITY RATIO

24. Regulation 12(1) 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.”

25. The details of debt-equity in respect of the transmission assets as on the date of commercial operation are given overleaf:-

Capital cost as on the date of commercial operation		
Asset-1		
Particulars	Amount (₹ in lakh)	%
Debt	1526.09	70.00
Equity	653.95	30.00
Total	2180.04	100.00
Combined Asset-1&2		
Debt	3090.81	70.01
Equity	1324.30	29.99
Total	4415.11	100.00

26. The details of debt- equity in respect of the transmission assets as on 31.3.2014 are as under:-

Capital cost as on 31.3.2014		
Combined Asset- 1&2		
Particulars	(₹ in lakh)	%
Debt	3827.25	70.00
Equity	1639.91	30.00
Total	5467.16	100.00

27. As regards the projected additional capital expenditure (referred to as "Ad-Cap" in the table below) the debt-equity details are as under:-

Normative		
Particulars	(₹ in lakh)	%
Asset-1		
Add Cap for 2009-10		
Debt	215.56	70.00
Equity	92.38	30.00
Total	307.94	100.00
Add Cap for 2010-11		
Debt	617.35	70.00
Equity	264.58	30.00
Total	881.93	100.00
Combined Assets- 1&2		
Add Cap for 2010-11		
Debt	736.44	70.00
Equity	315.62	30.00
Total	1052.05	100.00

RETURN ON EQUITY

28. 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 normal tax rate for the year 2008-09 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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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"

29. The amount of equity considered for calculation of return on equity is as

under :-

(₹ in lakh)							
Description	Equity on DOCO	Notional equity due to ACE for the period 2009-10	Total equity considered for tariff calculations for the period 2009-10*	Notional equity due to ACE for the period 2010-11	Total equity considered for tariff calculations for the period 2010-11*	Notional equity due to ACE for the period 2011-14	Total equity considered for tariff calculations for the period 2011-14*
Asset 1	653.95	92.38	700.14	264.58	878.62	-	-
Com. Asset 1&2	1324.30	-	-	315.62	1482.11	0.00	1639.91

30. In this order, Return on Equity has been calculated as per Regulation 15 of the 2009 regulations with pre-tax ROE of 17.481%.

31. Petitioner's prayer to allow grossing up the base rate of ROE 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.

32. Details of return on equity calculated are as under:-

(₹ in lakh)

Asset-1		
	2009-10	2010-11
Opening Equity	653.95	746.33
Addition due to Additional Capitalisation	92.38	264.58
Closing Equity	746.33	1010.91
Average Equity	700.14	878.62
Return on Equity (Base Rate)	15.50%	15.50%
Tax rate for the year 2008-09	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.4815	17.4815
Return on Equity (Pre Tax)	122.39	153.59

(₹ in lakh)

Combined Asset 1 & 2				
	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Opening Equity	1324.30	1639.91	1639.91	1639.91
Addition due to Additional Capitalisation	315.62	0.00	0.00	0.00
Closing Equity	1639.91	1639.91	1639.91	1639.91
Average Equity	1482.11	1639.91	1639.91	1639.91
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	43.18	286.67	286.67	286.67

INTEREST ON LOAN

33. 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."

34. In these calculations, the interest on loan has been worked out as detailed overleaf:-

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;

(b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period.

(c) Moratorium period availed by the transmission licensee and the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

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

35. The methodology followed for the calculation of weighted average rate of interest in case of floating interest loans in Petition 132/2010 has been adopted in the instant petition. Accordingly, the interest on loan has been calculated on the basis of rate prevailing as on the date of commercial operation, i.e 1.4.2009. Any change in rate of interest subsequent to the date of commercial will be considered at the time of truing up.

36. Transmission tariff has been allowed for Asset-1 from date of commercial operation, i.e. 1.4.2009 to 31.1.2011. Repayment of normative loan i.e. ₹ 252.41 lakh for Asset-1 upto 31.1.2011 has been considered as cumulative repayment of normative loan for Combined Asset-1&2 as on the notional date of commercial operation, i.e. 1.2.2011.

