

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 232-2010**

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

**Date of Hearing: 8.2.2011**

**Date of Hearing: 18.8.2011**

**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 LILO of Ckt-I of 400 kV D/C Maithon-Jamshedpur line at Mejia "B" TPS including PLCC Equipment (excluding Wave Trap) for the transmission line under Transmission System for Start-up Power to DVC and Maithon Right Bank Generation Projects in Eastern Region for the period from 1.4.2009 to 31.3.2014.

**And**

**In the matter of:**

Power Grid Corporation of India Limited, Gurgaon

.....**Petitioner**

**Vs**

1. Bihar State Electricity Board, Patna
2. West Bengal State Electricity Board, 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 R Prasad, PGCIL
2. Shri M. M. Mondal, PGCIL
3. Shri. Rajeev Gupta, PGCIL
4. Shri R. B. Sharma, Advocate, BSEB



## ORDER

This petition has been filed seeking approval for determination of transmission tariff for LILO of Ckt-I of 400 kV D/C Maithon-Jamshedpur line at Mejia "B" TPS including PLCC Equipment (excluding Wave Trap) for the transmission line under Transmission System for Start-up Power to DVC and Maithon Right Bank Generation Projects in Eastern Region (hereinafter referred to as "the transmission asset") for the period from 1.4.2009 to 31.3.2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as "the 2009 regulations"). The petitioner has also sought the following reliefs:

- (a) Invoke the provisions of regulation 44 of the 2009 regulations for relaxation of Regulation 15(3) of the 2009 regulations thereof to allow grossing up the base rate of return with the applicable tax rate as per the relevant Finance Acts and direct settlement of tax liability with the long term transmission customers on year to year basis;
- (b) Invoke the provisions of regulation 15 for allowing an additional return of 0.5% on equity for project completion within the timeline stipulated in Appendix – II of the 2009 regulations;
- (c) Approve the reimbursement, by the beneficiaries, of expenditure towards petition filing fee, and publishing of notices in newspapers in terms of Regulation 42 of the 2009 regulations, and other expenditure (if any) in relation to the filing of petition;

(d) Allow the petitioner to bill and adjust impact on loan due to change in interest rate on account of floating rate of interest applicable during the tariff period, if any, from the respondents;

(e) Allow the petitioner to bill and recover license fee separately from the respondents; and

(f) Pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.

2. Investment approval for the scheme was accorded by the Board of Directors of the Petitioner company vide C/CP/Start-up power for DVC and Maithon RB Project dated 29.4.2008 at an estimated cost of ₹ 29049 lakh including Interest During Construction of ₹ 1633 lakh based on 1<sup>st</sup> quarter 2008 price level.

3. The scope of the work to be carried out under the proposed scheme is as follows:

(A) Mejia B:-

(a) LILO of one circuit of 400 kV D/C Maithon-Jamshedpur Line at Mejia.

(b) 02 nos. of 400 kV bays at Mejia (at Generation Switchyard-under the scope of DVC)

(c) PLCC Equipment (Excl. WT) for LILO of one circuit of 400 kV D/C Maithon-Jamshedpur line at Mejia-B TPS.

(B) Koderma:-

(a) Koderma-Biharshariff 400 kV D/C (QUAD) line.

(b) 02 nos. of 400 kV bays at Biharshariff.

(c) 02 nos. of 400 kV bays at Koderma (at Generation Switchyard-under the scope of DVC)

(C)Maithon-RB:-

(a) Maithon RB-Maithon400 kV D/C line.

(b) 02 nos. of 400 kV bays at Maithon.

