

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Shri Bhanu Bhushan, Member**
- 2. Shri R.Krishnamoorthy, Member**

Petition No. 84/2006

In the matter of

Determination of transmission tariff for Ranaganadi transmission system in North Eastern Region for the period from 1.4.2004 to 31.3.2009.

And in the matter of

Power Grid Corporation of India Ltd., Gurgaon

.... **Petitioner**

Vs

1. Assam State Electricity Board, Guwahati
 2. Meghalaya State Electricity Board, Shillong
 3. Government of Arunachal Pradesh, Itanagar
 4. Power and Electricity Department, Govt. of Mizoram, Aizawl
 5. Electricity Department Govt. of Manipur, Imphal
 6. Department of Power, Govt. of Nagaland, Kohima
 7. Tripura State Electricity Corporation Limited., Agartala
- .Respondents**

The following were present:

1. Shri P.C.Pankaj, PGCIL
2. Shri U.K. Tyagi, PGCIL
3. Shri T.C.Sharma, PGCIL
4. Shri M.M.Mondal, PGCIL
5. Shri C.Kannan, PGCIL
6. Shri S.S.Raju, PGCIL
7. Shri Umesh Chandra, PGCIL
8. Shri Harmeet Singh, PGCIL
9. Shri B.P.Singh, PGCIL
10. Shri W.Rehman, PGCIL
11. Shri A.K.Das, PGCIL
12. Shri Utpal Sharma, PGCIL
13. Shri Mithilesh Kumar, PGCIL
14. Shri Anup Gan Choudhery, TSECL
15. Shri M.Debberma, TSECL
16. Shri L.Priyokumar, Electricity Deptt., Govt. of Manipur
17. Ms. Seema Sharma, Advocate, Consumer
18. Shri Hemanta Sharma, Consumer
19. Shri Rakesh, BSEB
20. Shri K.N. War, MeSEB
21. Shri S.S.Kharmih, MeSEB
22. Shri P.K.Hazarika, ASEB
23. Shri K.Goswami, ASEB
24. Shri H.C.Phukan, ASEB

ORDER
(DATE OF HEARING: 1.8.2007)

The petition has been filed for approval of tariff for Ranaganadi transmission system (the transmission system) in North Eastern Region for the period from 1.4.2004 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 the reimbursement of expenditure from the beneficiaries incurred towards publishing notices in the newspapers and the petition filing fee.

2. The investment approval for the transmission system was accorded by Ministry of Home Affairs vide letter dated 9.4.1987 at an estimated cost of Rs.4734 lakh. Subsequently, revised cost estimate for the transmission system was approved by Ministry of Power vide its letter dated 27.8.2000 at an estimated cost of Rs. 17243 lakh, which included IDC of Rs. 3125 lakh. The scope of work included in the transmission system and the date of commercial operation of the respective transmission line covered under the transmission system are as stated below:

S. No.	Name of the transmission line	Date of commercial operation	Line length in Ckt-km (for O & M)
(i)	132 kV S/C Nirjuli-Dikrong transmission line	1.10.2001	22.29
(ii)	400 kV D/C Ranganadi-Balipara transmission line	1.1.2003	332.67
	Total		354.96

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

(Rs in lakh)

	132 kV S/C Nirjuli-Dikrong transmission line					400 kV D/C Ranganadi-Balipara transmission line				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	27.23	27.23	27.23	27.23	27.23	377.99	377.99	377.99	377.99	377.99
Interest on Loan	23.25	19.28	15.31	11.34	7.36	424.83	369.66	314.51	259.36	204.21
Return on Equity	74.94	74.94	74.94	74.94	74.94	1340.39	1338.34	1338.34	1338.34	1338.34
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	4.27	4.30	4.34	4.38	4.43	58.12	58.27	58.53	58.86	59.26
O & M Expenses	43.30	45.04	46.84	48.71	50.66	188.44	195.98	203.82	211.97	220.45
Total	172.99	170.78	168.65	166.60	164.62	2390.14	2340.24	2293.19	2246.52	2200.26

