

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 287/2009

**Coram: Shri V.S.Verma, Member
Shri M.Deena Dayalan, Member**

Date of Hearing: 23-9-2010

Date of Order: 17-3-2011

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and Central Electricity Regulatory Commission (Terms and conditions of tariff) Regulations 2004 for transmission tariff for (i)400 KV D/C Gorakhpur-Lucknow Transmission Line(Asset-I) and (ii)400 kV D/C Bareilly-Mandola Transmission Line (Asset-II) in Northern Region associated with Tala Hydro Electric Project, East – North Interconnector and Northern Region Transmission System for the period from 1.4.2009 to 31.3.2014.

And

In the matter of:

Powerlinks Transmission Ltd.

...Petitioner

Vs

Power Grid Corporation of India Limited, Gurgaon

..... Respondent

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



The following was present:

1. Shri B A Chaudhari, Powerlinks
2. Ms. Nita Jha, Powerlinks
3. Shri Suresh Sachdev, Powerlinks
4. Shri Ajay Bagi, Powerlinks
5. Shri Arpit, Powerlinks
6. Shri Shirkant, Powerlinks
7. Shri U K Tyagi, PGCIL
8. Shri Raghuvver Prasad Verma, Rajasthan Discoms

ORDER

This petition has been filed seeking approval of transmission tariff in respect of (i) 400 KV D/C Gorakhpur-Lucknow Transmission Line (Asset-I) and (ii) 400 kV D/C Bareilly-Mandola Transmission Line (Asset-II) in Northern Region associated with Tala Hydro Electric Project, East-North Interconnector and Northern Region Transmission System (hereinafter called "the transmission assets") for the period from 1.4.2009 to 31.3.2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as "the 2009 regulations"). The petitioner has also sought the following reliefs:

- (a) Allow the petitioner for additional capitalization for change of insulators in Bareilly – Mandola Line and tower shifting along with pile foundation in Gorakhpur – Lucknow line under Regulation 10 of the 2009 regulations;
- (b) Allow the petitioner to bill and recover transmission service charge and publication expenses and other charges from the respondent No. 1 in

terms with Regulation 23 of 2009 regulations for the assets covered under the petition;

- (c) Allow the petitioner to pass on the benefit or loss to the respondents in case of any decrease or increase in the Interest rate directly by the petitioner on Powergrid on account of the respondents.
- (d) Pass such other relief as the Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.

2. Asset I and Asset II of the transmission system were commissioned on 1.8.2006 and 1.5.2006 respectively. Transmission charges for the transmission assets for the period upto 31.3.2009 were initially approved by the Commission by the order dated 30.4.2008 in Petition No. 149/2007 including the additional capital expenditure for the period upto 2006-07 which were subsequently revised by order dated 30.4.2009 in Petition No. 64/2009 on account of additional capital expenditure incurred during 2007-08 and 2008-09.

3. The petitioner has claimed the following transmission charges:

(Rs. In lakh)

Asset - I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1104.21	1114.69	1114.69	1114.69	1114.69
Interest on Loan	1097.36	991.42	872.20	752.99	633.78
Return on equity	1187.21	1198.33	1198.33	1198.33	1198.33
Interest on Working Capital	78.34	77.03	75.01	73.02	71.05
O & M Expenses	154.24	163.10	172.45	182.29	192.62
Sub Total	3621.36	3544.56	3432.68	3321.32	3210.47
Transmission Majoration Factor	362.14	354.46	343.27	332.13	321.05
Total	3983.50	3899.02	3775.95	3653.45	3531.52

Asset –II					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1100.39	1111.65	1111.65	1111.65	1111.65
Interest on Loan	1085.08	980.44	861.54	742.64	623.75
Return on equity	1183.22	1195.17	1195.17	1195.17	1195.17
Interest on Working Capital	77.64	76.37	74.35	72.34	70.36
O & M Expenses	148.60	157.13	166.14	175.62	185.57
Sub Total	3594.93	3520.76	3408.85	3297.42	3186.50
Transmission Majoration Factor	359.49	352.08	340.88	329.74	318.65
Total	3954.42	3872.84	3749.72	3627.16	3505.14

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

(Rs. In lakh)

Asset - I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	23.14	24.46	25.87	27.34	28.89
O & M expenses	12.85	13.59	14.37	15.19	16.05
Receivables	603.56	590.76	572.11	553.55	535.08
Total	639.55	628.82	612.35	596.09	580.02
Interest	78.34	77.03	75.01	73.02	71.05
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Asset –II					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	22.29	23.57	24.92	26.34	27.84
O & M expenses	12.38	13.09	13.84	14.63	15.46
Receivables	599.15	586.79	568.14	549.57	531.08
Total	633.83	623.46	606.90	590.55	574.38
Interest	77.64	76.37	74.35	72.34	70.36
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

5. No objections/suggestions have been received from the general public in response to the public notice issued in pursuance to section 64 of the Act. Uttar Pradesh Power Corporation (UPPCL), Respondent No.8 in the petition has filed reply to the petition in which the issues regarding transmission majoration factor, R & M charges, floating rate of interest, rate of return on equity etc. have been raised. The objections of UPPCL have been dealt with in relevant parts of this order.