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

(₹ in lakh)

Asset-1		
	2009-10	2010-11
Gross Normative Loan	1526.09	1741.65
Cumulative Repayment upto Previous Year	0.00	123.39
Net Loan-Opening	1526.09	1618.26
Addition due to Additional Capitalisation	215.56	617.35
Repayment during the year	123.39	154.82
Net Loan-Closing	1618.26	2080.79
Average Loan	1572.18	1849.53
Weighted Average Rate of Interest on Loan	4.0753%	3.9958%
Interest	64.07	73.90

(₹ in lakh)

Combined Asset 1 & 2				
	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Gross Normative Loan	3090.81	3827.25	3827.25	3827.25
Cumulative Repayment upto Previous Year	252.41	295.94	584.91	873.87
Net Loan-Opening	2838.41	3531.31	3242.34	2953.38
Addition due to Additional Capitalisation	736.44	0.00	0.00	0.00
Repayment during the year	43.53	288.97	288.97	288.97
Net Loan-Closing	3531.31	3242.34	2953.38	2664.41
Average Loan	3184.86	3386.83	3097.86	2808.89
Weighted Average Rate of Interest on Loan	3.0501%	3.0417%	3.0132%	2.9713%
Interest	16.19	103.02	93.34	83.46

DEPRECIATION

38. Regulation 17 of the 2009 regulations provides for computation of depreciation in the following manner, namely:-

“17. (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

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(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) 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 31st 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 assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

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

39. Asset-1 and Combined Assets1&2 were put under commercial operation on 1.4.2009 and their notional date of commercial operation is 1.2.2011 and accordingly will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III to the 2009 regulations. Cumulative depreciation of ₹ 252.41 of Asset-1 upto the notional date of commercial operation has been considered as cumulative depreciation for the Combine Asset 1&2.

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

(₹ in lakh)		
Asset-1		
	2009-10	2010-11
Gross Block	2180.04	2487.98
Addition during 2009-14 due to Projected Additional Capitalisation	307.94	881.93
Closing Gross Block	2487.98	3369.91
Average Gross Block	2334.01	2928.94
Rate of Depreciation	5.2864%	5.2860%
Depreciable Value	2100.61	2636.05
Remaining Depreciable Value	2100.61	2512.66
Depreciation	123.39	154.82

(₹ in lakh)				
Combined Asset-1&2				
	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Gross Block	4415.11	5467.16	5467.16	5467.16
Addition during 2009-14 due to Projected Additional Capitalisation	1052.05	0.00	0.00	0.00
Closing Gross Block	5467.16	5467.16	5467.16	5467.16
Average Gross Block	4941.14	5467.16	5467.16	5467.16
Rate of Depreciation	5.2860%	5.2855%	5.2855%	5.2855%
Depreciable Value 90%	4447.02	4920.45	4920.45	4920.45
Remaining Depreciable Value	4194.62	4624.51	4335.54	4046.57
Depreciation	43.53	288.97	288.97	288.97



OPERATION & MAINTENANCE EXPENSES

41. 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 asset covered in the instant petition are as under:-

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV bays (₹ Lakh per Bay)	52.40	55.40	58.57	61.92	65.46
220 kV bays (₹ Lakh per Bay)	36.68	38.78	41.00	43.34	45.82

42. Based on the above norms, the allowable O&M expenses for the assets covered in the instant petition are as under:-

(₹ in lakh)

Combined Asset - ! & 2				
Element	2010-11 (pro- rata)	2011-12	2012-13	2013-14
Two Nos. 400 kV bay	18.46	117.14	123.84	130.92
Six Nos. 220 kV bays	38.78	246.00	260.04	274.92
Total O&M expenses	57.24	363.14	383.88	405.84

43. The Petitioner has submitted that O&M expenditure for the year 2009-14 had been arrived at on the basis of normalized actual O&M expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O&M charges for tariff period 2009-14. The petitioner has further submitted that it reserved the right to approach the Commission for suitable revision in the norms for O&M expenditure in case the impact of wage hike with effect from 1.1.2007 is more than 50%. The petitioner has further submitted that in O&M norms for the period 2009-14, the cost associated with license fees had not been captured and therefore licence fee be allowed to be recovered separately from the respondents.

