

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 112/TT/2012**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson  
Shri M. Deena Dayalan, Member  
Shri A. K. Singhal, Member**

**Date of Hearing : 26.11.2013**

**Date of Order : 19.05.2014**

**In the matter of:**

Approval under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for determination of transmission tariff from notional DOCO (1.1.2011) to 31.3.2014 for Northern Region System Strengthening Scheme-V, for tariff block 2009-14 in Northern Region.

**And in the matter of:**

Power Grid Corporation of India Limited  
"Saudamani", Plot No.2,  
Sector-29, Gurgaon -122 001.

.....**Petitioner**

**Vs**

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,  
Vidyut Bhawan, Vidyut Marg,  
Jaipur- 302 005.
2. Ajmer Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
3. Jaipur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
4. Jodhpur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.



5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan, Kumar House Complex Building II,  
Shimla-171 004.
6. Punjab State Electricity Board  
The Mall, Patiala-147 001.
7. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6,  
Panchkula (Haryana)-134 109.
8. Power Development Department,  
Govt. of Jammu and Kashmir,  
Mini Secretariat, Jammu.
9. UP Power Corporation Ltd.,  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow-226 001.
10. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi-110 002.
11. BSES Yamuna Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
12. BSES Rajdhani Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
13. North Delhi Power Ltd.,  
Power Trading & Load Dispatch Group,  
Cennet Building, Adjacent to 66/11kV Pitampura-3,  
Grid Building, Near PP Jewellers,  
Pitampura, New Delhi-110 034.
14. Chandigarh Administration,  
Sector-9, Chandigarh.
15. Uttarakhand Power Corporation Ltd.,  
Urja Bhawan, Kanwali Road,  
Dehradun.
16. North Central Railway,  
Allahabad.

17. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi-110 002.

....Respondents

**For petitioner** : Shri M. M. Mondal, PGCIL  
Shri Prashant Sharma, PGCIL  
Shri B. K. Sahoo, PGCIL  
Shri S.S Raju, PGCIL  
Ms. Sangeeta Edwards, PGCIL  
Shri A. M. Pavgi, PGCIL

**For respondent** : Shri Padamjit Singh, PSPCL  
Shri R. B. Sharma, Advocate, BRPL  
Shri G. Das, NDMC  
Shri H. M. Saxena, NDMC

### **ORDER**

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of the transmission charges of elements from notional date of commercial operation (1.1.2011) to 31.3.2014 for Northern Region System Strengthening Scheme-V, for tariff block 2009-14 in Northern Region based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The Investment Approval (I.A.) for the transmission project was accorded by Government of India, vide Ministry of Power letter dated 9.6.2006, at an estimated cost of ₹72125 lakh, including IDC of ₹3266 lakh based on 4th quarter, 2005 price level. The instant asset was to be commissioned within 36 months

from the date of I.A., i.e by 1.7.2009. The scope of work includes construction of following transmission lines and sub-stations:-

**Transmission Lines:-**

- a) LILO of 400 kV S/C Hissar-Jaipur line at Bhiwadi-80 KM.
- b) 400 kV D/C Bhiwadi-Agra Line-216 KM.
- c) 400 kV D/C Bhiwadi-Moga Line-370 KM.

**Sub-Stations**

- a) Extension of 400 kV Agra (PGCIL) Sub-station.
- b) Extension of 400/220 kV Moga (PGCIL) Sub-Station.
- c) Extension of 400/220 kV Bhiwadi (PGCIL) Sub-Station

3. The asset covered in the instant petition is an 80 MVAR Bus Reactor at Bhiwadi Sub-station (hereinafter referred as "transmission asset"). With the commissioning of the transmission asset on 1.1.2011, the entire scope of the project is complete. The details of other assets covered under NRSSS-V are as follows:-

- a) LILO of 400 kV S/C Hissar- Bassi line at Bhiwadi –Tariff was approved vide order dated 25.5.2011 in Petition No. 251/2010.
- b) 400 kV D/C Bhiwadi- Agra Line- Tariff was approved vide order dated 25.5.2011 in Petition No. 251/2010.
- c) 400 kV D/C Bhiwadi- Moga TL- Tariff was approved vide order dated 5.7.2011 in Petition No. 294/2010.

