

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

1. **Dr. Pramod Deo, Chairperson**
2. **Shri R.Krishnamoorthy, Member**
3. **Shri V.S. Verma, Member**

Petition No.132/2008

In the matter of

Determination of final transmission tariff up to the date of commercial operation and additional capitalization from the date of commercial operation to 31.3.2008 for (i) LILO of 400 kV Satna-Bina Ckt-I at Bina (Power Grid) along with associated bays (ii) Circuit # IV & III of 400 kV D/C Satna-Bina transmission line (iii) LILO of Raipur-Rourkela D/C line at Raigarh and Raigarh sub-station with one ICT & 315 MVA 400/220 kV ICT-II at Raigarh sub-station under Vindhyachal Stage-III transmission system in Western Region for the period up to 2009.

Power Grid Corporation of India Limited, Gurgaon

..Petitioner

Vs

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

.....Respondents

The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri V.V.Sharma, PGCIL
3. Shri S.K.Niranjan, PGCIL
4. Shri Mahesh Kumar, PGCIL

**ORDER
(DATE OF HEARING: 12.3.2009)**

This petition has been filed for approval of transmission charges for (i) LILO of 400 kV Satna-Bina Ckt-I at Bina (Power Grid) along with associated bays, (ii) Circuit # IV & III of 400 kV D/C Satna-Bina transmission line, and (iii) LILO of Raipur-Rourkela D/C line at Raigarh and Raigarh sub-station with one ICT & 315 MVA 400/220 kV ICT-II at Raigarh sub-station under Vindhyachal Stage-III transmission system (the transmission system) in Western Region from the date of commercial operation of the respective transmission asset 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”) after accounting for additional capitalization during 2007-08. The petitioner has also prayed for reimbursement of expenditure from the beneficiaries incurred towards publishing of notices in newspapers and the petition filing fee.

2. The details of transmission assets and their dates of commercial operation as indicated by the petitioner are as under:

S. No.	Name of the assets	Date of commercial operation
1.	LILO of 400 kV Satna-Bina Ckt-I at Bina (Power Grid) along with associated bays (Asset-I)	1.4.2007
2.	Circuit # IV of 400 kV D/C Satna-Bina transmission line (Asset-II)	1.7.2007
3.	Circuit # III of 400 kV D/C Satna-Bina transmission line (Asset-III)	1.9.2007
4.	LILO of Raipur-Rourkela D/C transmission line at Raigarh and Raigarh sub-station with one ICT (Asset-IV)	1.1.2008
5.	315 MVA 400/220 kV ICT-II at Raigarh sub-station (Asset-V)	1.2.2008

3. The investment approval for the transmission system was accorded by Ministry of Power vide its letter dated 23.7.2004 at an estimated cost of Rs. 59647 lakh, which included IDC of Rs. 5289 lakh. Subsequently, approval for the revised cost estimate was accorded by Ministry of Power under its letter dated 13.11.2007 at an estimated cost of Rs. 68956 lakh, which includes IDC of Rs. 1319 lakh.

4. The provisional transmission charges for the transmission assets were approved by the Commission in its order dated 18.10.2007 in Petition No. 110/2007 (for Asset-I), order dated 23.1.2008 in Petition No. 158/2007 (for Asset-II and Asset-III) and order dated 10.3.2008 in Petition No. 167/2007 (for Asset-IV and Asset-V).

5. The details of the apportioned approved cost, the estimated completion cost, etc. of the transmission assets noted at opening para of this order, as per details furnished are as under:

(Rs. in lakh)

Name of the assets	Apportioned approved cost (as per revised cost estimate)	Capital expenditure as on the date of commercial operation	Capital Expenditure from the date of commercial operation to 31.3.2008	Capital expenditure as on 31.3.2008	Estimated Balance Expenditure	Total estimated completion cost
Asset- I	3827.29	2475.00	409.89	2884.89	786.87	3671.76
Asset-II	18240.54	15324.52	815.01	16139.53	1493.97	17633.50
Asset-III	7286.61	6154.89	407.82	6562.71	452.05	7014.76
Asset-IV	8637.29	6806.20	236.21	7042.41	1463.41	8505.82
Asset-V	1403.10	1111.96	38.04	1150.00	117.36	1267.36
Total	39394.83	31872.57	1906.97	33779.54	4313.66	38093.20

