

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

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

**Petition No. 141/2007**

**In the matter of**

Determination of final transmission tariff of (i) 400 kV Siliguri sub-station (extension) (relevant portion), 400 kV Purnea sub-station (extension) (relevant portion) (excluding 400/220 kV, 315 MVA ICT at Purnea sub-station), 40% Fixed Series Compensation (FSC) and 5% to 15% Thyristor Controlled Series Compensation (TCSC) on each Ckt of Purnea-Muzaffarpur 400 kV D/C line at Purnea (DOCO 1.5.2006), (ii) 400/220 kV, 315 MVA ICT at Purnea sub-station (DOCO 1.6.2006) , (iii) 400/220 kV Muzaffarpur sub-station (New) (Excluding 2no, 400 kV bays at Muzaffarpur with line reactors for Muzaffarpur Gorkhpur line and ICT-II at Muzaffarpur sub-station), 220 kV Muzaffarpur sub-station (BSEB Kanti) Extension (DOCO 1.9.2006) and provisional transmission tariff of 400/220 kV, 315 MVA ICT-II at Muzaffarpur sub-station (DOCO 1.6.2007) associated with Tala HEP, East-North Inter-connector and Northern Region Transmission system from DOCO to 31.3.2009.

**And in the matter of**

Power Grid Corporation of India Limited, Gurgaon  
Vs

**..Petitioner**

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

**.....Respondents**

**The following were present:**

1. Shri V.V.Sharma, PGCIL
2. Shri Prashant Sharma, PGCIL
3. Shri B.C.Pant, PGCIL
4. Shri A.K.Nagpal, PGCIL
5. Shri M.G.Ramachandran, Advocate, PGCIL
6. Shri R.B.Sharma, Advocate, BSEB

**ORDER  
(DATE OF HEARING: 10.1.2008)**

This petition has been filed for approval of transmission charges for (i) 400 kV Siliguri sub-station (extension) (relevant portion), 400 kV Purnea sub-station (extension) (relevant portion) (excluding 400/220 kV, 315 MVA ICT at Purnea sub-

station), 40% Fixed Series Compensation (FSC) and 5% to 15% Thyristor Controlled Series Compensation (TCSC) on each Ckt of Purnea-Muzaffarpur 400 kV D/C line at Purnea, (ii) 400/220 kV, 315 MVA ICT at Purnea sub-station, (iii) 400/220 kV Muzaffarpur sub-station (New) (Excluding 2 No, 400 kV bays at Muzaffarpur with line reactors for Muzaffarpur Gorkhpur line and ICT-II at Muzaffarpur sub-station), 220 kV Muzaffarpur sub-station (BSEB Kanti) Extension associated with Tala HEP, East-North Inter-connector and Northern Region Transmission system (the transmission system) from the date of commercial operation 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 2006-07. 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. In this application, the petitioner also sought approval of provisional tariff in respect of 400/220 kV, 315 MVA ICT-II at Muzaffarpur sub-station. The provisional transmission charges for this assets covered in the present petition were approved by the Commission in its order dated 10.1.2008. The provisional transmission charges for the other transmission assets covered under the transmission system were approved by the Commission in its order dated 29.1.2007 in Petition No.148/2006. 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. | 400 kV Siliguri sub-station (extension) (relevant portion), 400 kV Purnea sub-station (extension) (relevant portion) (excluding 400/220 kV, 315 MVA ICT at Purnea sub-station), 40% Fixed Series Compensation (FSC) and 5% to 15% Thyristor Controlled Series Compensation (TCSC) on each Ckt of Purnea-Muzaffarpur 400 kV D/C line at Purnea <b>(Asset-I)</b> | 1.5.2006  |
| 2. | 400/220 kV, 315 MVA ICT at Purnea sub-station <b>(Asset-II)</b>  | 1.6.2006  |
| 3. | 400/220 kV Muzaffarpur sub-station (New) (Excluding 2 No, 400 kV bays at Muzaffarpur with line reactors for Muzaffarpur Gorkhpur line and ICT-II at Muzaffarpur sub-station), 220 kV Muzaffarpur sub-station (BSEB Kanti) Extension <b>(Asset-III)</b>   | 1.9.2006  |

3. The administrative approval and expenditure sanction for the transmission system was accorded by the Central Government in Ministry of Power vide letter dated 2.7.2003 at an estimated cost of Rs. 198070 lakh (2nd quarter, 2000 price level), which included IDC of Rs. 21792 lakh. Subsequently, revised cost estimate for the transmission system was approved by Ministry of Power vide its letter dated 29.9.2005 at an estimated cost of Rs. 248388 lakh which included an IDC of Rs.14744 lakh with debt-equity ratio of 70:30. The transmission system is to be implemented by the petitioner and a JV Company (Powerlinks Transmission Ltd.) with following details of approved cost:

- (i) Petitioner's portion: Rs. 87210 lakh which includes IDC of Rs. 2574 lakh;
- (ii) JV portion: Rs. 161178 lakh which includes IDC of Rs. 12170 lakh.