4. The petitioner, vide affidavit dated 5.12.2013, requested that element wise tariff may be approved and submitted revised management certificates and tariff forms of the transmission asset i.e. Bus Reactor at Bhiwadi Sub-station.

5. The transmission charges claimed by the petitioner based on the actual date of commercial operation are as under:-

(` in lakh)

Particulars	2010-11	2011-12	2012-13	2013-14
Depreciation	12.85	52.78	54.03	55.01
Interest on Loan	3.60	14.09	13.34	12.48
Return on Equity	13.12	53.84	55.08	56.05
Interest on working capital	1.17	4.88	5.06	5.24
O & M Expenses	13.85	58.57	61.92	65.46
<b>Total</b>	<b>44.59</b>	<b>184.16</b>	<b>189.43</b>	<b>194.24</b>

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

(` in lakh)

Particulars	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	8.31	8.79	9.29	9.82
O & M Expenses	4.62	4.88	5.16	5.46
Receivables	29.73	30.69	31.57	32.37
<b>Total</b>	<b>42.66</b>	<b>44.36</b>	<b>46.02</b>	<b>47.65</b>
Rate of Interest	11.00%	11.00%	11.00%	11.00%
Interest	1.17	4.88	5.06	5.24

7. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. The Respondent No. 2, Ajmer Vidyut Vitran Nigam Ltd (AVVNL), has filed its reply affidavit dated 11.5.2012, Respondent No. 3, Jaipur Vidyut Vitran Nigam Ltd (JVVNL) has filed its reply affidavit dated 14.5.2012 Respondent No. 4, Jodhpur Vidyut Vitran Nigam Ltd (JdVVNL) has filed its reply

affidavit dated 14.5.2012, Respondent No. 6, Punjab State Power Corporation Limited (PSPCL), has filed its reply affidavit dated 25.11.2013 and Respondent No. 12, BSES Rajdhani Power Ltd (BRPL), has filed its reply affidavit dated 22.11.2013. The petitioner has filed separate rejoinders to the reply filed by JVVNL, AVVNL, JdVVNL, vide affidavits dated 21.11.2013. The petitioner has not filed any rejoinder to the reply filed by PSPCL and BRPL. The objections raised by the respondents in their reply and the clarifications given by the petitioner in its rejoinder are addressed in the relevant paragraphs of this order.

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

9. AVVNL, JVVNL and JdVVNL have submitted that though the transmission asset was put under commercial operation on 1.1.2011, the petitioner has filed the instant petition only on 14.12.2011 and the petitioner should explain the reasons for delay in filing the petition. PSPCL has submitted that the bus reactor was charged on 31.12.2010, but the notification regarding date of commercial operation was dated 19.9.2011. We are of the view that the petitioner should inform all the respondents about the date of commercial operation before or immediately after the commercial operation of the asset. In the instant case, it appears that the petitioner has taken considerably long time to inform the respondents about the date of commercial operation and it is not a healthy practice. Accordingly, we direct the petitioner to ensure that all the respondents are informed about the commercial operation of the asset before or immediately on commercial operation of the asset. Further, we are of the view

that the petitioner should file an application for approval of transmission tariff as provided in Regulation 5 of the 2009 Tariff Regulations or within a reasonable period from the date of commercial operation.

### **Capital cost**

10. Regulation 7 of the 2009 Tariff Regulations provides as follows:-

**“(1) Capital cost for a project shall include:-**

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.
- (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
- (c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

11. Details of capital cost submitted by the petitioner, vide affidavit dated 5.12.2013, as on the actual date of commercial operation and estimated

additional capital expenditure projected to be incurred for the transmission asset are given below. The petitioner has not claimed any initial spares.

