

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.202/2010

Coram:

1. Shri S.Jayaraman, Member
2. Shri V.S.Verma, Member
3. Shri M.Deena Dayalan, Member

DATE OF HEARING: 23.12.2010

DATE OF ORDER: 25.2.2011

In the matter of

Approval of transmission tariff for (i) LILO of both circuit of 400kV D/C Gazuwaka-Vijayawada line at Vemagiri and (ii) Extension of 400/220 kV sub-station at Vijayawada under System Strengthening-VI of Southern Region Grid in Southern 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 Kerala State Electricity Board, Thiruvananthapuram
- 2 Tamil Nadu Electricity Board, Chennai
- 3 Electricity Department, Govt. of Pondicherry, Pondicherry
- 4 Electricity Department, Government of Goa, Panaji
- 5 Transmission Corporation of Andhra Pradesh Ltd., Hyderabad
- 6 Northern Power Distribution Company of Andhra Pradesh Limited, Warangal
- 7 Eastern Power Distribution Company of Andhra Pradesh Limited, Vishakhapatnam
- 8 Southern Power Distribution Company of Andhra Pradesh Limited, Tirupati
- 9 Central Power Distribution Company of Andhra Pradesh Limited, Hyderabad
- 10 Karnataka Power Transmission Corporation Limited, Bangalore
- 11 Bangalore Electricity Supply Company Ltd., Bangalore
- 12 Gulbarga Electricity Supply Company Ltd. Gulbarga
- 13 Hubli Electricity Supply Company Ltd., Hubli
- 14 MESCOM Corporate office, Mangalore
- 15 Chamundeswari Electricity Supply Corporation Ltd., Mysore.

.....**Respondents**

The following were present:

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



ORDER

The petition has been filed for approval of tariff for (i) LILO of both circuit of 400kV D/C Gazuwaka-Vijayawada line at Vemagiri **(Asset-I)** ; and (ii) Extension of 400/220 kV sub-station at Vijayawada **(Asset-II)** (hereinafter referred to as "the transmission assets") under System Strengthening-VI (hereinafter referred to as the "the transmission scheme") of "Southern Region Grid" in Southern Region for the period 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") after accounting for additional capital expenditure incurred/projected to be incurred during 2009-10 and 2010-11. The petitioner has made the following additional prayers:-

- (a) To invoke the provisions of Regulation 44 of the 2009 regulations for relaxation of Regulation 9 (2) of the 2009 regulations so that additional capital expenditure incurred/projected to be incurred on account of undischarged liabilities after the cut-off date shall be allowed;

- (b) To invoke the provision of Regulation 44 of the 2009 regulations for relaxation of regulations 15 (3) of the 2009 regulations so that grossing up the base rate shall be allowed considering the tax rates viz, MAT, surcharge, any other cess, charges, levies etc. As per the relevant Finance Act and allow consequential impact of tariff on account of trueing up for 2009-14 period accordingly;



(c) To approve reimbursement of petition filing fee and publication of notices in the newspaper as per the 2009 regulations;

(d) Allow to bill and recover the service tax on transmission charges separately from the respondents, if the petitioner is subjected to such service tax; and

(e) Allow reimbursement of licence fee separately from the respondents.

2. The administrative approval and expenditure sanction for the transmission scheme was accorded by Board of Directors of the petitioner company vide Memorandum dated 30.3.2005, read with corrigendum dated 21.4.2005 at an estimated cost of ₹11373 lakh, which included IDC of ₹520 lakh. Subsequently, the Board of Directors accorded approval for revised cost estimate of ₹12684 lakh, including IDC of ₹713 lakh vide Memorandum dated 20.10.2008. The transmission assets were declared under commercial operation w.e.f 1.4.2008.

3. The annual transmission charges up to 31.3.2009 were decided by the Commission in its order dated 8.4.2010 in Petition No. 329/2009, based on admitted capital cost of ₹12380.66 lakh, after accounting for the additional capital expenditure up to 31.3.2009.

4. As noted above, Commission vide order dated 8.4.2010, had admitted the capital cost of Rs. 12380.66 lakh as on 31.03.2009. The tariff was awarded to a single asset, which comprised of the two assets. Consequent to the Commission's order dated 28.3.2008 in Petition No. 85/2007 (suo-moto), tariff



for downstream network is to be borne by the beneficiaries directly being served, therefore, the petitioner has apportioned the admitted cost as on 31.3.2009 among the two assets.

