

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 307/2010**

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

**Date of Hearing: 22.2.2011**

**Date of Order: 4.5.2011**

**In the matter of:**

Approval under Regulation 86 of CERC (Conduct of Business) Regulations 1999, and CERC (Terms and Conditions of Tariff) Regulations 2009, for determination of transmission tariff for Kudankulam (NPC) – Tirunelveli (POWERGRID) 400 kV (QUAD) D/C Line – I & II with associated bays and equipments under Kudankulam Transmission system in Southern Region for the 2009-14 period.

**And**

**In the matter of:**

Power Grid Corporation of India Limited, Gurgaon

.....**Petitioner**

**Vs**

1. Karnataka Power Transmission Corporation, Ltd.  
Bangalore
2. Transmission Corporation of Andhra Pradesh Ltd.  
Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Electricity Board, Chennai
5. Electricity Department, Govt. of Goa, Panaji
6. Electricity Department, Govt. of Pondicherry,  
Pondicherry
7. Eastern Power Distribution Company of Andhra  
Pradesh Ltd., Visakhapatnam
8. Southern Power Distribution Company of Andhra  
Pradesh Ltd., Tirupati
9. Central Power Distribution Company of Andhra  
Pradesh Ltd., Hyderabad
10. Northern Power Distribution Company of Andhra  
Pradesh Ltd. Warangal
11. Bangalore Electricity Supply Company Ltd., Bangalore
12. Gulbarga Electricity Supply Company Ltd., Gulbarga
13. Hubli Electricity Supply Company Ltd., Hubli
14. Mangalore Electricity Supply Company Ltd.,  
Mangalore
15. Chamundeswari Electricity Supply Company Ltd.,  
Mysore

..... **Respondents**

**The following were present:**

1. Shri M.M. Mondal, PGCIL
2. Shri Rajiv Gupta, PGCIL
3. Shri R. Prasad, PGCIL

**ORDER**

This petition has been filed seeking approval for determination of transmission tariff for Kudankulam (NPC) – Tirunelveli (POWERGRID) 400 kV (QUAD) D/C Line – I & II with associated bays and equipments (hereinafter referred to as “the transmission line”) under the Transmission system associated with the Kudankulam Atomic Power Project (hereinafter referred to as “the transmission system”) for the 2009-14 period, 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) 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) Approve the reimbursement, of expenditure, by the beneficiaries 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.

(c) Allow the petitioner to bill and recover Service Tax on Transmission charges separately from the respondents, if at any time the exemption from service tax is withdrawn and transmission of power is notified as a taxable service.

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

(e) 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. The investment approval for the transmission system associated with Kudankulam Atomic Power Project (2X1000MW) was accorded by the Government of India vide Memorandum No. 12/18/2003-PG dated 25.5.2005 of Ministry of Power at an estimated cost of ` 177929 lakh including Interest During Construction of ` 7141 lakh, at 4<sup>th</sup> quarter 2004 price level. Subsequently, the revised cost Estimate for the above transmission system was approved by the Board of Directors of the petitioner vide Memorandum C/CCP/Kudankulam dated 3.9.2010 at an estimated revised cost of ` 215907 lakh including Interest During Construction of ` 22342 lakh, at 1<sup>st</sup> Quarter, 2010 price level.

3. The petitioner had filed Petition No. 81/2010 seeking approval of 1.4.2009 as date of commercial operation for the transmission line, under

clause 3 (12) (c) of the 2009 regulations and Regulation 24 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

4. After hearing, the commission vide order dated 24.9.2010 in Petition No. 81/2010 approved 1.4.2009 as the date of commercial operation of the subject transmission line and allowed the petitioner to file petition for determination and approval of Transmission charges. Accordingly, vide notification No SR-II: Comml:2010-2011/156 dated 14.10.2010, Kundankulam (NPC) – Tirunelveli (POWERGRID) 400 kv (QUAD) D/C Line – I&II with associated bays and equipments were declared under commercial operation with effect from 1.4.2009.

