

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Dr. Pramod Deo, Chairperson**
- 2. Shri Bhanu Bhushan, Member**
- 3. Shri R.Krishnamoorthy, Member**

Petition No. 63/2008

In the matter of

Approval of transmission tariff due to additional capitalization incurred during 2005-06 and 2006-07 in respect of Hiriyr sub-stations (including 315 MVA Auto Transformer), LILO of Davangere-Hoody 400 kV D/C line at Hiriyr and additional bays at Kolar and Hosur sub-station for 2nd circuit of Kolar-Hosur 400 kV D/C transmission line under System Strengthening Scheme-II in Southern Region for the period from 1.4.2005 to 31.3.2009.

And in the matter of

Power Grid Corporation of India Limited

..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 Pondicherry, Pondicherry...**Respondents**

The following were present:

1. Shri U.K. Tyagi, PGCIL
2. Shri V.V.Sharma, PGCIL
3. Shri C. Kannan, PGCIL
4. Shri M.M.Mandol, PGCIL
5. Shri Mohd. Mohsin, PGCIL
6. Shri Rakesh Prasad, PGCIL

**ORDER
(DATE OF HEARING: 17.6.2008)**

This petition has been filed for revision of transmission tariff for additional capital expenditure incurred during 2005-06 and 2006-07 in respect of additional bays at Kolar and Hosur sub-stations for 2nd circuit of Kolar-Hosur 400 kV D/C line (Asset-I) and the Hiriyr sub-stations (including 315 MVA Auto Transformer), LILO of Davangere-Hoody 400 kV D/C transmission line at Hiriyr (Asset-II) under the System Strengthening Scheme-II (the transmission scheme)

in Southern Region for the period from 1.4.2005 to 31.3.2009, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004, (hereinafter referred to as “the 2004 regulations”). The petitioner has also prayed for reimbursement of the petition filing fee and other expenditure .in connection with the filing of the petition.

2. The investment approval for the transmission scheme was accorded by the Board of Directors of the petitioner company vide its letter dated 23.10.2001 at an estimated cost of Rs. 7761.00 lakh, including IDC of Rs. 722.00 lakh.

3. The details of the respective transmission asset, their dates of commercial operation and apportioned approved cost as indicated by the petitioner are as under:

S.No	Name of the asset	Date of commercial operation	Apportioned approved cost (Rs in lakh)
(a)	Asset-I	1.9.2003	767.00
(b)	Asset-II	1.2.2004	6994.00

4. The transmission charges for Asset-I and Asset-II were approved by the Commission in its order dated 5.5.2006 in Petition No.105/2005 for the period 1.3.2005 to 31.3.2009 based on capital cost of Rs. 582.44 lakh and Rs. 3681.60 lakh respectively as per audited accounts as on 31.3.2005, without considering additional capital expenditure. The transmission charges were subsequently revised based on capital cost of Rs. 584.16 lakh and Rs. 3994.12 lakh for Asset-I and Asset-II respectively after considering the additional capital expenditure for the year 2004-05 vide order dated 26.4.2007. The summary of the revised transmission charges approved by the said order dated 26.4.2007 is extracted hereunder:

(Rs.in lakh)										
	Asset-I					Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	21.95	21.98	21.98	21.98	21.98	123.69	128.63	128.63	128.63	128.63
Interest on Loan	38.74	36.64	34.34	31.43	28.07	222.63	219.10	204.47	186.34	166.03
Return on Equity	14.80	14.83	14.83	14.83	14.83	161.19	167.75	167.75	167.75	167.75
Advance against Depreciation	0.00	0.00	0.23	16.74	16.74	0.00	5.56	35.09	100.34	100.52
Interest on Working Capital	3.33	3.39	3.45	3.79	3.84	18.38	19.07	19.81	21.13	21.30
O & M Expenses	56.24	58.50	60.84	63.26	65.80	225.39	234.45	243.83	253.52	263.70
Total	135.07	135.35	135.68	152.04	151.27	751.27	774.56	799.57	857.71	847.93

5. The relevant details of the approved cost, completion cost etc. of the Asset-I and Asset-II claimed by the petitioner are as under:

(Rs.in lakh)								
Name of the Element	Approved cost	Capital expenditure as on 31.3.2005	Additional Capitalization during 2005-06	Capital expenditure as on 1.4.2006	Additional Capitalization during 2006-07	Capital expenditure as on 1.4.2007	Balance estimated expenditure	Estimated completion cost
Asset-I	767.00	584.16	2.06	586.22	0.00	586.22	0.00	586.22
Asset-II	6994.00	3994.12	12.18	4006.30	3.54	4009.84	0.00	4009.84
Total	7761.00	4578.28	14.24	4592.52	3.54	4595.52	0.00	4596.06