5. For working out the tariff for the period 2009-14 for the individual asset, the opening equity, gross opening loan, and net normative opening loan as on 1.4.2009 has been considered on the basis of *pro rata* of capital cost as apportioned by the petitioner, whereas depreciation for 2008-09 has been considered as per respective rates for sub-Station and transmission line for the period 2004-09.

6. Accordingly, capital expenditure of ₹10527.54 lakh for Asset-I and ₹1853.12 lakh for Asset-II as on 1.4.2009 has been considered for determination of tariff for the period 2009-14.

7. The petitioner has claimed the transmission charges in respect of the transmission assets as under:

(₹ in lakh)

	Asset-I					Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	555.85	557.49	559.12	559.12	559.12	98.49	99.13	99.13	99.13	99.13
Interest on Loan	653.07	601.98	550.70	497.17	443.67	113.93	105.35	95.90	86.43	76.98
Return on Equity	552.10	553.72	555.34	555.34	555.34	97.82	98.46	98.46	98.46	98.46
Interest on Working Capital	39.14	38.29	37.43	36.48	35.52	10.92	11.03	11.10	11.18	11.29
O & M Expenses	48.80	51.61	54.56	57.68	60.95	89.08	94.18	99.57	105.26	111.28
Total	1848.96	1803.09	1757.15	1705.79	1654.60	410.24	408.15	404.16	400.46	397.14

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

(₹ in lakh)

	Asset-I					Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	7.32	7.74	8.18	8.65	9.14	13.36	14.13	14.94	15.79	16.69
O & M expenses	4.07	4.30	4.55	4.81	5.08	7.42	7.85	8.30	8.77	9.27
Receivables	308.16	300.52	292.86	284.30	275.77	68.37	68.03	67.36	66.74	66.19
Total	319.55	312.56	305.59	297.76	289.99	89.15	90.01	90.60	91.30	92.15
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	39.14	38.29	37.43	36.48	35.52	10.92	11.03	11.10	11.18	11.29

9. Reply to the petition has been filed by Tamil Nadu Electricity Board (TNEB). The objections of the TNEB have been dealt within relevant paras of this order. 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.

CAPITAL COST

10. As per the last proviso to clause (2) of Regulation 7 of the 2009 regulations, in case of the existing projects, capital cost admitted by the Commission prior to 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14 as may be admitted by the Commission, shall form the basis for determination of tariff.

11. The petitioner has claimed the tariff after accounting for projected additional capital expenditure as under:

(₹ in lakh)

	Approved capital cost as on 31.3.2009	Admitted capital cost as on the 31.3.2009	projected additional capital expenditure incurred/proposed to be incurred from 1.4.2009 to 31.3.2010	projected additional capital expenditure incurred/proposed to be incurred from 1.4.2010 to 31.3.2011	Total estimated capital cost
Asset-I	10508.00	10527.54	-	61.90	10589.44
Asset-II	2176.00	1853.12	24.36	-	1877.48
Total	12684.00	12380.66	24.36	61.90	12466.92

ADDITIONAL CAPITAL EXPENDITURE

12. Regulation 9 of the 2009 regulations provides as under:

(1) The capital expenditure incurred or projected to be incurred, on the following counts with in 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) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulating 8 ;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in law;

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of the tariff.

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

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;
- (ii) Change in law;
- (iii) *****
- (iv) *****
- (v) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become

necessary for successful and efficient operation of the transmission system.

13. The details submitted by the petitioner in support of its claim for projected additional capital expenditure for the transmission line is given hereunder:

Asset-I			Asset-II		
Years	Nature and details of expenditure	Amount (₹ in lakh)	Years	Nature and details of expenditure	Amount (₹ in lakh)
2010-11	Transmission line-Balance and retention payments	61.90	2009-10	Sub-station-Balance and retention payments	24.36
	Total	61.90		Total	24.36

14. TNEB in its reply has submitted that additional capital expenditure on account of undischarged liabilities claimed by the petitioner should not be allowed as the claim does not come under the purview of Regulation 9(2) of the 2009 regulations. In response, the petitioner has submitted that the additional capital expenditure proposed during 2009-10 and 2010-11 is to be dealt in accordance with the provision of 9 (2)(v) of the 2009 regulations. The petitioner has also submitted that due to contractual exigencies and other reasons beyond the control, it has to make provisions for release of balance/retention payment beyond 2008-09. The petitioner has further submitted that the additional capital expenditure incurred/ projected to be incurred during the years 2009-10 and 2010-111 is on account of balance and retention payment and is with the original scope of work.