(c) 02 nos. of 400 kV bays at Maithon RB (at Generation Switchyard-under the scope of DVC)

4. Assets covered in the petition are as under:-

S. No.	Asset	DOCO
1.	LILO of once circuit of 400kV D/C Maithon – Jamshedpur line at Meija and PLCC Equipment (Excluding Wave Trap)	1.2.2010

5. Date of commercial operation of the above assets is 1.2.2010.

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

	(₹ in lakh)				
	2009-10 (Pro-rata)	2010-11	2011-12	2012-13	2013-14
Depreciation	46.40	305.46	314.11	317.36	317.36
Interest on Loan	54.94	345.72	328.17	303.48	274.77
Return on equity	47.45	312.36	321.24	324.57	324.57
Interest on Working Capital	3.36	21.73	21.82	21.54	21.05
O & M Expenses	5.19	32.90	34.79	36.77	38.86
<b>Total</b>	<b>157.34</b>	<b>1018.17</b>	<b>1020.13</b>	<b>1003.72</b>	<b>976.61</b>

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

	(₹ in lakh)				
	2009-10 (Pro-rata)	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	4.67	4.93	5.22	5.52	5.83
O & M expenses	2.60	2.74	2.90	3.06	3.24
Receivables	157.34	169.70	170.02	167.29	162.77
<b>Total</b>	<b>164.61</b>	<b>177.37</b>	<b>178.14</b>	<b>175.87</b>	<b>171.84</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	3.36	21.73	21.82	21.54	21.05

8. 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 respondent no. 1, Bihar State Electricity Board (BSEB).

9. BSEB, in its affidavit dated 17.1.2011 has raised the following objections:-

(a) LILO of once circuit of 400kV D/C Maithon – Jamshedpur line at Meija 'B' including PLCC equipment (excluding Wave Trap) covered in the petition are part of the transmission system for start-up power to DVC as part of the Meija transmission system in the Eastern Region. As per the discussion between CMD, Powergrid and Chairman, DVC, in the meeting dated 22.11.2007, the transmission charges will be borne by DVC exclusively till commissioning of the Meija 'B' TPS subsequent to which the transmission charges will be shared by Eastern Regions constituents. In the 13<sup>th</sup> ERPC meeting held on 26.3.2010, ERPC members have only approved the date of commercial operation of these elements and not the sharing of transmission charges;

- (b) Consequent to the proposed additional capital expenditure, cost of the assets will exceed approved apportioned cost of ₹ 5600 lakh by ₹ 294.16 lakh and no justification for increase in cost has been furnished by the petitioner;
- (c) That the petitioner is not entitled for the additional 0.5% equity as the entire project has not been completed ahead of the time line prescribed in Appendix–II of the 2009 regulations;
- (d) That the petitioner should avail the benefit of the Tax as it is eligible to claim tax holiday under section 80-IA of the Income Tax Act, 1961, the date of commercial operation being 1.2.2010;
- (e) The petitioner's claim for reimbursement of application filing fee and the expenses incurred on publication of notices be negated in line with the Commission's order dated 11.9.2008 in Petition No.129/2005;
- (f) That there is no provision for reimbursement of licence fee in the 2009 regulations and hence the petitioner's request for recovery of licence fee be rejected.
- (g) That the Commission has already taken care of the wage hike on account of pay revision by increasing the norms for O&M expenses by 50% and any increase in the wage hike by beyond 50% must be taken care by the petitioner by increasing its productivity.

10. The petitioner in its rejoinder, filed under affidavit dated 28.2.2011, has clarified the position on the points raised by BSEB as under:-

- (a) With regard to sharing of transmission charges it has been submitted that it shall be borne by the beneficiaries of the project.

- (b) That the cost over-run is mainly due to two reasons (i) stringing rate obtained through competitive bidding was higher than the original estimates and (ii) additional use of extension towers due to site conditions.
- (c) It has also been clarified that the additional ROE of 0.5% claimed is as per the 2009 regulations.
- (d) The issue of Tax Holiday has been settled by the Commission in its order dated 8.4.2011 in Petition No. 225/2010.

11. As regards bearing the expenditure of the transmission asset, we note that the petitioner in its petition has clearly indicated that DVC has agreed to bear the transmission charges till the same is paid by the beneficiaries. It has also been agreed in the 13<sup>th</sup> ERPC meeting held on 26.3.2010, that after commissioning, the charges shall be paid by the ER constituents. Therefore, the object of BSEB on this ground cannot be sustained.

12. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition.