6. Based on the above additional capital expenditure, the petitioner has claimed the additional transmission charges for the period 2005-06 to 2008-09 as under:

(Rs.in lakh)								
	Asset-I				Asset-II			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Depreciation	0.04	0.07	0.07	0.07	0.20	0.47	0.53	0.53
Interest on Loan	0.06	0.11	0.10	0.09	0.36	0.80	0.83	0.74
Return on Equity	0.04	0.09	0.09	0.09	0.26	0.59	0.66	0.66
Advance against Depreciation	0.00	0.01	0.05	0.05	0.00	0.08	0.48	0.48
Interest on Working Capital	0.00	0.01	0.01	0.01	0.02	0.05	0.06	0.06
O & M Expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.14	0.29	0.33	0.31	0.84	1.98	2.56	2.46

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

(Rs.in lakh)

	Asset-I				Asset-II			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	0.01	0.02	0.02	0.02	0.06	0.14	0.17	0.18
O & M expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Receivables	0.02	0.05	0.05	0.05	0.14	0.33	0.43	0.41
Total	0.03	0.07	0.08	0.08	0.20	0.47	0.60	0.59
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	0.00	0.01	0.01	0.01	0.02	0.05	0.06	0.06

8. The reply to the petition has been filed by Tamil Nadu Electricity Board (TNEB).

9. TNEB in its reply has submitted that tariff on account of additional capital expenditure be awarded from the year subsequent to the year of investment and to limit the tariff only to ROE and interest on loan of the investment made, in line with the decision taken for the tariff period 2001-04. We do not find merit in the submission. The 2004 regulations specifically provide for revision of tariff consequent to additional capitalisation. This was not the position during the tariff period 2001-04 as the relevant regulations interdicted revision of tariff on account of additional capitalization not exceeding 20% of the capital cost.

CAPITAL COST

10. The details submitted by the petitioner in support of its claim for additional capital expenditure are given hereunder:

Asset-I				Asset-II		
Sl. No.	Year	Amount (Rs. in lakh)	Nature and details of expenditure	Year	Amount (Rs. in lakh)	Nature and details of expenditure
1.	2005-06	Sub-station = 2.06	Retention/final payments	2005-06	Building and other civil works = 2.06 Sub-station = 10.12	Retention/final payments
2.	2006-07	-	-	2006-07	Sub-station = 3.54	Retention/final payments

11. It is found that the additional capital expenditure claimed is in respect of retention/ final payments. These are part of the deferred liabilities relating to works/services and are within the original scope of work. Therefore, the additional

expenditure sought to be capitalised is allowed under clauses (1) and (2) of Regulation 53 of the 2004 regulations.

TOTAL CAPITAL COST

12. Based on the above, capital cost for the purpose of tariff for each of the transmission asset, works out as under:

(Rs.in lakh)					
Name of the Element	Admitted capital cost as on 1.4.2005	Additional capital expenditure during 2005-06	Capital expenditure as on 1.4.2006	Additional capital expenditure during 1.4.2006 to 31.3.2007	Capital expenditure as on 1.4.2007
Asset-I	584.16	2.06	586.22	0.00	586.22
Asset-II	3994.12	12.18	4006.30	3.54	4009.84
Total	4578.28	14.24	4592.52	3.54	4596.06

DEBT- EQUITY RATIO

13. Vide order dated 5.5.2006 in Petition No. 105/2006 debt-equity ratio of 81.86:18.14 and 70:30 for the Asset-I and Asset-II respectively was considered for the purpose of tariff. The petitioner has considered debt-equity ratio of 81.86:18.14 and 70:30 for Asset-I and Asset-II respectively as on 1.4.2005. The petitioner has further considered the amount of additional capitalization in the debt-equity ratio of 70:30. This has been found to be in order. Accordingly, for the purpose of tariff, equity considered for the transmission assets is as under:

(Rs. in lakh)								
	Equity as on 1.3.2005	Notional additional equity up to 31.3.2005	Notional additional equity during 2005-06	Average equity during 2005-06	Equity as on 1.4.2006	Notional additional equity during 2006-07	Average equity for 2006-07	Equity as on 1.4.2007
Asset- I	105.44	0.52	0.62	106.27	1066.58	-	106.57	106.57
Asset-II	1104.48	93.76	3.65	1200.07	1201.89	1.06	1202.42	1202.95

RETURN ON EQUITY

14. As per clause (iii) of Regulation 56 of the 2004 regulations, return on equity shall be computed on the equity base determined in accordance with regulation 54 @ 14% per annum. Equity invested in foreign currency is to be

allowed a return in the same currency and the payment on this account is made in Indian Rupees based on the exchange rate prevailing on the due date of billing.