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

(Rs.in lakh)

	132 kV S/C Nirjuli-Dikrong transmission line					400 kV D/C Ranganadi-Balipara transmission line				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	9.19	9.74	10.33	10.95	11.60	152.95	162.13	171.85	182.17	193.10
O & M expenses	3.61	3.75	3.90	4.06	4.22	15.70	16.33	16.98	17.66	18.37
Receivables	28.83	28.46	28.11	27.77	27.44	398.36	390.04	382.20	374.42	366.71
Total	41.63	41.96	42.34	42.77	43.26	567.01	568.50	571.04	574.25	578.18
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	4.27	4.30	4.34	4.38	4.43	58.12	58.27	58.53	58.86	59.26

5. The reply to the petition has been filed by Tripura State Electricity Corporation Limited and Assam State Electricity Board. Ms. Mallika Sharma Bezbaruah, a consumer has filed her response to the public notice published by the petitioner under section 64 of the Electricity Act, 2003.

6. For the reasons given in the order dated 16.1.2008 in Petition No. 85/2006, tariff is being determined from 1.4.2007.

CAPITAL COST

7. 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. As regards the project commissioned prior to 1.4.2004, clause (2) of Regulation 52 of the 2004 regulations provides that

in case of the existing projects, the project cost admitted by the Commission prior to that date, shall form the basis for determination of tariff.

8. The petitioner has not claimed additional capital expenditure in respect of 132 kV S/C Nirjuli-Dikrong transmission line. The petitioner has not claimed FERV as there are no foreign loans. The petitioner has considered de-capitalization of Rs. 0.23 lakh for the period 1.4.2003 to 31.3.2004 and Rs. 29.19 lakh for the period 1.4.2004 to 31.3.2005 in respect of 400 kV D/C Ranganadi-Balipara transmission line. Accordingly, the capital expenditure and de-capitalization of expenditure considered by the petitioner for tariff purpose are given here under:

	Expenditure up to the date of commercial operation	Expenditure from date of commercial operation to 31.3.2004	Capital cost as on 31.3.2004	Expendere from 1.4.2004 to 31.3.2005	Capital cost as on 1.4.2005	Balance estimated expenditure
132 kV S/C Nirjuli-Dikrong transmission line	794.26	0.00	794.26	0.00	794.26	0.00
400 kV D/C Ranganadi-Balipara transmission line	14216.02	(-)0.23	14215.79	(-) 29.19	14186.60	103.61
	15010.28	(-) 0.23	15010.05	(-) 29.19	14980.86	103.61

9. As has been noted above, tariff for the transmission system during 2001-04 was not determined by the Commission under the terms and conditions specified by it and the UCPTT rate was allowed to continue. Therefore, the capital base for computation of tariff is to be traced from the date of commercial operation.

Additional capitalization

10. In the present case, the petitioner has claimed de-capitalization of Rs.0.23 lakh for the period 2001-04 and Rs. 29.19 lakh for the period 2004-05 in respect of 400 kV D/C Ranganadi-Balipara transmission line. The details submitted by the petitioner in support of its claim for additional capital expenditure are given hereunder:

Year	Amount (Rs. in lakh)	Head of expenditure
2003-04	(-) 0.23	Transmission line = (-) Rs.0.23 lakh (Adjustment of price variation bill)
2004-05	(-) 29.19	Transmission Line = Rs. (-) 29.10 lakh (Balance payment and price variation payment of Rs. 8.34 lakh, adjusted against de-capitalised amount of Rs. (-) 37.44 lakh) Sub-station = Rs. (-) 0.09 lakh (Tools written off)

11. The de-capitalisation claimed is found to be in order. Accordingly, the de-capitalisation of Rs. 0.23 lakh for the year 2003-04 and Rs. 29.19 lakh for the year 2004-05 has been allowed to be decapitalised.

Time Over-run

12. The transmission system was scheduled to be commissioned by April 1994. However, its transmission lines were declared under commercial operation on 1.10.2001 and 1.1.2003.