6. The petitioner has claimed the transmission charges as under:

(Rs. in lakh)

	Asset- I		Asset-II		Asset-III		Asset-IV		Asset-V	
	2007-08	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09
Depreciation	89.25	93.28	318.37	436.28	103.11	183.84	57.28	233.07	6.79	41.40
Interest on Loan	157.23	161.71	708.33	936.43	226.54	388.28	100.04	428.06	11.14	69.95
Return on Equity	112.63	121.24	495.58	677.88	155.83	275.69	72.72	295.83	7.93	48.35
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	14.55	15.25	49.21	67.09	17.03	29.96	9.22	38.15	1.43	8.85
O & M Expenses	126.90	131.99	99.58	138.31	77.45	138.31	73.50	305.83	21.09	131.60
Total	500.56	523.48	1671.07	2255.99	579.95	1016.08	312.75	1300.95	48.36	300.15

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		Asset-III		Asset-IV		Asset-V	
	2007-08	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09
Maintenance Spares	24.75	26.24	153.25	160.14	61.55	63.70	68.06	69.08	11.12	11.23
O & M expenses	10.57	11.00	11.06	11.53	11.06	11.53	24.50	25.49	10.54	10.97
Receivables	83.43	87.25	371.35	376.00	165.70	169.35	208.50	216.82	48.36	50.02
Total	118.75	124.48	535.66	547.67	238.31	244.58	301.06	311.39	70.03	72.22
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	14.55	15.25	49.21	67.09	17.03	29.96	9.22	38.15	1.43	8.85

8. The reply to the petition has been filed by Maharashtra State Electricity Distribution Co. Ltd. In response to the public notices published by the petitioner in accordance with the procedure specified by the Commission, no comments have been received from the general public.

CAPITAL COST

9. As per clause (1) of Regulation 52 of the 2004 regulations, subject to prudence check, the actual expenditure incurred on completion of the project shall form the basis for determination of final tariff. The final tariff shall be determined based on the admitted capital expenditure actually incurred up to the date of commercial operation of the transmission system and shall include capitalised initial spares subject to a ceiling norm as 1.5% of original project cost. The regulation is applicable in case of the transmission system declared under commercial operation on or after 1.4.2004.

10. The petitioner has claimed tariff after accounting for additional capitalization in respect of transmission assets up to 31.3.2008 as given in the table below para 5 above.

ADDITIONAL CAPITALIZATION 2007-08

11. Clause (1) of Regulation 53 of the 2004 regulations provides-

“(1) The following capital expenditure within the original scope of work actually incurred after the date of commercial operation and up to the cut off date may be admitted by the Commission, subject to prudence check:

- (i) Deferred liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares in the original scope of works subject to the ceiling norm specified in regulation 52;
- (iv) Liabilities to meet award of arbitration or compliance of the order or decree of a court; and
- (v) On account of change in law:

Provided that original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff:

Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the transmission system.”

12. The details submitted by the petitioner in support of its claim for additional capital expenditure for Asset-I, Asset-II, Asset-III, Asset-IV and Asset-IV are given hereunder:

Asset-I	Asset-II	Asset-III	Asset-IV	Asset-V
Nature of expenditure	Nature of expenditure	Nature of expenditure	Nature of expenditure	Nature of expenditure

Civil works= Rs. 364.28 lakh Transmission line= Rs. 21.82 lakh Sub-station=Rs. 2 0.74 lakh PLCC = Rs. 3.05 lakh	Civil works= Rs. 65.56 lakh Transmission line= Rs. 444.57 lakh Sub-station=Rs. 304.88 lakh	Transmission lines= Rs. 50.18 lakh Sub-station=Rs. 357.64 lakh	Civil works = Rs. 39.70 lakh Transmission line= Rs. 2.90 lakh Sub-station=Rs. 186.73 lakh	Sub-station=38.04 lakh
Total = 409.89 lakh	Total = Rs. 815.01 lakh	Total = Rs. 407.82 lakh	Total= 236.21 lakh	Total= Rs. 38.04 lakh

13. The additional capital expenditure claimed is within the original scope of work and is found to be in order as it was against the committed liability. Accordingly, capitalization of the additional expenditure claimed by the petitioner has been allowed for the transmission assets.