(₹ in lakh)						
Apportioned approved cost	Expenditure up to DOCO	Projected expenditure from DOCO to 31.3.2011	Projected expenditure for 2011-2012	Projected expenditure for 2012-13	Projected expenditure for 2013-14	Total estimated completion cost
1186.56	994.28	12.35	40.10	7.30	29.77	1083.80

### **Cost variation**

12. The total estimated completion cost of the transmission asset is ₹1083.80 lakh against apportioned approved cost of ₹1186.56 lakh and accordingly there is no cost over-run. BRPL has submitted that the estimated completion cost is lower than the apportioned approved cost leading to considerable savings to the petitioner. As has been observed by us in other petitions, the cost estimates of the petitioner are not realistic in this petition too. We direct the petitioner to adopt a prudent procedure to make cost estimates of different elements of the transmission projects more realistic.

### **Time over-run**

13. As per the investment approval, the project was scheduled to be commissioned within 36 months from the date of investment approval i.e. by 1.7.2009. The transmission asset was put under commercial operation on 1.1.2011, after a delay of 18 months. The petitioner has submitted, in the petition, that the progress of work of bus reactor at Bhiwadi Sub-station was hampered mainly due to poor mobilization of supply and erection by the contractor.



14. AVVNL, JVVNL and JdVVNL have submitted that the delay of 18 months may not be condoned and the financial burden due to the time over-run caused by the contractor should not be passed on to the beneficiaries. PSPCL has submitted that non-availability of bus reactor up to 1.6.2011 would have had adverse effect of high voltage problem and requested not to allow IDC for the period of delay of 18 months. BRPL has submitted that as per Form 5C, the transmission asset was to be completed on 22.10.2008. Thus, the total delay is 26 months and not 18 months as stated by the petitioner and therefore, IDC and IEDC for 26 months may not be allowed. In response, the petitioner has clarified, vide affidavit dated 19.7.2013, that the progress of work of bus reactor at Bhiwadi Sub-station was hampered mainly due to heavy construction activity including roads around Bhiwadi, poor mobilization of supply and erection by the contractor due to non-availability of testing and commissioning manpower. The petitioner has requested to condone the time over-run.

15. We have considered the submissions of the respondents and the petitioner. According to the petitioner, the time over-run is mainly due to construction activity around Bhiwadi, poor mobilization of supply and erection by the contractor due to non-availability of testing and commissioning manpower. During the hearing on 26.11.2013, the petitioner reiterated that the delay was mainly on account of non-availability of testing facility and difficulty in mobilizing manpower. If the contractor did not have testing facility and commissioning manpower, the petitioner should have provided necessary support to the contractor. It is the prime responsibility of the petitioner to supervise the work

closely and get it executed in time. We are not convinced that the construction activity around Bhiwadi could delay the commissioning of the transmission asset. Further, the petitioner has not submitted any documentary evidence to substantiate that the time over-run is due to the contractor. In the absence of any documentary evidence, we are not able to accept the claims made by the petitioner. We are of the view that the beneficiaries should not be burdened with the cost of time over-run and accordingly delay of 18 months is not condoned.

16. Details of disallowed IDC and IEDC are as follows:-

(₹ in lakh)

<b>As per Management Certificate submitted vide affidavit dated 06.12.2013</b>		
	<b>IDC</b>	<b>IEDC</b>
Expenditure Up to 31.12.2010	132.84	36.05
Total IDC and IEDC Claimed	<b>132.84</b>	<b>36.05</b>
<b>Details of IDC &amp; IEDC Disallowed for 18 months</b>		
Disallowed IDC and IEDC for 18 months	44.28	12.02
Total	<b>44.28</b>	<b>12.02</b>

17. The capital cost considered for the purpose of tariff calculation as on date of commercial operation is as follows:-

(₹ in lakh)

Capital cost as on DOCO	Disallowed IDC and IEDC	Capital Cost considered for tariff calculation.
994.28	56.30	937.98

### **Projected additional capital expenditure**

18. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“Additional Capitalisation: (1) The capital expenditure incurred or projected to be incurred, on the following counts within the 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 Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

19. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31<sup>st</sup> March of the year closing after 2 years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31<sup>st</sup> March of the year closing after 3 years of the year of commercial operation”.