15. We have considered the submission made by the petitioner and the respondents. For the reasons recorded in order dated 8.2.2010 in Petition No. 176/2010, we allow the claim of the petitioner for capitalization of the



expenditure incurred/proposed to be incurred during 2009-10 and 2010-11 after the cut-off date, on account of undischarged liabilities and truing up at the end of the tariff by relaxing the provisions of Regulation 9 (2) of the 2009 regulations.

TOTAL CAPITAL COST

16. Based on the above, gross block as given below has been considered for the purpose of tariff for the transmission assets, after allowing additional capital expenditure incurred/projected to be incurred during 2009-10 and 2010-11 as claimed by the petitioner:

(₹ in lakh)

	Approved capital cost as on 31.3.2009	Admitted capital cost as on the 31.3.2009	Projected additional capital expenditure incurred/proposed to be incurred from 1.4.2009 to 31.3.2010	Projected additional capital expenditure incurred/proposed to be incurred from 1.4.2010 to 31.3.2011	Total capital expenditure
Asset-I	10508.00	10527.54	-	61.90	10589.44
Asset-II	2176.00	1853.12	24.36	-	1877.48
Total	12684.00	12380.66	24.36	61.90	12466.92

DEBT- EQUITY RATIO

17. Clause (1) of Regulation 12 of the 2009 regulations *inter- alia* 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"

18. The petitioner has claimed tariff based on debt-equity ratio of 70:30. The petitioner has further claimed the amount of additional capital expenditure in the debt-equity ratio of 70:30 for the year 2009-10 and 2010-11, the same has

been considered for the calculation of tariff. For the purpose of tariff, equity considered for the transmission asset is as under:

(₹ in lakh)

	Equity as on 1.4.2009	Notional equity due to projected additional capital expenditure for the period 2009-10	Average equity for 2009-10	Notional equity due to additional capital expenditure for the period 2010-11	Average equity for 2010-11	Notional Equity for the period 2011-14	Average equity for 2011-14
Asset-I	3158.26	0.00	3158.26	18.57	3167.55	0.00	3176.83
Asset-II	555.94	7.31	559.59	0.00	563.25	0.00	563.25

RETURN ON EQUITY

19. 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.

Illustration.-

(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 11.33% including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1 - 0.1133) = 17.481\%$$

(ii) In case of generating company or the transmission licensee paying normal corporate tax @ 33.99% including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1 - 0.3399) = 23.481\%."$$

20. TENB has submitted that the petitioner has prayed to invoke the provisions of Regulation 44 of the 2009 regulations to allow the revised MAT rate as per the applicable Finance Act. Since the Commission has already taken a decision to amend the tariff regulations in this regard, the amended provision should apply.

21. The Commission vide its order dated 3.8.2010 in Petition No. 17/2010 has already taken a decision to amend the 2009 regulations for allowing grossing up of the base rate of return with the applicable tax rate as per the Finance Act for the relevant year and for direct settlement of tax holidays of between the generating company/transmission licensee and the beneficiaries/long-term transmission customers on year to year basis. The process of amendment to the 2009 regulations is under way and will address the grievance of the petitioner with regard to the MAT rate. Accordingly, the return on equity has been computed as per the existing provision of Regulation 15 (3) of 2009 regulation as under:

(₹ in lakh)

Return on equity	2009-10	2010-11	2011-12	2012-13	2013-14
Asset-I	552.10	553.72	555.34	555.34	555.34
Asset-II	97.82	98.46	98.46	98.46	98.46

INTEREST ON LOAN

22. Regulation 16 of the 2009 regulations provides as under:

"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."

23. TENB in its reply has submitted that there is no provision for calculation of the interest on loan on the basis of the rate prevailing as on 1.4.2009 and change in rate of interest, if any, due to floating rate of interest to be claimed/adjusted over the tariff period directly from the beneficiaries. In response, the petitioner has submitted that Commission had allowed direct settlement with the beneficiaries for any change in interest on account of floating rate of interest for the tariff period 2004-09. As any change in the rate of interest may increase or decrease during the tariff period 2009-14, it would be fair to allow annual adjustment of difference in interest rate. Since the 2009 regulation do not allow for the floating rate of interest, the rate of interest as on 1.4.2009 have been considered for the purpose of tariff.

