

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

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

**Petition No. 144/2007**

**In the matter of**

Determination of final transmission tariff from the date of commercial operation to 31.3.2009 after accounting for additional capitalization from date of commercial operation to 31.3.2007 for (i) 400 kV Bareilly sub-station (UPPCL) (extension) and 400 kV Mandaula sub-station (extension) associated with 400 kV Mandaula-Bareilly transmission line of Powerlinks (ii) 400 kV D/C Lucknow (Power Grid)-Unnao (UPPCL) transmission line with associated bays at both ends, 400 kV D/C Gorakhpur (Power Grid)-Gorakhpur (UPPCL) transmission line with bays at both ends, 2 Nos 400 kV bays at Gorakhpur (Power Grid) and 2 Nos 400 kV bays at Lucknow (Power Grid) for 400 kV D/C Gorakhpur-Lucknow transmission line of Powerlinks, 400/220 kV 315 MVA ICT at Lucknow with associated bays and 400/220 kV 315 MVA ICT-I at Gorakhpur (Power Grid) with associated bays under the transmission system associated with Tala HEP, East-North Inter-connector and Northern Region Transmission System.

**And in the matter of**

Power Grid Corporation of India Limited

**...Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
2. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
3. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
4. Jodhpur Vidyut Vitaran Nigam Ltd, Jodhpur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Vidyut Prasaran Nigam Ltd, Panchkula
8. Power Development Department, Govt. of J&K, Jammu
9. Uttar Pradesh Power Corporation Ltd, Lucknow
10. Delhi Transco Ltd, New Delhi
11. BSES Yamuna Power Ltd., Delhi
12. BSES Rajdhani Power Ltd., New Delhi
13. North Delhi Power Ltd., New Delhi
14. Chief Engineer, Chandigarh Administration, Chandigarh
15. Uttaranchal Power Corporation Ltd, Dehradun
16. North Central Railway, Allahabad

**..Respondents**

**The following were present:**

1. Shri V.V.Sharma, PGCIL
2. Shri U.K. Tyagi, PGCIL
3. Shri C. Kannan, PGCIL
4. Shri Prashant Sharma, PGCIL
5. Ms. Sangeeta Edwards, PGCIL
6. Shri B.C.Pant, PGCIL

7. Shri. A.K. Nagpal, PGCIL
8. Shri Kashish Bhambhani, PGCIL
9. Shri A.V.S. Ramesh, PGCIL
10. Shri S.N. Singh, UPPCL
11. Shri Bharat Sharma, NDPL
12. Shri R.K.Arora, HPGL

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

This petition has been filed for approval of tariff for (i) 400 kV Bareilly sub-station (UPPCL) (extension) and 400 kV Mandaula sub-station (extension) associated with 400 kV Mandaula-Bareilly transmission line of Powerlinks (**Asset-I**), and 400 kV D/C Lucknow (Power Grid)-Unnao (UPPCL) transmission line with associated bays at both ends, 400 kV D/C Gorakhpur (Power Grid)-Gorakhpur (UPPCL) transmission line with bays at both ends, 2 Nos 400 kV bays at Gorakhpur (Power Grid) and 2 Nos 400 kV bays at Lucknow (Power Grid) for 400 kV D/C Gorakhpur-Lucknow transmission line of Powerlinks, 400/220 kV 315 MVA ICT at Lucknow with associated bays and 400/220 kV 315 MVA ICT-I at Gorakhpur (Power Grid) with associated bays (**Asset-II**) under transmission system associated with Tala HEP, East-North Inter-connector and Northern Region Transmission System (also collectively referred to as "the transmission system") from the date of commercial operation of the respective asset to 31.3.2009, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "the 2004 regulations") after accounting for additional capitalization during 2006-07. The petitioner has also prayed for reimbursement of expenditure incurred towards publishing of notices in newspapers from the beneficiaries and the petition filing fee.

2. 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-I 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 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.