6. Having heard the representatives of the parties and examined the material on record, we proceed to dispose of the petition.

CAPITAL COST

7. As per last proviso to clause (2) of Regulation 7 of 2009 of Regulations provides that in case of existing projects, the capital cost admitted by the Commission prior to 1.4.2009 and additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.

8. As per the Commission's order dated 30.7.2009 in Petition No. 64/2009, the admitted capital expenditure for Asset-1 was Rs.20993.75 lakh and for Asset-2 was Rs. 20907.79 lakh as on 31-03-2009. Accordingly, capital expenditure of Rs.20993.75 lakh and Rs. 20907.79 lakh as on 1.4.2009 for Asset I and Asset II respectively has been considered for tariff determination during 2009-14 period.

ADDITIONAL CAPITAL EXPENDITURE

9. Regulation 9 of 2009 regulations provides for additional capital expenditure as under:

"9 (1)The capital expenditure incurred or projected to be incurred, on the following counts within original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities;*
- (ii) Works deferred for execution;*
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulating 8 ;*
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
- (v) Change in law;*

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of the tariff.

(2) *The capital expenditure incurred on the following counts after the cut-off-date, in its discretion, be admitted by the Commission, subject to prudence check:*

- (i) *Liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- (ii) *Change in law;*
- (iii) *******
- (iv) *******
- (v) *In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of the transmission system."*

10. The petitioner has claimed additional capital expenditure amounting to Rs. 397.05 lakh for shifting of tower with pile foundation due to change in river course in case of Asset-I and Rs. 426.57 lakh for replacement of insulators in the case of Asset-II under Regulation 10 of 2009 regulations. The petitioner in its affidavit dated 28.9.22010 has submitted that Regulation 10 was mentioned because of a typographical error and the petitioner had intended to claim the expenditures under Regulation 9 of 2009 regulations. The additional capital expenditure claimed by the petitioner has been discussed in the succeeding paragraphs.

(A) Shifting of tower with pile foundation

11. The petitioner has submitted that during construction of 400 kV Goakhpur-Lucknow Transmission Line, the tower at location No.246 was at a safe distance from the river Ghagra. Since commissioning of the line in 2006, the river has been changing course and consequent erosion of soil has posed great threat to the existing open type foundation. In

2008, Random Rubble Revetment (RRR) wall was constructed to protect the foundation of the tower location; however, the wall would not be able to provide protection if the river course changes and consequent soil erosion continues for another one year. In order to safeguard the stability of tower, the petitioner has decided to construct a new foundation using RCC pile. The petitioner has submitted that the change of river course ought to be considered as a force majeure event as the company has no control over it. The petitioner in its affidavit dated 7.7.2010 has submitted the break-up of the expenditure on shifting of tower with pile foundation at a total cost of Rs 3,97,05,000.

12. The expenditure on shifting of tower with pile foundation is considered necessary for efficient and successful operation of the transmission system and is accordingly allowed under Regulation 9(2)(v) of 2009 regulations. The petitioner is directed to dispose off the materials of the existing tower and adjust the realized value against the dues of the beneficiaries.

(B) Replacement of Insulators

13. As regards the additional projected capital expenditure in respect of Asset II, it has been submitted that due to a large number of tripping of 400 kV power transmission lines in Northern Region, Secretary (Power), Government of India convened a meeting on 9.3.2008 to deliberate on probable causes and to chalk out remedial measures to prevent such tripping in future. During the meeting, the cause of tripping was attributed to high level of pollution in National Capital Region arising out of vehicle emissions, brick kilns and jaggery units, high construction activity coupled with heavy fog, high humidity due to watering of crops has caused large number of trippings as the conventional insulators were not

designed for such level of pollution. In the meeting, the remedial measures such as cleaning of insulators, hot line washing of insulators and replacement of conventional insulators by polymer insulators on all vulnerable lines were decided. The list of critical lines included the 400 kV Bareilly Mandola line of the petitioner as well. The petitioner carried out the reconnaissance and identified the most vulnerable locations for replacement of conventional insulators by long rod polymer insulators in sections of the line covered under Asset II falling under NCR area. The matter regarding capitalization of expenditure on account of such replacement and its recovery through tariff was discussed and confirmed in a meeting taken by Member Secretary, Northern Regional Power Committee on 4.11.2008. The replacement work was completed at a cost of Rs. 4.27 crore for which the petitioner has claimed capitalization in tariff. UPPCL has not opposed capitalization of aforesaid expenditure on merit but has only submitted that if the expenditure is claimed as R & M, then an application with detailed project report for approval under Regulation 10 of 2009 regulation should be filed. The objection of UPPCL no more survives after the clarification of the petitioner that the claim has been made under Regulation 9 of 2009 regulation.