15. For the reasons already recorded, equity as given the table under para 13 above has been considered. However, tariff for the years 2005-06 and 2006-07 has been allowed pro rata on average equity. Accordingly, return on equity allowed each year is given as under:

(Rs. in lakh)

Name of the asset	Return on equity			
	2005-06	2006-07	2007-08	2008-09
Asset- I	14.88	14.92	14.92	14.92
Asset- II	168.01	168.34	168.41	168.41

INTEREST ON LOAN

16. Clause (1) of regulation 56 of the 2004 regulations *inter alia* provides that,-

(a) Interest on loan capital shall be computed loan wise on the loans arrived at in the manner indicated in regulation 54.

(b) The loan outstanding as on 1.4.2004 shall be worked out as the gross loan in accordance with Regulation 54 minus cumulative repayment as admitted by the Commission or any other authority having power to do so, up to 31.3.2004. The repayment for the period 2004-09 shall be worked out on a normative basis.

(c) The transmission licensee shall make every effort to re-finance the loan as long as it results in net benefit to the beneficiaries. The costs associated with such re-financing shall be borne by the beneficiaries.

(d) The changes to the loan terms and conditions shall be reflected from the date of such re-financing and benefit passed on to the beneficiaries.

(e) In case of dispute, any of the parties may approach the Commission with proper application. However, the beneficiaries shall not withhold any payment ordered by the Commission to the transmission licensee during pendency of any dispute relating to re-financing of loan;

(f) In case any moratorium period is availed of by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

(g) The transmission licensee shall not make any profit on account of re-financing of loan and interest on loan;

(h) The transmission licensee may, at its discretion, swap loans having floating rate of interest with loans having fixed rate of interest, or vice versa, at its own cost and gains or losses as a result of such swapping shall accrue to the transmission licensee:

Provided that the beneficiaries shall be liable to pay interest for the loans initially contracted, whether on floating or fixed rate of interest.”

17. The petitioner has claimed interest on loan in the following manner:

(a) Gross loan opening is from the year 2004-05.

(b) On the basis of actual rate of interest on actual average loan, the weighted average rate of interest on loan is worked out for various years.

(c) Notional loan corresponding to additional capital expenditure for 2005-06 for Asset-I and 2005-06 and 2006-07 for Asset-II have been considered and the weighted average rate of interest on loan for respective years as per above has been multiplied to arrive at interest on loan. Depreciation has been considered as repayment.

18. TNEB has pointed out that interest on notional loan be allowed based on weighted average rate of interest corresponding to the year to which outstanding notional loan pertains.

19. In our calculation the 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 loan as per earlier order dated 5.5.2006 in Petition No 105/2005 have been considered.

(b) Notional loan arising out of additional capital expenditure up to 31.3.2007 has been added in loan amount as on 1.4.2004 to arrive at total notional loan. This adjusted gross loan is considered as normative loan for tariff calculations.

Tariff has been worked out considering normative loan and normative repayments. Normative repayments are worked out by the following formula :

$$\frac{\text{Actual repayment of actual loan during the year}}{\text{Opening balance of actual loan during the year}} \times \text{Opening balance of normative loan during the year}$$

(c) Moratorium in repayment of loan is considered with reference to normative loan and if the normative repayment of loan during the year is less than the depreciation including Advance Against Depreciation during the year, then depreciation including Advance Against Depreciation during the year is deemed as normative repayment of loan during the year.