3. The provisional transmission charges for Asset-I were approved by the Commission in the order dated 18.8.2006 in Petition No. 34/2006, and for Asset-II in the order dated 16.1.2007 in Petition No. 114/2006. The dates of commercial operation of the two assets are as under:

S. No.	Name of the assets	Date of commercial operation
1.	Asset- I	1.5.2006
2.	Asset-II	1.8.2006

4. The details of the apportioned approved cost and the estimated completion cost of the transmission assets are given as hereunder:

(Rs. in lakh)

Name of the assets	Apportioned approved cost	Capital expenditure on the date of commercial operation	Capital expenditure from the date of commercial to 31.3.2007	Capital cost on 1.4.2007	Balance Expenditure	Total estimated completion cost
Asset- I	2591.00	2190.68	185.92	2376.70	10.32	2386.92
Asset-II	30174.66	23227.48	1429.67	24657.15	1198.27	25855.42

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

(Rs.in lakh)

	Asset- I			Asset-II		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
Depreciation	77.16	87.58	87.58	451.81	697.23	697.23
Interest on Loan	92.52	99.93	94.35	807.94	1208.71	1160.86
Return on Equity	87.96	99.86	99.86	670.52	1035.80	1035.80
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	9.57	10.90	11.09	62.85	97.57	99.14
O & M Expenses	111.54	126.52	131.60	485.44	756.94	787.52
<b>Total</b>	<b>378.75</b>	<b>424.80</b>	<b>424.49</b>	<b>2478.56</b>	<b>3796.26</b>	<b>3780.55</b>

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		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
Maintenance Spares	22.84	25.02	26.52	239.42	256.15	271.52
O & M expenses	10.14	10.54	10.97	60.68	63.08	65.63
Receivables	68.86	70.80	70.75	619.64	632.71	630.09
Total	101.84	106.36	108.24	919.74	951.94	967.24
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	<b>9.57</b>	<b>10.90</b>	<b>11.09</b>	<b>62.85</b>	<b>97.57</b>	<b>99.14</b>

7. The reply to the petition has been filed by Uttar Pradesh Power Corporation Limited. 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. UPPCL in its reply stated that the petitioner has not furnished the details of apportioned approved cost of all the assets. UPPCL further enquired about the status of work of extension of 400 kV Unnano sub-station. We find that the details of apportioned approved cost of all the assets have been furnished in Form 5D forming part of the petition. The petitioner vide its affidavit dated 7.1.2007 has also informed that extension work at Unnao 400 kV sub-station has been completed and declared under commercial operation w.e.f. 1.8.2006.

### **CAPITAL COST**

9. As per clause (1) of Regulation 52 of the 2004 regulations, subject to prudence check, the actual expenditure incurred on completion of the project shall form the basis for determination of final tariff. The final tariff shall be determined based on the admitted capital expenditure actually incurred up to the date of commercial operation of the transmission system and shall include capitalised initial spares subject to a

ceiling norm as 1.5% of original project cost. The regulation is applicable in case of the transmission system declared under commercial operation on or after 1.4.2004.

10. The petitioner has claimed tariff after accounting for additional capitalization in respect of Asset-I and Asset-II as given in the table below para 4 above.

**ADDITIONAL CAPITALIZATION 2006-07**

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:

Asset-I		Asset-II	
Nature of expenditure		Nature of expenditure	
Sub-station	= Rs. 180.42 lakh	Sub-station	= Rs. 388.73 lakh
PLCC	= Rs. 5.50 lakh	Buildings	= Rs. 223.33 lakh
Total	= Rs. 185.92 lakh	Transmission line	= Rs. 871.61 lakh
		Total	= Rs. 1429.67 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.185.92 lakh and Rs. 1429.67 lakh for Asset-I and Asset-II, respectively has been allowed.

### **Time Over-run**

14. As per the original approval, the transmission assets were scheduled to be commissioned by June 2006. Asset-I was commissioned one month ahead of schedule. Asset-II was commissioned after one month of the scheduled date as it was linked with completion of Tala HEP, from which supply commenced with effect from 4.8.2006 onwards.

15. We have considered the matter in the light of the above facts. There is satisfactory explanation from the petitioner for the entire delay in completion of the transmission line. Therefore, the delay on one month in commissioning of Asset-II is considered to be beyond the control of the petitioner.