### **CAPITAL COST**

13. 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.”*

14. Capital expenditure amounting to ₹ 4851.30 lakh as on the date of commercial operation has been considered for the purpose of tariff calculation based on the Auditor's certificate date 20.4.2010.

15. As regards the submission of BSEB regarding cost over-run, it is seen that the petitioner has in its rejoinder adduced the following reasons for the escalation:-

(a) Stringing rate obtained through competitive bidding was higher as compared to original estimate.

(b) There has been additional use of extension towers in route sectors having power line crossing and Railway crossing and due to the site conditions and this has caused increase in quantities of various items leading to increase in amount. It has also been submitted that there has been negative variation in certain items and therefore the net variation is ₹ 394 lakh.

16. The petitioner has submitted data for benchmarking. It is observed that the capital cost claimed by the petitioner is less than that calculated based on the benchmarking model. Accordingly the cost claimed by the petitioner based on the auditor's certificate is allowed.



## **ADDITIONAL CAPITAL EXPENDITURE**

17. With regard to additional capital expenditure, clause 9(1) of the 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”*

18. The 2009 regulations further defines cut-off date as under:-

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

19. As per the above definition, cut-off date in respect of all the transmission line whose transmission tariff is being approved vide this order is 31.3.2013.

20. Petitioner has claimed additional capital expenditure of ₹ 816.95 lakh, ₹ 204.91 lakh and ₹ 123.00 lakh for the years 2009-10 (from date of commercial operation to 31.3.2010), 2010-11 and 2011-12, respectively. As pointed out by BSEB, estimated completion cost will exceed the apportioned approved cost, consequent to the above addition. As the petitioner has not submitted Revised

Cost Estimates, additional capital expenditure amounting to ₹ 750.70 lakh only out of ₹ 816.95 lakh during 2009-10 period has been considered for the purpose of tariff calculation. Additional capital expenditure claimed for the remaining years have not been allowed.

21. Disallowed additional capital expenditure amounting to ₹ 66.25 lakh (₹816.95 lakh - ₹750.70 lakh) for the year 2009-10 has been proportionately deducted from the cost of the Transmission Line and PLCC.

### **DEBT- EQUITY RATIO**

22. Regulation 12 of the 2009 regulations provides that,-

*“12. **Debt-Equity Ratio.** (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.*

**Explanation.-** *The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*

*(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.*

*(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital*

*expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”*

23. Details of debt-equity in respect of the transmission assets as on the date of commercial operation are as under:-

Particulars	Approved		Capital Cost as on date of commercial operation	
	Amount (₹ Lakh)	%	Amount (₹ Lakh)	%
Debt	3921.40	70.00	3396.00	70.00
Equity	1680.60	30.00	1455.30	30.00
<b>Total</b>	<b>5602.00</b>	<b>100.00</b>	<b>4851.30</b>	<b>100.00</b>

24. As regards the additional capital expenditure, the debt-equity details are as under:-

	(₹ in lakh)	%
Debt	525.49	70.00
Equity	225.21	30.00
<b>Total</b>	<b>750.70</b>	<b>100.00</b>

### **RETURN ON EQUITY**

25. 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 tried 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.*

26. The petitioner has claimed additional return on equity amounting to 0.5% under the proviso to clause 15(2) of the 2009 regulations, extracted hereinabove. According to the petitioner, the elements covered in the project inter-alia include 400 kV D/C Quad transmission line (plain terrain) for which time schedule of 32 months have been prescribed in Appendix-II of the 2009 regulations. It is claimed that the elements covered in the petition viz. LILO of one Ckt (Ckt-I) of 400 kV D/C Maithon-Jamshedpur line at Mejia 'B' TPS including PLCC equipment (excluding wave trap) have been completed within 21 months from the date of investment approval. This claim of the petitioner is examined in the succeeding two paragraphs.

27. From the investment approval, it is evident that the whole scheme consists of transmission system for start up power to three different generating stations i.e. Mejia-B, Kodarama and Maithan Right Bank. In the present petition the transmission scheme for start- up power to Mejia-B TPS is covered. Among the elements for this generating station, all the elements except 2 Nos of 400 kV bays at Mejia have been completed. Left out work is

under the scope of DVC. Thus, for the start-up power to Mejia-B TPS, all the elements under the petitioner's scope have been completed within 21 months of investment approval.