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

20. Based on above, year-wise interest on loan has been worked out as under:

(Rs. in lakh)								
	Asset-I				Asset-II			
Details	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Gross Normative Loan	478.20	479.65	479.65	479.65	2795.88	2804.41	2806.89	2806.89
Cumulative Repayment upto Previous Year/date of commercial operation	30.15	52.17	77.48	116.33	170.69	299.51	463.82	693.78
Net Loan-Opening	448.05	427.47	402.17	363.31	2625.20	2504.90	2343.07	2113.11
Addition due to Additional Capitalisation	1.44				8.53	2.48		
Repayment during the year	22.02	25.31	38.85	38.85	128.83	164.30	229.96	229.96
Net Loan-Closing	427.47	402.17	363.31	324.46	2504.90	2343.07	2113.11	1883.15
Average Loan	437.76	414.82	382.74	343.89	2565.05	2423.98	2228.09	1998.13
Weighted Average Rate of Interest on Loan	8.3830%	8.3055%	8.2395%	8.1907%	8.5651%	8.4870%	8.4212%	8.3698%
Interest	36.70	34.45	31.54	28.17	219.70	205.72	187.63	167.24

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

DEPRECIATION

22. Sub-clause (a) of clause (ii) of Regulation 56 of the 2004 regulations provides for computation of depreciation in the following manner, namely:

(a) The value base for the purpose of depreciation shall be the historical cost of the asset.

(b) Depreciation shall be calculated annually based on straight line method over the useful life of the asset and at the rates prescribed in Appendix II to these regulations. The residual value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the historical capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded from the capital cost while computing 90% of the historical cost of the asset. The historical capital cost of the asset shall include additional capitalisation on account of Foreign Exchange Rate Variation up to 31.3.2004 already allowed by the Central Government/Commission.

(c) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.

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

23. Depreciation allowed has been worked out as below:

	Asset-I				Asset-II			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Rate of Depreciation	3.76%	3.76%	3.76%	3.76%	3.22%	3.22%	3.22%	3.22%
Depreciable Value	526.67	527.60	527.60	527.60	3568.60	3575.67	3577.27	3577.27
Balance Useful life of the asset	-	-	-	-	-	-	-	-
Remaining Depreciable Value	491.81	469.79	447.49	408.64	3279.75	3150.92	2986.62	2756.66
Depreciation	22.02	22.06	22.06	22.06	128.83	129.09	129.16	129.16
Cumulative Depreciation/ Advance against Depreciation	55.18	77.48	116.33	155.18	271.56	435.87	665.83	895.79

ADVANCE AGAINST DEPRECIATION

24. As per sub-clause (b) of clause (ii) of Regulation 56 of the 2004 regulations, in addition to allowable depreciation, the transmission licensee is entitled to Advance Against Depreciation, computed in the manner given hereunder:

AAD = Loan repayment amount as per regulation 56 (i) subject to a ceiling of 1/10th of loan amount as per regulation 54 minus depreciation as per schedule

25. It is provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year. It is further provided that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.

26. The petitioner has claimed Advance Against Depreciation in the following manner:

- (a) 1/10th of gross loan is worked out from the gross notional loan.
- (b) Cumulative loan as well as repayment of notional loan during the year have been considered.

(c) Depreciation as claimed in the petition.

27. Accordingly, in our calculation the Advance Against Depreciation has been worked as detailed below:

(a) 1/10th of gross loan is worked out from the Gross Notional Loan as per para 20 above.

(b) Repayment of notional loan during the year is considered as per para 20 above.

(c) Depreciation is worked out as per para 23 above.

(d) In the calculation of Advance Against Depreciation, cumulative depreciation/Advance Against Depreciation up to the preceding year along with the depreciation of the current year have been considered for working out the Advance Against Depreciation. Therefore the figure of cumulative depreciation/ Advance Against Depreciation is different from the figure appearing under the similar head elsewhere in tariff calculations where Advance Against Depreciation for the current year is also included for 90% restriction of the depreciation.

28. Details of Advance Against Depreciation allowed are given hereunder:

(Rs. in lakh)

	Asset-I				Asset-II			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	47.82	47.96	47.96	47.96	279.59	280.44	280.69	280.69
Repayment of the Loan	22.02	25.31	38.85	38.85	128.83	164.30	229.96	229.96
Minimum of the above	22.02	25.31	38.85	38.85	128.83	164.30	229.96	229.96
Depreciation during the year	22.02	22.06	22.06	22.06	128.83	129.09	129.16	129.16
(A) Difference	0.00	3.25	16.79	16.79	0.00	35.21	100.80	100.81
Cumulative Repayment of the Loan	52.17	77.48	116.33	155.18	299.51	463.82	693.78	923.74
Cumulative Depreciation/ Advance against Depreciation	55.18	77.24	99.54	138.39	271.56	400.66	565.02	794.98
(B) Difference	-3.01	0.24	16.79	16.79	27.95	63.16	128.75	128.76
Advance against Depreciation Minimum of (A) and (B)	0.00	0.24	16.79	16.79	0.00	35.21	100.80	100.81

OPERATION & MAINTENANCE EXPENSES

29. In accordance with clause (iv) of Regulation 56 the 2004 regulations, the following norms are prescribed for O & M expenses:

	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses (Rs in lakh per ckt-km)	0.227	0.236	0.246	0.255	0.266
O&M expenses (Rs in lakh per bay)	28.12	29.25	30.42	31.63	32.90

30. O&M expenses as taken for the tariff calculations as per order dated 26.4.2007 in Petition No. 105/2005 have been considered, since line length and number of bays remain unchanged.