24. The interest on loan has been worked out as detailed below:

- (i) Details of net outstanding loan as on 31.3.2009, cumulative repayment up to 31.3.2009, repayment schedule for the loans and rate of interest etc. Have been taken from the order dated 8.4.2010 in Petition No. 329/2009 for working out weighted average rate of interest. Gross opening loan and net normative opening loan as on 1.4.2009 has been considered on pro rata of capital cost basis as apportioned by the petitioner;

- (ii) The tariff has been worked out considering normative loan and normative repayment. Depreciation allowed has been taken as normative repayment for the period 2009-14; and
- (iii) Weighted average rate of interest on actual loan has been worked out and applied on the average loan during the year to arrive at the interest on loan.

25. Based on the above, the year-wise details of interest worked out are given hereunder:

(₹ in lakh)

Details of loan	Asset-I						Asset-II					
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14		
Gross Normative Loan	7369.28	7369.28	7369.28	7412.61	7412.61	7412.61	1297.18	1297.18	1314.23	1314.23	1314.23	1314.23
Cumulative repayment up to previous year		266.24	822.09	1379.58	1938.70	2497.83		61.93	160.42	259.55	358.68	457.81
Net Loan-Opening		7103.04	6547.19	6033.03	5473.91	4914.78		1235.25	1153.81	1054.68	955.55	856.42
Addition due to additional capitalisation		0.00	43.33	0.00	0.00	0.00		17.05	0.00	0.00	0.00	0.00
Repayment during the year		555.85	557.49	559.12	559.12	559.12		98.49	99.13	99.13	99.13	99.13
Net loan-closing		6547.19	6033.03	5473.91	4914.78	4355.66		1153.81	1054.68	955.55	856.42	757.29
Average Loan		6825.11	6290.11	5753.47	5194.34	4635.22		1194.53	1104.25	1005.12	905.99	806.86
Weighted Average rate of interest on loan		9.5686%	9.5702%	9.5716%	9.5714%	9.5717%		9.5372%	9.5400%	9.5415%	9.5402%	9.5405%
Interest		653.07	601.98	550.70	497.17	443.67		113.93	105.35	95.90	86.43	76.98

26. The detailed calculations in support of the weighted revised average rate of interest are contained in Annexure-I and Annexure-II attached.

DEPRECIATION

27. Regulation 17 of the 2009 regulations provides for computation of depreciation in the following manner:

"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."

28. The depreciation has been worked out on the basis of capital expenditure as on 31.3.2009 and projected additional capital expenditure thereafter. For working out accumulated depreciation up to 31.3.2009, depreciation for the year 2008-09 has been considered as per rates specified



for sub-station and transmission line for the tariff period 2004-09. Accordingly, the depreciation for Asset-I and Asset-II has been worked out as below:

(₹ in lakh)

Details of loan	Asset-I					Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
Gross block as on 31.3.2009	10527.54	10527.54	10589.44	10589.44	10589.44	1853.12	1853.12	1877.48	1877.48	1877.48
Addition during 2009-14 due to projected Additional Capitalisation	0.00	61.90	0.00	0.00	0.00	24.36	0.00	0.00	0.00	0.00
Average Gross Block	10527.54	10589.44	10589.44	10589.44	10589.44	1877.48	1877.48	1877.48	1877.48	1877.48
Gross block as on 31.3.2009	10527.54	10558.49	10589.44	10589.44	10589.44	1865.30	1877.48	1877.48	1877.48	1877.48
Rate of depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	90%	9474.79	9502.64	9530.50	9530.50	90%	1678.77	1689.73	1689.73	1689.73
Remaining depreciable Value		9208.55	8680.55	8150.91	7591.79	7032.67	1616.84	1529.31	1430.18	1331.05
Depreciation		555.85	557.49	559.12	559.12	559.12	98.49	99.13	99.13	99.13

OPERATION & MAINTENANCE EXPENSES

29. In accordance with clause (g) of Regulation 19 the 2009 regulations, the following norms for 400 kV D/C Twin conductor transmission line, 400 kV and 220 kV bays have been specified for O & M expenses:

	Year				
	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C transmission line (Twin conductor) (₹ in lakh /km)	0.672	0.663	0.701	0.741	0.783
400 kV bay (₹ in lakh per bay)	52.40	55.40	58.57	61.92	65.46
220 kV bay (₹ in lakh per bay)	36.68	38.78	41.00	43.34	45.82

30. The petitioner's entitlement to O & M expenses has been worked out as given hereunder:

Asset-I

(₹ in lakh)

	Year				
	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C Twin conductor transmission line (77.837 km)	48.80	51.61	54.56	57.68	60.95
Total	48.80	51.61	54.56	57.68	60.95

Asset-II

(₹ in lakh)

	Year				
	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV bay	52.40	55.40	58.57	61.92	65.46
400 kV, Rishikesh & Muzzaffarnagar bays at Roorkee sub-station (2 bays)	36.68	38.78	41.00	43.34	45.82
Total	89.08	94.18	99.57	105.26	111.28

31. The petitioner has submitted that O & M expenditure for 2009-14 tariff block had been arrived on the basis of normalized actual O & M expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the O & M charges for 2009-14 periods. The petitioner has submitted that it would approach the Commission for suitable revision in the norms of O & M expenses in case the impact of wage hike w.e.f. 1.1.2007 is more than 50%.