Cost over-run

14. As against the apportioned approved cost of Rs. 39395 lakh, the actual expenditure up to the date of commercial operation is Rs. 31872 lakh. The actual expenditure incurred from the date of commercial operation to 31.3.2008 is Rs. 1906 lakh. As per the approved revised cost estimate there is no cost over run. For the purpose of computation of tariff, capital cost as on the date of commercial operation and as on 31.3.2008 has been considered.

TOTAL CAPITAL COST

15. Based on the above, gross block as given below has been considered for the purpose of tariff for the transmission assets, after allowing additional capitalization on works as claimed by the petitioner, which is within the limits of apportioned approved cost:

	(Rs. in lakh)		
	Expenditure as on the date of commercial operation	Additional capital expenditure up to 31.3.2009	Total capital expenditure
Asset- I	2475.00	409.89	2884.89
Asset-II	15324.52	815.01	16139.53
Asset-III	6154.89	407.82	6562.71
Asset-IV	6806.20	236.21	7042.41
Asset-V	1111.96	38.04	1150.00
Total	31872.57	1906.97	33779.54

DEBT- EQUITY RATIO

16. Clause (1) of Regulation 54 of the 2004 regulations *inter alia* provides that,-

“(1) In case of the existing projects, debt–equity ratio Considered by the Commission for fixation of tariff for the period ending 31.3.2004 shall be considered for determination of tariff with effect from 01.04.2004:

Provided that in cases where the tariff for the period ending 31.3.2004 has not been determined by the Commission, debt-equity ratio shall be as may be decided by the Commission:

Provided further that in case of the existing projects where additional capitalisation has been completed on or after 1.4.2004 and admitted by the Commission under Regulation 53, equity in the additional capitalisation to be considered shall be :-

- (a) 30% of the additional capital expenditure admitted by the Commission, or
- (b) equity approved by the competent authority in the financial package, for additional capitalisation, or
- (c) actual equity employed,

whichever is the least:

Provided further that in case of additional expenditure admitted under the second proviso, the Commission may consider equity of more than 30% if the transmission licensee is able to satisfy the Commission that deployment of such equity of more than 30% was in the interest of general public.”

17. The Note 1 below Regulations 53 lays down that any expenditure on account of committed liabilities with the original scope of work is to be serviced in the normative debt-equity ratio specified in Regulation 54.

18. The petitioner has considered debt and equity as actually deployed on the date of commercial operation. The petitioner has further considered the amount of additional capitalization during 2007-08 in the debt-equity ratio of 70:30. We have considered debt-equity ratio of 70:30 on the date of the commercial operation as also for the additional capital expenditure approved. Accordingly, for the purpose of tariff, equity considered for the transmission assets is as under:

(Rs. in lakh)

	Capital cost as on date of commercial operation	Equity on the date of commercial operation	National additional equity during 2007-08	Average equity for 2007-08	Equity as on 1.4.2008

Asset- I	2475.00	742.50	122.97	803.98	865.47
Asset-II	15324.52	4597.36	244.50	4719.61	4841.86
Asset-III	6154.89	1846.47	122.35	1907.64	1968.81
Asset-IV	6806.20	2041.86	70.86	2077.29	2112.72
Asset-V	1111.96	333.59	11.41	339.29	345.00

RETURN ON EQUITY

19. 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.

20. Equity as given the table under para 18 above has been considered. However, tariff for the year of additional capital expenditure approved has been allowed on average equity. Accordingly, return on equity allowed is given as under:

(Rs. in lakh)

	Return on equity	
	2007-08	2008-09
Asset- I	112.56	121.17
Asset-II	495.56 (pro rata)	677.86
Asset-III	155.79 (pro rata)	275.63
Asset-IV	72.71 (pro rata)	295.78
Asset-V	7.92 (pro rata)	48.30

INTEREST ON LOAN

21. Clause (i) 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.”

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

- (i) Gross loan opening has been considered from 2007-08.
- (ii) 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;
- (iii) Gross loan at (i) above have been considered along with the loan utilised after date of commercial operation and weighted average rate of interest on loan for respective year as per above has been multiplied to arrive at interest on loan considering Depreciation as repayment.
- (iv) Bridge loan from ICICI has been replaced by Bond XXVI.