5. The petitioner has claimed the following transmission charges:

	( ₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1585.85	1604.68	1617.27	1619.25	1619.25
Interest on Loan	1965.62	1835.63	1695.48	1540.02	1382.50
Return on equity	1573.45	1592.07	1604.55	1606.51	1606.51
Interest on Working Capital	124.45	123.53	122.20	120.17	118.07
O & M Expenses	352.50	372.71	394.06	416.58	440.32
<b>Total</b>	<b>5601.87</b>	<b>5528.62</b>	<b>5433.56</b>	<b>5302.53</b>	<b>5166.65</b>

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

	( ₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	52.88	55.91	59.11	62.49	66.05
O & M expenses	29.38	31.06	32.84	34.72	36.69
Receivables	933.65	921.44	905.59	883.76	861.11
<b>Total</b>	<b>1015.91</b>	<b>1008.41</b>	<b>997.54</b>	<b>980.97</b>	<b>963.85</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>124.45</b>	<b>123.53</b>	<b>122.20</b>	<b>120.17</b>	<b>118.07</b>

7. Reply to the petition has been filed only by the Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO) successor of the fourth respondent, viz. Tamil Nadu Electricity Board. The respondent has referred to the delay in commissioning of the transmission line and has pointed out that the petitioner should have either stuck to the original time schedule of 26 months or waited for the commercial operation of unit 1. Based on this, the respondent has contended that the beneficiaries should not be asked to bear the transmission cost till the subject asset is put to beneficial use. The respondent has contended that IDC be limited to the period as per original approval. The respondent has further urged the Commission to exercise prudence check while allowing the capital cost and additional capital expenditure. TANGEDCO has specifically pointed out that the cost of initial spares is 1.06% which is more than the prescribed norms. The respondent has further objected to the following prayers made by the petitioner:

(a) Prayer for grossing up the rate of return based on the tax rate of the relevant Finance Acts be linked with the proposed amendment of the regulation by the Commission.

(b) Claim for reimbursement of service tax be rejected because transmission of power has been exempt from payment of service tax.

(c) Petitioner's request in para 8.6 of the petition for revision of norms for O&M expenditure due to impact of wage revision be negated.

(d) Claim of the petitioner for reimbursement of license fee be negated as the same is not covered under the regulations.

8. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition. While doing so, we also take care of the submissions of the respondent and address them in the relevant paragraphs. We further make it clear that the issue of date of commercial operation of the transmission line is a settled one vide the Commission's order dated 24.9.2010 in Petition No. 81/2010 considering the submissions made by the respondent as well. The issue cannot be re-opened in the present proceedings because the same is hit by *res-judicata*.

### **CAPITAL COST**

9. Proviso to Regulation 7 (1) of the 2009 regulations, the project cost admitted by the Commission for determination of tariff prior to 1.4.2009 shall form the basis for determination of tariff.

*“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.”*

10. Against the apportioned approved cost of ` 30655.00 lakh, the actual expenditure as on the date of commercial operation is ` 29845.53 lakh which includes a sum of ` 324.05 lakh towards initial spares. Regulation 8 of the 2009 regulations prescribes a ceiling of 0.75% towards initial spares. As per

the above norm, the permissible limit of initial spares in the present case works out to ` 218.13 lakh only. Accordingly, the excess amount of ` 105.92 lakh (` 324.05 lakh – ` 218.13 lakh) is to be deducted from the actual cost incurred up to the date of commercial operation. Capital cost allowed thus works out to ` 29739.61 lakh (` 29845.53 lakh – ` 105.92 lakh). This has been considered for the purpose of tariff calculations.

### **ADDITIONAL CAPITAL EXPENDITURE**

11. 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”*

12. 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”.*

13. As per the above definition, cut-off date in respect of the transmission line is 31.3.2012.

14. The petitioner has claimed Additional Capital Expenditure amounting to ` 309.05 lakh, ` 401.05 lakh and ` 75.00 lakh for the years 2009-10, 2010-11 and 2011-12 respectively. The claimed amounts are within the cut-off date and are towards balance and retention payments. Hence, the same are allowed for the purpose of tariff calculation.

15. Element wise details of the additional capital expenditure are as under:

Year	Work/Equipment proposed to be added after COD upto cut off date	Amount capitalized and proposed to be capitalized ( ` in lakh)	Justification as per purpose
2009-10	Building	1.50	Balance and retention payments
	Transmission line	213.02	
	Substation	79.39	
	PLCC	15.14	
	<b>Total</b>	<b>309.05</b>	
2010-11	Building	0.37	Balance and retention payments
	Transmission line	377.05	
	Substation	19.85	
	PLCC	3.78	
	<b>Total</b>	<b>401.05</b>	
2011-12	Transmission line	75.00	Balance and retention payments
	<b>Total</b>	<b>75.00</b>	

### **DEBT- EQUITY RATIO**

16. Clause (1) of 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.*

17. Details of debt-equity in respect of the transmission line as claimed by the petitioner are as under:

Particulars	Approved		Capital Cost as on date of commercial operation	
	Amount (₹ Lakh)	%	Amount (₹ Lakh)	%
Debt	21458.50	70.00%	20891.00	69.997%
Equity	9196.50	30.00%	8954.53	30.003%
<b>Total</b>	<b>30655.00</b>	<b>100.00%</b>	<b>29845.53</b>	<b>100.00%</b>