32. TNEB has requested to negate the request for revision of the normative O & M expenses considering the impact of wage revision w.e.f 1.1.2007 as the 2009 regulations also do not provide for revisiting the normative O & M charges. In response, the petitioner has submitted that per ckt. km. and per bay O & M rates considered are based on the 2009 regulations. The petitioner has submitted that the wage revision for the executive levels has already been done, however, for the non-executive levels, the wage revision shall be done shortly and he will approach before the Commission for additional manpower cost on account of wage revision during the period 2009-14. With reference to the submission of the petitioner, it is clarified that if any such application is made, it will be dealt with in accordance with law.

INTEREST ON WORKING CAPITAL

33. 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 annual transmission charges. 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 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 specified in Regulation 19 of the 2009 regulations. The value of maintenance spares has been accordingly 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 O&M expenses of the respective year which has been considered for computing 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 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.

34. The computations in support of interest on working capital are given as under:

(₹ in lakh)

	Asset-I					Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	7.32	7.74	8.18	8.65	9.14	13.36	14.13	14.94	15.79	16.69
O & M expenses	4.07	4.30	4.55	4.81	5.08	7.42	7.85	8.30	8.77	9.27
Receivables	308.16	300.51	292.86	284.30	275.77	68.37	68.02	67.36	66.75	66.19
Total	319.55	312.56	305.59	297.76	289.99	89.16	90.00	90.59	91.31	92.16
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	39.14	38.29	37.43	36.48	35.52	10.92	11.02	11.10	11.18	11.29

TRANSMISSION CHARGES

35. The transmission charges being allowed for the transmission asset are summarised below:

(₹ in lakh)

	Asset-I					Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	7.5	557.49	559.12	559.12	559.12	98.49	99.13	99.13	99.13	99.13
Interest on Loan	653.07	601.98	550.70	497.17	443.67	113.93	105.35	95.90	86.43	76.98
Return on Equity	552.10	553.72	555.34	555.34	555.34	97.82	98.46	98.46	98.46	98.46
Interest on Working Capital	39.14	38.29	37.43	36.48	35.52	10.92	11.02	11.10	11.18	11.29
O & M Expenses	48.80	51.61	54.56	57.68	60.95	89.08	94.18	99.57	105.26	111.28
	1848.96	1803.08	1757.16	1705.79	1654.61	410.24	408.14	404.16	400.47	397.14

Application fee and the publication expenses

36. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition for determination of transmission tariff. Regulation 42 of the 2009 regulations provides as under:

"The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company or the transmission licensee, as the case may be, directly from the beneficiaries or the transmission customers, as the case may be."

37. TNEB has submitted that the claim of filing fee should be dealt as per the decision taken by Commission vide order dated 11.9.2008 in Petition No. 129/2005 (Suo motu). It is clarified that the said decision was applicable to the tariff period 2004-09. However, Regulation 42 of the 2009 regulation provides for reimbursement of filing fees and expenses on publication of notices may be allowed in the direction of the Commission. In accordance with our 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.

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

Service Tax

39. The prayer of the petitioner for reimbursement of service tax if it is revised in future has been opposed by TENB. We have already decided in our

order dated 23.9.2010 in Petition No. 62/2009 that the petitioner is exempted from service tax as per the extent policy of the Government of India. As regards the reimbursement of service tax is imposed on the petitioner in future, the prayer is premature at this stage and if any application is made by the petitioner, the same will be dealt in accordance with law.

Licence fee

40. TNEB has requested to negate the claim for reimbursement of license fee as the 2009 regulations does not make any provisions for reimbursement of licence fee. In this regard, It is clarified that the matter is under consideration of the Commission and any decision on the issue as and when taken will be applicable to this petition.