23. In our calculation, the interest on loan has been worked out as detailed below:

- (i) Gross amount of loan and repayment of instalments submitted by the petitioner have been used to work out weighted average rate of interest on actual loan.
- (ii) On the basis of actual rate of interest on actual average loan, the weighted rate of interest on loan has been worked out for various years.
- (iii) Tariff has been worked out considering normative loan and normative repayments. Once the normative loan has been arrived at, it has been considered for all purposes in the tariff. Normative repayment has been worked out by the following formula :
- $$\frac{\text{Actual repayment of actual loan during the year}}{\text{Opening balance of actual loan during the year}} \times \frac{\text{Opening balance of normative loan during the year}}{\text{Opening balance of actual loan during the year}}$$
- (iv) In case the normative repayment of loan during the year is less than the depreciation during the year, depreciation during the year has been deemed as normative repayment of loan.
- (v) Short term loan from SBI has been replaced by Bond XXVI in case of Asset-IV and Asset-V. Therefore, and their weighted average rate of interest for that year has been considered.

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

	Asset- I		Asset-II		Asset-III		Asset-IV		Asset-V	
	2007-08	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09
Opening Gross Loan	1732.50	2019.42	10727.16	11297.67	4308.42	4593.90	4764.34	4929.69	778.37	805.00
Cumulative Repayment	0.00	89.25	0.00	318.37	0.00	103.11	0.00	57.28	0.00	6.79
Net Loan-Opening	1732.50	1930.17	10727.16	10979.30	4308.42	4490.79	4764.34	4872.41	778.37	798.21
Additions due to Additional Capitalisation	286.92	-	570.51	-	285.47	-	165.35	-	26.63	-
Repayment during the year	89.25	93.28	318.37	436.28	103.11	183.84	57.28	233.07	6.79	41.40
Net Loan-Closing	1930.17	1836.89	10979.30	10543.02	4490.79	4306.95	4872.41	4639.33	798.21	756.81
Average Loan	1831.33	1883.53	10853.23	10761.16	4399.61	4398.87	4818.37	4755.87	788.29	777.51
Weighted Average Rate of Interest on Loan	8.59%	8.59%	8.70%	8.70%	8.83%	8.83%	8.31%	9.00%	8.48%	9.00%
Interest	157.27	161.76	708.34	936.45	226.56	388.32	100.05	428.09	11.14	69.98

25. The detailed calculations in support of the weighted average rate of interest are contained in Annexure-I, Annexure-II, Annexure-III, Annexure-IV and Annexure-V attached.

DEPRECIATION

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

- (i) The value base for the purpose of depreciation shall be the historical cost of the asset.
- (ii) 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.
- (iii) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.
- (iv) 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.

27. Depreciation allowed has been worked out as below:

					(Rs. in lakh)
	Asset- I	Asset-II	Asset-III	Asset-IV	Asset-V

Details of Depreciation	2007-08	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09
Gross block as on the date of commercial operation	2475.00	2884.89	15324.52	16139.53	6154.89	6562.71	6806.20	7042.41	1111.96	1150.00
Additional Capitalisation during 2006-07	409.89	-	815.01	-	407.82	-	236.21	-	38.04	-
Gross Block at the end of the year	2884.89	2884.89	16139.53	16139.53	6562.71	6562.71	7042.41	7042.41	1150.00	1150.00
Rate of Depreciation	3.3305%	3.2333%	2.6982%	2.7032%	2.7797%	2.8012%	3.3088%	3.3096%	3.6000%	3.6000%
Depreciable Value (90%)	2411.95	2596.40	14158.82	14525.58	5722.92	5906.44	6197.62	6303.92	1017.88	1035.00
Remaining Depreciable Value	2411.95	2507.15	14158.82	14207.21	5722.92	5803.33	6197.62	6246.64	1017.88	1028.21
Depreciation	89.25	93.28	318.37	436.28	103.11	183.84	57.28	233.07	6.79	41.40

ADVANCE AGAINST DEPRECIATION

28. 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

29. 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.