14. In response to our query during the hearing of the petition on 24.6.2010, the petitioner in its affidavit dated 7.7.2010 has submitted that out of total 633 locations in a total of 231 kms of 400 kV D/C Bareilly-Mandola Line, insulators have been replaced at 176 locations in 61 km of the line. The petitioner in its affidavit dated 28.9.2010 has placed on record the break-up of the expenditure of Rs 4.27 crore on replacement of insulators supported by relevant documents. As regards our directions to the petitioner to explore the possibility of resale of porcelain insulators which have been removed, the petitioner has submitted that it

had contacted POWERGRID and Tata Power Company Limited for sale of porcelain insulators; however they did not evince any interest in purchasing the insulators. The petitioner has assured to make further efforts for sale of these insulators and to pass on the realized value, if any, to the beneficiaries.

15. We had directed respondent No.1 (POWERGRID) during the hearing on 24.6.2010 to calculate the loss of revenue on account of grid failure as a sample for information to all concerned. Respondent No.1 in its affidavit dated 22.7.2010 has submitted that the estimated production loss for one partial grid disturbance in Northern Grid during foggy weather conditions would be about Rs 269 crore besides other intangible loss in the form of inconvenience to the public at large.

16. We have considered the submissions of the petitioner and the material facts on record. The petitioner has incurred an expenditure of Rs 4.27 crore for replacement of porcelain insulators with composite long rod polymer insulators on the 400 kV D/C Bareilly-Mandola Line in order to obviate the possibility of tripping due to high level of pollution in the National Capital Region. Considering the estimated impact of partial grid failure on the economy and public at large, we are of the view that the expenditure is considered necessary for the efficient and successful operation of the transmission system and accordingly, is allowed to be capitalized under Regulation 9(2)(iv) of 2009 regulations. The petitioner has submitted in its affidavit dated 7.7.2010 that the cost of replaced porcelain insulators is Rs 25,340,252. Proviso to Regulation 7(1)(c) of 2009 regulations provide that assets forming part of the project but not in use shall be taken out of the capital cost. In accordance with this provision, Rs 25,340,252 towards the cost of the porcelain insulators

which have been taken out of service has been reduced from the capital cost. The petitioner is directed to make fresh efforts for sale of porcelain insulators and any loss suffered by the petitioner on account of decapitalisation after adjusting the cost of sale of porcelain insulators may be brought to the notice of the Commission for appropriate directions in the matter.

17. The break up the additional capital expenditure allowed is as under:

(Rs. in Lakh)			
	De-Capitalisation	Additional capital expenditure	Net Additional capital expenditure considered for calculation.
Asset – I	NIL	397.05	397.05
Asset - II	253.40	426.57	173.17

18. The following capital cost has been allowed during 2009-14 after considering the additional capital expenditure:

(Rs in lakh)

Particulars	As on 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
ASSET I						
Opening Gross Block	20993.75	20993.75	21390.80	21390.80	21390.80	21390.80
ACE during 2009-14		397.05	0.00	0.00	0.00	0.00
Gross Block		21390.80	21390.80	21390.80	21390.80	21390.80
ASSET II						
Opening Gross Block	20907.79	20907.79	21080.96	21080.96	21080.96	21080.96
ACE during 2009-14		173.17	0.00	0.00	0.00	0.00
Gross Block		21080.96	21080.96	21080.96	21080.96	21080.96

DEBT- EQUITY RATIO

19. Clause (2) of Regulation 12 of the 2009 regulations *inter-alia* provides that,-

“(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.”