13. The petitioner has submitted that the Ranganadi (Dikrong)-Itanagar (Nirjili) was completed on 1.10.2001. Ranganadi-Balipara line was completed and commission in August 1998. The construction of Ranganadi Transmission System was originally envisaged by NEEPCO. The work was scheduled to be commenced in October 1991 and completed in November 1996 matching with the commissioning of Ranganadi HEP. It is explained that after transfer of assets from NEEPCO to the petitioner, the contract for construction of transmission project was awarded in October 1992. Ranganadi HEP was anticipated to be completed in 1998-99. The petitioner took appropriate measures to defer the progress of the transmission system to the extent possible to match with revised generation schedule. The transmission line was also used temporarily for providing construction power to Ranganadi HEP during the period from June 1998 to November 2001. Subsequently, the switchyard at Ranganadi HEP was

completed, Unit I & II of Ranganadi HEP were commissioned during February 2002 and unit III in March 2002. The unit could not generate power more than 60 MW against the station capacity of 405 MW due to non-commissioning of 2 x 400/132 kV, 360 MVA ICT in RHEP switchyard. It is further submitted that although Unit I & II of Ranganadi HEP were commissioned during February 2002, these units were on a prolonged outage immediately after commissioning due to technical problem and became operational only after Ranganadi HEP was commissioned on 27.12.2002. Therefore, the petitioner has submitted that it could declare the transmission system under commercial operation with effect from 1.1.2003.

14. There is satisfactory explanation for the entire delay in completion of the transmission line. It needs to be pointed out that the petitioner does not gain anything by delaying the commissioning of its transmission assets. Therefore, the delay in commissioning of line is considered to be beyond the control of the petitioner.

15. In case of 400 kV D/C Ranganadi-Balipara transmission line, expenditure up to date of commercial operation, that is, 1.1.2003 is Rs. 14214.02 lakh which includes IDC for Rs. 1577.24 lakh and IEDC for Rs. 177.23 lakh for the period from 9.8.1998 (date of capitalization) to date of commercial operation. Since the reasons for time delay given by the petitioner have been accepted, IDC and IEDC for the period from 9.8.1998 to the date of commercial operation have been allowed to be notionally capitalized.

TOTAL CAPITAL COST

16. The actual gross block as on 1.4.2005, works out to Rs. 14980.86 lakh which is less than the approved revised cost estimates-I of Rs. 17243 lakh. Accordingly, gross block of Rs. 14980.86 lakh as on 1.4.2005 has been considered for the purpose of tariff comprising of Rs. 794.26 lakh in respect of

132 kV S/C Nirjuli-Dikrong transmission line and Rs. 14186 lakh in respect of 400 kV D/C Ranganadi-Balipara transmission line.

DEBT- EQUITY RATIO

17. 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 considered 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.”

18. 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.

19. Debt-equity ratio claimed by the petitioner for two transmission lines for the purpose of determination of tariff in the present petition is indicated below:

	Name of the transmission assets	Debt-equity ratio
1.	132 kV S/C Nirjuli-Dikrong transmission line	32.61:67.39
2.	400 kV D/C Ranganadi-Balipara transmission line	32.55:67.45

20. In case of 132 kV S/C Nirjuli-Dikrong transmission line, the petitioner has indicated that the deployment of equity to the extent of 67.39% is mainly due to direct equity from North East Council for Ranganadi project to the extent of Rs. 8333 lakh. In case of 400 kV D/C Ranganadi-Balipara transmission line, the petitioner has indicated that the deployment of equity to the extent of 67.45% is mainly due to direct equity from North East Council for Ranganadi project and in this asset the equity amount has not been indicated.

21. The petitioner has stated in the petition that the approved debt-equity ratio is 50:50. Therefore, equity has been adjusted in order to bring debt and equity ratio close to the approved debt-equity. Therefore, equity considered for the purpose of tariff is as under:

	Name of the assets	Equity as on 1.4.2007
1.	132 kV S/C Nirjuli-Dikrong transmission line	397.13
2.	400 kV D/C Ranganadi-Balipara transmission line	7108.01

RETURN ON EQUITY

22. 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.