30. The petitioner has not claimed Advance Against Depreciation and accordingly, Advance Against Depreciation has not been considered.

OPERATION & MAINTENANCE EXPENSES

31. 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
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32. The petitioner has claimed O & M expenses for 1.484 ckt.km. and 4 bays for Asset-I, 272.586 ckt.km and 2 bays for Asset-II, 272.586 ckt.km and 2 bays for Asset-III, 36.592 ckt. km and 9 bays for Asset-IV and 4 bays for Asset-V which have been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

(Rs. in lakh)

	Asset-I		Asset-II		Asset-III		Asset-IV		Asset-V					
	2007-08	2008-09	2007-08 (Pro rata)	2008-09	2007-08 (Pro rata)	2008-09	2007-08	2008-09	2007-08 (Pro rata)	2008-09				
O&M expenses for 1.484 ckt km	0.38	0.39	O&M expenses for 272.586 ckt km	52.13	72.51	O&M expenses for 272.586 ckt km	40.55	72.51	O&M expenses for 36.592 ckt km	2.33	9.73	O&M expenses for ckt km	-	-
Rs in lakh per bay for 4 bays	126.52	131.60	Rs in lakh per bay for 2 bays	47.45	65.80	Rs in lakh per bay for s bays	36.90	65.80	Rs in lakh per bay for 9 bays	71.17	296.10	Rs in lakh per bay for 4 bays	21.09	131.60
Total	126.90	131.99	Total	99.58	138.31	Total	77.45	138.31	Total	73.50	305.83	Total	21.09	131.60

33. The petitioner has submitted that the wage revision of its employees is due with effect from 1.1.2007. Therefore, according to the petitioner, O & M expenses should be subject to revision on account of revision of employee cost from that date. In the alternative, it has been prayed that the increase in employee cost due to wage revision be allowed as per actuals for extra cost to be incurred consequent to wage revision. We are not expressing any view, as this issue does not arise for consideration at this stage. The petitioner may approach for a relief in this regard at an appropriate stage in accordance with law.

INTEREST ON WORKING CAPITAL

34. 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. In the present case, element wise capital expenditure on the date of commercial operation which has been considered as the historical cost for the purpose of the present petition and maintenance spares have been worked out accordingly by escalating 1% of the historical cost @ 6% per annum. In this manner, the value of maintenance spares works out to Rs. 24.75 lakh, Rs.153.25 lakh Rs. 61.55 lakh, Rs. 68.05 lakh and Rs. 11.12 lakh for Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V respectively as on date of commercial operation. The necessary details are given hereunder:

Transmission assets	Date of Commercial Operation	Capital Expenditure on the date of commercial operation (Rs. in lakh)	Escalated spares Cost as on 1.4.2007 (Rs. in lakh)
Asset- I	1.4.2007	2475.00	24.75
Asset-II	1.7.2007	15324.52	153.25
Asset-III	1.9.2007	6154.89	61.55
Asset-IV	1.1.2008	6806.20	68.05
Asset-V	1.2.2008	1111.96	11.12

(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. The petitioner has claimed O&M expenses for 1 month of O&M expenses of the respective year as claimed in the petition. This has been considered in the working capital.

(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. The petitioner has claimed the receivables on the basis 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.

(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 @ 12.25% based on SBI PLR as on the first April of the year of commissioning, which is in accordance with the 2004 regulations and has been allowed.