20. Debt-Equity ratio of 70:30 was considered in order dated 30.7.2009 in Petition No. 64 of 2009 while deciding the tariff for 2004-09. The same ratio has been considered for calculation in this order. Debt-equity details in respect of the transmission assets in respect of the capital cost have been calculated as under:

Asset I	Approved		Admitted as on 31.03.2009		As on 31.03.2014	
	Amount (Rs. Lakh)	%	Amount (Rs. Lakh)	%	Amount (Rs. Lakh)	%
Debt	15090.05	70.00%	14695.63	70.00%	14973.56	70.00%
Equity	6467.16	30.00%	6298.13	30.00%	6417.24	30.00%
Total	21557.21	100.00%	20993.76	100.00%	21390.80	100.00%
Asset II						
	Amount (Rs. Lakh)	%	Amount (Rs. Lakh)	%	Amount (Rs. Lakh)	%
Debt	15360.10	70.00%	14635.45	70.00%	14756.67	70.00%
Equity	6582.90	30.00%	6272.34	30.00%	6324.29	30.00%
Total	21943.00	100.00%	20907.79	100.00%	21080.96	100.00%

RETURN ON EQUITY

21. Regulation 15 of the 2009 regulations provides for calculation of return as under:

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation:

*Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:*

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be:

Provided that return on equity with respect to the actual tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be tried up separately for each year of the tariff period along with the tariff petition filed for the next tariff period.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

.....”

22. The petitioner has computed return on equity on pre-tax basis at the MAT rate applicable for 2009-10 i.e. 16.995%. The petitioner in its affidavit dated 9.6.2010 has submitted that it has filed Petition No.17 of 2010 for relaxation of Regulation 15 of 2009 regulations to allow grossing up of return on equity with the MAT rate of 16.995% as applicable to the financial year 2009-10. Pending decision by the Commission, the petitioner has submitted the revised calculation by grossing up the base rate of return @ 11.33 % as per the provisions of 2009 regulations.

23. The Commission in its order dated 3.8.2010 in Petition No.17/2010 has decided to amend the 2009 regulations to provide for grossing up the base rate of return with the applicable tax MAT rate as per the relevant Finance Act. The process of amendment is under way and when notified will address the concern of the petitioner, other transmission licensees and generators who are paying at the MAT rate of tax.

24. Return on equity in respect the transmission assets has been calculated as under:

(Rs. In lakh)

Asset - I						
		2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	6298.13	6298.13	6417.24	6417.24	6417.24	6417.24
Addition due to Additional Capitalisation		119.12	0.00	0.00	0.00	0.00
Closing Equity		6417.24	6417.24	6417.24	6417.24	6417.24
Average Equity		6357.68	6417.24	6417.24	6417.24	6417.24
Return on Equity (Base Rate)		15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)		11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)		17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)		1111.39	1121.80	1121.80	1121.80	1121.80

Asset –II						
		2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	6272.34	6272.34	6324.29	6324.29	6324.29	6324.29
Addition due to Additional Capitalisation		51.95	0.00	0.00	0.00	0.00
Closing Equity		6324.29	6324.29	6324.29	6324.29	6324.29
Average Equity		6298.31	6324.29	6324.29	6324.29	6324.29
Return on Equity (Base Rate)		15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)		11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)		17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)		1101.01	1105.55	1105.55	1105.55	1105.55

INTEREST ON LOAN

25. Regulation 16 of the 2009 regulations provides for calculation of interest on loan capital as under:

“16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

26. In this order, interest on loan has been calculated as per the methodology detailed below:

- (a) Loan details as admitted by the Commission as per last order dated 30.7.2009 in Petition No. 64/2009 have been taken for the purpose of calculation. There is addition of actual loan during 2009-10 for the purpose of additional capital expenditure.
- (b) 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.
- (c) Gross loan as on 31.3.2009 as admitted by the Commission at the time of previous tariff setting and the additions there after have been considered as notional loan and the weighted average rate of interest on loan for respective years arrived as per (b) above has been applied to arrive at interest on notional loan.
- (d) There are differences in the interest on loan as worked out in this order and as calculated by the petitioner in the petition on account of the following:
 - (i) Net additional capitalization during 2009-10 has been taken in our calculations for Asset-II whereas the petitioner has not considered the de-capitalization.

- (ii) Petitioner has considered actual repayment of loan instead of notional repayment (which is equal to the depreciation) during the year for both the assets.

27. Calculation of weighted average interest on loan is enclosed as **Annexure** to this order. Interest on Loan has been calculated based on the principles mentioned in the preceding para as under:

(Rs. In lakh)

Asset – I						
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	14695.63	14695.63	14973.56	14973.56	14973.56	14973.56
Cumulative Repayment upto Previous Year		2720.62	3824.83	4939.52	6054.21	7168.90
Net Loan-Opening		11975.01	11148.73	10034.04	8919.35	7804.66
Addition due to Additional Capitalisation		277.94	0.00	0.00	0.00	0.00
Repayment during the year		1104.21	1114.69	1114.69	1114.69	1114.69
Net Loan-Closing		11148.73	10034.04	8919.35	7804.66	6689.97
Average Loan		11561.87	10591.39	9476.70	8362.01	7247.32
Weighted Average Rate of Interest on Loan		9.5505%	9.5501%	9.5497%	9.5490%	9.5482%
Interest		1104.21	1011.49	904.99	798.49	691.99