23. The petitioner has claimed return on equity as on 1.4.2004 after accounting for equity on account of decapitalization on works for the period up to 31.3.2005. For the reasons recorded in para 22 above the petitioner shall be entitled to return on equity during the tariff period as under.

Name of the Element	Equity	(Rs. in lakh) Return in Equity	
		2007-08	2008-09
(i) 132 kV S/C Nirjuli-Dikrong transmission line	397.13	55.60	55.60
(ii) 400 kV D/C Ranganadi-Balipara transmission line	7108.01	993.88	993.88

INTEREST ON LOAN

24. 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.”

25. The petitioner has claimed interest on loan in the following manner:
- (i) Gross loan opening has been considered from 2004-05 where in the loans of Bonds I, II and III and loans from UTI have been indicated as repaid up to the previous year;
 - (ii) Government of India loan repayment is from the year 2004-05;
 - (iii) 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;
 - (iv) Gross loan has been considered as notional loan. As the normative repayment of loan is less than the depreciation during the year, depreciation for the year has been taken as repayment and the net loan closing amount thus arrived is the net loan opening for the following year. The weighted average rate of interest on loan for respective years as per above has been multiplied to arrive at interest on loan.
26. In our calculation, the interest on loan has been worked out as detailed below:
- (i) Gross amount of loan, repayment of instalments and rate of interest as per the Form-13 of the petition have been used to work out weighted average rate of interest on actual loan;
 - (ii) Notional loan corresponding to additional capitalization from date of commercial operation to 31.3.2005 has been added to the loan amount as on the date of commercial operation to arrive at total

notional loan. This adjusted gross loan has been considered as normative loan for tariff calculation;

- (iii) For the purpose of calculating the interest on loan to be recovered in tariff, cumulative repayment up to 31.3.2004 as per the petition has been considered as repayment. Depreciation during 2004-05, 2005-06 and 2006-07 has been considered as repayment of the respective years. Average outstanding loan has thereafter been computed considering notional loan repayment equal to the depreciation allowed during the year 2007-08 and 2008-09;
- (iv) Weighted average rate of interest on actual loan worked out as per (i) above has been applied on the average loan during the year to arrive at the interest on loan.

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

Details of loan	(Rs. in lakh)			
	132 kV S/C Nirjuli-Dikrong transmission line		400 kV D/C Ranganadi-Balipara transmission line	
	2007-08	2008-09	2007-08	2008-09
Interest on loan				
Opening Gross Loan	397.13	397.13	7087.46	7087.46
Cumulative Repayment up to 31.3.2007	167.69	194.91	2660.34	3038.33
Net Loan-Opening	229.44	202.22	4427.12	4049.13
Repayment during the year	27.23	27.23	377.99	377.99
Net Loan-Closing	202.22	174.99	4049.13	3671.14
Average Loan	215.83	188.60	4238.12	3860.13
Weighted Average Rate of Interest on Loan	14.59%	14.59%	14.59%	14.59%
Interest	31.49	27.52	618.34	563.19

28. The detailed calculations in support of the weighted average rate of interest are contained in the annexure attached.

DEPRECIATION

29. 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.

30. The petitioner has claimed the depreciation on the capital cost of Rs. 794.26 lakh and Rs. 14186.60 lakh for the transmission lines. The petitioner has not indicated any cumulative depreciation recovery for the period up to 31.3.2004.

31. For the period 1.4.2007 to 31.3.2009 the depreciation works out to Rs. 27.23 lakh and Rs. 377.99 lakh respectively each year by applying rate of depreciation of 3.428% and 2.664%.

ADVANCE AGAINST DEPRECIATION

32. Advance Against Depreciation is permissible only if loan repayment in a year exceeds the depreciation, and the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year. Since notional loan repayment has been assumed to be equal to the depreciation recovered in tariff, no Advance Against Depreciation is admissible.