18. As stated hereinabove, the capital cost claimed by the petitioner has been pruned on account of modification of the initial spares allowed. Accordingly the debt-equity allowed based on the admitted capital cost is as under:

Particulars	Approved		Capital Cost as on date of commercial operation	
	Amount (₹ Lakh)	%	Amount (₹ lakh)	%
Debt	21458.50	70.00%	20817.72	70.00%
Equity	9196.50	30.00%	8921.88	30.00%
<b>Total</b>	<b>30655.00</b>	<b>100.00%</b>	<b>29739.61</b>	<b>100.00%</b>

19. As regards the additional capital expenditure the debt-equity ratio of 70:30 has been allowed.

### **RETURN ON EQUITY**

20. 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:*

*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.*

21. Return on Equity has been calculated as follows- Base rate/(1-t), where Base Rate is 15.5% and 't' is normal tax rate for the period 2008-09 applicable to the petitioner which is under MAT i.e. 10% + surcharge@ 10% + 3% Education Cess.

22. 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 Acts, has already been taken cognizance of in the Commission's order dated 3.8.2010 in Petition No. 17/2010 wherein a

decision has been taken to address the issue raised by the petitioner.

Relevant portion of the said order is extracted as under:

*“We are of the view that this issue of ‘grossing up the base rate with the normal tax rate for the year 2008-09’ is generic in nature and therefore, it will be appropriate to make suitable provisions in the 2009 regulations to cater to any future changes in the tax rate. Accordingly, we direct the staff of the Commission to prepare and submit draft amendment to the 2009 regulations for allowing 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. Any under/over recovery on account of direct settlement of tax liability shall be subject to the final adjustment at the time of true up exercise.”*

23. Details of return on equity calculated are as under:

		( ` in lakh)				
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	8921.88					
Addition due to Additional Capitalisation	0.00					
Opening Equity	8921.88	8921.88	9014.60	9134.91	9157.41	9157.41
Addition due to additional capital expenditure		92.72	120.32	22.50	0.00	0.00
Closing Equity		9014.60	9134.91	9157.41	9157.41	9157.41
Average Equity		8968.24	9074.75	9146.16	9157.41	9157.41
Return on Equity (Base Rate )		15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09		11.33%	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax )		17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>		<b>1567.74</b>	<b>1586.36</b>	<b>1598.84</b>	<b>1600.81</b>	<b>1600.81</b>

### **INTEREST ON LOAN**

24. 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.”*

25. 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) In respect of 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.

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

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

		( ` in lakh)				
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Loan	20817.72					
Addition due to additional capital expenditure	0.00					
Gross Normative Loan	20817.72	20817.72	21034.06	21314.79	21367.29	21367.29
Cumulative Repayment upto Previous Year		0.00	1580.26	3179.35	4791.03	6404.68
Net Loan-Opening		20817.72	19453.80	18135.44	16576.27	14962.62
Addition due to additional capital expenditure		216.34	280.74	52.50	0.00	0.00
Repayment during the year		1580.26	1599.09	1611.67	1613.65	1613.65
Net Loan-Closing		19453.80	18135.44	16576.27	14962.62	13348.96
Average Loan		20135.76	18794.62	17355.86	15769.44	14155.79
Weighted Average Rate of Interest on Loan		9.7278%	9.7332%	9.7357%	9.7327%	9.7332%
<b>Interest</b>		<b>1958.77</b>	<b>1829.32</b>	<b>1689.71</b>	<b>1534.80</b>	<b>1377.82</b>

## **DEPRECIATION**

28. 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.”*

29. The transmission line was put under commercial operation with effect from 1.4.2009. 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.

30. Details of the depreciation worked out are as under:

( ₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block (As per Last Order)	29739.61	30048.66	30449.71	30524.71	30524.71
Addition during 2009-14 due to Projected Additional Capitalisation	309.05	401.05	75.00	0.00	0.00
Closing Gross Block	30048.66	30449.71	30524.71	30524.71	30524.71
Average Gross Block	29894.13	30249.18	30487.21	30524.71	30524.71
Opening Gross Block (As per Last Order)	29739.61	30048.66	30449.71	30524.71	30524.71
Rate of Depreciation	5.2862%	5.2864%	5.2864%	5.2864%	5.2864%
Depreciable Value	90%	26904.72	27224.26	27438.49	27472.24
Remaining Depreciable Value		26904.72	25644.00	24259.13	22681.21
<b>Depreciation</b>		<b>1580.26</b>	<b>1599.09</b>	<b>1611.67</b>	<b>1613.65</b>