4. The details of the apportioned approved cost, the estimated completion cost, etc. of the assets noted at para 2 above are as under:

(Rs. in lakh)

| Name of the assets | Apportioned approved cost | Capital expenditure as on the date of commercial operation | Capital Expenditure from the date of commercial operation to 31.3.2007 | Balance Expenditure | Total estimated completion cost |
|--------------------|---------------------------|--|--|---------------------|---------------------------------|
| Asset- I           | 11667.00                  | 10387.42   | 108.19   | 235.81              | 10731.42                        |

|           |         |         |        |         |         |
|-----------|---------|---------|--------|---------|---------|
| Asset-II  | 1368.00 | 1005.25 | 0.00   | 95.00   | 1100.25 |
| Asset-III | 6673.00 | 4635.69 | 304.00 | 1245.00 | 6184.69 |

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

(Rs.in lakh)

|                              | Asset- I              |         |         | Asset-II              |         |         | Asset-II              |         |         |
|------------------------------|-----------------------|---------|---------|-----------------------|---------|---------|-----------------------|---------|---------|
|                              | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 |
| Depreciation                 | 347.82                | 381.39  | 381.39  | 30.16                 | 36.19   | 36.19   | 99.05                 | 174.60  | 174.60  |
| Interest on Loan             | 413.61                | 432.92  | 409.50  | 37.39                 | 42.86   | 40.64   | 127.54                | 227.48  | 215.68  |
| Return on Equity             | 373.62                | 409.85  | 409.85  | 29.65                 | 35.57   | 35.57   | 116.63                | 206.32  | 206.32  |
| Advance against Depreciation | 0.00                  | 0.00    | 0.00    | 0.00                  | 0.00    | 0.00    | 0.00                  | 0.00    | 0.00    |
| Interest on Working Capital  | 38.43                 | 42.72   | 43.40   | 3.88                  | 4.74    | 4.84    | 13.97                 | 24.97   | 25.45   |
| O & M Expenses               | 334.62                | 379.56  | 394.80  | 50.70                 | 63.26   | 65.80   | 195.20                | 347.93  | 361.90  |
| Total                        | 1508.09               | 1646.43 | 1638.94 | 151.78                | 182.62  | 183.04  | 552.38                | 981.30  | 983.95  |

6. 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-II              |         |         |
|--------------------|-----------------------|---------|---------|-----------------------|---------|---------|-----------------------|---------|---------|
|                    | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 |
| Maintenance Spares | 104.42                | 110.70  | 117.34  | 10.05                 | 10.56   | 11.19   | 47.88                 | 51.07   | 54.14   |
| O & M expenses     | 30.42                 | 31.63   | 32.90   | 5.07                  | 5.27    | 5.48    | 27.89                 | 28.99   | 30.16   |
| Receivables        | 274.20                | 274.41  | 273.16  | 30.36                 | 30.44   | 30.51   | 157.82                | 163.55  | 163.99  |
| Total              | 409.03                | 416.73  | 423.40  | 45.48                 | 46.26   | 47.18   | 233.58                | 243.62  | 248.29  |
| Rate of Interest   | 10.25%                | 10.25%  | 10.25%  | 10.25%                | 10.25%  | 10.25%  | 10.25%                | 10.25%  | 10.25%  |
| Interest           | 38.43                 | 42.71   | 43.40   | 3.88                  | 4.74    | 4.84    | 13.97                 | 24.97   | 25.45   |

7. The reply to the petition has been filed by Bihar State Electricity Board and West Bengal State Electricity Distribution Company Limited (WBSEDCL) the successor entity of West Bengal State Electricity Board. 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.

8. BSEB in its reply has raised certain issues. The issues are discussed in the first instance.

9. BSEB has expressed reservation on the issue of allocation of power from Tala HEP allowed by Ministry of Power to Eastern Region constituents. It has been stated that Ministry of Power has swapped equivalent thermal capacity at Farakka and Kahalgaon STPS with the capacity at Tala HEP. This has resulted in reduced energy availability to ER constituents because Tala HEP is run-of-river project and maximum generation is in summer/monsoon months whereas generation from Farakka and Kehalgaon STPS is available on round-the-year basis. It has been further stated that the swapping arrangement has considerably increased the transmission charges in ER without giving any benefit in terms of additional power. BSEB has computed the average pooled generation cost of Farakka and Kahalgaon STPS of NTPC as Rs 1.70 (approx.) per KWh whereas the cost of Tala HEP is Rs 1.84 per KWh including trading margin of PTC. BSEB submitted that transmission assets associated with Tala HEP from Tala to Muzzaffarpur, pooled with regional tariff of ER should be segregated from ER regional tariff and recovered from ultimate users of the said asset by invoking provisions of Regulation 12 (Power to remove difficulties) and Regulation 13 (Power to relax) of the 2004 regulations.

10. It is to be clarified that function of allocation of power from the central sector generating stations is in the domain of Ministry of Power. BSEB should take up this issue with concerned authorities for redressal of its grievances in this regard, if any.