### **TOTAL CAPITAL COST**

16. 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 date of commercial operation	Additional expenditure up to 31.3.2007	Total capital expenditure
Asset- I	2190.68	185.92	2376.60
Asset-II	23227.48	1429.67	24657.15
<b>Total</b>	<b>25418.16</b>	<b>1615.59</b>	<b>27033.75</b>

### **DEBT- EQUITY RATIO**

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

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

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

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

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

whichever is the least:

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

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

19. The petitioner has considered debt-equity ratio of 69.99:30.01 for both the assets, 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. In our calculations, we have considered the debt-equity ratio of 70:30 in accordance with the 2004 regulations. Accordingly, for the purpose of tariff, debt-equity considered for two assets as under:

(Rs. in lakh)

	Capital cost as on the 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 as on 1.4.2007
Asset- I	2190.68	657.20	185.92	2376.60	55.78	712.98
Asset-II	23227.48	6968.24	1429.67	24657.15	428.90	7397.14
<b>Total</b>	<b>25418.16</b>	<b>7625.44</b>	<b>1615.59</b>	<b>27033.75</b>	<b>484.68</b>	<b>8110.12</b>

## **RETURN ON EQUITY**

20. 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.

21. 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 19 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	Equity as on 1.4.2007	Average equity During 2006-07	Return on equity		
					2006-07 (Pro rata)	2007-08	2008-09
Asset- I	657.20	55.78	712.98	685.09	87.92	99.82	99.82
Asset- II	6968.24	428.90	7397.14	7182.69	670.38	1035.60	1035.60

## **INTEREST ON LOAN**

22. 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.”

23. 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) Gross loans at (i) above has been considered and the weighted average rate of interest on loan for respective years as per above has been multiplied to arrive at interest on loan, considering (depreciation + AAD) as repayment.

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

(i) Gross amount of loan, repayment of instalments and rate of interest as 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 capitalization from date of commercial operation to 31.3.2007 has been added to the 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) In case of IBRD-II loan, the IBRD statement of interest sheet indicates a Regular Waiver reduction rate of 0.05%. In our calculations, the weighted average rate of interest has been worked out without including the effect of this loan waiver. The loan waiver effect shall be

applied/settled mutually by the petitioner and the beneficiaries. However, in case of any dispute, either party is at liberty to approach the Commission through appropriate proceeding .

25. 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		
	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Interest on loan						
Opening Gross Loan	1533.48	1663.62	1663.62	16259.24	17260.01	17260.01
Cumulative Repayment	0.00	77.16	164.74	0.00	451.81	1149.04
Net Loan-Opening	1533.48	1586.46	1498.88	16259.24	16808.19	16110.97
Additions due to Additional Capitalisation	130.14			1000.77		
Repayment during the year	77.16	87.58	87.58	451.81	697.23	697.23
Net Loan-Closing	1586.46	1498.88	1411.30	16808.19	16110.97	15413.74
Average Loan	1559.97	1542.67	1455.09	16533.72	16459.58	15762.35
Weighted Average Rate of Interest on Loan	6.47%	6.48%	6.49%	7.33%	7.34%	7.37%
<b>Interest</b>	<b>92.54</b>	<b>99.95</b>	<b>94.37</b>	<b>808.01</b>	<b>1208.82</b>	<b>1160.97</b>

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

### **DEPRECIATION**

27. 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.

28. Depreciation allowed has been worked out as calculated below:

(Rs.in lakh)

Details of Depreciation	Asset-I			Asset-II		
	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Gross block as on the date of commercial operation	2190.68	2376.60	2376.60	23227.48	24657.15	24657.15
Additional Capitalisation during the period	185.92			1429.67		
Gross Block at the end of the period	2376.60	2376.60	2376.60	24657.15	24657.15	24657.15
Rate of Depreciation	3.6858%	3.6853%	3.6853%	2.8306%	2.8277%	2.8277%
Depreciable Value (90%)	2055.28	2138.94	2138.94	20541.39	21184.74	21184.74
Remaining Depreciable Value	2055.28	2061.78	1974.20	20541.39	20732.93	20035.70
<b>Depreciation</b>	<b>77.16</b>	<b>87.58</b>	<b>87.58</b>	<b>451.81</b>	<b>697.23</b>	<b>697.23</b>

### **ADVANCE AGAINST DEPRECIATION**

29. 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

30. 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.