44. We observe that the issue regarding reimbursement of additional expenditure on account of wage revision has been raised by the petitioner in other petitions also. The decision as and when taken will be applicable to the present case also.

INTEREST ON WORKING CAPITAL

45. As per the 2009 regulations the components of the working capital and the interest thereon are discussed hereunder:-

- (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: As per clause (3) of Regulation 18 of the 2009 regulations (for the Assets commissioned before 30.6.2010) SBI PLR rate of 12.25% as on 1.4.2009 for Asset-1 and SBI Base Rate Plus 350 basis points as on 1.7.2010 (i.e.11.00%) for Combined Asset-1 & 2 has been considered as the rate of interest on working capital.

46. Necessary computation in support of interest on working capital is appended hereinbelow:-

	(₹ in lakh)	
	2009-10	2010-11 (12 months)
Maintenance Spares	24.37	25.76
O & M expenses	13.54	14.31
Receivables	81.15	95.10
Total	119.05	135.18
Rate of Interest	12.25%	12.25%
Interest	14.58	16.56

(₹ in lakh)				
Combined Asset-1&2				
	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Maintenance Spares	51.52	54.47	57.58	60.88
O & M expenses	28.62	30.26	31.99	33.82
Receivables	164.63	178.46	180.43	182.57
Total	244.77	263.19	270.00	277.27
Rate of Interest	11.00%	11.00%	11.00%	11.00%
Interest	4.49	28.95	29.70	30.50

TRANSMISSION CHARGES

47. The transmission charges being allowed for the transmission lines are summarized below:-

(₹ in lakh)

Asset-1			
	2009-10	2010-11 (12 months)	2010-11 (pro-rata for 10 months)
Depreciation	123.39	154.82	129.02
Interest on Loan	64.07	73.90	61.59
Return on equity	122.39	153.59	127.99
Interest on Working Capital	14.58	16.56	13.80
O & M Expenses	162.44	171.74	143.12
Total	486.87	570.62	475.51

(₹ in lakh)

Combined Asset-1&2				
	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Depreciation	43.53	288.97	288.97	288.97
Interest on Loan	16.19	103.02	93.34	83.46
Return on equity	43.18	286.67	286.67	286.67
Interest on Working Capital	4.49	28.95	29.70	30.50
O & M Expenses	57.24	363.14	383.88	405.84
Total	164.63	1070.75	1082.57	1095.44

OTHER ISSUES

48. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition. In accordance with the Commission's decision in order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee from the beneficiaries.

49. Accordingly, expenses incurred by the petitioner on petition filing fees and publication of notices in connection with the present petition shall be directly recovered from the beneficiaries on pro-rata basis.

50. The petitioner has made a specific 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. The petitioner is at liberty to approach the Commission for any relief at the appropriate as per law.

51. As regards the prayer for reimbursement of licence fee, it is clarified that the same shall be dealt with in accordance with our order dated 25.10.2011 in Petition No.21/2011 and 22/2011.

52. 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 regulations upto 30.6.2011. With effect from 1.7.2011, the billing collection and disbursement of the transmission charges shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 and the Removal of Difficulties orders issued thereunder.

