

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

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

**Petition No. 49/2007**

**In the matter of**

Approval of final transmission tariff for 40% Fixed Series Compensation on existing 400 kV S/C Rengali-Indravati transmission line associated with augmentation of capacity of Gazuwaka HVDC back-to-back project in Eastern Region for the period from 1.10.2005 to 31.3.2009..

**And in the matter of**

Power Grid Corporation of India Ltd., Gurgaon

**.... Petitioner**

Vs

1. Bihar State Electricity Board, Patna
2. West Bengal State Electricity Board, Kolkata
3. Orissa Power Transmission Corporation Ltd., Bhubaneswar
4. Damodar Valley Corporation, Kolkata
5. Power Dept., Govt. of Sikkim, Gangtok
6. Jharkhand State Electricity Board, Ranchi

**.....Respondents**

**The following were present:**

1. Shri P.C.Pankaj, PGCIL
2. Shri U.K. Tyagi, PGCIL
3. Shri B.C.Pant, PGCIL
4. Shri C.Kannan, PGCIL
5. Shri A.K.Nagpal, PGCIL
6. Shri R.B.Sharma, Advocate, BSEB

**ORDER  
(DATE OF HEARING: 14.8.2007)**

The petition has been filed for approval of tariff for 40% Fixed Series Compensation (hereinafter referred to as "the transmissions assets") on the existing 400 kV S/C Rengali-Indravati transmission line, associated with augmentation of capacity of Gazuwaka HVDC back-to-back project (hereinafter referred to as "the project") in Eastern Region for the period from 1.10.2005 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") after accounting for additional capitalization of Rs. 90.50 lakh during

2005-06. The petitioner has also prayed for the reimbursement of expenditure from the beneficiaries incurred towards publishing notices in newspapers and the petition filing fee.

2. The investment approval for the implementation of the project was accorded by Ministry of Power vide letter dated 22.1.2002 at an estimated cost of Rs.76925 lakh, which included IDC of Rs. 9612 lakh. As per the investment approval, the project was to be completed within 36 months from the date of sanction, that is, by January 2005. The apportioned approved cost of the transmission assets is stated to be Rs. 2730 lakh. Subsequently, Ministry of Power vide its letter dated 6.1.2004 approved the revised commissioning schedule of the project. As per the revised schedule, the project was to be commissioned by June 2005. It was further noted that the cost of the project was estimated to be Rs. 73927 lakh.

3. The provisional transmission charges for the transmission assets, declared under commercial operation on 1.10.2005, were approved by the Commission in its order dated 15.12.2006 in Petition No. 79/2006. The present petition is for approval of final tariff.

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

	(Rs. in lakh)			
	<b>2005-06 (Pro rata)</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	25.33	52.06	52.06	52.06
Interest on Loan	39.11	77.60	73.28	68.19
Return on Equity	27.85	57.60	57.60	57.60
Advance against Depreciation	0.00	0.00	0.00	23.90
Interest on Working Capital	2.70	5.52	5.56	6.02
O & M Expenses	14.63	30.42	31.63	32.90
<b>Total</b>	<b>109.62</b>	<b>223.20</b>	<b>220.13</b>	<b>240.67</b>

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

(Rs. in lakh)

	<b>2005-06 (Pro rata)</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Maintenance Spares	13.68	14.09	14.94	15.84
O & M expenses	2.44	2.54	2.64	2.74
Receivables	36.54	37.20	36.69	40.11
Total	52.66	53.83	54.26	58.69
Rate of Interest	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>2.70</b>	<b>5.52</b>	<b>5.56</b>	<b>6.02</b>

6. The reply to the petition has been filed by Bihar State Electricity Board. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under section 64 of the Electricity Act, 2003.

### **CAPITAL COST**

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.

8. The petitioner has claimed additional capitalization of Rs. 90.50 lakh on works for the period from 1.10.2005 to 31.3.2006 over the capital expenditure of Rs. 1368.28 lakh as on the date of commercial operation.

9. While determining the provisional transmission tariff, the petitioner was directed to furnish the details of apportionment of approved cost of the

transmission assets corresponding to the estimated cost of Rs. 73927 lakh for the project, as indicated in Ministry of Power letter dated 6.1.2004.