11. The petitioner has submitted that Ministry of Power vide its letter dated 7.7.2006 has issued allocation of power from Tala HEP. Based on the above allocation of power from Tala HEP and/or allocation of the displaced thermal power of the Eastern Region, the total shared allocation to Eastern Region beneficiaries from central generating stations would be determined. The transmission charges of the assets covered in the present petition would be added to ERTS and would be shared

in proportion of the MW share allocation of each beneficiaries from the total Central sector power in the Eastern Region. Regarding segregation of transmission charges, the petitioner has informed that prior to construction of assets, Bulk Power Transmission Agreement was signed with ER respondents including BSEB for Tala Transmission System on 9.1.2003; for ER-NR interconnection, joint Bulk Power Transmission Agreement with NR respondents was signed. The transmission charges are to be shared by BSEB in accordance with the Bulk Power Transmission Agreement.

### **CAPITAL COST**

12. 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.

13. The petitioner has claimed tariff after accounting for additional capitalization in respect of Asset-I and Asset-III up to 31.3.2007 as given in the table below para 4 above.

### **ADDITIONAL CAPITALIZATION 2006-07**

14. 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.”

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

| Asset-I                     | Asset-III   |
|-----------------------------|---|
| Nature of expenditure       | Nature of expenditure                                       |
| Buildings = Rs. 108.19 lakh | Buildings = Rs. 74.00 lakh<br>Sub-station = Rs. 230.00 lakh |
|                             | Total = Rs. 304.00 lakh                                     |

16. 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.

**Time Over-run**

17. As per the original approval, the transmission scheme was scheduled to be commissioned by June 2006. Asset-I was commissioned one month ahead of schedule. The commissioning of Asset-II is in accordance with the specified schedule. Asset-III was commissioned after 3 months of the scheduled date. The petitioner has explained following reasons for delay in commissioning of Asset-III:

- (i) Two general assembly elections in Bihar during February 2005 and November 2005 and Panchayat elections scheduled in April and May 2006, adversely affected the progress of site works and mobilization of men, material as well as T & P for around one month on each occasion;

(ii) There had been firing incident at site on 29.4.2006 after clash between armed home guards and local labour leading to one fatal injury. Besides, there had been massive fire incidents by violent mob and various materials, T & P, etc. were damaged. All the working groups got demobilized for restoration of normalcy. Remobilisation of manpower and arrangement of damaged materials took considerable time. Copies of newspaper cuttings reporting violence in the area has been attached with the application;

(iii) The progress of work was affected due to above mentioned reasons for about three and half months.

18. In view of above, it has been submitted that delay in completion of the project was beyond the control of the petitioner.

19. We have considered the matter in right earnest. There is satisfactory explanation from the petitioner for the entire delay in completion of the transmission line. Therefore, the delay in commissioning of line is considered to be beyond the control of the petitioner and is condoned.

20. WBSEDC has stated that Asset-I and Asset-III have been commissioned prior to commencement of scheduling of Tala Power. The first unit at Tala HEP was commissioned on 31.3.2007, thus date of commercial operation should have been postponed. It is noted from the records that the issue of early commissioning for the Asset-I and Asset-II was discussed in commercial Committee meeting, of Eastern Region on 7.7.2007. After agreeing in ERPC forum, objection in respect of early commissioning is not reasonable.

**TOTAL CAPITAL COST**



21. 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 31.3.2007 | Total capital expenditure |
| Asset- I      | 10387.42   | 108.19   | 10495.61                  |
| Asset-II      | 1005.25  | 0.00   | 1005.25                   |
| Asset-III     | 4635.69  | 304.00   | 4939.69                   |
| <b>Total</b>  | <b>16028.36</b>                                    | <b>412.19</b>                                  | <b>16440.55</b>           |

### **DEBT- EQUITY RATIO**

22. 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.”

23. 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.

24. The petitioner has considered debt-equity ratio of 72.13:27.87, 74.72:25.28 and 70.18:29.82 for Asset-I, Asset-II and Asset-III respectively, 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 for the transmission Asset-I and Asset-III. In our calculations, actual debt-equity ratio as on the date of commercial operation has been considered and for the additional capital expenditure approved in the ratio of 70:30 in accordance with the 2004 regulations. 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 | Additional capital expenditure during 2006-07 | Capital cost as on 1.4.2007 | Addition of equity | Equity considered as on 1.4.2007 |
|--------------|---|--|---|-----------------------------|--------------------|----------------------------------|
| Asset- I     | 10387.42  | 2895.06                                    | 108.19  | 10495.61                    | 32.46              | 2927.52                          |
| Asset-II     | 1005.25   | 254.10                                     | 0.00  | 1005.25                     | 0.00               | 254.10                           |
| Asset-III    | 4635.69   | 1382.49                                    | 304.00  | 4939.69                     | 91.20              | 1473.69                          |
| <b>Total</b> | <b>16028.36</b>                                 | <b>4531.65</b>                             | <b>412.19</b>                                 | <b>16440.55</b>             | <b>123.66</b>      | <b>4655.31</b>                   |

### **RETURN ON EQUITY**

25. 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.