41. TNEB has submitted that the Asset-II is a down-stream of Andhra Pradesh and should not be claimed with the regional assets. In response the petitioner has submitted that the transmission charges for the Asset-I are to be borne by the regional beneficiaries and transmission charges for the Asset-II are to be borne by the beneficiaries of Andhra Pradesh and PGCIL has requested to pass an order in line with 2009 regulations. In this regard it is clarified that the petitioner has claimed Asset-II as down-stream of Andhra Pradesh which is to be shared by beneficiaries of Andhra Pradesh only. Therefore, the transmission charges for Asset-I shall be borne by the regional beneficiaries and transmission chargers for Asset-II shall be borne by the beneficiaries of

Andhra Pradesh as per the order dated 28.3.2008 in Petition No. 85/2007
(Suo motu).

42. This order disposes of Petition No. 202/2010.

Sd/-
(M.Deena Dayalan)
Member

Sd/-
(V.S.Verma)
Member

Sd/-
(S.Jayaraman)
Member



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

Asset-I

Annexure-I

(₹ In lakh)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	Bond XX					
	Gross loan opening	605.65	605.65	605.65	605.65	605.65
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	50.47	100.94	151.41
	Net Loan-Opening	605.65	605.65	555.18	504.71	454.24
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	50.47	50.47	50.47	50.47
	Net Loan-Closing	605.65	555.18	504.71	454.24	403.77
	Average Loan	605.65	580.41	529.94	479.47	429.00
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	54.08	51.83	47.32	42.82	38.31
	Rep Schedule	12 Annual instalments from 07-09-2010				
2	Bond XXI					
	Gross loan opening	550.28	550.28	550.28	550.28	550.28
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	45.86	91.71	137.57
	Net Loan-Opening	550.28	550.28	504.42	458.57	412.71
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	45.86	45.86	45.86	45.86
	Net Loan-Closing	550.28	504.42	458.57	412.71	366.85
	Average Loan	550.28	527.35	481.50	435.64	389.78
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	48.04	46.04	42.03	38.03	34.03
	Rep Schedule	12 Annual instalments from 11.10.2010				
3	BOND XXII					
	Gross loan opening	571.91	571.91	571.91	571.91	571.91
	Cumulative Repayment up to the date of commercial operation O/previous year	0.00	0.00	47.66	95.32	142.98
	Net Loan-Opening	571.91	571.91	524.25	476.59	428.93
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	47.66	47.66	47.66	47.66
	Net Loan-Closing	571.91	524.25	476.59	428.93	381.27
	Average Loan	571.91	548.08	500.42	452.76	405.10
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	49.64	47.57	43.44	39.30	35.16
	Rep Schedule	12 Annual instalments from 07.12.2010				
4	BOND XXIV					
	Gross loan opening	1855.02	1855.02	1855.02	1855.02	1855.02
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	154.59	309.17	463.76
	Net Loan-Opening	1855.02	1855.02	1700.44	1545.85	1391.27
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	154.59	154.59	154.59	154.59
	Net Loan-Closing	1855.02	1700.44	1545.85	1391.27	1236.68
	Average Loan	1855.02	1777.73	1623.14	1468.56	1313.97



	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	184.57	176.88	161.50	146.12	130.74
	Rep Schedule	12 Annual instalments from 26-03-2011				
5	BOND XXV					
	Gross loan opening	1981.34	1981.34	1981.34	1981.34	1981.34
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	165.11	330.22
	Net Loan-Opening	1981.34	1981.34	1981.34	1816.23	1651.12
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	165.11	165.11	165.11
	Net Loan-Closing	1981.34	1981.34	1816.23	1651.12	1486.01
	Average Loan	1981.34	1981.34	1898.78	1733.67	1568.56
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%
	Interest	200.12	200.12	191.78	175.10	158.42
	Rep Schedule	12 Annual instalments from 12-06-2011				
6	BOND XXVI					
	Gross loan opening	1088.44	1088.44	1088.44	1088.44	1088.44
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	90.70	181.41
	Net Loan-Opening	1088.44	1088.44	1088.44	997.74	907.03
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	90.70	90.70	90.70
	Net Loan-Closing	1088.44	1088.44	997.74	907.03	816.33
	Average Loan	1088.44	1088.44	1043.09	952.39	861.68
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	101.22	101.22	97.01	88.57	80.14
	Rep Schedule	12 Annual instalments from 07.03.2012				
7	BOND XXVII					
	Gross loan opening	481.92	481.92	481.92	481.92	481.92
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	40.16	80.32
	Net Loan-Opening	481.92	481.92	481.92	441.76	401.60
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	40.16	40.16	40.16
	Net Loan-Closing	481.92	481.92	441.76	401.60	361.44
	Average Loan	481.92	481.92	461.84	421.68	381.52
	Rate of Interest	9.47%	9.47%	9.47%	9.47%	9.47%
	Interest	45.64	45.64	43.74	39.93	36.13
	Rep Schedule	12 Annual instalments from 31.03.2012				
8	BOND XXIX (ADDCAP FOR 2008-2009 DRAWL ON 12-MAR-2009)					
	Gross loan opening	80.45	80.45	80.45	80.45	80.45
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	0.00	6.70
	Net Loan-Opening	80.45	80.45	80.45	80.45	73.75
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	6.70	6.70
	Net Loan-Closing	80.45	80.45	80.45	73.75	67.04
	Average Loan	80.45	80.45	80.45	77.10	70.39
	Rate of Interest	9.20%	9.20%	9.20%	9.20%	9.20%
	Interest	7.40	7.40	7.40	7.09	6.48