OPERATION & MAINTENANCE EXPENSES

33. 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

34. The petitioner in its affidavit dated 17.9.2007 has submitted that the transmission voltage in all the regions except NER is 400 kV and 220 kV and very few lines are of 132 kV voltage level, and keeping this in view, while working out total number of bays and the unit O&M rates for NER, the outgoing line feeders of voltage level up to 132 kV only were considered. It may be mentioned that in NER generally the main transmission lines are of 132 kV level and outgoing feeders are of 33 kV level with 132/33 kV ICTs. Due to omission of 33 kV voltage level outgoing line bays, the total number of bays considered for calculation purpose were less. Further, inadvertently, a few of 132 kV voltage level outgoing feeders were also not considered in the calculations submitted in the petition. Accordingly, the petitioner has revised the statement for the total number of bays

under operation in NER. The statement has been prepared considering the following bays which are in line with the methodology considered.

- (i) line bay up to voltage level of 132 kV;
- (ii) Outgoing line bays up to voltage level of 33 kV (distribution bays);
- (iii) Bus reactor line bays up to voltage level of 33 kV; and
- (iv) HV and LV bays with all the ICTs.

35. The petitioner has submitted a detailed statement of bays under operation as on 31.3.2005 in NER. The petitioner has prayed that for computation of O & M expenses, Form-2 filed with petition may be taken in to consideration and O & M expenses may be allowed accordingly.

36. Against the petitioner's claim based on per bay rates of Rs 39,84,930 and Rs. 41,44,330 for the years 2007-08 and 2008-09, per bay rates of Rs. 31,63,000 and Rs. 32,90,000 respectively have been applied for O & M expenses as per the 2004 regulations. Similarly, against the petitioner's claim based on per ckt. kilometre rate of Rs. 39,760 and Rs. 41,350 for the years 2007-08 and 2008-09, per kilometre rates of Rs. 25,500 and Rs. 26,600 respectively have been applied as laid down under the 2004 regulations.

37. The petitioner's entitlement to O & M expenses for ckt km and bays has been worked out as given hereunder:

(Rs. in lakh)

	132 kV S/C Nirjuli-Dikrong transmission line		400 kV D/C Ranganadi-Balipara transmission line		
	2007-08	2007-08		2007-08	2008-09
O&M expenses for 22.29 Ckt km line length	5.68	5.93	O&M expenses for 332.67 Ckt-km line length	84.83	88.49
O&M expenses for 1 bay	31.63	32.90	O&M expenses for 2 bays	63.26	65.80
TOTAL	37.31	38.83	TOTAL	148.09	154.29

38. The petitioner has submitted that the wage revision of its employees is due with effect from 1.1.2007. Therefore, 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

39. 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, the capital expenditure on the date of commercial operation is Rs. 794.26 lakh and Rs. 14216.02 lakh, respectively 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 as on 1.4.2004 are given hereunder:

Name of the Element	Date of Commercial Operation	Capital Expenditure (Rs. in lakh) on the date of commercial operation
(i) 132 kV S/C Nirjuli-Dikrong transmission line	1.10.2001	794.26
(ii) 400 kV D/C Ranganadi-Balipara transmission line	1.1.2003	14216.02

(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 @ 10.25% based on SBI PLR as on 1.4.2004, which has been considered .

40. The necessary computations in support of interest on working capital are appended hereinbelow:

(Rs. in lakh)

	132 kV S/C Nirjuli-Dikrong transmission line		400 kV D/C Ranganadi-Balipara transmission line	
	2007-08	2008-09	2007-08	2008-09
Maintenance Spares	10.95	11.60	182.17	193.10
O & M expenses	3.11	3.24	12.34	12.86
Receivables	25.95	25.55	365.96	357.86
Total	40.01	40.39	560.47	563.81
Rate of Interest	10.25%	10.25%	10.25%	10.25%
Interest	4.10	4.14	57.45	57.79