26. Equity has been considered as on the date of commercial operation and as on 1.4.2007 onwards as given in the table in para 24 above. However, tariff for the period from date of commercial operation to 31.3.2007 has been allowed on average equity. Accordingly, the petitioner shall be entitled to return on equity as under:

(Rs. in lakh)

| Name of the assets | Equity as on the date of commercial operation | Addition due to additional capitalization | Average equity | Return on equity   |         |         |
|--------------------|---|---|----------------|--------------------|---------|---------|
|                    |   |   |                | 2006-07 (Pro rata) | 2007-08 | 2008-09 |
| Asset- I           | 2895.06                                       | 32.46                                     | 2911.29        | 373.62             | 409.85  | 409.85  |

|           |         |       |         |        |        |        |
|-----------|---------|-------|---------|--------|--------|--------|
| Asset- II | 254.10  | 0.00  | 254.10  | 29.65  | 35.57  | 35.57  |
| Asset-III | 1382.49 | 91.20 | 1428.09 | 116.63 | 206.32 | 206.32 |

### **INTEREST ON LOAN**

27. 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.”

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

(i) Gross loans opening has been considered from 2006-07.;

- (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) Besides Bonds DX and XVI, foreign loan IBRD-II has been utilised. For Asset-I and II, Bond XIX has been considered for additional capitalisation purpose during 2006-07;
- (iv) To the total gross loan of 2006-07, notional loan corresponding to additional capital expenditure for 2006-07 has been added. This resulting amount has been considered as notional loan and the weighted average rate of interest on loan for respective years as per above has been multiplied to arrive at interest on loan, considering (depreciation + AAD) as repayment.

29. 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 submitted by the petitioner have been used to work out weighted average rate of interest on actual loan.
- (ii) Notional loan arising out of additional capitalization from date of commercial operation to 31.3.2007 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 :

Actual repayment of actual loan during the year

----- X Opening balance of normative  
Opening balance of actual loan during the year 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.

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

(Rs. in lakh)

| Details of loan                            | Asset-I               |         |         | Asset-II              |         |         | Asset-III             |         |         |
|--|-----------------------|---------|---------|-----------------------|---------|---------|-----------------------|---------|---------|
|  | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 |
| Opening Gross Loan                         | 7492.36               | 7568.09 | 7568.09 | 751.15                | 751.15  | 751.15  | 3253.20               | 3466.00 | 3466.00 |
| Cumulative Repayment                       | 0.00                  | 347.82  | 729.21  | 0.00                  | 30.16   | 66.35   | 0.00                  | 99.05   | 273.65  |
| Net Loan-Opening                           | 7492.36               | 7220.27 | 6838.89 | 751.15                | 720.99  | 684.80  | 3253.20               | 3366.95 | 3192.35 |
| Additions due to Additional Capitalisation | 75.73                 |         |         | 0.00                  |         |         | 212.80                |         |         |
| Repayment during the year                  | 347.82                | 381.39  | 381.39  | 30.16                 | 36.19   | 36.19   | 99.05                 | 174.60  | 174.60  |
| Net Loan-Closing                           | 7220.27               | 6838.89 | 6457.50 | 720.99                | 684.80  | 648.61  | 3366.95               | 3192.35 | 3017.74 |
| Average Loan                               | 7356.32               | 7029.58 | 6648.19 | 736.07                | 702.90  | 666.71  | 3310.08               | 3279.65 | 3105.04 |
| Weighted Average Rate of Interest on Loan  | 6.13%                 | 6.16%   | 6.16%   | 6.10%                 | 6.10%   | 6.10%   | 6.82%                 | 6.94%   | 6.95%   |
| <b>Interest</b>                            | 413.61                | 432.92  | 409.50  | 37.39                 | 42.86   | 40.64   | 131.78                | 227.48  | 215.68  |

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

**DEPRECIATION**

32. 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.

33. Depreciation allowed has been worked out as below:

(Rs.in lakh)

|  |         |          |          |
|--|---------|----------|----------|
|  | Asset-I | Asset-II | Asset-II |
|--|---------|----------|----------|

| Details of Depreciation                            | 2006-07<br>(Pro rata) | 2007-08  | 2008-09  | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 |
|--|-----------------------|----------|----------|-----------------------|---------|---------|-----------------------|---------|---------|
| Gross block as on the date of commercial operation | 10387.42              | 10495.61 | 10495.61 | 1005.25               | 1005.25 | 1005.25 | 4635.69               | 4939.69 | 4939.69 |
| Additional Capitalisation during 2006-07           | 108.19                |          |          | 0.00                  |         |         | 304.00                |         |         |
| Gross Block at the end of the year                 | 10495.61              | 10495.61 | 10495.61 | 1005.25               | 1005.25 | 1005.25 | 4939.69               | 4939.69 | 4939.69 |
| Rate of Depreciation                               | 3.6340%               | 3.6338%  | 3.6338%  | 3.6000%               | 3.6000% | 3.6000% | 3.5466%               | 3.5347% | 3.5347% |
| Depreciable Value (90%)                            | 9397.36               | 9446.05  | 9446.05  | 904.73                | 904.73  | 904.73  | 4149.69               | 4286.49 | 4286.49 |
| Remaining Depreciable Value                        | 9397.36               | 9098.23  | 8716.84  | 904.73                | 874.57  | 838.38  | 4149.69               | 4187.44 | 4012.84 |
| <b>Depreciation</b>                                | 347.82                | 381.39   | 381.39   | 30.16                 | 36.19   | 36.19   | 99.05                 | 174.60  | 174.60  |

### **ADVANCE AGAINST DEPRECIATION**

34. 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

35. 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.