10. The petitioner has clarified that sanctioned estimated cost of the project remains Rs. 76925 lakh, since Ministry of Power while extending the commissioning schedule from January 2005 to June 2005 had stated that the estimated completion cost of Rs. 73927 lakh for the project being less than the earlier approved cost of Rs. 76925 lakh, no fresh approval of the revised cost estimate by the central Government was required. In view of this, the apportioned approved cost of the transmission assets remains Rs. 2730 lakh.

**Additional capitalization -2005-06**

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 are given hereunder:

Year	Nature of expenditure
2005-06	Building = Rs. 25.30 lakh
	Sub-station = Rs. 65.20 lakh
	Total = Rs. 90.50 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, the additional capital expenditure of Rs. 90.50 lakh has been allowed.

**Time Over run**

14. As per the Ministry of Power letter dated 6.1.2004, the transmission assets were scheduled to be commissioned by June 2005. However, these assets were declared under commercial operation on 1.10.2005. Thus, there is delay of about 3 months in the commissioning.

15. The petitioner has explained that the Rengali sub-station falls in the high temperature zone of Orissa State where temperature shoots up to 50 degree during summer. In view of this, Labour Commissioner is stated to have advised to restrict the work between 11.30 A.M. to 3.30 P.M. As stated by the petitioner, during twilight, it became very hard to carry out erection work of electrical nature, and this hampered the progress of work. The petitioner has also explained that Orissa State is in the zone of heavy and unpredictable rainfall. Due to excessive rainfall, work of electrical nature could not be carried out as there was danger of electric shock which could result in loss of life. The period of delay of 180 days from July to September 2004 and July to September 2005 was on account of heavy rains and delay of 61 days during summer months of 2004 and 2005 was on account of hot weather conditions.

16. BSEB in its reply has stated that the problems given by the petitioner for delay in commissioning of the transmission assets were of general nature.

17. We have considered the matter in right earnest. There is satisfactory explanation for the net delay of about 3 months in completion of the transmission line, and is considered to be beyond the control of the petitioner.

18. While explaining benefits accrued on account of installation of 40% Fixed Series Compensation (FSC) at Rengali end of 400 kV S/C Rengali-Indravati transmission line, the petitioner has submitted that Southern Region is facing deficit of peak power and adequate capacity of inter-regional link between Eastern and Southern Regions is of mutual benefit of both the regions. It has been stated that with the installation of 40% FSC at Rengali end, in case of tripping of Talcher-Kolar HVDC bi-pole line, the power flow up to Jeypore via Indravati to Southern Region can be enhanced up to 700 MW from the present capacity of 500 MW. Also, according to the petitioner, series capacitor helps in improving short circuit capacity at Jeypore. Further, besides enhancing transmission capacity of the transmission line in Eastern Region it ensures transfer of power up to Jeypore with better voltage profile and increased reliability.

19. BSEB has stated that in the instant case it is not deriving any benefit. Further, according to the BSEB, National Electricity Policy mandates for framework transmission pricing should be sensitive to distance, direction and related to quantum of power flow.

20. The petitioner in its affidavit dated 6.9.2007 while responding to the objection filed by BSEB has submitted that benefits accruing out of the scheme had already been discussed in Standing Committee meetings and the matter was resolved during Standing Committee meeting of ER held on 26.9.2000 in CEA, whereat the representative of BSEB also participated. In view of this factual position, we over-rule the objection of BSEB.

21. It is seen that the estimated completion cost of Rs. 1937.68 lakh claimed by the petitioner in the present petition is within the apportioned approved cost of Rs. 2730 lakh. The petitioner has submitted that the main reason for cost variations between approved cost and the estimated completion cost is mainly because of non-payment of custom duty and reduction in IDC & IEDC.

22. Initial spares cost as per auditor's certificate is Rs 62.64 lakh which is 3.27% of the total estimated completion cost of Rs 1937.68 lakh. As per the 2004 regulations, cost of initial spares should not exceed 1.5% of original project cost. However, considering the cost of assets already commissioned and approved in Petition No. 138/2005, the combined cost of initial spares is within 1.5% of original project cost. Therefore, cost of initial spares of Rs 62.64 lakh in the present case is being allowed.

### **TOTAL CAPITAL COST**

23. Against the above background, gross block of Rs. 1458.78 lakh as on 31.3.2006 has been worked out for the purpose of tariff over the gross block of Rs. 1368.28 lakh as on the date of commercial operation.