53. This order disposes Petition No.335/2010.

Sd/-

(M. Deena Dayalan)
Member

Sd/-

(V.S. Verma)
Member

Sd/-

(Dr. Pramod Deo)
Chairperson



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
(₹ in lakh)			
	Details of Loan	2009-10	2010-11
1	IBRD III		
	Gross loan opening	1315.81	1315.81
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1315.81	1315.81
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1315.81	1315.81
	Average Loan	1315.81	1315.81
	Rate of Interest	3.24%	3.24%
	Interest	42.63	42.63
	Rep Schedule	30 half yearly installment from 15.09.2011	
2	Bond XXVI		
	Gross loan opening	14.00	14.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	14.00	14.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	14.00	14.00
	Average Loan	14.00	14.00
	Rate of Interest	9.30%	9.30%
	Interest	1.30	1.30
	Rep Schedule	12 annual installments from 07.03.2012	
3	Bond XX		
	Gross loan opening	13.00	13.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	13.00	13.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	1.08
	Net Loan-Closing	13.00	11.92
	Average Loan	13.00	12.46
	Rate of Interest	8.93%	8.93%
	Interest	1.16	1.11
	Rep Schedule	12 annual installments from 07.09.2010	
4	Bond XXI		
	Gross loan opening	15.00	15.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	15.00	15.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	1.25
	Net Loan-Closing	15.00	13.75
	Average Loan	15.00	14.38
	Rate of Interest	8.73%	8.73%
	Interest	1.31	1.25
	Rep Schedule	12 annual installments from 11.10.2010	

5	Bond XXV		
	Gross loan opening	103.00	103.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	103.00	103.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	103.00	103.00
	Average Loan	103.00	103.00
	Rate of Interest	10.10%	10.10%
	Interest	10.40	10.40
	Rep Schedule	12 annual installments from 12.06.2011	
6	Bond XXVIII		
	Gross loan opening	69.00	69.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	69.00	69.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	69.00	69.00
	Average Loan	69.00	69.00
	Rate of Interest	9.33%	9.33%
	Interest	6.44	6.44
	Rep Schedule	12 annual installments from 15.12.2012	
7	IBRD III (Add Cap for 2009-10 drwal on 15.05.2009)		
	Gross loan opening	0.00	215.58
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	215.58
	Additions during the year	215.58	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	215.58	215.58
	Average Loan	107.79	215.58
	Rate of Interest	3.24%	3.24%
	Interest	3.49	6.98
	Rep Schedule	30 half yearly installment from 15.09.2011	
8	IBRD III (Add Cap for 2010-11 drwal on 01.04.2010)		
	Gross loan opening	0.00	0.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	39.73
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	39.73
	Average Loan	0.00	19.87
	Rate of Interest	1.82%	1.82%
	Interest	0.00	0.36
	Rep Schedule	30 half yearly installment from 15.09.2011	
	Total Loan		
	Gross loan opening	1529.81	1745.39
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1529.81	1745.39



Additions during the year	215.58	39.73
Repayment during the year	0.00	2.33
Net Loan-Closing	1745.39	1782.79
Average Loan	1637.60	1764.09
Rate of Interest	4.0753%	3.9958%
Interest	66.74	70.49



Annexure 2

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN					
					(₹ in lakh)
	Details of Loan	2010-11	2011-12	2012-13	2013-14
1	IBRD III				
	Gross loan opening	1315.81	1315.81	1315.81	1315.81
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	64.03	130.86
	Net Loan-Opening	1315.81	1315.81	1251.78	1184.95
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	64.03	66.83	69.72
	Net Loan-Closing	1315.81	1251.78	1184.95	1115.23
	Average Loan	1315.81	1283.79	1218.37	1150.09
	Rate of Interest	1.82%	1.82%	1.82%	1.82%
	Interest	23.95	23.37	22.17	20.93
	Rep Schedule	30 half yearly installment from 15.09.2011			
2	Bond XXVI				
	Gross loan opening	62.00	62.00	62.00	62.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	5.17	10.33
	Net Loan-Opening	62.00	62.00	56.83	51.67
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	5.17	5.17	5.17
	Net Loan-Closing	62.00	56.83	51.67	46.50
	Average Loan	62.00	59.42	54.25	49.08
	Rate of Interest	9.30%	9.30%	9.30%	9.30%
	Interest	5.77	5.53	5.05	4.56
	Rep Schedule	12 annual installments from 07.03.2012			
3	Bond XX				
	Gross loan opening	49.00	49.00	49.00	49.00
	Cumulative Repayment upto DOCO/previous year	4.08	4.08	8.17	12.25
	Net Loan-Opening	44.92	44.92	40.83	36.75
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	4.08	4.08	4.08
	Net Loan-Closing	44.92	40.83	36.75	32.67
	Average Loan	44.92	42.88	38.79	34.71
	Rate of Interest	8.93%	8.93%	8.93%	8.93%
	Interest	4.01	3.83	3.46	3.10
	Rep Schedule	12 annual installments from 07.09.2010			
4	Bond XXI				
	Gross loan opening	72.00	72.00	72.00	72.00
	Cumulative Repayment upto DOCO/previous year	6.00	6.00	12.00	18.00
	Net Loan-Opening	66.00	66.00	60.00	54.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	6.00	6.00	6.00
	Net Loan-Closing	66.00	60.00	54.00	48.00
	Average Loan	66.00	63.00	57.00	51.00
	Rate of Interest	8.73%	8.73%	8.73%	8.73%
	Interest	5.76	5.50	4.98	4.45
	Rep Schedule	12 annual installments from 11.10.2010			