(Rs. In lakh)

Asset – II						
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	14635.45	14635.45	14756.67	14756.67	14756.67	14756.67
Cumulative Repayment upto Previous Year		2801.04	3894.74	4993.00	6091.27	7189.54
Net Loan-Opening		11834.41	10861.93	9763.67	8665.40	7567.13
Addition due to Additional Capitalisation		121.22	0.00	0.00	0.00	0.00
Repayment during the year		1093.70	1098.27	1098.27	1098.27	1098.27
Net Loan-Closing		10861.93	9763.67	8665.40	7567.13	6468.86
Average Loan		11348.17	10312.80	9214.53	8116.26	7018.00
Weighted Average Rate of Interest on Loan		9.5505%	9.5502%	9.5497%	9.5491%	9.5483%
Interest		1083.81	984.89	879.96	775.03	670.10

DEPRECIATION

28. Regulation 17 of the 2009 regulations provides for computation of depreciation in the following manner, namely:

“17. (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that.....



Provided further that.....

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

29. Depreciation has been worked out on the admitted capital expenditure as on 1.4.2009 and projected additional capitalization thereafter. The difference in the depreciation claimed by petitioner and that awarded through this order in case of Asset-II are attributable to non consideration of de-capitalization amount of Rs.253.05 lakh by the petitioner.

30. For the period 1.4.2009 to 31.3.2014 the depreciation worked out are as under:

(Rs. In lakh)

Asset – I						
		2009-10	2010-11	2011-12	2012-13	2013-14
Rate of Depreciation		5.2104%	5.2111%	5.2111%	5.2111%	5.2111%
Depreciable Value	90%	19073.05	19251.72	19251.72	19251.72	19251.72
Elapsed Life		3	4	5	6	7
Balance Useful life of the asset		-	-	-	-	-
Remaining Depreciable Value		16352.43	15426.89	14312.20	13197.51	12082.82
Depreciation		1104.21	1114.69	1114.69	1114.69	1114.69
Asset – I						
		2009-10	2010-11	2011-12	2012-13	2013-14
Rate of Depreciation		5.2095%	5.2098%	5.2098%	5.2098%	5.2098%
Depreciable Value	90%	18894.94	18972.86	18972.86	18972.86	18972.86
Elapsed Life		3	4	5	6	7
Balance Useful life of the asset		-	-	-	-	-
Remaining Depreciable Value		16113.52	15097.75	13999.48	12901.21	11802.95
Depreciation		1093.70	1098.27	1098.27	1098.27	1098.27

OPERATION & MAINTENANCE EXPENSES

31. Clause (g) of Regulation 19 the 2009 regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. The norms for Double Circuit Twin Conductor transmission line is as under:

32. The petitioner has calculated the operation and maintenance expenses in accordance with the above norms which have been allowed. The O & M expenses for the transmission assets have been calculated as under:

INTEREST ON WORKING CAPITAL

33. As per the 2009 regulations the components of the working capital and the interest thereon are discussed hereunder:

(i) Receivables: As per Regulation 18(1)(c)(i) of the 2009 regulations, receivables will be equivalent to two months' average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months' transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Maintenance spares: Regulation 18(1)(c)(ii) of the 2009 regulations provides for maintenance spares @ 15% per annum of the O & M expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses: Regulation 18(1) (c) (iii) of the 2009 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 the respective year as claimed in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital: As per Regulation 18(3) of the 2009 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 1.4.2009 or on 1st April of the year in which the project or part thereof (as the case may be) is declared under commercial operation, whichever is later. The interest on working capital is payable on normative basis notwithstanding that the transmission licensee has not taken working capital loan from any outside agency. The petitioner has claimed interest on working capital @ 12.25% based on SBI PLR as on 1.4.2009, which is in accordance with the 2009 regulations and has been allowed.