INTEREST ON WORKING CAPITAL

31. The components of the working capital and the interest thereon are discussed hereunder:

(i) Maintenance spares

Regulation 56(v) (1) (b) of the 2004 regulations provides for maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation. The petitioner has claimed maintenance spares after accounting for additional capital expenditure. TNEB in its reply has urged to retain the cost of maintenance spare at 1% of the project cost as on the date of commercial operation as already considered for award of tariff.

For the purpose of computation of maintenance spares, the historical cost is being taken as the cost on the date of commercial operation. Maintenance spares on additional capital expenditure are not being

considered for the present. Therefore, the petitioner's claim in this regard is not being allowed. Accordingly, maintenance spares have been worked out on the historical cost and providing escalation from the date of commercial operation.

(ii) O & M expenses

Regulation 56(v)(1)(a) of the 2004 regulations provides for operation and maintenance expenses for one month as a component of working capital. O&M expenses as considered in the order dated 26.4.2007 in Petition No. 105/2005 have been considered.

(iii) Receivables

As per Regulation 56(v)(1)(c) of the 2004 regulations, receivables will be equivalent to two months average billing calculated on target availability level. Accordingly, in the tariff being allowed, receivables have been worked out on the basis 2 months' transmission charges.

(iv) Rate of interest on working capital

As per Regulation 56(v) (2) of the 2004 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 1.4.2004 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 @ 10.25% based on SBI PLR as on 1.4.2004, which is in accordance with the 2004 regulations and has been allowed.

32. The necessary computations in support of interest on working capital are appended herein below:

(Rs. in lakh)

	Asset-I				Asset-II			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	5.66	6.00	6.36	6.74	37.40	39.64	42.02	44.54
O & M expenses	4.88	5.07	5.27	5.48	19.54	20.32	21.13	21.98
Receivables	22.58	22.66	25.39	25.26	128.33	133.67	143.45	141.78
Total	33.12	33.73	37.02	37.49	185.26	193.63	206.60	208.29
Interest	3.39	3.46	3.79	3.84	18.99	19.85	21.18	21.35

TRANSMISSION CHARGES

33. The revised transmission charges being allowed for the two transmission assets for the period 2005-06 to 2008-09 are summarised below:

(Rs. in lakh)

	Asset-I				Asset-II			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Depreciation	22.02	22.06	22.06	22.06	128.83	129.09	129.16	129.16
Interest on Loan	36.70	34.45	31.54	28.17	219.70	205.72	187.63	167.24
Return on Equity	14.88	14.92	14.92	14.92	168.01	168.34	168.41	168.41
Advance against Depreciation	0.00	0.24	16.79	16.79	0.00	35.21	100.80	100.81
Interest on Working Capital	3.39	3.46	3.79	3.84	18.99	19.85	21.18	21.35
O & M Expenses	58.50	60.84	63.26	65.80	234.45	243.83	253.52	263.70
Total	135.49	135.97	152.36	151.58	769.98	802.04	860.70	850.67

34. The transmission charges for the year 2004-05 already approved vide order dated 26.4.2007 ibid remain unaltered.

35. The petitioner shall recover from the beneficiaries the additional transmission charges for the period up to 31.8.2008 in two monthly instalments.

36. In addition to the transmission charges, the petitioner shall be entitled to other charges like income-tax, incentive, surcharge and other cess and taxes in accordance with the 2004 regulations. These transmission charges shall be included in the regional transmission tariff for Southern Region and shall be shared by the regional beneficiaries in accordance with the 2004 regulations.