### **DEBT- EQUITY RATIO**

24. Clause (2) of Regulation 54 of the 2004 regulations *inter alia* provides that,-

“(2) In case of the transmission system for which investment approval was accorded prior to 1.4.2004 and which are likely to be declared under commercial operation during the period 1.4.2004 to 31.3.2009, debt and equity in the ratio of 70:30 shall be considered:

Provided that where equity actually employed to finance the project is less than 30%, the actual debt and equity shall be considered for determination of tariff:

Provided further that the Commission may in appropriate cases consider equity higher than 30% for determination of tariff, where the transmission licensee is able to establish to the satisfaction of the

Commission that deployment of equity higher than 30% was in the interest of general public.”

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

26. The petitioner has considered debt-equity ratio of 71.92:28.08 as actually deployed on the date of commercial operation. The petitioner has further considered the amount of additional capitalization in the debt-equity ratio of 70:30. We have considered the debt-equity ratio of 71.92:28.08 as on the date of commercial operation. The additional capitalisation on works of Rs. 90.50 lakh has been segregated into debt and equity in the normative debt-equity ratio of 70:30 in view of Note 1 below Regulation 53. Accordingly, for the purpose of tariff, an amount of Rs. 384.28 lakh has been considered as equity as on 1.10.2005 and Rs. 411.43 lakh as on 1.4.2006.

### **RETURN ON EQUITY**

27. 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.

28. The petitioner has claimed return on equity of Rs. 384.28 lakh as on 1.10.2005 and equity of Rs. 411.43 lakh as on 1.4.2006. For the reasons recorded in para 26 above equity of Rs. 384.28 lakh has been considered as on 1.10.2005 and from 1.4.2006 onwards, equity of Rs. 411.43 lakh has been considered each year. However, tariff for the period 1.10.2005 to 31.3.2006 has been allowed on average equity of Rs. 397.86 lakh. Accordingly, the petitioner



shall be entitled to return on equity of Rs. 27.85 lakh during 2005-06 on pro rata basis and Rs. 57.60 lakh each year during 2006-09.

### **INTEREST ON LOAN**

29. 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.”

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

(i) Gross loan opening has been considered from 2005-06.

- (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) Loan for Bond XVIII has been drawn on 9.3.2006 for additional capital expenditure during 2005-06.
- (iv) To the total gross loan of 2005-06, notional loan amounting to Rs. 63.35 lakh corresponding to additional capital expenditure for the year 2005-06 has been added. The resultant amount has been considered as notional loan and weighted average rate of interest on loan for respective years as per above has been multiplied to arrive at interest on loan. Depreciation plus Advance Against Depreciation has been considered as repayment.

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

- (i) Gross amount of loan, repayment of instalments as per the loan allocation statement for 2005-06 has been prepared on the basis of loan allocation details submitted by the petitioner and rate of interest as given in the petition. The same is used to work out weighted average rate of interest on actual loan. The gross loan as per loan reconciliation has been considered as gross loan as on date of commercial operation.
- (ii) Notional loan arising out of additional capitalization from date of commercial operation to 31.3.2006 has been added in loan amount as on date of commercial operation to arrive at total notional loan. This adjusted gross loan has been considered as normative loan for tariff calculations.

- (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 :

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

- (iv) Moratorium in repayment of loan has been considered with reference to normative loan and if the normative repayment of loan during the year is less than the depreciation during the year, it has been considered as moratorium and depreciation during the year has been deemed as normative repayment of loan during the year.
- (v) 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.
- (vi) The date of the commercial operation of the asset is during 2005-06 and the petitioner has considered funding of additional capital expenditure during 2005-06 from Bond XVIII which is drawn w.e.f. 9.3.2006. As per methodology for the tariff block 2004-09, weighted average rate of interest has been worked out on average loan basis for Bond XVIII.

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

(Rs. in lakh)

Details of loan	2005-06 (Pro rata)	2006-07	2007-08	2008-09
Interest on Loan				
Opening Gross Loan	984.00	1047.35	1047.35	1047.35
Cumulative Repayment up to date of commercial operation/previous year	2.67	28.00	80.06	132.12
Net Loan-Opening	981.33	1019.35	967.29	915.23
Additions due to Additional Capitalisation	63.35	-	-	-
Repayment during the year	25.33	52.06	52.06	75.98
Net Loan-Closing	1019.35	967.29	915.23	839.26
Average Loan	1000.34	993.32	941.26	877.24
Weighted Average Rate of Interest on Loan	7.82%	7.81%	7.79%	7.77%
<b>Interest</b>	<b>39.11</b>	<b>77.60</b>	<b>73.28</b>	<b>68.19</b>

33. The detailed calculations in support of the weighted average rate of interest are contained in Annexure I attached.

### **DEPRECIATION**

34. 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.