34. Interest on working capital calculated on the basis of the above are given as under:

(Rs. In lakh)

Asset – I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	23.14	24.47	25.87	27.34	28.89
O & M expenses	12.85	13.59	14.37	15.19	16.05
Receivables	591.83	581.16	564.67	548.27	531.96
Total	627.82	619.21	604.91	590.81	576.91
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	76.91	75.85	74.10	72.37	70.67

Asset -II					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	22.29	23.57	24.92	26.34	27.84
O & M expenses	12.38	13.09	13.85	14.64	15.46
Receivables	583.81	570.03	553.75	537.56	521.44
Total	618.49	606.69	592.52	578.53	564.74
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	75.76	74.32	72.58	70.87	69.18

TRANSMISSION MAJORATION FACTOR

35. The petitioner has claimed Transmission Majoration Factor (TMF) @ 10% of the Annual Transmission Charges in accordance with the provisions of 2001 regulations. UPPCL has raised objections to grant of TMF on perpetuity on the ground that there is no mention about the TMF @ 10% of the transmission charges in 2004 and 2009 regulations. It has been further submitted that the Commission in its order dated 23.5.2001 allowed TMF to new private entrepreneurs entering transmission sector upto 31.3.2004. The Commission's intention in order dated 23.5.2001 was to provide initial buoyancy to the private entrepreneurs for investment in transmission lines in power sector but continuing the TMF in perpetuity after giving proper rate of return on equity is in contradiction to the spirit of section 61(d) of the Electricity Act, 2003 and the National Electricity Policy which seek to maintain a balance between the need for investment and interest of consumers.

36. We have considered the submissions of UPPCL. To recapitulate the background of the introduction of TMF, it may be noted that the Commission by its order dated 23.5.2001 in Petition No 23/2001 had decided to allow 10% mark up (pre-tax) on transmission charges as the TMF to new private entrepreneurs entering the

transmission sector up to 31.4.2004. The relevant para of the said order dated 23.5.2001 is as under:

“24. The Commission would like to make it clear that the TMF is a one-time measure to encourage private entrepreneurs to promote investment in transmission sector. We expect that the serious entrepreneurs would seize this opportunity and we also expect that the PGCIL would also expedite urgent action to cover all the critical lines with a limited period in meaningful and constructive cooperation with private investors. Accordingly, the TMF would be available to new entrepreneurs only for the period up to 31st March 2004. This would, thus, be co-terminus with the Commission’s order dated 21.12.2000 on terms and conditions of tariff. However, the benefit of TMF would continue to be available during the entire life of the project in respect of the investors who enter the transmission sector up to the period ending 31.3.2004.”

37. This was notified as a part of terms and conditions of tariff as Regulation 4.10A of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2001 which is extracted as under:

“4.10A Transmission Majoration Factor

In respect of the transmission projects executed through IPTC/JV routes, 10% (ten percent) mark up (pre-tax) on transmission charges shall be allowed as Transmission Majoration Factor.

Provided that Transmission Majoration Factor shall not be allowed on HVDC projects executed through IPTC/JV routes.

Provided further that the Transmission Majoration Factor shall be allowed during the entire life of the transmission project to the new investor entering the transmission sector through IPTC/JV routes and who has been granted a transmission licence under Section 27C of the Indian Electricity Act, 1910, up to 31-3-2004.”

38. The Commission vide its order dated 1.7.2004 in Petition No. 51/2004 has confirmed the entitlement of the petitioner to TMF during the tariff period 2004-09 and thereafter. The relevant paragraph of the said order is extracted hereunder:

“8. in our considered opinion, Regulation 4.10A ibid has conferred a substantive right on the petitioner to claim Transmission Majoration Factor. Therefore, despite the fact that no provision for payment of Transmission Majoration Factor is made in the 2004 Regulations, the petitioner shall be entitled to claim the Transmission Majoration Factor throughout the period of licence, which is 25 years from the date of issue.”

39. The petitioner has entered the transmission sector through JV route before 31.3.2004 and was granted the transmission licence by the Commission on 13.11.2003. In terms of the provisions of Regulation 4.10A of 2001 regulations and in the light of our decision quoted above, we are of the view that the petitioner is entitled to the benefits of the Transmission Majoration Factor @ 10% of the transmission charges during 2009-14.

TRANSMISSION CHARGES

40. The transmission charges being allowed for the transmission lines are summarized below:

(Rs. In lakh)

Asset -I					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1104.21	1114.69	1114.69	1114.69	1114.69
Interest on Loan	1104.21	1011.49	904.99	798.49	691.99
Return on equity	1111.39	1121.80	1121.80	1121.80	1121.80
Interest on Working Capital	76.91	75.85	74.10	72.37	70.67
O & M Expenses	154.24	163.10	172.45	182.29	192.62
Total	3550.96	3486.93	3388.03	3289.64	3191.77
Asset -II					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1093.70	1098.27	1098.27	1098.27	1098.27
Interest on Loan	1083.81	984.89	879.96	775.03	670.10
Return on equity	1101.01	1105.55	1105.55	1105.55	1105.55
Interest on Working Capital	75.76	74.32	72.58	70.87	69.18
O & M Expenses	148.60	157.13	166.14	175.62	185.57
Total	3502.88	3420.16	3322.50	3225.34	3128.66

APPLICATION FEE AND THE PUBLICATION EXPENSES

41. The petitioner has sought approval for the reimbursement of publication charge and other charges from Respondent No.1. In accordance with our decision in order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled for

reimbursement of the filing fee from the beneficiaries. The petitioner shall also be entitled for publication expenses from the beneficiaries.