28. We also hold that the qualifying time line is to be considered only in respect of Mejia-B and not for all the three generating stations covered in the investment approval. Thus, the qualifying time for the elements of the transmission system for Mejia-B TPS would be that for 400 kV D/C transmission line i.e. LILO of one of the circuits of 400 kV D/C Maithan-Jamshedpur Line at Mejia which is 28 months for plain area as per Appendix –II of the 2009 regulations. Thus, if all the elements under the scope of the transmission system were completed within the specified time line of 28 months from the date of investment approval, then it would qualify for the additional return of 0.5% as prescribed in the proviso to clause 15(2) of the 2009 regulations. It has been observed that the elements under the transmission system for start-up power to Mejia-B TPS i.e. LILO of one Ckt (Ckt-I) of 400 kV D/C Maithon – Jamshedpur line at Mejia 'B' TPS including PLCC equipment (excluding Wave Trap) have been commissioned (on 1.2.2010) in less than 28 months from the date of investment approval (i.e. 29.4.2008) and qualify for the additional 0.5% return and the same has therefore been allowed.

29. In this order, Return on Equity has been calculated as per Regulation 15 of the 2009 regulations with pre-tax ROE of 18.044%.

30. 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, has already been taken care of through the 2<sup>nd</sup> amendment to the 2009 regulations which inter alia provides as under:-

*“(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”*

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

	(₹ in lakh)				
	2009-10 (Pro-rata)	2010-11	2011-12	2012-13	2013-14
Opening Equity	1455.30	1680.51	1680.51	1680.51	1680.51
Addition due to additional capital expenditure	225.21	0.00	0.00	0.00	0.00
Closing Equity	1680.51	1680.51	1680.51	1680.51	1680.51
Average Equity	1567.91	1680.51	1680.51	1680.51	1680.51
Return on Equity (Base Rate )	<b>16.00%</b>	<b>16.00%</b>	<b>16.00%</b>	<b>16.00%</b>	<b>16.00%</b>
Tax rate for the year 2008-09	11.33%	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )	18.044%	18.044%	18.044%	18.044%	18.044%
<b>Return on Equity (Pre Tax)</b>	<b>47.15</b>	<b>303.23</b>	<b>303.23</b>	<b>303.23</b>	<b>303.23</b>

## **INTEREST ON LOAN**

32. 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.”*

33. In these calculations, 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 average loan have been considered as per the petition.

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

(c) As regards the moratorium period availed by the transmission licensee, 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.

(e) 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 1.4.2009/date of commercial operation Any change in rate of Interest subsequent to the above will be considered at the time of truing up.



34. Detailed calculation of the weighted average rate of interest has been given in Annexure to this order.

35. Details of the interest on loan worked on the above basis is as under:-

(₹ in lakh)

	2009-10 (Pro-rata)	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	3396.00	3921.49	3921.49	3921.49	3921.49
Cumulative Repayment upto Previous Year	0.00	46.11	342.65	639.18	935.72
Net Loan-Opening	3396.00	3875.38	3578.84	3282.31	2985.77
Addition due to additional capital expenditure	525.49	0.00	0.00	0.00	0.00
Repayment during the year	46.11	296.54	296.54	296.54	296.54
Net Loan-Closing	3875.38	3578.84	3282.31	2985.77	2689.23
Average Loan	3635.69	3727.11	3430.57	3134.04	2837.50
Weighted Average Rate of Interest on Loan	9.0101%	9.0022%	9.0022%	8.9979%	8.9930%
<b>Interest</b>	<b>54.60</b>	<b>335.52</b>	<b>308.83</b>	<b>282.00</b>	<b>255.18</b>

## **DEPRECIATION**

36. 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.*

XXXX

XXXX

*(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.”*

37. The transmission line was put under commercial operation on 1.2.2010. Accordingly, the same 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 of the 2009 regulations.