### **OPERATION & MAINTENANCE EXPENSES**

31. 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 as under:

Name of Elements	2009-10	2010-11	2011-12	2012-13	2013-14
<b>400 kV Transmission Line:</b>					
400 kV Quad Conductor, D/C transmission line ( ₹ lakh/ bay)	0.940	0.994	1.051	1.111	1.174
400 kV Bay ( ₹ lakh/ bay)	52.40	55.40	58.57	61.92	65.46

32. Based on the above norms, the petitioner has calculated the following operation and maintenance expenses which is allowed:

( ₹ in lakh)

Name of Elements	2009-10	2010-11	2011-12	2012-13	2013-14
<b>400 kV Transmission Line:</b>					
400 kV Quad Conductor, D/C transmission line[152.023 k.m (72.489+79.534)]	142.90	151.11	159.78	168.90	178.48
400 kV Bay 4 Nos.	209.60	221.60	234.28	247.68	261.84
<b>Total</b>	<b>352.50</b>	<b>372.71</b>	<b>394.06</b>	<b>416.58</b>	<b>440.32</b>

33. 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.

34. 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**

35. 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' average billing calculated on target



availability level. 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 Regulation 18(3) of the 2009 regulations, rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the project or part thereof (as the case may be) is declared under commercial operation, whichever is later. The interest on working capital is payable on normative basis notwithstanding that the transmission licensee has not taken working

capital loan from any outside agency. The petitioner has claimed interest on working capital @ 12.25% based on SBI PLR as on 1.4.2009, which is in accordance with the 2009 regulations and has been allowed.

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

( ₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	52.88	55.91	59.11	62.49	66.05
O & M expenses	29.38	31.06	32.84	34.72	36.69
Receivables	930.56	918.44	902.69	880.94	858.39
<b>Total</b>	<b>1,012.81</b>	<b>1,005.40</b>	<b>994.64</b>	<b>978.15</b>	<b>961.13</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>124.07</b>	<b>123.16</b>	<b>121.84</b>	<b>119.82</b>	<b>117.74</b>

### TRANSMISSION CHARGES

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

( ₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1580.26	1599.09	1611.67	1613.65	1613.65
Interest on Loan	1958.77	1829.32	1689.71	1534.80	1377.82
Return on equity	1567.74	1586.36	1598.84	1600.81	1600.81
Interest on Working Capital	124.07	123.16	121.84	119.82	117.74
O & M Expenses	352.50	372.71	394.06	416.58	440.32
<b>Total</b>	<b>5583.34</b>	<b>5510.63</b>	<b>5416.13</b>	<b>5285.66</b>	<b>5150.34</b>

### Filing fee and the publication expenses

38. 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.

39. 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.

### **Service Tax**

40. 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.

41. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shall be shared by the respondent in accordance with Regulation 33 of the 2009 regulations.

33. This order disposes of Petition No. 307/2010.

**Sd/-  
(M.Deena Dayalan)  
Member**

**Sd/-  
(V.S.Verma)  
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 XXII</b>					
	Gross loan opening	2200.00	<b>2200.00</b>	<b>2200.00</b>	<b>2200.00</b>	<b>2200.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>183.33</b>	<b>366.67</b>	<b>550.00</b>
	Net Loan-Opening	2200.00	2200.00	2016.67	1833.33	1650.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	183.33	183.33	183.33	183.33
	Net Loan-Closing	2200.00	2016.67	1833.33	1650.00	1466.67
	Average Loan	2200.00	2108.33	1925.00	1741.67	1558.33
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	<b>190.96</b>	<b>183.00</b>	<b>167.09</b>	<b>151.18</b>	<b>135.26</b>
	Rep Schedule	12 equal annul installments w.e.f. 07.12.2010				
<b>2</b>	<b>BOND XXVI</b>					
	Gross loan opening	700.00	<b>700.00</b>	<b>700.00</b>	<b>700.00</b>	<b>700.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>58.33</b>	<b>116.67</b>
	Net Loan-Opening	700.00	700.00	700.00	641.67	583.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	58.33	58.33	58.33
	Net Loan-Closing	700.00	700.00	641.67	583.33	525.00
	Average Loan	700.00	700.00	670.83	612.50	554.17
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	<b>65.10</b>	<b>65.10</b>	<b>62.39</b>	<b>56.96</b>	<b>51.54</b>
	Rep Schedule	12 equal annul installments w.e.f. 07.03.2012				
<b>3</b>	<b>BOND XXI</b>					
	Gross loan opening	600.00	<b>600.00</b>	<b>600.00</b>	<b>600.00</b>	<b>600.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>50.00</b>	<b>100.00</b>	<b>150.00</b>
	Net Loan-Opening	600.00	600.00	550.00	500.00	450.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	50.00	50.00	50.00	50.00
	Net Loan-Closing	600.00	550.00	500.00	450.00	400.00
	Average Loan	600.00	575.00	525.00	475.00	425.00
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	<b>52.38</b>	<b>50.20</b>	<b>45.83</b>	<b>41.47</b>	<b>37.10</b>
	Rep Schedule	12 equal annul installments w.e.f. 11.10.2010				