	Rep Schedule	12 Annual instalments from 12.03.2013				
9	BOND XXVIII(ADDCAP FOR 2008-2009 DRAWL ON 29-SEP-2008					
	Gross loan opening	143.01	143.01	143.01	143.01	143.01
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	0.00	11.92
	Net Loan-Opening	143.01	143.01	143.01	143.01	131.09
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	11.92	11.92
	Net Loan-Closing	143.01	143.01	143.01	131.09	119.18
	Average Loan	143.01	143.01	143.01	137.05	125.13
	Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
	Interest	13.34	13.34	13.34	12.79	11.67
	Rep Schedule	12 Annual instalments from 15.12.2012				
10	BOND XXXII					
	Gross loan opening	0.00	0.00	43.33	43.33	43.33
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	43.33	43.33	43.33
	Additions during the year	0.00	43.33	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	43.33	43.33	43.33	43.33
	Average Loan	0.00	21.67	43.33	43.33	43.33
	Rate of Interest	8.84%	8.84%	8.84%	8.84%	8.84%
	Interest	0.00	1.92	3.83	3.83	3.83
	Rep Schedule	12 Annual instalment from 29.03.2014				
	Total Loan					
	Gross loan opening	7358.02	7358.02	7401.35	7401.35	7401.35
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	298.57	893.12	1506.29
	Net Loan-Opening	7358.02	7358.02	7102.78	6508.23	5895.06
	Additions during the year	0.00	43.33	0.00	0.00	0.00
	Repayment during the year	0.00	298.57	594.55	613.17	613.17
	Net Loan-Closing	7358.02	7102.78	6508.23	5895.06	5281.90
	Average Loan	7358.02	7230.40	6805.51	6201.65	5588.48
	Rate of Interest	9.5686%	9.5702%	9.5716%	9.5714%	9.5717%
	Interest	704.06	691.96	651.39	593.59	534.91

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

Asset-II

ANNEXURE-II

(₹ in lakh)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	Bond XX					
	Gross loan opening	94.35	94.35	94.35	94.35	94.35
	Cumulative Repayment up to the date of commercial operation/previous year	0.00	0.00	7.86	15.73	23.59
	Net Loan-Opening	94.35	94.35	86.49	78.63	70.76
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	7.86	7.86	7.86	7.86
	Net Loan-Closing	94.35	86.49	78.63	70.76	62.90
	Average Loan	94.35	90.42	82.56	74.69	66.83
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	8.43	8.07	7.37	6.67	5.97
	Rep Schedule	12 Annual instalments from 7-9-2010				
2	Bond XXI					
	Gross loan opening	85.72	85.72	85.72	85.72	85.72
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	7.14	14.29	21.43
	Net Loan-Opening	85.72	85.72	78.58	71.43	64.29
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	7.14	7.14	7.14	7.14
	Net Loan-Closing	85.72	78.58	71.43	64.29	57.15
	Average Loan	85.72	82.15	75.01	67.86	60.72
	Rate of Interest	8.73%	8.73%	8.73%	8.73%	8.73%
	Interest	7.48	7.17	6.55	5.92	5.30
	Rep Schedule	12 Annual instalments from 11.10.2010				
3	BOND XXII					
	Gross loan opening	89.09	89.09	89.09	89.09	89.09
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	7.42	14.85	22.27
	Net Loan-Opening	89.09	89.09	81.67	74.24	66.82
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	7.42	7.42	7.42	7.42
	Net Loan-Closing	89.09	81.67	74.24	66.82	59.39
	Average Loan	89.09	85.38	77.95	70.53	63.11
	Rate of Interest	8.68%	8.68%	8.68%	8.68%	8.68%
	Interest	7.73	7.41	6.77	6.12	5.48
	Rep Schedule	12 Annual instalments from 7.12.2010				
4	BOND XXIV					
	Gross loan opening	288.98	288.98	288.98	288.98	288.98
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	24.08	48.16	72.25
	Net Loan-Opening	288.98	288.98	264.90	240.82	216.74
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	24.08	24.08	24.08	24.08
	Net Loan-Closing	288.98	264.90	240.82	216.74	192.65
	Average Loan	288.98	276.94	252.86	228.78	204.69
	Rate of Interest	9.95%	9.95%	9.95%	9.95%	9.95%
	Interest	28.75	27.56	25.16	22.76	20.37
	Rep Schedule	12 Annual instalments from 26-3-2011				