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

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	4851.30	5602.00	5602.00	5602.00	5602.00
Addition due to projected additional capitalization	750.70	0.00	0.00	0.00	0.00
Closing Gross Block	5602.00	5602.00	5602.00	5602.00	5602.00
Average Gross Block	5226.65	5602.00	5602.00	5602.00	5602.00
Rate of Depreciation	5.2932%	5.2934%	5.2934%	5.2934%	5.2934%
Depreciable Value (90%)	4703.99	5041.80	5041.80	5041.80	5041.80
Remaining Depreciable Value	4703.99	4995.69	4699.15	4402.62	4106.08
<b>Depreciation</b>	<b>46.11</b>	<b>296.54</b>	<b>296.54</b>	<b>296.54</b>	<b>296.54</b>

### **OPERATION & MAINTENANCE EXPENSES**

39. 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:-

Name of Elements	2009-10	2010-11	2011-12	2012-13	2013-14
Single Circuit (Twin & Triple Conductor)	0.358	0.378	0.400	0.423	0.447
Double Circuit (Twin & Triple Conductor)	0.627	0.663	0.701	0.741	0.783

40. Based on the above norms, the petitioner has calculated the following operation and maintenance expenses which are allowed:-

Name of Elements	(₹ in lakh)				
	2009-10 (Pro-rata)	2010-11	2011-12	2012-13	2013-14
0.297 k.m. 400 kV S/C twin conductor transmission line	0.02	0.11	0.12	0.13	0.13
49.456 k/m. 400 kV D/C Twin Conductor Transmission line	5.17	32.79	34.67	36.65	38.72
<b>Total</b>	<b>5.19</b>	<b>32.90</b>	<b>34.79</b>	<b>36.78</b>	<b>38.85</b>

41. 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 the tariff period 2009-14. The petitioner has further submitted that it reserves 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.

42. We observe that these issues have been raised by the petitioner in other petitions also. A view is yet to be taken by the Commission on

reimbursement of the cost of wage hike and reimbursement of licence fees. The decision as and when taken will be applicable to the present case also.

### **INTEREST ON WORKING CAPITAL**

43. 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:** In these calculations, SBI PLR as on 1.4.2009 (i.e. 12.25%) has been considered in accordance with the 2009 regulations as amended vide the second

amendment regulations notified in June 2011 has been considered for calculating interest on working capital.

44. Necessary computations in support of interest on working capital are appended hereinbelow:-

(₹ in lakh)

	2009-10 (Pro-rata)	2010-11	2011-12	2012-13	201-14
Maintenance Spares	4.67	4.94	5.22	5.52	5.83
O & M expenses	2.60	2.74	2.90	3.07	3.24
Receivables	156.39	164.89	160.68	156.46	152.26
<b>Total</b>	<b>163.66</b>	<b>172.56</b>	<b>168.79</b>	<b>165.04</b>	<b>161.32</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>3.34</b>	<b>21.14</b>	<b>20.68</b>	<b>20.22</b>	<b>19.76</b>

### **TRANSMISSION CHARGES**

45. The transmission charges being allowed for the transmission assets are summarized below:-

(₹ in lakh)

	2009-10 (Pro-rata)	2010-11	2011-12	2012-13	2013-14
Depreciation	46.11	296.54	296.54	296.54	296.54
Interest on Loan	54.60	335.52	308.83	282.00	255.18
Return on equity	47.15	303.23	303.23	303.23	303.23
Interest on Working Capital	3.34	21.14	20.68	20.22	19.76
O & M Expenses	5.19	32.90	34.79	36.78	38.85
<b>Total</b>	<b>156.39</b>	<b>989.33</b>	<b>964.06</b>	<b>938.76</b>	<b>913.56</b>

### **OTHER ISSUES**

46. 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.

47. 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 beneficiary on pro rata basis.

48. 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 the exemption granted to it is withdrawn and transmission of power is made a taxable service. We consider the prayer pre-mature. The petitioner is at liberty to approach the Commission for any relief at the appropriate as per law.

49. As regards the prayer for reimbursement of licence fee, it is clarified that the matter is under consideration of the Commission and any decision taken will apply to this case as well.