<b>4</b>	<b>BOND XXV</b>					
	Gross loan opening	12262.00	<b>12262.00</b>	<b>12262.00</b>	<b>12262.00</b>	<b>12262.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>1021.83</b>	<b>2043.67</b>
	Net Loan-Opening	12262.00	12262.00	12262.00	11240.17	10218.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	1021.83	1021.83	1021.83
	Net Loan-Closing	12262.00	12262.00	11240.17	10218.33	9196.50
	Average Loan	12262.00	12262.00	11751.08	10729.25	9707.42
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%
	Interest	<b>1238.46</b>	<b>1238.46</b>	<b>1186.86</b>	<b>1083.65</b>	<b>980.45</b>
	Rep Schedule	12 equal Annual Installment from 12.06.2011				
<b>5</b>	<b>BOND XXVIII</b>					
	Gross loan opening	4004.00	<b>4004.00</b>	<b>4004.00</b>	<b>4004.00</b>	<b>4004.00</b>
	Cumulative Repayment upto DOCO/previous year	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>333.67</b>
	Net Loan-Opening	4004.00	4004.00	4004.00	4004.00	3670.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	333.67	333.67
	Net Loan-Closing	4004.00	4004.00	4004.00	3670.33	3336.67
	Average Loan	4004.00	4004.00	4004.00	3837.17	3503.50
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	<b>373.57</b>	<b>373.57</b>	<b>373.57</b>	<b>358.01</b>	<b>326.88</b>
	Rep Schedule	12 equal Annual Installment from 15.12.2012				
<b>6</b>	<b>Bond XIX</b>					
	Gross loan opening	<b>25.00</b>	<b>25.00</b>	<b>25.00</b>	<b>25.00</b>	<b>25.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>2.08</b>	<b>4.17</b>	<b>6.25</b>
	Net Loan-Opening	25.00	25.00	22.92	20.83	18.75
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	2.08	2.08	2.08	2.08
	Net Loan-Closing	25.00	22.92	20.83	18.75	16.67
	Average Loan	25.00	23.96	21.88	19.79	17.71
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	<b>2.31</b>	<b>2.22</b>	<b>2.02</b>	<b>1.83</b>	<b>1.64</b>
	Rep Schedule	12 equal Annual Installment from 24.07.2010				
<b>7</b>	<b>Bond XXIV</b>					
	Gross loan opening	<b>1100.00</b>	<b>1100.00</b>	<b>1100.00</b>	<b>1100.00</b>	<b>1100.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>91.67</b>	<b>183.33</b>	<b>275.00</b>
	Net Loan-Opening	1100.00	1100.00	1008.33	916.67	825.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	91.67	91.67	91.67	91.67
	Net Loan-Closing	1100.00	1008.33	916.67	825.00	733.33
	Average Loan	1100.00	1054.17	962.50	870.83	779.17
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	<b>109.45</b>	<b>104.89</b>	<b>95.77</b>	<b>86.65</b>	<b>77.53</b>
	Rep Schedule	12 equal Annual Installment from 26.03.2011				

	<b>Total Loan</b>					
	Gross loan opening	20891.00	20891.00	20891.00	20891.00	20891.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	327.08	1734.33	3475.25
	Net Loan-Opening	20891.00	20891.00	20563.92	19156.67	17415.75
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	327.08	1407.25	1740.92	1740.92
	Net Loan-Closing	20891.00	20563.92	19156.67	17415.75	15674.83
	Average Loan	20891.00	20727.46	19860.29	18286.21	16545.29
	Rate of Interest	<b>9.7278%</b>	<b>9.7332%</b>	<b>9.7357%</b>	<b>9.7327%</b>	<b>9.7332%</b>
	<b>Interest</b>	2032.24	2017.44	1933.53	1779.75	1610.39