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

### **OPERATION & MAINTENANCE EXPENSES**

37. 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 |

38. The petitioner has claimed O & M expenses for 12 bays for Asset-I, 2 bays for Asset - II and 11 bays for Asset-III which have been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

| (Rs. in lakh)            |                       |               |               |                         |                       |              |              |                          |                       |               |               |
|--------------------------|-----------------------|---------------|---------------|-------------------------|-----------------------|--------------|--------------|--------------------------|-----------------------|---------------|---------------|
|                          | 2006-07<br>(Pro rata) | 2007-08       | 2008-09       |                         | 2006-07<br>(Pro rata) | 2007-08      | 2008-09      |                          | 2006-07<br>(Pro rata) | 2007-08       | 2008-09       |
| O&M expenses for 12 bays | 334.62                | 379.56        | 394.80        | O&M expenses for 2 bays | 50.70                 | 63.26        | 65.80        | O&M expenses for 11 bays | 195.195               | 347.93        | 361.90        |
| <b>Total</b>             | <b>334.62</b>         | <b>379.56</b> | <b>394.80</b> | <b>Total</b>            | <b>50.70</b>          | <b>63.26</b> | <b>65.80</b> | <b>Total</b>             | <b>195.195</b>        | <b>347.93</b> | <b>361.90</b> |

39. 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**

40. 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. 103.87 lakh, Rs.10.05 lakh and Rs. 46.36 lakh for Asset-I, Asset-II and Asset-III, respectively as on date of commercial operation. The necessary details are given hereunder:

| Transmission assets | Date of Commercial Operation | Capital Expenditure (Rs. in lakh) on the date of commercial operation | Escalated spares Cost as on 1.4.2004 (Rs. in lakh) |
|---------------------|------------------------------|---|--|
| Asset- I            | 1.5.2006                     | 10387.42  | 103.87   |
| Asset-II            | 1.6.2006                     | 1005.25   | 10.05  |
| Asset-III           | 1.9.2006                     | 4635.69   | 46.36  |

**(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 1.4.2006, which is in accordance with the 2004 regulations and has been allowed.

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

(Rs. in lakh)

|                    | Asset-I               |         |         | Asset-II              |         |         | Asset-III             |         |         |
|--------------------|-----------------------|---------|---------|-----------------------|---------|---------|-----------------------|---------|---------|
|                    | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 |
| Maintenance Spares | 103.87                | 109.59  | 116.16  | 10.05                 | 10.56   | 11.19   | 46.36                 | 47.98   | 50.86   |
| O & M expenses     | 30.42                 | 31.63   | 32.90   | 5.07                  | 5.27    | 5.48    | 27.89                 | 28.99   | 30.16   |
| Receivables        | 274.19                | 274.39  | 273.14  | 30.36                 | 30.44   | 30.51   | 159.03                | 163.50  | 163.93  |
| Total              | 408.48                | 415.60  | 422.20  | 45.48                 | 46.26   | 47.18   | 233.27                | 240.47  | 244.95  |
| Rate of Interest   | 10.25%                | 10.25%  | 10.25%  | 10.25%                | 10.25%  | 10.25%  | 10.25%                | 10.25%  | 10.25%  |
| Interest           | 38.38                 | 42.60   | 43.28   | 3.88                  | 4.74    | 4.84    | 13.95                 | 24.65   | 25.11   |

### TRANSMISSION CHARGES

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

(Rs. in lakh)

|                              | Asset- I              |         |         | Asset-II              |         |         | Asset-III             |         |         |
|------------------------------|-----------------------|---------|---------|-----------------------|---------|---------|-----------------------|---------|---------|
|                              | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 | 2006-07<br>(Pro rata) | 2007-08 | 2008-09 |
| Depreciation                 | 347.82                | 381.39  | 381.39  | 30.16                 | 36.19   | 36.19   | 99.05                 | 174.60  | 174.60  |
| Interest on Loan             | 413.61                | 432.92  | 409.50  | 37.39                 | 42.86   | 40.64   | 131.78                | 227.48  | 215.68  |
| Return on Equity             | 373.62                | 409.85  | 409.85  | 29.65                 | 35.57   | 35.57   | 116.63                | 206.32  | 206.32  |
| Advance against Depreciation | 0.00                  | 0.00    | 0.00    | 0.00                  | 0.00    | 0.00    | 0.00                  | 0.00    | 0.00    |
| Interest on Working Capital  | 38.38                 | 42.60   | 43.28   | 3.88                  | 4.74    | 4.84    | 13.95                 | 24.65   | 25.11   |
| O & M Expenses               | 334.62                | 379.56  | 394.80  | 50.70                 | 63.26   | 65.80   | 195.20                | 347.93  | 361.90  |
| Total                        | 1508.04               | 1646.32 | 1638.82 | 151.78                | 182.62  | 183.04  | 556.60                | 980.97  | 983.61  |

43. 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.