35. The petitioner has claimed the depreciation on the capital cost of Rs. 1458.78 lakh.

36. The gross depreciable value of the transmission system is  $0.9 \times (\text{Rs } 1458.78 \text{ lakh}) = \text{Rs. } 1312.90 \text{ lakh}$ .

37. Depreciation works out to Rs. 25.33 lakh for the period 1.10.2005 to 31.3.2006 on average gross block of Rs. 1413.53 and Rs. 52.06 lakh each year for the period 1.4.2006 to 31.3.2009 on gross block of Rs. 1458.78 lakh by applying rates of depreciation of 3.5839% during 2005-06 and 3.5688% thereafter as shown below:

Details of Depreciation	(Rs. in lakh)			
	2005-06 (Pro rata)	2006-07	2007-08	2008-09
Gross block at the beginning of the period	1368.28	1458.78	1458.78	1458.78
Additional Capitalisation during the period	90.50	-	-	-
Gross Block at the end of the period	1368.28	1458.78	1458.78	1458.78
Rate of Depreciation	3.5839%	3.5688%	3.5688%	3.5688%
Depreciable Value (90%)	1272.18	1312.90	1312.90	1312.90
Balance Useful life of the asset	-	-	-	-
Remaining Depreciable Value	1272.18	1287.57	1235.51	1183.45
<b>Depreciation</b>	<b>25.33</b>	<b>52.06</b>	<b>52.06</b>	<b>52.06</b>

### **ADVANCE AGAINST DEPRECIATION**

38. 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

39. 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.

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

- (i) 1/10th of gross loan considered for tariff computation.
- (ii) Cumulative loan as well as repayment of notional loan considered during the year.
- (iii) Depreciation as claimed in the petition.

41. In our calculation, Advance Against Depreciation has been worked as under:

- (i) 1/10th of gross loan has been worked out from the gross notional loan as per para 32 above.
- (ii) Repayment of notional loan during the year has been considered as per para 32 above.
- (iii) Depreciation as worked out as per para 37 has been taken into account.

42. The details of Advance Against Depreciation allowed for the transmission scheme is given hereunder:

(Rs. in lakh)

<b>Details of Advance Against Depreciation</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
1/10th of Gross Loan(s)	98.40	104.74	104.74	104.74
Repayment of Loan	25.33	52.06	52.06	75.98
Minimum of the above	25.33	52.06	52.06	75.98
Depreciation during the year	25.33	52.06	52.06	52.06
(A) Difference	0.00	0.00	0.00	23.92
Cumulative Repayment of the Loan	28.00	80.06	132.12	208.09
Cumulative Depreciation/ Advance against Depreciation	25.33	77.39	129.45	181.51
(B) Difference	2.67	2.67	2.67	26.58
<b>Advance Against Depreciation Minimum of (A) and (B)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.92</b>

### **OPERATION & MAINTENANCE EXPENSES**

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

	<b>Year</b>				
	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
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

44. The petitioner has claimed O & M expenses for one bay, which have been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

(Rs. in lakh)

	<b>Year</b>			
	<b>2005-06 (Pro rata)</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
O&M expenses for one bay	14.63	30.42	31.63	32.90
<b>Total</b>	<b>14.63</b>	<b>30.42</b>	<b>31.63</b>	<b>32.90</b>

45. 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**

46. 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 Rs1368.28 lakh, 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.13.68 lakh as on 1.10.2005.

#### **(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 1.4.2005, which is in accordance with the 2004 regulations and has been allowed.