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

(Rs. in lakh)

	Asset-I		Asset-II		Asset-III		Asset-IV		Asset-V	
	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09
Maintenance Spares	24.75	26.24	153.25	160.14	61.55	63.70	68.06	69.08	11.12	11.23
O & M expenses	10.58	11.00	11.06	11.53	11.06	11.53	24.50	25.49	10.55	10.97
Receivables	83.42	87.24	371.35	376.00	165.70	169.34	208.50	216.82	48.37	50.02
Total	118.75	124.47	535.66	547.66	238.31	244.57	301.06	311.39	70.03	72.22
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	14.55	15.25	49.21	67.09	17.03	29.96	9.22	38.15	1.43	8.85

TRANSMISSION CHARGES

36. The transmission charges being allowed for the transmission assets are summarised below:

(Rs. in lakh)

	Asset-I		Asset-II		Asset-III		Asset-IV		Asset-V	
	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09
Depreciation	89.25	93.28	318.37	436.28	103.11	183.84	57.28	233.07	6.79	41.40
Interest on Loan	157.27	161.76	708.34	936.45	226.56	388.32	100.05	428.09	11.14	69.98
Return on Equity	112.56	121.17	495.56	677.86	155.79	275.63	72.71	295.78	7.92	48.30
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	14.55	15.25	49.21	67.09	17.03	29.96	9.22	38.15	1.43	8.85
O & M Expenses	126.90	131.99	99.58	138.31	77.45	138.31	73.50	305.83	21.09	131.60
Total	500.53	523.44	1671.06	2255.99	579.94	1016.06	312.75	1300.93	48.37	300.13

37. 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.

38. The petitioner has sought approval for the reimbursement of expenditure of Rs. 1,99,959/- incurred on publication of notices in the newspapers. The petitioner shall claim reimbursement of the said expenditure directly from the respondents in one installment in the ratio applicable for sharing of transmission charges. The Commission by its separate general order dated 11.9.2008 in Petition No. 129/2005 has decided that the petitioner shall not be allowed reimbursement of the petition filing fee.

39. This order disposes of Petition No. 132/2008.

Sd/-
(V.S.VERMA)
MEMBER

New Delhi dated the 20th April 2009

sd/-
(R.KRISHNAMOORTHY)
MEMBER

sd/-
(DR.PRAMOD DEO)
CHAIRPERSON

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

LILO of 400 kV Satna-Bina Ckt-I at Bina (Power grid) along with associated bays

(Rs. in lakh)

	Details of Loan	2007-08	2008-09
1	Bond-XVIII		
	Gross Loan opening	925.00	925.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	925.00	925.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	925.00	925.00
	Average Loan	925.00	925.00
	Rate of Interest	8.15%	8.15%
	Interest	75.39	75.39
	Repayment Schedule	12 Annual instalments from 9.3.2010	
2	Bond-XX		
	Gross Loan opening	400.00	400.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	400.00	400.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	400.00	400.00
	Average Loan	400.00	400.00
	Rate of Interest	8.93%	8.93%
	Interest	35.72	35.72
	Repayment Schedule	12 Annual instalments from 7-9-2010	
3	Bond-XXI		
	Gross Loan opening	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	50.00	50.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00
	Rate of Interest	8.73%	8.73%
	Interest	4.37	4.37
	Repayment Schedule	12 Annual instalments from 11-10-2010	
4	Bond-XXII		
	Gross Loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	100.00	100.00
	Average Loan	100.00	100.00
	Rate of Interest	8.68%	8.68%
	Interest	8.68	8.68
	Repayment Schedule	12 Annual instalments from 7-12-2010	
5	Bond-XXIII		
	Gross Loan opening	140.00	140.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00

	Net Loan-Opening	140.00	140.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	140.00	140.00
	Average Loan	140.00	140.00
	Rate of Interest	9.25%	9.25%
	Interest	12.95	12.95
	Repayment Schedule	12 Annual instalments from 9-2-2011	
6	Bond- XXIV		
	Gross Loan opening	117.00	117.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	117.00	117.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	117.00	117.00
	Average Loan	117.00	117.00
	Rate of Interest	9.95%	9.95%
	Interest	11.64	11.64
	Repayment Schedule	12 Annual instalments from 26-3-2011	
	Total Loan		
	Gross Loan opening	1732.00	1732.00
	Cumulative Repayment upto DOCO	0.00	0.00
	Net Loan-Opening	1732.00	1732.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1732.00	1732.00
	Average Loan	1732.00	1732.00
	Rate of Interest	8.59%	8.59%
	Interest	148.74	148.74

Annexure-II

Circuit # III of 400 kV D/C Satna-Bina transmission line

(Rs. in lakh)