TRANSMISSION CHARGES

41. The transmission charges being allowed for the transmission system are summarised below:

(Rs.in lakh)

	132 kV S/C Nirjuli-Dikrong transmission line		400 kV D/C Ranganadi-Balipara transmission line	
	2007-08	2008-09	2007-08	2008-09
Depreciation	27.23	27.23	377.99	377.99
Interest on Loan	31.49	27.52	618.34	563.19
Return on Equity	55.60	55.60	993.88	993.88
Advance against Depreciation	0.00	0.00	0.00	0.00
Interest on Working Capital	4.10	4.14	57.45	57.79
O & M Expenses	37.31	38.83	148.09	154.29
Total	155.73	153.31	2195.75	2147.14

42. 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. .

43. The petitioner has sought approval for the reimbursement of expenditure of Rs. 1,25,461.95/- incurred on publication of notices in the newspapers. The petitioner shall claim reimbursement of the said expenditure directly from the respondent in one installment. The petitioner has also sought reimbursement of filing fee of Rs.5 lakh paid. A final view on reimbursement of filing fee is yet to be taken by the Commission for which views of the stakeholder have been called for. The view taken on consideration of the comments received shall apply in the present case as regards reimbursement of filing fee.

44. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's order dated 27.4.2007. The provisional billing of tariff shall be adjusted in the light of final tariff now approved by us.

45. This order disposes of Petition No. 84/2006.

Sd/-
(R.KRISHNAMOORTHY)
MEMBER
New Delhi dated the 7th March 2008

sd/-
(BHANU BHUSHAN)
MEMBER

132 kV S/C Nirjuli-Dikrong transmission line

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(Rs. in Lakh)

	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
1	Bond-I (Issue-I)					
	Gross Loan opening	7.00	7.00	7.00	7.00	7.00
	Cumulative Repayment upto DOCO/previous year	7.00	7.00	7.00	7.00	7.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
2	Bond-I (Issue-II)					
	Gross Loan opening	6.00	6.00	6.00	6.00	6.00
	Cumulative Repayment upto DOCO/previous year	6.00	6.00	6.00	6.00	6.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
3	Bond-I (Issue-III)					
	Gross Loan opening	14.00	14.00	14.00	14.00	14.00
	Cumulative Repayment upto DOCO/previous year	14.00	14.00	14.00	14.00	14.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
4	Bond-II (Issue-I)					
	Gross Loan opening	26.00	26.00	26.00	26.00	26.00
	Cumulative Repayment upto DOCO/previous year	26.00	26.00	26.00	26.00	26.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
5	Bond-II (Issue-II)					
	Gross Loan opening	2.00	2.00	2.00	2.00	2.00
	Cumulative Repayment upto DOCO/previous year	2.00	2.00	2.00	2.00	2.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00	

	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
6	Bond-III(Issue-I)					
	Gross Loan opening	2.00	2.00	2.00	2.00	2.00
	Cumulative Repayment upto DOCO/previous year	2.00	2.00	2.00	2.00	2.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
7	Bond-III (Issue-II)					
	Gross Loan opening	13.00	13.00	13.00	13.00	13.00
	Cumulative Repayment upto DOCO/previous year	13.00	13.00	13.00	13.00	13.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
8	UTI					
	Gross Loan opening	16.00	16.00	16.00	16.00	16.00
	Cumulative Repayment upto DOCO/previous year	16.00	16.00	16.00	16.00	16.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
9	GOI					
	Gross Loan opening	173.00	173.00	173.00	173.00	173.00
	Cumulative Repayment upto DOCO/previous year	0.00	10.00	23.00	39.00	56.00
	Net Loan-Opening	173.00	163.00	150.00	134.00	117.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	10.00	13.00	16.00	17.00	17.00
	Net Loan-Closing	163.00	150.00	134.00	117.00	100.00
	Average Loan	168.00	156.50	142.00	125.50	108.50
	Rate of Interest	14.59%	14.59%	14.59%	14.59%	14.59%
	Interest	24.51	22.83	20.72	18.31	15.83
	Total Loan					
	Gross Loan opening	259.00	259.00	259.00	259.00	259.00
	Cumulative Repayment upto DOCO/previous year	86.00	96.00	109.00	125.00	142.00
	Net Loan-Opening	173.00	163.00	150.00	134.00	117.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	10.00	13.00	16.00	17.00	17.00
	Net Loan-Closing	163.00	150.00	134.00	117.00	100.00
	Average Loan	168.00	156.50	142.00	125.50	108.50
	Rate of Interest	14.59%	14.59%	14.59%	14.59%	14.59%
	Interest	24.51	22.83	20.72	18.31	15.83