44. The petitioner has sought approval for the reimbursement of expenditure of Rs.2,05, 826/- 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 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.

45. This order disposes of Petition No. 141/2007.

sd/-  
**(R.KRISHNAMOORTHY)**  
**MEMBER**  
**New Delhi dated the 23<sup>rd</sup> May 2008**

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

**Annexure-I**

400 kV Siliguri sub-station (extension) (relevant portion), 400 kV Purnea sub-station (extension) (relevant portion) (excluding 400/220 kV, 315 MVA ICT at Purnea sub-station), 40% Fixed Series Compensation (FSC) and 5% to 15% Thyristor Controlled Series Compensation (TCSC) on each Ckt of Purnea-Muzaffarpur 400 kV D/C line at Purnea

|          | Details of Loan                              | 2006-07                                 | 2007-08 | 2008-09 |
|----------|--|---|---------|---------|
| <b>1</b> | <b>Bond XV</b>                               |   |         |         |
|          | Gross Loan opening                           | 325.00                                  | 325.00  | 325.00  |
|          | Cumulative Repayment upto DOCO/previous year | 0.00                                    | 0.00    | 27.08   |
|          | Net Loan-Opening                             | 325.00                                  | 325.00  | 297.92  |
|          | Additions during the year                    | 0.00                                    | 0.00    | 0.00    |
|          | Repayment during the year                    | 0.00                                    | 27.08   | 27.08   |
|          | Net Loan-Closing                             | 325.00                                  | 297.92  | 270.83  |
|          | Average Loan                                 | 325.00                                  | 311.46  | 284.38  |
|          | Rate of Interest                             | 6.68%                                   | 6.68%   | 6.68%   |
|          | Interest                                     | 21.71                                   | 20.81   | 19.00   |
|          | Repayment Schedule                           | 12 Annual installments w.e.f.23-02-2008 |         |         |
| <b>2</b> | <b>Bond XVI</b>                              |   |         |         |
|          | Gross Loan opening                           | 300.00                                  | 300.00  | 300.00  |
|          | Cumulative Repayment upto DOCO/previous year | 0.00                                    | 0.00    | 0.00    |
|          | Net Loan-Opening                             | 300.00                                  | 300.00  | 300.00  |
|          | Additions during the year                    | 0.00                                    | 0.00    | 0.00    |
|          | Repayment during the year                    | 0.00                                    | 0.00    | 30.00   |

|          |  |   |         |         |
|----------|--|---|---------|---------|
|          | Net Loan-Closing                                   | 300.00  | 300.00  | 270.00  |
|          | Average Loan                                       | 300.00  | 300.00  | 285.00  |
|          | Rate of Interest                                   | 7.10%   | 7.10%   | 7.10%   |
|          | Interest   | 21.30   | 21.30   | 20.24   |
|          | Repayment Schedule                                 | 10 Annual installments w.e.f.18-02-2009       |         |         |
| <b>3</b> | <b>IBRD-II</b>                                     |   |         |         |
|          | Gross Loan opening                                 | 6867.36                                       | 6867.36 | 6867.36 |
|          | Cumulative Repayment upto DOCO/previous year       | 0.00  | 143.13  | 437.09  |
|          | Net Loan-Opening                                   | 6867.36                                       | 6724.23 | 6430.27 |
|          | Additions during the year                          | 0.00  | 0.00    | 0.00    |
|          | Repayment during the year                          | 143.13  | 293.96  | 312.94  |
|          | Net Loan-Closing                                   | 6724.23                                       | 6430.27 | 6117.33 |
|          | Average Loan                                       | 6795.80                                       | 6577.25 | 6273.80 |
|          | Rate of Interest                                   | 6.04%   | 6.04%   | 6.04%   |
|          | Interest   | 410.47  | 397.27  | 378.94  |
|          | Repayment Schedule                                 | 30 Half Yearly installments w.e.f. 15-12-2006 |         |         |
| <b>4</b> | <b>Bond XIX ( Loan for Add Cap during 2006-07)</b> |   |         |         |
|          | Gross Loan opening                                 | 0.00  | 108.19  | 108.19  |
|          | Cumulative Repayment upto DOCO/previous year       | 0.00  | 0.00    | 0.00    |
|          | Net Loan-Opening                                   | 0.00  | 108.19  | 108.19  |
|          | Additions during the year                          | 108.19  | 0.00    | 0.00    |
|          | Repayment during the year                          | 0.00  | 0.00    | 0.00    |
|          | Net Loan-Closing                                   | 108.19  | 108.19  | 108.19  |
|          | Average Loan                                       | 54.10   | 108.19  | 108.19  |
|          | Rate of Interest                                   | 9.25%   | 9.25%   | 9.25%   |
|          | Interest   | 5.00  | 10.01   | 10.01   |
|          | Repayment Schedule                                 | 12 Annual installments w.e.f. 24.7.2010       |         |         |
|          | <b>Total</b>                                       |   |         |         |
|          | Gross Loan opening                                 | 7492.36                                       | 7600.55 | 7600.55 |
|          | Cumulative Repayment upto DOCO/previous year       | 0.00  | 143.13  | 464.17  |
|          | Net Loan-Opening                                   | 7492.36                                       | 7457.42 | 7136.38 |
|          | Additions during the year                          | 108.19  | 0.00    | 0.00    |
|          | Repayment during the year                          | 143.13  | 321.04  | 370.02  |
|          | Net Loan-Closing                                   | 7457.42                                       | 7136.38 | 6766.35 |
|          | Average Loan                                       | 7474.89                                       | 7296.90 | 6951.37 |
|          | Rate of Interest                                   | 6.13%   | 6.16%   | 6.16%   |
|          | Interest   | 458.48  | 449.38  | 428.18  |