50. The transmission charges shall be shared by the respondents in accordance with Regulation 23 and Regulation 33 of the 2009 regulations from the date of commercial operation 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.

51. This order disposes of Petition No. 232/2010.

Sd/-

**(M. Deena Dayalan)**  
Member

Sd/-

**(V.S. Verma)**  
Member

Sd/-

**(S. Jayaraman)**  
Member

Sd/-

**(Dr. Pramod Deo)**  
Chairperson



## Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
					₹ in lakh	
	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1</b>	<b>Bond XXIX</b>					
	Gross loan opening	1200.00	<b>1200.00</b>	<b>1200.00</b>	<b>1200.00</b>	<b>1200.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>100.00</b>
	Net Loan-Opening	1200.00	1200.00	1200.00	1200.00	1100.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	100.00	100.00
	Net Loan-Closing	1200.00	1200.00	1200.00	1100.00	1000.00
	Average Loan	1200.00	1200.00	1200.00	1150.00	1050.00
	Rate of Interest	9.20%	9.20%	9.20%	9.20%	9.20%
	Interest	<b>110.40</b>	<b>110.40</b>	<b>110.40</b>	<b>105.80</b>	<b>96.60</b>
	Rep Schedule	12 equal Annual Installment from 12.03.2013				
<b>2</b>	<b>Bond XXVIII</b>					
	Gross loan opening	500.00	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>41.67</b>
	Net Loan-Opening	500.00	500.00	500.00	500.00	458.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	41.67	41.67
	Net Loan-Closing	500.00	500.00	500.00	458.33	416.67
	Average Loan	500.00	500.00	500.00	479.17	437.50
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	<b>46.65</b>	<b>46.65</b>	<b>46.65</b>	<b>44.71</b>	<b>40.82</b>
	Rep Schedule	12 equal Annual Installment from 15.12.2012				
<b>3</b>	<b>Bond XXXI (Add Cap for 2009-10 drawl on 25-02-2010)</b>					
	Gross loan opening	<b>0.00</b>	<b>571.87</b>	<b>571.87</b>	<b>571.87</b>	<b>571.87</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	571.87	571.87	571.87	571.87
	Additions during the year	571.87	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	47.66
	Net Loan-Closing	571.87	571.87	571.87	571.87	524.21
	Average Loan	285.94	571.87	571.87	571.87	548.04
	Rate of Interest	8.90%	8.90%	8.90%	8.90%	8.90%
	Interest	<b>25.45</b>	<b>50.90</b>	<b>50.90</b>	<b>50.90</b>	<b>48.78</b>
	Rep Schedule	12 equal Annual Installment from 25.02.2014				

<b>4</b>	<b>Bond XXX</b>					
	Gross loan opening	<b>1696.00</b>	<b>1696.00</b>	<b>1696.00</b>	<b>1696.00</b>	<b>1696.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	1696.00	1696.00	1696.00	1696.00	1696.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	141.33
	Net Loan-Closing	1696.00	1696.00	1696.00	1696.00	1554.67
	Average Loan	1696.00	1696.00	1696.00	1696.00	1625.33
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	<b>149.25</b>	<b>149.25</b>	<b>149.25</b>	<b>149.25</b>	<b>143.03</b>
	Rep Schedule	12 equal Annual Installment from 29.09.2013				
	<b>Total Loan</b>					
	Gross loan opening	3396.00	3967.87	3967.87	3967.87	3967.87
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	141.67
	Net Loan-Opening	3396.00	3967.87	3967.87	3967.87	3826.20
	Additions during the year	571.87	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	141.67	330.66
	Net Loan-Closing	3967.87	3967.87	3967.87	3826.20	3495.55
	Average Loan	3681.94	3967.87	3967.87	3897.04	3660.88
	Rate of Interest	<b>9.0101%</b>	<b>9.0022%</b>	<b>9.0022%</b>	<b>8.9979%</b>	<b>8.9930%</b>
	<b>Interest</b>	331.75	357.19	357.19	350.65	329.22