Therefore, cut-off date for the above mentioned assets is 31.3.2014.

20. The details of additional capital expenditure claimed by the petitioner for the instant transmission asset are given overleaf:-

(₹ in lakh)

Year	Work/equipment proposed to be added after DOCO up to cut-off date/ beyond cut off date	Amount capitalized and proposed to be capitalized	Justification
2010-11	Building	0.93	Balance & Retention payment
	Sub-station	11.42	
	<b>Total</b>	<b>12.35</b>	
2011-12	Sub-station	40.10	Balance & Retention payment
	<b>Total</b>	<b>40.10</b>	
2012-13	Sub-station	7.30	Balance & Retention payment
	<b>Total</b>	<b>7.30</b>	
2013-14	Sub-station	29.77	Balance & Retention payment
	<b>Total</b>	<b>29.77</b>	

21. AVVNL, JVVNL and JdVVNL have submitted that the petitioner should confirm that all the works included in the project scope have been completed and completion cost is within the approved cost. The petitioner has clarified that all the works under the scope of the project are already completed and are within the approved cost.

22. The additional capital expenditure claimed by the petitioner falls within the cut-off date. Hence, it has been considered for the purpose of tariff calculation. However, the petitioner should submit the list of liabilities and balance work at the time of truing up.

23. Estimated capital cost as on 31.3.2014 after adjusting IDC/IEDC and additional capital expenditure are as follows:-

Capital cost as on DOCO after adjusting IDC/IEDC	Additional capital expenditure				(₹ in lakh)
	2010-11	2011-12	2012-13	2013-14	Total capital cost
937.98	12.35	40.10	7.30	29.77	1027.50

### **Debt- equity ratio**

24. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

**Explanation-** The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal

resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(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.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

25. The debt-equity ratio as on the actual date of commercial operation considered for the purpose of tariff calculation is as follows:-

( ` in lakh)

<b>Capital cost as on date of commercial operation</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	656.60	70.00
Equity	281.38	30.00
<b>Total</b>	<b>937.98</b>	<b>100.00</b>

26. The details of debt-equity considered for additional capital expenditure during 2010-14 are as follows:-

( ` in lakh)

<b>Additional capital expenditure</b>								
<b>Particulars</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
	2010-11		2011-12		2012-13		2013-14	
Debt	8.65	70.00	36.72	91.57	5.11	70.00	20.84	70.00
Equity	3.71	30.00	3.38	08.43	2.19	30.00	8.93	30.00
<b>Total</b>	<b>12.35</b>	<b>100.00</b>	<b>40.10</b>	<b>100.00</b>	<b>7.30</b>	<b>100.00</b>	<b>29.77</b>	<b>100.00</b>

27. The petitioner has submitted, vide affidavit dated 5.12.13, the revised Form-13. As per the revised Form-13, the loan corresponding to additional capital expenditure during the financial year 2010-11, is indicated as drawn in the next financial year. Accordingly, it implies that the additional capital expenditure during 2010-11 is funded only through equity. This equity amount has been

restricted to 30% as per Regulation 12(3) of the 2009 Tariff Regulations. The actual loan corresponding to additional capital expenditure for 2011-12 is ₹36.72 lakh (₹28.07 lakh+₹8.65 lakh) i.e. in percentage terms and the debt portion is 91.57% and actual equity is 8.43%.

28. Details of debt-equity ratio of assets as on 31.3.2014 is as follows:-

(₹ in lakh)

<b>Capital cost as on 31.3.2014</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	727.92	70.84
Equity	299.59	29.16
<b>Total</b>	<b>1027.50</b>	<b>100.00</b>

### **Return on equity**

29. Regulation 15 of the 2009 Tariff Regulations provides 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% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall 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 Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

(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.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the 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 financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations".