42. This order disposes of Petition No. 287/2009.

Sd/-
(M.Deena Dayalan)
Member

Sd/-
(V.S.Verma)
Member



Name of the Company:	POWERLINKS TRANSMISSION LTD.
Name of the Tr. System:	Asset-1: Gorakhpur-Lucknow Transmission line in EASTERN-NORTHERN INTER-CONNECTOR
Actual DOCO:	01.08.2006
Petition No.:	287/2009
Tarrif setting Period:	2009-14

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(Rs. in Lacs)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	IFC					
	Gross loan opening	4440.44	4524.42	4524.42	4524.42	4524.42
	Cumulative Repayment upto DOCO/previous year	736.59	1113.63	1490.66	1867.70	2244.73
	Net Loan-Opening	3703.85	3410.80	3033.76	2656.73	2279.69
	Additions during the year	83.98	0.00	0.00	0.00	0.00
	Repayment during the year	377.04	377.04	377.04	377.04	377.04
	Net Loan-Closing	3410.80	3033.76	2656.73	2279.69	1902.66
	Average Loan	3557.32	3222.28	2845.24	2468.21	2091.17
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	313.04	283.56	250.38	217.20	184.02
	Rep Schedule	24 equal half yearly installments from 15.07.2007				
2	ADB					
	Gross loan opening	3948.31	4022.98	4022.98	4022.98	4022.98
	Cumulative Repayment upto DOCO/previous year	654.95	990.20	1325.45	1660.70	1995.94
	Net Loan-Opening	3293.36	3032.78	2697.53	2362.29	2027.04
	Additions during the year	74.67	0.00	0.00	0.00	0.00
	Repayment during the year	335.25	335.25	335.25	335.25	335.25
	Net Loan-Closing	3032.78	2697.53	2362.29	2027.04	1691.79
	Average Loan	3163.07	2865.16	2529.91	2194.66	1859.41
	Rate of Interest	9.14%	9.14%	9.14%	9.14%	9.14%
	Interest	289.10	261.88	231.23	200.59	169.95
	Rep Schedule	24 semi annual equal installments from 15.07.2007				
3	IDFC					
	Gross loan opening	3336.12	3399.22	3399.22	3399.22	3399.22
	Cumulative Repayment upto DOCO/previous year	553.39	836.66	1119.93	1403.20	1686.46
	Net Loan-Opening	2782.73	2562.56	2279.29	1996.03	1712.76
	Additions during the year	63.10	0.00	0.00	0.00	0.00
	Repayment during the year	283.27	283.27	283.27	283.27	283.27

	Net Loan-Closing	2562.56	2279.29	1996.03	1712.76	1429.49
	Average Loan	2672.65	2420.93	2137.66	1854.39	1571.12
	Rate of Interest	10.48%	10.48%	10.48%	10.48%	10.48%
	Interest	280.09	253.71	224.03	194.34	164.65
	Rep Schedule	48 quarterly installments from 15.04.2007				
4	SBI					
	Gross loan opening	2970.75	3026.94	3026.94	3026.94	3026.94
	Cumulative Repayment upto DOCO/previous year	552.44	804.69	1056.93	1309.18	1561.42
	Net Loan-Opening	2418.31	2222.26	1970.01	1717.77	1465.52
	Additions during the year	56.19	0.00	0.00	0.00	0.00
	Repayment during the year	252.25	252.25	252.25	252.25	252.25
	Net Loan-Closing	2222.26	1970.01	1717.77	1465.52	1213.28
	Average Loan	2320.28	2096.13	1843.89	1591.64	1339.40
	Rate of Interest	10.19%	10.19%	10.19%	10.19%	10.19%
	Interest	236.44	213.60	187.89	162.19	136.48
	Rep Schedule	48 quarterly installments from 31.03.2007				
	Total Loan					
	Gross loan opening	14695.62	14973.56	14973.56	14973.56	14973.56
	Cumulative Repayment upto DOCO/previous year	2497.37	3745.17	4992.96	6240.76	7488.56
	Net Loan-Opening	12198.25	11228.39	9980.60	8732.80	7485.00
	Additions during the year	277.94	0.00	0.00	0.00	0.00
	Repayment during the year	1247.80	1247.80	1247.80	1247.80	1247.80
	Net Loan-Closing	11228.39	9980.60	8732.80	7485.00	6237.21
	Average Loan	11713.32	10604.50	9356.70	8108.90	6861.11
	Rate of Interest	9.5505%	9.5501%	9.5497%	9.5490%	9.5482%
	Interest	1118.68	1012.74	893.53	774.32	655.11