	Details of Loan	2007-08	2008-09
1	Bond-XVIII		
	Gross Loan opening	4560.00	4560.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	4560.00	4560.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	4560.00	4560.00
	Average Loan	4560.00	4560.00
	Rate of Interest	8.15%	8.15%
	Interest	371.64	371.64
	Repayment Schedule	12 Annual instalments from 9.3.2010	
2	Bond-XX		
	Gross Loan opening	2769.00	2769.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2769.00	2769.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2769.00	2769.00
	Average Loan	2769.00	2769.00
	Rate of Interest	8.93%	8.93%
	Interest	247.27	247.27
	Repayment Schedule	12 Annual instalments from 7-9-2010	
3	Bond-XXI		
	Gross Loan opening	390.00	390.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	390.00	390.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	390.00	390.00
	Average Loan	390.00	390.00
	Rate of Interest	8.73%	8.73%
	Interest	34.05	34.05
	Repayment Schedule	12 Annual instalments from 11-10-2010	
4	Bond-XXII		
	Gross Loan opening	900.00	900.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	900.00	900.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	900.00	900.00
	Average Loan	900.00	900.00
	Rate of Interest	8.68%	8.68%
	Interest	78.12	78.12
	Repayment Schedule	12 Annual instalments from 7-12-2010	
5	Bond-XXIII		
	Gross Loan opening	1050.00	1050.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1050.00	1050.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1050.00	1050.00
	Average Loan	1050.00	1050.00
	Rate of Interest	9.25%	9.25%
	Interest	97.13	97.13
	Repayment Schedule	12 Annual instalments from 9-2-2011	
6	Bond- XXIV		
	Gross Loan opening	1058.00	1058.00

	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1058.00	1058.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1058.00	1058.00
	Average Loan	1058.00	1058.00
	Rate of Interest	9.95%	9.95%
	Interest	105.27	105.27
	Repayment Schedule	12 Annual instalments from 26-3-2011	
	Total Loan		
	Gross Loan opening	10727.00	10727.00
	Cumulative Repayment upto DOCO	0.00	0.00
	Net Loan-Opening	10727.00	10727.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	10727.00	10727.00
	Average Loan	10727.00	10727.00
	Rate of Interest	8.70%	8.70%
	Interest	933.47	933.47

Circuit # IV of 400 kV D/C Satna-Bina transmission line
(Rs. in lakh)

Annexure-III

Details of Loan		2007-08	2008-09
1	Bond-XVIII		
	Gross Loan opening	1791.00	1791.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00

	Net Loan-Opening	1791.00	1791.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1791.00	1791.00
	Average Loan	1791.00	1791.00
	Rate of Interest	8.15%	8.15%
	Interest	145.97	145.97
	Repayment Schedule	12 Annual instalments from 9.3.2010	
2	Bond-XX		
	Gross Loan opening	960.00	960.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	960.00	960.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	960.00	960.00
	Average Loan	960.00	960.00
	Rate of Interest	8.93%	8.93%
	Interest	85.73	85.73
	Repayment Schedule	12 Annual instalments from 7-9-2010	
3	Bond-XXI		
	Gross Loan opening	80.00	80.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	80.00	80.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	80.00	80.00
	Average Loan	80.00	80.00
	Rate of Interest	8.73%	8.73%
	Interest	6.98	6.98
	Repayment Schedule	12 Annual instalments from 11-10-2010	
4	Bond-XXII		
	Gross Loan opening	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	200.00	200.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	200.00	200.00
	Average Loan	200.00	200.00
	Rate of Interest	8.68%	8.68%
	Interest	17.36	17.36
	Repayment Schedule	12 Annual instalments from 7-12-2010	
5	Bond-XXIII		
	Gross Loan opening	400.00	400.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	400.00	400.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	400.00	400.00
	Average Loan	400.00	400.00
	Rate of Interest	9.25%	9.25%
	Interest	37.00	37.00
	Repayment Schedule	12 Annual instalments from 9-2-2011	
6	Bond- XXIV		
	Gross Loan opening	877.00	877.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	877.00	877.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00