30. The petitioner's prayer for recovery of shortfall or refund the excess Annual Fixed Charges on account of return on equity due to change in Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly with the beneficiaries shall be settled in accordance with the provisions of Regulation 15 of 2009 Tariff Regulations. Return on equity has been computed @ 17.481% p.a on average equity as shown in the table below:-

(` in lakh)

2010-11 (pro-rata)	2011-12	2012-13	2013-14
12.38	50.13	50.62	51.59

31. Based on the above, the return on equity has been considered as given hereunder:-

(` in lakh)

Particulars	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Opening Equity	281.38	285.09	288.47	290.66
Addition due to Additional Capitalisation	3.71	3.38	2.19	8.93
Closing Equity	285.09	288.47	290.66	299.59
Average Equity	283.23	286.78	289.56	295.12
Return on Equity (Base Rate )	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>	<b>15.50%</b>
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre Tax)</b>	<b>12.38</b>	<b>50.13</b>	<b>50.62</b>	<b>51.59</b>

## **Interest on loan**

32. Regulation 16 of the 2009 Tariff Regulations provides as under:-

“16. **Interest on loan capital** (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.”



33. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner's entitlement to interest on loan has been calculated on the following basis:-

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition.

(b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period.

(c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

34. As mentioned in Para-27 above, the petitioner has claimed foreign loan ADB III amounting to ₹8.65 lakh towards additional capital expenditure for 2010-11. However, the date of drawl of the loan was 6.5.2011. As the loan is drawn during 2011-12, it has been considered in the financial year 2011-12 for the purpose of calculating weighted average rate of interest on actual loan.

35. Detailed calculations in support of the weighted average rates of interest have been given in Annexure to this order.

36. Based on the above, interest on loan has been calculated as given overleaf:-

(` in lakh)

Particulars	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Gross Normative Loan	656.60	665.25	701.97	707.08
Cumulative Repayment upto previous year	0.00	12.13	62.01	113.15
Net Loan-Opening	656.60	653.12	639.95	593.92
Addition due to additional capital expenditure	8.65	36.72	5.11	20.84
Repayment during the year	12.13	49.89	51.14	52.12
Net Loan-Closing	653.12	639.95	593.92	562.64
Average Loan	654.86	646.54	616.94	578.28
Weighted Average Rate of Interest on Loan	2.0731%	2.0743%	2.0760%	2.0765%
<b>Interest</b>	<b>3.39</b>	<b>13.41</b>	<b>12.81</b>	<b>12.01</b>

### **Depreciation**

37. Regulation 17 of the 2009 Tariff Regulations provides as follows:-

“17. **Depreciation** (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 in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(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.”

38. The transmissions asset was put under commercial operation on 1.1.2011 and will complete 12 years beyond 2013-14. Accordingly, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of the 2009 Tariff Regulations, as per details given overleaf:-

(` in lakh)

Particulars	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
Opening Gross Block	937.98	950.33	990.43	997.73
Addition due to Projected Additional Capitalisation	12.35	40.10	7.30	29.77
Closing Gross Block	950.33	990.43	997.73	1027.50
Average Gross Block	944.16	970.38	994.08	1012.62
Rate of Depreciation	5.1381%	5.1410%	5.1443%	5.1468%
Depreciable Value	849.74	873.35	894.68	911.36
Remaining Depreciable Value	849.74	861.22	832.66	798.20
Depreciation	<b>12.13</b>	<b>49.89</b>	<b>51.14</b>	<b>52.12</b>

### **Operation & maintenance expenses**

39. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms prescribed in respect of the elements covered in the instant petition are as under:-

Transmission Line/Bay	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV bay (₹ in lakh / bay)	52.40	55.40	58.57	61.92	65.46