5	BOND XXV					
	Gross loan opening	308.66	308.66	308.66	308.66	308.66
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	25.72	51.44
	Net Loan-Opening	308.66	308.66	308.66	282.94	257.22
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	25.72	25.72	25.72
	Net Loan-Closing	308.66	308.66	282.94	257.22	231.50
	Average Loan	308.66	308.66	295.80	270.08	244.36
	Rate of Interest	10.10%	10.10%	10.10%	10.10%	10.10%
	Interest	31.17	31.17	29.88	27.28	24.68
	Rep Schedule	12 Annual instalments from 12-6-2011				
6	BOND XXVI					
	Gross loan opening	169.56	169.56	169.56	169.56	169.56
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	14.13	28.26
	Net Loan-Opening	169.56	169.56	169.56	155.43	141.30
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	14.13	14.13	14.13
	Net Loan-Closing	169.56	169.56	155.43	141.30	127.17
	Average Loan	169.56	169.56	162.50	148.37	134.24
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	15.77	15.77	15.11	13.80	12.48
	Rep Schedule	12 Annual instalments from 7.3.2012				
7	BOND XXVII					
	Gross loan opening	75.08	75.08	75.08	75.08	75.08
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	6.26	12.51
	Net Loan-Opening	75.08	75.08	75.08	68.82	62.57
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	6.26	6.26	6.26
	Net Loan-Closing	75.08	75.08	68.82	62.57	56.31
	Average Loan	75.08	75.08	71.95	65.70	59.44
	Rate of Interest	9.47%	9.47%	9.47%	9.47%	9.47%
	Interest	7.11	7.11	6.81	6.22	5.63
	Rep Schedule	12 Annual instalments from 31.3.2012				
8	BOND XXIX (ADDCAP FOR 2008-2009 DRAWL ON 12-MAR-2009)					
	Gross loan opening	63.56	63.56	63.56	63.56	63.56
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	0.00	5.30
	Net Loan-Opening	63.56	63.56	63.56	63.56	58.26
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	5.30	5.30
	Net Loan-Closing	63.56	63.56	63.56	58.26	52.97
	Average Loan	63.56	63.56	63.56	60.91	55.62
	Rate of Interest	9.20%	9.20%	9.20%	9.20%	9.20%
	Interest	5.85	5.85	5.85	5.60	5.12
	Rep Schedule	12 Annual instalments from 12.3.2013				
9	BOND XXVIII(ADDCAP FOR 2008-2009 DRAWL ON 29-SEP-2008)					
	Gross loan opening	112.99	112.99	112.99	112.99	112.99
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	0.00	0.00	9.42
	Net Loan-Opening	112.99	112.99	112.99	112.99	103.57
	Additions during the year	0.00	0.00	0.00	0.00	0.00



Repayment during the year	0.00	0.00	0.00	9.42	9.42
Net Loan-Closing	112.99	112.99	112.99	103.57	94.16
Average Loan	112.99	112.99	112.99	108.28	98.87
Rate of Interest	9.33%	9.33%	9.33%	9.33%	9.33%
Interest	10.54	10.54	10.54	10.10	9.22
Rep Schedule	12 Annual instalments from 15.12.2012				
Total Loan					
Gross loan opening	1287.99	1287.99	1287.99	1287.99	1287.99
Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00	46.51	139.13	246.46
Net Loan-Opening	1287.99	1287.99	1241.48	1148.86	1041.53
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	46.51	92.62	107.33	107.33
Net Loan-Closing	1287.99	1241.48	1148.86	1041.53	934.19
Average Loan	1287.99	1264.73	1195.17	1095.19	987.86
Rate of Interest	9.5372%	9.5400%	9.5415%	9.5402%	9.5405%
Interest	122.84	120.66	114.04	104.48	94.25