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

### **OPERATION & MAINTENANCE EXPENSES**

32. 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

33. The petitioner has claimed O & M expenses for 4 bays for Asset-I and 239.54 Ckt. km and 22 bays for Asset -II, which has been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

(Rs. in lakh)

	Asset-I			Asset-II			
	2006-07 (Pro rata)	2007-08	2007-08		2006-07 (Pro rata)	2007-08	2008-09
				O&M expenses for 239.54 Ckt km	39.28	61.08	63.72
O&M expenses for 4 bays	111.54	126.52	131.60	O&M expenses for 22 bays	446.16	695.86	723.80
<b>TOTAL</b>	<b>111.54</b>	<b>126.52</b>	<b>131.60</b>	<b>TOTAL</b>	<b>485.44</b>	<b>756.94</b>	<b>787.52</b>

34. 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**

35. 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. 21.91 lakh and Rs. 232.27 lakh for Asset-I and Asset-II, 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	2190.68	21.91
Asset-II	1.8.2006	23227.48	232.27

#### **(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.

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

(Rs. in lakh)

	Asset-I			Asset-II		
	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Maintenance Spares	21.91	23.11	24.50	232.27	241.57	256.06
O & M expenses	10.14	10.54	10.97	60.68	63.08	65.63
Receivables	68.84	70.76	70.71	619.50	632.44	629.81
Total	100.89	104.42	106.17	912.45	937.08	951.49
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	<b>9.48</b>	<b>10.70</b>	<b>10.88</b>	<b>62.35</b>	<b>96.05</b>	<b>97.53</b>

### TRANSMISSION CHARGES

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

	Asset-I			Asset-II		
	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Depreciation	77.16	87.58	87.58	451.81	697.23	697.23
Interest on Loan	92.54	99.95	94.37	808.01	1208.82	1160.97
Return on Equity	87.92	99.82	99.82	670.38	1035.60	1035.60
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	9.48	10.70	10.88	62.35	96.05	97.53
O & M Expenses	111.54	126.52	131.60	485.44	756.94	787.52
Total	<b>378.64</b>	<b>424.57</b>	<b>424.25</b>	<b>2477.99</b>	<b>3794.64</b>	<b>3778.84</b>

38. 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.

39. The transmission charges of the assets covered in the present petition would be added to the transmission charges for Northern Regional Transmission System and shall be shared in proportion of the MW share allocation of each beneficiary from the total central sector power in the Northern Region.

40. The petitioner has sought approval for the reimbursement of expenditure of Rs.2,82,682/- 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.

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

42. This order disposes of Petition No.144/2007.

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

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

400 kV Bareilly sub-station (UPPCL) (extension) and 400 kV Mandaula sub-station (extension) associated with 400 kV Mandaula-Bareilly transmission line of Powerlinks.

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

(Rs. in lakh)

	Details of Loan	2006-07	2007-08	2008-09
<b>1</b>	<b>Bond XV</b>			
	Gross Loan opening	206.00	206.00	206.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	17.17
	Net Loan-Opening	206.00	206.00	188.83
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	17.17	17.17
	Net Loan-Closing	206.00	188.83	171.67
	Average Loan	206.00	197.42	180.25
	Rate of Interest	6.68%	6.68%	6.68%
	Interest	13.76	13.19	12.04
	Repayment Schedule	12 Annual instalments from 23-2-2008		
<b>2</b>	<b>Bond XVI</b>			
	Gross Loan opening	160.00	160.00	160.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	160.00	160.00	160.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	16.00
	Net Loan-Closing	160.00	160.00	144.00
	Average Loan	160.00	160.00	152.00
	Rate of Interest	7.10%	7.10%	7.10%
	Interest	11.36	11.36	10.79
	Repayment Schedule	10 Annual instalments from 18-2-2009		
<b>3</b>	<b>IBRD-II</b>			
	Gross Loan opening	903.15	903.15	903.15
	Cumulative Repayment upto DOCO/previous year	0.00	18.83	57.49
	Net Loan-Opening	903.15	884.32	845.66
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	18.83	38.66	41.15
	Net Loan-Closing	884.32	845.66	804.51
	Average Loan	893.73	864.99	825.08
	Rate of Interest	6.04%	6.04%	6.04%
	Interest	53.98	52.25	49.84
	Repayment Schedule	Half yearly Instalments from 15.12.2006		
<b>4</b>	<b>Bond XVII</b>			
	Gross Loan opening	264.00	264.00	264.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	264.00	264.00	264.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	264.00	264.00	264.00
	Average Loan	264.00	264.00	264.00
	Rate of Interest	7.39%	7.39%	7.39%
	Interest	19.51	19.51	19.51