40. As per the above norms the allowable O&M expenses for the asset covered in the petition are as follows:-

(₹ in lakh)

Element	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
1 no 400 kV Bus Reactor bay	13.85	58.57	61.92	65.46
<b>Total O&amp;M Expenses</b>	<b>13.85</b>	<b>58.57</b>	<b>61.92</b>	<b>65.46</b>

41. The petitioner has submitted that O&M expenses for 2009-14 tariff block had been arrived on the basis of normalized actual O&M expenses of the petitioner during the year 2003-04 to 2007-08. The base norms so arrived have been escalated at 5.72% per annum to arrive at norms for the tariff period 2009-14. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the O&M expenses for tariff period 2009-14. The petitioner has also submitted that it would approach the Commission for suitable revision in the norms for O&M expenses due to impact of wage revision. AVVNL, JVVNL and JdVVNL have submitted that O&M expenses should be allowed as specified in the 2009 Tariff Regulations. BRPL has submitted that any further increase in the employee cost due to wage revision should be taken care by the petitioner by improving its productivity levels. The petitioner in its rejoinder has reiterated the submissions made in the petition.

42. The O&M expenses are allowed as per the norms specified in the 2009 Tariff Regulations. As regards the petitioner's submission regarding revision in the

norms for O&M expenses due to impact of wage revision, we would like to clarify that the Commission has already given effect to the impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the employees of PSUs after extensive stakeholders' consultation. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. However, in case the petitioner approaches with any such application, the same shall be dealt with in accordance with law.

### **Interest on working capital**

43. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are as follows:-

#### **(i) Receivables**

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months of annual 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 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses as part of the working capital 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 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O&M expenses for one month of the respective year. This has been considered in the working capital.

### **(iv) Rate of interest on working capital**

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate of 7.50% plus 350 bps as on 1.4.2012 (11.00%). The interest on working capital for the assets covered in the petition has been worked out accordingly.

44. Necessary computations in support of interest on working capital are given hereunder:-

(` in lakh)

Particulars	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Maintenance Spares	8.31	8.79	9.29	9.82
O & M Expenses	4.62	4.88	5.16	5.46
Receivables	28.59	29.46	30.23	31.05
Total	<b>41.52</b>	<b>43.12</b>	<b>44.68</b>	<b>46.32</b>
Rate of Interest	11.00%	11.00%	11.00%	11.00%
Interest	1.14	4.74	4.91	5.10

### **Transmission charges**

45. The transmission charges being allowed for the assets are summarized overleaf:-

(` in lakh)

Particulars	2010-11 (pro-rata)	2011-12	2012-13	2013-14
Depreciation	12.13	49.89	51.14	52.12
Interest on Loan	3.39	13.41	12.81	12.01
Return on Equity	12.38	50.13	50.62	51.59
Interest on Working Capital	1.14	4.74	4.91	5.10
O & M Expenses	13.85	58.57	61.92	65.46
<b>Total</b>	<b>42.89</b>	<b>176.74</b>	<b>181.40</b>	<b>186.27</b>

### **Filing fee and the publication expenses**

46. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. BRPL has submitted that the filing fee shall be governed as per the Commission's order. In accordance with the Commission's order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

### **Licence fee**

47. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. BRPL has submitted that the petitioner's request for reimbursement for licence fee should be rejected as license fee is the eligibility fee of a licence holder and it is the onus of the

petitioner. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations

### **Service tax**

48. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. BRPL has objected to recovery of service tax from the beneficiaries in future as CBEC has exempted service tax on transmission, vide notification No. 11/2010-service tax dated 20.7.2010. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

### **Sharing of Transmission Charges**

49. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shared by the beneficiaries in accordance with Regulation 33 of the 2009 Tariff Regulation up to 30.6.2011. With effect from 1.7.2011, the billing, collection & disbursement of the transmission charges shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 as amended.