Name of the Company:	POWERLINKS TRANSMISSION LTD.
Name of the Tr. System:	Asset-2: 400 KV Double Circuit Bareilly-Mandola Transmission line
Actual DOCO:	01.05.2006
Petition No.:	287/2009
Tarrif setting Period:	2009-14

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(Rs. in Lacs)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	IFC					
	Gross loan opening	4422.26	4512.49	4512.49	4512.49	4512.49
	Cumulative Repayment upto DOCO/previous year	733.03	1109.07	1485.11	1861.15	2237.19
	Net Loan-Opening	3689.23	3403.42	3027.38	2651.34	2275.30
	Additions during the year	90.23	0.00	0.00	0.00	0.00
	Repayment during the year	376.04	376.04	376.04	376.04	376.04
	Net Loan-Closing	3403.42	3027.38	2651.34	2275.30	1899.26
	Average Loan	3546.32	3215.40	2839.36	2463.32	2087.28
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	312.08	282.96	249.86	216.77	183.68
	Rep Schedule	24 equal half yearly installments from 15.07.2007				
2	ADB					
	Gross loan opening	3932.14	4012.37	4012.37	4012.37	4012.37
	Cumulative Repayment upto DOCO/previous year	651.77	986.13	1320.50	1654.86	1989.23
	Net Loan-Opening	3280.37	3026.24	2691.87	2357.51	2023.14
	Additions during the year	80.23	0.00	0.00	0.00	0.00
	Repayment during the year	334.36	334.36	334.36	334.36	334.36
	Net Loan-Closing	3026.24	2691.87	2357.51	2023.14	1688.78
	Average Loan	3153.30	2859.05	2524.69	2190.33	1855.96
	Rate of Interest	9.14%	9.14%	9.14%	9.14%	9.14%
	Interest	288.21	261.32	230.76	200.20	169.63
	Rep Schedule	24 semi annual equal installments from 15.07.2007				
3	IDFC					
	Gross loan opening	3322.45	3390.25	3390.25	3390.25	3390.25
	Cumulative Repayment upto DOCO/previous year	550.71	833.23	1115.75	1398.27	1680.79
	Net Loan-Opening	2771.74	2557.02	2274.50	1991.98	1709.46
	Additions during the year	67.80	0.00	0.00	0.00	0.00
	Repayment during the year	282.52	282.52	282.52	282.52	282.52
	Net Loan-Closing	2557.02	2274.50	1991.98	1709.46	1426.94

	Average Loan	2664.38	2415.76	2133.24	1850.72	1568.20
	Rate of Interest	10.48%	10.48%	10.48%	10.48%	10.48%
	Interest	279.23	253.17	223.56	193.96	164.35
	Rep Schedule	48 quarterly installments from 15.04.2007				
4	SBI					
	Gross loan opening	2958.59	3018.95	3018.95	3018.95	3018.95
	Cumulative Repayment upto DOCO/previous year	549.29	800.87	1052.45	1304.03	1555.61
	Net Loan-Opening	2409.30	2218.08	1966.50	1714.92	1463.34
	Additions during the year	60.36	0.00	0.00	0.00	0.00
	Repayment during the year	251.58	251.58	251.58	251.58	251.58
	Net Loan-Closing	2218.08	1966.50	1714.92	1463.34	1211.76
	Average Loan	2313.69	2092.29	1840.71	1589.13	1337.55
	Rate of Interest	10.19%	10.19%	10.19%	10.19%	10.19%
	Interest	235.77	213.20	187.57	161.93	136.30
	Rep Schedule	48 quarterly installments from 31.03.2007				
	Total Loan					
	Gross loan opening	14635.44	14934.06	14934.06	14934.06	14934.06
	Cumulative Repayment upto DOCO/previous year	2484.80	3729.31	4973.81	6218.32	7462.82
	Net Loan-Opening	12150.64	11204.76	9960.25	8715.75	7471.24
	Additions during the year	298.62	0.00	0.00	0.00	0.00
	Repayment during the year	1244.51	1244.51	1244.51	1244.51	1244.51
	Net Loan-Closing	11204.76	9960.25	8715.75	7471.24	6226.74
	Average Loan	11677.70	10582.50	9338.00	8093.49	6848.99
	Rate of Interest	9.5505%	9.5502%	9.5497%	9.5491%	9.5483%
	Interest	1115.28	1010.65	891.75	772.86	653.96