5	Bond XXV				
	Gross loan opening	206.00	206.00	206.00	206.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	17.17	34.33
	Net Loan-Opening	206.00	206.00	188.83	171.67
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	17.17	17.17	17.17
	Net Loan-Closing	206.00	188.83	171.67	154.50
	Average Loan	206.00	197.42	180.25	163.08
	Rate of Interest	10.10%	10.10%	10.10%	10.10%
	Interest	20.81	19.94	18.21	16.47
	Rep Schedule	12 annual installments from 12.06.2011			
6	Bond XXVIII				
	Gross loan opening	127.00	127.00	127.00	127.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	10.58
	Net Loan-Opening	127.00	127.00	127.00	116.42
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	10.58	10.58
	Net Loan-Closing	127.00	127.00	116.42	105.83
	Average Loan	127.00	127.00	121.71	111.13
	Rate of Interest	9.33%	9.33%	9.33%	9.33%
	Interest	11.85	11.85	11.36	10.37
	Rep Schedule	12 equal installments w.e.f. 15.12.2012			
7	IBRD III (Add Cap for 2009-10 drwal on 15.05.2009)				
	Gross loan opening	215.58	215.58	215.58	215.58
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	10.49	21.44
	Net Loan-Opening	215.58	215.58	205.09	194.14
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	10.49	10.95	11.42
	Net Loan-Closing	215.58	205.09	194.14	182.72
	Average Loan	215.58	210.33	199.61	188.43
	Rate of Interest	1.82%	1.82%	1.82%	1.82%
	Interest	3.92	3.83	3.63	3.43
	Rep Schedule	30 half yearly installment from 15.09.2011			
8	IBRD III (Add Cap for 2010-11 drwal on 01.04.2010)				
	Gross loan opening	39.73	39.73	39.73	39.73
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	1.93	3.95
	Net Loan-Opening	39.73	39.73	37.80	35.78
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	1.93	2.02	2.11
	Net Loan-Closing	39.73	37.80	35.78	33.67
	Average Loan	39.73	38.76	36.79	34.73
	Rate of Interest	1.82%	1.82%	1.82%	1.82%
	Interest	0.72	0.71	0.67	0.63
	Rep Schedule	30 half yearly installment from 15.09.2011			
9	IBRD III (Exchange Rate @ 46.26)				
	Gross loan opening	1092.34	1092.34	1092.34	1092.34
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	53.16	108.63



Net Loan-Opening	1092.34	1092.34	1039.18	983.71
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	53.16	55.48	57.88
Net Loan-Closing	1092.34	1039.18	983.71	925.83
Average Loan	1092.34	1065.76	1011.45	954.77
Rate of Interest	1.82%	1.82%	1.82%	1.82%
Interest	19.88	19.40	18.41	17.38
Rep Schedule	30 half yearly installment from 15.09.2011			
Total Loan				
Gross loan opening	3179.46	3179.46	3179.46	3179.46
Cumulative Repayment upto DOCO/previous year	10.08	10.08	172.11	350.38
Net Loan-Opening	3169.38	3169.38	3007.35	2829.08
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	162.03	178.27	184.13
Net Loan-Closing	3169.38	3007.35	2829.08	2644.95
Average Loan	3169.38	3088.36	2918.21	2737.01
Rate of Interest	3.0501%	3.0417%	3.0132%	2.9713%
Interest	96.67	93.94	87.93	81.33