50. This order disposes of Petition No. 112/TT/2012.

sd/-

**(A. K. Singhal)**  
**Member**

sd/-

**(M. Deena Dayalan)**  
**Member**

sd/-

**(Gireesh B. Pradhan)**  
**Chairperson**







**Annexure****CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN****(₹ in lakh)**

	<b>Details of Loan</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-14</b>
<b>1</b>	<b>ADB-III</b>				
	Gross loan opening	<b>696.01</b>	<b>696.01</b>	<b>696.01</b>	<b>696.01</b>
	Cumulative Repayment upto DOCO/previous year	<b>21.51</b>	<b>33.06</b>	<b>57.91</b>	<b>85.33</b>
	Net Loan-Opening	674.50	662.95	638.10	610.68
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	11.55	24.85	27.42	30.21
	Net Loan-Closing	662.95	638.10	610.68	580.47
	Average Loan	668.73	650.53	624.39	595.58
	Rate of Interest	2.07%	2.07%	2.07%	2.07%
	Interest	13.86	13.49	12.94	12.35
	Rep Schedule	30 Half yearly installments from 15.1.2010			
<b>2</b>	<b>ADB-III ( Drawn on 06-05-2011 for Add cap )</b>				
	Gross loan opening	<b>0.00</b>	<b>0.00</b>	<b>8.64</b>	<b>8.64</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.72</b>	<b>1.06</b>
	Net Loan-Opening	0.00	0.00	7.92	7.58
	Additions during the year	0.00	8.64	0.00	0.00
	Repayment during the year	0.00	0.72	0.34	0.37
	Net Loan-Closing	0.00	7.92	7.58	7.20
	Average Loan	0.00	3.96	7.75	7.39
	Rate of Interest	1.83%	1.83%	1.83%	1.83%
	Interest	0.00	0.07	0.14	0.13
	Rep Schedule	30 Half yearly installments from 15.1.2010			
<b>3</b>	<b>ADB-III ( Add cap for the year 2011-2012)</b>				
	Gross loan opening	<b>0.00</b>	<b>0.00</b>	<b>28.07</b>	<b>28.07</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>	<b>3.44</b>
	Net Loan-Opening	0.00	0.00	25.73	24.63
	Additions during the year	0.00	28.07	0.00	0.00
	Repayment during the year	0.00	2.34	1.11	1.22
	Net Loan-Closing	0.00	25.73	24.63	23.41
	Average Loan	0.00	12.87	25.18	24.02
	Rate of Interest	2.21%	2.21%	2.21%	2.21%
	Interest	0.00	0.28	0.56	0.53
	Rep Schedule	30 Half yearly installments from 15.1.2010			
<b>4</b>	<b>ADB-III ( Add cap For the year 2012-2013)</b>				
	Gross loan opening	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.11</b>

	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>
	Net Loan-Opening	0.00	0.00	0.00	4.48
	Additions during the year	0.00	0.00	5.11	0.00
	Repayment during the year	0.00	0.00	0.63	0.19
	Net Loan-Closing	0.00	0.00	4.48	4.30
	Average Loan	0.00	0.00	2.24	4.39
	Rate of Interest	2.21%	2.21%	2.21%	2.21%
	Interest	0.00	0.00	0.05	0.10
	Rep Schedule	30 Half yearly installments from 15.1.2010			
	<b>Total Loan</b>				
	Gross loan opening	696.01	696.01	732.71	737.82
	Cumulative Repayment upto DOCO/previous year	21.51	33.06	60.96	90.46
	Net Loan-Opening	674.50	662.95	671.75	647.37
	Additions during the year	0.00	36.70	5.11	0.00
	Repayment during the year	11.55	27.90	29.50	31.99
	Net Loan-Closing	662.95	671.75	647.37	615.38
	Average Loan	668.73	667.35	659.56	631.37
	Rate of Interest	<b>2.0731%</b>	<b>2.0743%</b>	<b>2.0760%</b>	<b>2.0765%</b>
	<b>Interest</b>	13.86	13.84	13.69	13.11