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

	(Rs. in lakh)			
	<b>2005-06 (Pro rata)</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Maintenance Spares	13.68	14.09	14.94	15.84
O & M expenses	2.44	2.54	2.64	2.74
Receivables	36.54	37.20	36.69	40.11
Total	52.66	53.83	54.26	58.69
Rate of Interest	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>2.70</b>	<b>5.52</b>	<b>5.56</b>	<b>6.02</b>

**TRANSMISSION CHARGES**

48. The capital cost and other relevant details are contained in the summary sheet attached as Annexure II. The transmission charges being allowed for the transmission system are summarised below:

(Rs. in lakh)

	<b>2005-06 (Pro rata)</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	25.33	52.06	52.06	52.06
Interest on Loan	39.11	77.60	73.28	68.19
Return on Equity	27.85	57.60	57.60	57.60
Advance against Depreciation	0.00	0.00	0.00	23.92
Interest on Working Capital	2.70	5.52	5.56	6.02
O & M Expenses	14.63	30.42	31.63	32.90
<b>Total</b>	<b>109.62</b>	<b>223.20</b>	<b>220.13</b>	<b>240.68</b>

49. 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. .

50. The petitioner has sought approval for the reimbursement of expenditure of Rs. 1,14,484/- 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.

51. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's order dated 15.12.2006 in Petition No. 79/2006. The provisional billing of tariff shall be adjusted in the light of final tariff now approved by us.

52. This order disposes of Petition No. 49/2007.

Sd/  
**(R.KRISHNAMOORTHY)**  
**MEMBER**  
New Delhi dated the 15th October 2007

sd/  
**(BHANU BHUSHAN)**  
**MEMBER**

## Annexure I

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>					
(Rs. in Lakh)					
	<b>Details of Loan</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
<b>1</b>	<b>Bond-XII</b>				
	Gross Loan opening	32.00	32.00	32.00	32.00
	Cumulative Repayment upto DOCO/previous year	0.00	2.67	5.33	8.00
	Net Loan-Opening	32.00	29.33	26.67	24.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	2.67	2.67	2.67	2.67
	Net Loan-Closing	29.33	26.67	24.00	21.33
	Average Loan	30.67	28.00	25.33	22.67
	Rate of Interest	9.70%	9.70%	9.70%	9.70%
	Interest	2.97	2.72	2.46	2.20
	Repayment Schedule		12 Annual instalments from 28.3.2006		
<b>2</b>	<b>Bond-XIII Option-I</b>				
	Gross Loan opening	402.00	402.00	402.00	402.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	33.50	67.00
	Net Loan-Opening	402.00	402.00	368.50	335.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	33.50	33.50	33.50
	Net Loan-Closing	402.00	368.50	335.00	301.50
	Average Loan	402.00	385.25	351.75	318.25
	Rate of Interest	8.63%	8.63%	8.63%	8.63%
	Interest	34.69	33.25	30.36	27.46
	Repayment Schedule		12 Annual instalments from 31.7.2006		
<b>3</b>	<b>Bond-XV</b>				
	Gross Loan opening	162.00	162.00	162.00	162.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	13.50
	Net Loan-Opening	162.00	162.00	162.00	148.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	13.50	13.50
	Net Loan-Closing	162.00	162.00	148.50	135.00
	Average Loan	162.00	162.00	155.25	141.75
	Rate of Interest	6.68%	6.68%	6.68%	6.68%
	Interest	10.82	10.82	10.37	9.47
	Repayment Schedule		12 Annual instalments from 23-2-2008		
<b>4</b>	<b>Bond- XVI</b>				
	Gross Loan opening	275.00	275.00	275.00	275.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	275.00	275.00	275.00	275.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	27.50
	Net Loan-Closing	275.00	275.00	275.00	247.50
	Average Loan	275.00	275.00	275.00	261.25
	Rate of Interest	7.10%	7.10%	7.10%	7.10%
	Interest	19.53	19.53	19.53	18.55
	Repayment Schedule		10 Annual instalments from 18-2-2009		
<b>5</b>	<b>Bond- XVII</b>				
	Gross Loan opening	81.00	81.00	81.00	81.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	81.00	81.00	81.00	81.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00