37. This order disposes of Petition No. 63/2008.

Sd/- (R.KRISHNAMOORTHY) MEMBER	sd/- (BHANU BHUSHAN) MEMBER	sd/- (DR.PROMOD DEO) CHAIRPERSON
New Delhi dated the 1 st September 2008		

Annexure-I**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN****Additional bays at Kolar and Hosur for second circuit of Kolar-Hosur 400 kV D/C line**

(Rs. in lakh)

	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
1	Bond-IX					
	Net Loan-Opening	73.80	65.60	57.40	49.20	41.00
	Repayment during the year	8.20	8.20	8.20	8.20	8.20
	Net Loan-Closing	65.60	57.40	49.20	41.00	32.80
	Average Loan	69.70	61.50	53.30	45.10	36.90
	Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
	Interest	8.54	7.53	6.53	5.52	4.52
	Repayment Schedule	10 Annual Instalments from 22.08.2003				
	Bond- XIII Option-I					
	Net Loan-Opening	223.00	223.00	223.00	204.42	185.83
	Repayment during the year	0.00	0.00	18.58	18.58	18.58
	Net Loan-Closing	223.00	223.00	204.42	185.83	167.25
	Average Loan	223.00	223.00	213.71	195.13	176.54
	Rate of Interest	8.63%	8.63%	8.63%	8.63%	8.63%
	Interest	19.24	19.24	18.44	16.84	15.24
	Repayment Schedule	12 Annual Instalments from 31.07.2006				
	Bond- XV					
	Net Loan-Opening	172.00	172.00	172.00	172.00	157.67
	Repayment during the year	0.00	0.00	0.00	14.33	14.33
	Net Loan-Closing	172.00	172.00	172.00	157.67	143.33
	Average Loan	172.00	172.00	172.00	164.83	150.50
	Rate of Interest	6.68%	6.68%	6.68%	6.68%	6.68%
	Interest	11.49	11.49	11.49	11.01	10.05
	Repayment Schedule	12 Annual Instalments from 23.02.2008				
	Total Loan					
	Net Loan-Opening	468.80	460.60	452.40	425.62	384.50
	Repayment during the year	8.20	8.20	26.78	41.12	41.12
	Net Loan-Closing	460.60	452.40	425.62	384.50	343.38
	Average Loan	464.70	456.50	439.01	405.06	363.94
	Rate of Interest	8.45%	8.38%	8.31%	8.24%	8.19%
	Interest	39.27	38.27	36.46	33.37	29.81

Annexure-II

400 kV Hiriyr sub-station including 315 MVA Auto Transformer and LILO of Davangere-Hoody 400 kV D/C line at Hiriyr

(Rs. in lakh)

	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
1	Bond-IX					
	Net Loan-Opening	423.00	376.00	329.00	282.00	235.00
	Repayment during the year	47.00	47.00	47.00	47.00	47.00
	Net Loan-Closing	376.00	329.00	282.00	235.00	188.00
	Average Loan	399.50	352.50	305.50	258.50	211.50
	Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
	Interest	48.94	43.18	37.42	31.67	25.91
	Repayment Schedule	10 Annual Instalments from 22.08.2003				
2	Bond- XIII Option-I					
	Net Loan-Opening	1277.00	1277.00	1277.00	1170.58	1064.16
	Repayment during the year	0.00	0.00	106.42	106.42	106.42
	Net Loan-Closing	1277.00	1277.00	1170.58	1064.16	957.74
	Average Loan	1277.00	1277.00	1223.79	1117.37	1010.95
	Rate of Interest	8.63%	8.63%	8.63%	8.63%	8.63%
	Interest	110.21	110.21	105.61	96.43	87.24
	Repayment Schedule	12 Annual Instalments from 31.07.2006				
3	Bond- XV					
	Net Loan-Opening	733.00	733.00	733.00	733.00	671.92
	Repayment during the year	0.00	0.00	0.00	61.08	61.08
	Net Loan-Closing	733.00	733.00	733.00	671.92	610.83
	Average Loan	733.00	733.00	733.00	702.46	641.38
	Rate of Interest	6.68%	6.68%	6.68%	6.68%	6.68%
	Interest	48.96	48.96	48.96	46.92	42.84
	Repayment Schedule	12 Annual Instalments from 23.02.2008				
	Total Loan					
	Net Loan-Opening	2433.00	2386.00	2339.00	2185.58	1971.08
	Repayment during the year	47.00	47.00	153.42	214.50	214.50
	Net Loan-Closing	2386.00	2339.00	2185.58	1971.08	1756.57
	Average Loan	2409.50	2362.50	2262.29	2078.33	1863.83
	Rate of Interest	8.64%	8.57%	8.49%	8.42%	8.37%
	Interest	208.11	202.35	192.00	175.02	156.00