400 kV D/C Ranganadi-Balipara transmission line

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(Rs. in Lakh)

	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
1	Bond-I (Issue-I)					
	Gross Loan opening	128.00	128.00	128.00	128.00	128.00
	Cumulative Repayment up to DOCO/previous year	128.00	128.00	128.00	128.00	128.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
2	Bond-I (Issue-II)					
	Gross Loan opening	107.00	107.00	107.00	107.00	107.00
	Cumulative Repayment up to DOCO/previous year	107.00	107.00	107.00	107.00	107.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
3	Bond-I (Issue-III)					
	Gross Loan opening	249.00	249.00	249.00	249.00	249.00
	Cumulative Repayment up to DOCO/previous year	249.00	249.00	249.00	249.00	249.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
4	Bond-II (Issue-I)					
	Gross Loan opening	457.00	457.00	457.00	457.00	457.00
	Cumulative Repayment up to DOCO/previous year	457.00	457.00	457.00	457.00	457.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
5	Bond-II (Issue-II)					
	Gross Loan opening	27.00	27.00	27.00	27.00	27.00
	Cumulative Repayment up to DOCO/previous year	27.00	27.00	27.00	27.00	27.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00

	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
6	Bond-III(Issue-I)					
	Gross Loan opening	37.00	37.00	37.00	37.00	37.00
	Cumulative Repayment up to DOCO/previous year	37.00	37.00	37.00	37.00	37.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
7	Bond-III (Issue-II)					
	Gross Loan opening	230.00	230.00	230.00	230.00	230.00
	Cumulative Repayment up to DOCO/previous year	230.00	230.00	230.00	230.00	230.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
8	UTI					
	Gross Loan opening	291.00	291.00	291.00	291.00	291.00
	Cumulative Repayment up to DOCO/previous year	291.00	291.00	291.00	291.00	291.00
	Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
	Average Loan	0.00	0.00	0.00	0.00	0.00
	Rate of Interest					
	Interest	0.00	0.00	0.00	0.00	0.00
9	GOI					
	Gross Loan opening	3101.00	3101.00	3101.00	3101.00	3101.00
	Cumulative Repayment up to DOCO/previous year	0.00	180.00	422.00	711.00	1021.00
	Net Loan-Opening	3101.00	2921.00	2679.00	2390.00	2080.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	180.00	242.00	289.00	310.00	310.00
	Net Loan-Closing	2921.00	2679.00	2390.00	2080.00	1770.00
	Average Loan	3011.00	2800.00	2534.50	2235.00	1925.00
	Rate of Interest	14.59%	14.59%	14.59%	14.59%	14.59%
	Interest	439.30	408.52	369.78	326.09	280.86
	Total Loan					
	Gross Loan opening	4627.00	4627.00	4627.00	4627.00	4627.00
	Cumulative Repayment up to DOCO/previous year	1526.00	1706.00	1948.00	2237.00	2547.00
	Net Loan-Opening	3101.00	2921.00	2679.00	2390.00	2080.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	180.00	242.00	289.00	310.00	310.00
	Net Loan-Closing	2921.00	2679.00	2390.00	2080.00	1770.00
	Average Loan	3011.00	2800.00	2534.50	2235.00	1925.00
	Rate of Interest	14.59%	14.59%	14.59%	14.59%	14.59%
	Interest	439.30	408.52	369.78	326.09	280.86