**Annexure-II**

400/220 kV, 315 MVA ICT at Purnea sub-station

(Rs. in Lakh)

|          | <b>Details of Loan</b>                       | <b>2006-07</b>                          | <b>2007-08</b> | <b>2008-09</b> |
|----------|--|---|----------------|----------------|
| <b>1</b> | <b>Bond XV</b>                               |   |                |                |
|          | Gross Loan opening                           | 24.00                                   | 24.00          | 24.00          |
|          | Cumulative Repayment upto DOCO/previous year | 0.00                                    | 0.00           | 2.00           |
|          | Net Loan-Opening                             | 24.00                                   | 24.00          | 22.00          |
|          | Additions during the year                    | 0.00                                    | 0.00           | 0.00           |
|          | Repayment during the year                    | 0.00                                    | 2.00           | 2.00           |
|          | Net Loan-Closing                             | 24.00                                   | 22.00          | 20.00          |
|          | Average Loan                                 | 24.00                                   | 23.00          | 21.00          |
|          | Rate of Interest                             | 6.68%                                   | 6.68%          | 6.68%          |
|          | Interest                                     | 1.60                                    | 1.54           | 1.40           |
|          | Repayment Schedule                           | 12 Annual installments w.e.f.23-02-2008 |                |                |
| <b>2</b> | <b>Bond XVI</b>                              |   |                |                |
|          | Gross Loan opening                           | 25.00                                   | 25.00          | 25.00          |
|          | Cumulative Repayment upto DOCO/previous year | 0.00                                    | 0.00           | 0.00           |
|          | Net Loan-Opening                             | 25.00                                   | 25.00          | 25.00          |
|          | Additions during the year                    | 0.00                                    | 0.00           | 0.00           |
|          | Repayment during the year                    | 0.00                                    | 0.00           | 2.50           |
|          | Net Loan-Closing                             | 25.00                                   | 25.00          | 22.50          |
|          | Average Loan                                 | 25.00                                   | 25.00          | 23.75          |
|          | Rate of Interest                             | 7.10%                                   | 7.10%          | 7.10%          |
|          | Interest                                     | 1.78                                    | 1.78           | 1.69           |
|          | Repayment Schedule                           | 10 Annual installments w.e.f.18-02-2009 |                |                |
| <b>3</b> | <b>IBRD-II</b>                               |   |                |                |
|          | Gross Loan opening                           | 702.15                                  | 702.15         | 702.15         |
|          | Cumulative Repayment upto DOCO/previous year | 0.00                                    | 14.63          | 44.68          |

|  |   |        |        |
|--|---|--------|--------|
| Net Loan-Opening                             | 702.15  | 687.52 | 657.47 |
| Additions during the year                    | 0.00  | 0.00   | 0.00   |
| Repayment during the year                    | 14.63   | 30.05  | 32.00  |
| Net Loan-Closing                             | 687.52  | 657.47 | 625.47 |
| Average Loan                                 | 694.84  | 672.50 | 641.47 |
| Rate of Interest                             | 6.04%   | 6.04%  | 6.04%  |
| Interest                                     | 41.97   | 40.62  | 38.74  |
| Repayment Schedule                           | 30 Half Yearly installments w.e.f. 15-12-2006 |        |        |
| <b>Total</b>                                 |   |        |        |
| Gross Loan opening                           | 751.15  | 751.15 | 751.15 |
| Cumulative Repayment upto DOCO/previous year | 0.00  | 14.63  | 46.68  |
| Net Loan-Opening                             | 751.15  | 736.52 | 704.47 |
| Additions during the year                    | 0.00  | 0.00   | 0.00   |
| Repayment during the year                    | 14.63   | 32.05  | 36.50  |
| Net Loan-Closing                             | 736.52  | 704.47 | 667.97 |
| Average Loan                                 | 743.84  | 720.50 | 686.22 |
| Rate of Interest                             | 6.10%   | 6.10%  | 6.10%  |
| Interest                                     | 45.35   | 43.93  | 41.83  |

### Annexure-III

400/220 kV Muzaffarpur sub-station (New) (Excluding 2 No, 400 kV bays at Muzaffarpur with line reactors for Muzaffarpur Gorkhpur line and ICT-II at Muzaffarpur sub-station), 220 kV Muzaffarpur sub-station (BSEB Kanti) Extension