Net Loan-Closing	877.00	877.00
Average Loan	877.00	877.00
Rate of Interest	9.95%	9.95%
Interest	87.26	87.26
Repayment Schedule	12 Annual instalments from 26-3-2011	
Total Loan		
Gross Loan opening	4308.00	4308.00
Cumulative Repayment upto DOCO	0.00	0.00
Net Loan-Opening	4308.00	4308.00
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	4308.00	4308.00
Average Loan	4308.00	4308.00
Rate of Interest	8.83%	8.83%
Interest	380.30	380.30

Annexure-IV

LILO of Raipur-Rourkela D/C transmission line at Raigarh and Raigarh sub-station with one ICT

(Rs. in lakh)

	Details of Loan	2007-08	2008-09
1	Bond-XVIII		
	Gross Loan opening	1275.00	1275.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1275.00	1275.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00

	Net Loan-Closing	1275.00	1275.00
	Average Loan	1275.00	1275.00
	Rate of Interest	8.15%	8.15%
	Interest	103.91	103.91
	Repayment Schedule	12 Annual instalments from 9.3.2010	
2	Bond-XXVI w.e.f. 07.03.2008 in replacement of short term loan from SBI drawn on 24.8.2007 to 6.3.2008		
	Gross Loan opening	3385.00	3385.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3385.00	3385.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	3385.00	3385.00
	Average Loan	3385.00	3385.00
	Rate of Interest	8.32%	9.30%
	Interest	281.66	314.81
	Repayment Schedule	12 Annual instalments from 7-3-2012 (Bond-XXVI)	
3	Bond-XXII		
	Gross Loan opening	4.00	4.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	4.00	4.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	4.00	4.00
	Average Loan	4.00	4.00
	Rate of Interest	8.68%	8.68%
	Interest	0.35	0.35
4	Bond-XXIII		
	Gross Loan opening	27.00	27.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	27.00	27.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	27.00	27.00
	Average Loan	27.00	27.00
	Rate of Interest	9.25%	9.25%
	Interest	2.50	2.50
	Repayment Schedule	12 Annual instalments from 9-2-2011	
5	Bond- XXIV		
	Gross Loan opening	73.00	73.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	73.00	73.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	73.00	73.00
	Average Loan	73.00	73.00
	Rate of Interest	9.95%	9.95%
	Interest	7.26	7.26
	Repayment Schedule	12 Annual instalments from 26-3-2011	
	Total Loan		
	Gross Loan opening	4764.00	4764.00
	Cumulative Repayment upto DOCO	0.00	0.00
	Net Loan-Opening	4764.00	4764.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	4764.00	4764.00
	Average Loan	4764.00	4764.00

	Rate of Interest	8.31%	9.00%
	Interest	395.68	428.83

Annexure-V

315 MVA 400/220 kV ICT-II at Raigarh sub-station

(Rs. in lakh)

	Details of Loan	2007-08	2008-09
1	Bond-XVIII		
	Gross Loan opening	225.00	225.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	225.00	225.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	225.00	225.00
	Average Loan	225.00	225.00
	Rate of Interest	8.15%	8.15%

	Interest	18.34	18.34
	Repayment Schedule	12 Annual instalments from 9.3.2010	
2	Bond-XXVI w.e.f. 07.03.2008 in replacement of short term loan from SBI drawn on 24.08.2007 to 6.3.2008		
	Gross Loan opening	513.00	513.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	513.00	513.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	513.00	513.00
	Average Loan	513.00	513.00
	Rate of Interest	8.51%	9.30%
	Interest	43.67	47.71
	Repayment Schedule	12 Annual instalments from 7. 3-2012 (Bond-XXVI)	
3	Bond- XXIV		
	Gross Loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	9.95%	9.95%
	Interest	3.98	3.98
	Repayment Schedule	12 Annual instalments from 26.3.2011	
	Total Loan		
	Gross Loan opening	778.00	778.00
	Cumulative Repayment upto DOCO	0.00	0.00
	Net Loan-Opening	778.00	778.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	778.00	778.00
	Average Loan	778.00	778.00
	Rate of Interest	8.48%	9.00%
	Interest	65.99	70.03