	Net Loan-Closing	81.00	81.00	81.00	81.00
	Average Loan	81.00	81.00	81.00	81.00
	Rate of Interest	7.39%	7.39%	7.39%	7.39%
	Interest	5.99	5.99	5.99	5.99
	Repayment Schedule		10 Annual Instalments from 22.9.2009		
<b>6</b>	<b>Bond- XVIII ( For ACE) (Date of Drawal 9.3.2006)</b>				
	Gross Loan opening	0.00	77.00	77.00	77.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	77.00	77.00	77.00
	Additions during the year	77.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	77.00	77.00	77.00	77.00
	Average Loan	38.50	77.00	77.00	77.00
	Rate of Interest	8.15%	8.15%	8.15%	8.15%
	Interest	3.14	6.28	6.28	6.28
	Repayment Schedule		12 annual inatalments from 9.3.2010		
<b>7</b>	<b>OBC</b>				
	Gross Loan opening	32.00	32.00	32.00	32.00
	Cumulative Repayment up to DOCO/previous year	2.67	5.33	8.00	10.67
	Net Loan-Opening	29.33	26.67	24.00	21.33
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	2.67	2.67	2.67	2.67
	Net Loan-Closing	26.67	24.00	21.33	18.67
	Average Loan	28.00	25.33	22.67	20.00
	Rate of Interest	8.60%	8.60%	8.60%	8.60%
	Interest	2.41	2.18	1.95	1.72
	Repayment Schedule		12 Annual Instalments from 22.3.2005		
	<b>Total Loan</b>				
	Gross Loan opening	984.00	1061.00	1061.00	1061.00
	Cumulative Repayment up to DOCO/previous year	2.67	8.00	46.83	99.17
	Net Loan-Opening	981.33	1053.00	1014.17	961.83
	Additions during the year	77.00	0.00	0.00	0.00
	Repayment during the year	5.33	38.83	52.33	79.83
	Net Loan-Closing	1053.00	1014.17	961.83	882.00
	Average Loan	1017.17	1033.58	988.00	921.92
	Rate of Interest	7.82%	7.81%	7.79%	7.77%
	<b>Interest</b>	79.55	80.75	76.92	71.66

## Annexure II

<b>Name of the Company:</b>				<b>PGCIL</b>			
<b>Name of the Element:</b>				<b>40% Fixed Series Compensation on existing 400 kV S/C Rengali- Indravati transmission line associated with augmentation of capacity of Gazuwaka HVDC back to back project in ER</b>			
<b>Actual DOCO:</b>				<b>1.10.2005</b>			
<b>Petition No.:</b>				<b>49/2007</b>			
<b>Tariff setting Period:</b>				<b>2004-09</b>			
(Rs.in lakh)							
<b>1</b>	<b>Capital Cost of the Project as on DOCO</b>						<b>1368.28</b>
<b>2</b>	<b>Additional Capitalisation</b>						<b>90.50</b>
			For the year 2005-06			90.50	
			Total			90.50	
<b>3</b>	<b>Total Capital Cost as on 1.4.2006(1+2)</b>						<b>1458.78</b>
<b>4</b>	<b>Means of Finance :</b>						
	<b>As on DOCO</b>			<b>As on 01.04.2006</b>			
	Debt	71.92%	984.00			71.80%	1047.35
	Equity	28.08%	384.28			28.20%	411.43
	Total	100.00%	1368.28			100.00%	1458.78
<b>5</b>	<b>Gross Loan:</b>						
			As on DOCO			984.00	
			Notional Loan corresponding to ACE during 2005-06			63.35	
			As on 1.4.2006			1047.35	
<b>6</b>	<b>Cumulative Repayment up to 31.3.2009 :</b>						<b>208.09</b>
			Up to DOCO			2.67	
			DOCO to 31.3.2009			205.43	
			Total			208.09	
<b>7</b>	<b>Balance Loan to be repaid beyond 31.3.2009 :</b>						<b>839.26</b>
<b>8</b>	<b>Depreciation recovered up to 31.3.2009 :</b>						<b>205.43</b>
				<b>Dep</b>	<b>AAD</b>	<b>Total</b>	
			DOCO to 31.3.2009	181.51	23.92	205.43	
			Total			205.43	
<b>9</b>	<b>Balance Depreciation to be recovered beyond 31.3.2009 :</b>						<b>1107.47</b>
			<b>Capital cost for the purpose of Depreciation</b>			<b>1368.28</b>	
			<b>ACE during 2005-06</b>			<b>90.50</b>	
			<b>Capital cost as 1.4.2006</b>			<b>1458.78</b>	
			<b>Less: Land Cost</b>			<b>0.00</b>	
						<b>1458.78</b>	
			<b>90% of Capital Cost as above</b>			<b>1312.90</b>	
			<b>Cum. Depreciation to be recovered up to 31.3.2009</b>			<b>205.43</b>	
			<b>Balance Depreciation to be recovered beyond 31.3.2009</b>			<b>1107.47</b>	