(Rs. in Lakh)

| Details of Loan |  | 2006-07                                 | 2007-08 | 2008-09 |
|-----------------|--|---|---------|---------|
| <b>1</b>        | <b>Bond XV</b>                               |   |         |         |
|                 | Gross Loan opening                           | 58.00                                   | 58.00   | 58.00   |
|                 | Cumulative Repayment upto DOCO/previous year | 0.00                                    | 0.00    | 4.83    |
|                 | Net Loan-Opening                             | 58.00                                   | 58.00   | 53.17   |
|                 | Additions during the year                    | 0.00                                    | 0.00    | 0.00    |
|                 | Repayment during the year                    | 0.00                                    | 4.83    | 4.83    |
|                 | Net Loan-Closing                             | 58.00                                   | 53.17   | 48.33   |
|                 | Average Loan                                 | 58.00                                   | 55.58   | 50.75   |
|                 | Rate of Interest                             | 6.68%                                   | 6.68%   | 6.68%   |
|                 | Interest                                     | 3.87                                    | 3.71    | 3.39    |
|                 | Repayment Schedule                           | 12 Annual installments w.e.f.23-02-2008 |         |         |
| <b>2</b>        | <b>Bond XVI</b>                              |   |         |         |
|                 | Gross Loan opening                           | 6.00                                    | 6.00    | 6.00    |
|                 | Cumulative Repayment upto DOCO/previous year | 0.00                                    | 0.00    | 0.00    |
|                 | Net Loan-Opening                             | 6.00                                    | 6.00    | 6.00    |
|                 | Additions during the year                    | 0.00                                    | 0.00    | 0.00    |
|                 | Repayment during the year                    | 0.00                                    | 0.00    | 0.60    |
|                 | Net Loan-Closing                             | 6.00                                    | 6.00    | 5.40    |
|                 | Average Loan                                 | 6.00                                    | 6.00    | 5.70    |
|                 | Rate of Interest                             | 7.10%                                   | 7.10%   | 7.10%   |
|                 | Interest                                     | 0.43                                    | 0.43    | 0.40    |
|                 | Repayment Schedule                           | 10 Annual installments w.e.f.18-02-2009 |         |         |

|          |  |   |         |         |
|----------|--|---|---------|---------|
| <b>3</b> | <b>IBRD-II</b>                                     |   |         |         |
|          | Gross Loan opening                                 | 3189.20                                       | 3189.20 | 3189.20 |
|          | Cumulative Repayment upto DOCO/previous year       | 0.00  | 66.47   | 202.98  |
|          | Net Loan-Opening                                   | 3189.20                                       | 3122.73 | 2986.22 |
|          | Additions during the year                          | 0.00  | 0.00    | 0.00    |
|          | Repayment during the year                          | 66.47   | 136.51  | 145.33  |
|          | Net Loan-Closing                                   | 3122.73                                       | 2986.22 | 2840.89 |
|          | Average Loan                                       | 3155.97                                       | 3054.48 | 2913.56 |
|          | Rate of Interest                                   | 6.71%   | 6.71%   | 6.71%   |
|          | Interest   | 211.77  | 204.96  | 195.50  |
|          | Repayment Schedule                                 | 30 Half Yearly installments w.e.f. 15-12-2006 |         |         |
| <b>4</b> | <b>Bond XIX ( Loan for Add Cap during 2006-07)</b> |   |         |         |
|          | Gross Loan opening                                 | 0.00  | 304.00  | 304.00  |
|          | Cumulative Repayment upto DOCO/previous year       | 0.00  | 0.00    | 0.00    |
|          | Net Loan-Opening                                   | 0.00  | 304.00  | 304.00  |
|          | Additions during the year                          | 304.00  | 0.00    | 0.00    |
|          | Repayment during the year                          | 0.00  | 0.00    | 0.00    |
|          | Net Loan-Closing                                   | 304.00  | 304.00  | 304.00  |
|          | Average Loan                                       | 152.00  | 304.00  | 304.00  |
|          | Rate of Interest                                   | 9.25%   | 9.25%   | 9.25%   |
|          | Interest   | 14.06   | 28.12   | 28.12   |
|          | Repayment Schedule                                 | 12 Annual installments w.e.f.24-07-2010       |         |         |
|          | <b>Total</b>                                       |   |         |         |
|          | Gross Loan opening                                 | 3253.20                                       | 3557.20 | 3557.20 |
|          | Cumulative Repayment upto DOCO/previous year       | 0.00  | 66.47   | 207.81  |
|          | Net Loan-Opening                                   | 3253.20                                       | 3490.73 | 3349.39 |
|          | Additions during the year                          | 304.00  | 0.00    | 0.00    |
|          | Repayment during the year                          | 66.47   | 141.34  | 150.76  |
|          | Net Loan-Closing                                   | 3490.73                                       | 3349.39 | 3198.62 |
|          | Average Loan                                       | 3371.97                                       | 3420.06 | 3274.01 |
|          | Rate of Interest                                   | 6.82%   | 6.94%   | 6.95%   |
|          | Interest   | 230.13  | 237.21  | 227.41  |