Repayment Schedule	10 Annual Instalments from 22.9.2009		
<b>Total</b>			
Gross Loan opening	1533.15	1533.15	1533.15
Cumulative Repayment upto DOCO/previous year	0.00	18.83	74.66
Net Loan-Opening	1533.15	1514.32	1458.49
Additions during the year	0.00	0.00	0.00
Repayment during the year	18.83	55.83	74.32
Net Loan-Closing	1514.32	1458.49	1384.17
Average Loan	1523.73	1486.40	1421.33
Rate of Interest	6.47%	6.48%	6.49%
Interest	98.61	96.30	92.18

400 kV D/C Lucknow (Power Grid)-Unnao (UPPCL) transmission line with associated bays at both ends, 400 kV D/C Gorakhpur (Power Grid)-Gorakhpur (UPPCL) transmission line with bays at both ends, 2 Nos 400 kV bays at Gorakhpur (Power Grid) and 2 Nos 400 kV bays at Lucknow (Power Grid) for 400 kV D/C Gorakhpur-Lucknow transmission line of Powerlinks, 400/220 kV 315 MVA ICT at Lucknow with associated bays and 400/220 kV 315 MVA ICT-I at Gorakhpur (Power Grid) with associate bays.

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

(Rs. in lakh)

Details of Loan	2006-07	2007-08	2008-09
<b>1 Bond XV</b>			
Gross Loan opening	754.00	754.00	754.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	62.83
Net Loan-Opening	754.00	754.00	691.17
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	62.83	62.83
Net Loan-Closing	754.00	691.17	628.33
Average Loan	754.00	722.58	659.75
Rate of Interest	6.68%	6.68%	6.68%
Interest	50.37	48.27	44.07
Repayment Schedule	12 Annual instalments from 23-2-2008		
<b>2 Bond XVI</b>			
Gross Loan opening	586.00	586.00	586.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	586.00	586.00	586.00
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	58.60
Net Loan-Closing	586.00	586.00	527.40
Average Loan	586.00	586.00	556.70
Rate of Interest	7.10%	7.10%	7.10%
Interest	41.61	41.61	39.53
Repayment Schedule	10 Annual instalments from 18-02-2009		
<b>3 IBRD-II</b>			
Gross Loan opening	9865.80	9865.80	9865.80
Cumulative Repayment upto DOCO/previous year	0.00	205.63	627.93
Net Loan-Opening	9865.80	9660.17	9237.87
Additions during the year	0.00	0.00	0.00
Repayment during the year	205.63	422.30	449.58
Net Loan-Closing	9660.17	9237.87	8788.29
Average Loan	9762.99	9449.02	9013.08
Rate of Interest	6.71%	6.71%	6.71%
Interest	655.10	634.03	604.78
Repayment Schedule	Half yearly Instalments from 15.12.2006		
<b>4 Bond XVII</b>			
Gross Loan opening	1348.00	1348.00	1348.00

	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1348.00	1348.00	1348.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1348.00	1348.00	1348.00
	Average Loan	1348.00	1348.00	1348.00
	Rate of Interest	7.39%	7.39%	7.39%
	Interest	99.62	99.62	99.62
	Repayment Schedule	10 Annual Instalments from 22.09.2009		
<b>5</b>	<b>Bond XVIII</b>			
	Gross Loan opening	460.00	460.00	460.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	460.00	460.00	460.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	460.00	460.00	460.00
	Average Loan	460.00	460.00	460.00
	Rate of Interest	8.15%	8.15%	8.15%
	Interest	37.49	37.49	37.49
	Repayment Schedule	12 annual instalments from 09.03.2010		
<b>6</b>	<b>Bond XIX</b>			
	Gross Loan opening	3244.00	3244.00	3244.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	3244.00	3244.00	3244.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	3244.00	3244.00	3244.00
	Average Loan	3244.00	3244.00	3244.00
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	300.07	300.07	300.07
	Repayment Schedule	12 Annual Instalments from 24.07.2010		
	<b>Total</b>			
	Gross Loan opening	16257.80	16257.80	16257.80
	Cumulative Repayment upto DOCO/previous year	0.00	205.63	690.76
	Net Loan-Opening	16257.80	16052.17	15567.04
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	205.63	485.13	571.01
	Net Loan-Closing	16052.17	15567.04	14996.02
	Average Loan	16154.99	15809.60	15281.53
	Rate of Interest	7.33%	7.34%	7.37%
	Interest	1184.25	1161.08	1125.55