

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 199/TT/2012

Coram:

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

Date of Hearing: 13.11.2014

Date of Order : 09.01.2015

In the matter of

Approval of transmission tariff for **Asset-I:** LILO of both circuits of 400 kV D/C Bamnoui-Mundka/Bawana at Jatikalan 765/400 kV Sub-station (anticipated DOCO: 1.9.2012), **Asset-II:** Agra-Jatikalan 765 kV S/C T/L (anticipated DOCO: 1.1.2013) and **Asset-III:** Agra-Meerut 765 kV S/C T/L (anticipated DOCO: 1.12.2012) under 765 kV system for Central Part of Northern Grid Part-I in Northern Region, for tariff block 2009-14 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.

And in the matter of:

Power Grid Corporation of India Limited
Soudamini, Plot No 2, Sector 29
Gurgaon - 122001

.....**Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg, Jaipur-302005

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-147001
 7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula (Haryana) 134 109
 8. Power Development Department,
Govt. of Jammu & Kashmir,
Mini Secretariat, Jammu
 9. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226 001
 10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110 002
 11. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place, New Delhi
 12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place, New Delhi
 13. North Delhi Power Limited,
Power Trading & Load Dispatch Group,
CENNET Building, Adjacent to 66/11 kV Pitampura-3 GRID Building,
Near PP Jewelers, Pitampura, New Delhi-110 034
 14. Chandigarh Administration,
Sector-9, Chandigarh
 15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kasnwali Road, Dehradun
 16. North Central Railway,
Allahabad.
 17. New Delhi Municipal Council, Palika Kendra,
Sansad Marg, New Delhi-110 001

.....Respondents

For petitioner : Shri M.M. Mondal, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri Rajesh Prasad, PGCIL
Ms Sangeeta Edwards, PGCIL

For respondents : None

ORDER

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) for approval of transmission charges for (a) LILO of two circuits of 400 kV D/C Bamnoli-Mundka/Bawana transmission line at Jatikalan 765/400 kV substation(Asset-I) (anticipated DOCO: 1.9.2012), (b)765 kV S/C Agra-Jatikalan transmission line (Asset-II) (anticipated DOCO: 1.1.2013) and (c) 765 kV S/C Agra-Meerut transmission line (Asset-III) (anticipated DOCO: 1.12.2012) under 765 kV transmission system for Central Part of Northern Grid Part-I (the transmission system), from the anticipated dates of commercial operation of the respective asset to 31.3.2014 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (the 2009 Tariff Regulations).

2. The petitioner has filed affidavit dated 26.8.2013 to place on record the actual dates of commercial operation as under:-

Particulars	Date of Commercial Operation
Asset-I	1.10.2012
Asset-II	1.5.2013
Asset-III	1.6.2013

3. The Investment Approval (IA) for the transmission system was accorded by Board of Directors of the petitioner company vide Memorandum dated 20.9.2009 at an estimated cost of ₹134732 lakh, including Interest During Construction (IDC) of ₹10270 lakh. The broad scope of work is as follows:-

- (a) 765 kV S/CAgra-Meerut transmission line-260 kM (Asset-III)
- (b) 765 kV S/C Agra-Jatikalán transmission line-240 kM (Asset-II)
- (c) Jatikalán-Bhiwani-Moga 765 kV S/C transmission line-355 kM
- (d) LILo of both circuits of 400 kV D/C Meerut/Bawana-Bamnouli transmission line (Quad) at Jatikalán-5 kM (Asset-I).

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

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14 (Pro-rata)
Depreciation	53.24	123.81	1,908.50	1,766.51
Interest on Loan	61.36	135.24	2,229.82	2,057.99
Return on Equity	52.88	122.97	1,895.60	1,754.57
Interest on Working Capital	4.25	9.63	144.10	133.56
O & M Expenses	7.17	15.16	155.00	149.30
Total	178.90	406.81	6333.02	5861.93

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

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14 (Pro-rata)
Maintenance Spares	2.15	2.27	25.36	26.87
O & M Expenses	1.20	1.26	14.09	14.93
Receivables	59.63	67.80	1151.46	1172.39
Total	62.98	71.33	1190.91	1214.19
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	4.25	9.63	144.10	133.56

6. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003. None of the respondents have filed any reply to the petition.

7. We have heard the representatives of the parties present at the hearing and have perused the material available on record. We proceed to dispose of the petition.

Capital cost

8. Regulation 7 of the Tariff Regulations so far as relevant provides as under:-

“(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.”

9. The details of the apportioned approved cost, cost as on the dates of commercial operation and additional capital expenditure projected to be incurred for the transmission assets as submitted by the petitioner are given hereunder:-

(₹ in lakh)

Particulars	Apportioned Approved Cost	Actual Cost on Date of Commercial Operation	Projected Additional Capital Expenditure			Estimated Completion Cost
			2012-13	2013-14	2014-15	
Asset-I	1904.70	1777.15	478.69	178.14	-	2433.98
Asset-II	35511.57	38854.65	-	1154.41	695.85	40704.91
Asset-III	43837.99	39596.89	-	1102.30	862.77	41561.96

10. Additional Capital expenditure for 2014-15 period falls beyond the control period 2009-14 and as such is not being considered in the present petition.

Initial spares

11. Regulation 8 of the Tariff Regulations provide for ceiling norms for capitalization of initial spares in respect of transmission system as under:-

“8. Initial Spares. Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:

(iv) Transmission system

(a) Transmission line - 0.75%

(b) Transmission Sub-station - 2.5%

(c) Series Compensation devices and HVDC Station - 3.5%

Provided that where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost under first proviso to clause (2) of regulation 7, such norms shall apply to the exclusion of the norms specified herein.

12. The petitioner has not claimed any initial spares in the instant petition.

Time over-run

13. As per the IA, the transmission assets were scheduled to be commissioned within 36 months from the date of IA. Accordingly, the scheduled date of commissioning of the assets sanctioned under the transmission system was 1.3.2012. As stated by the petitioner in its affidavit dated 26.8.2013, in

response to Commission's letter dated 31.8.2012, the dates of commercial operation and consequential delay in respect of each asset is as under:-

Particulars	Date of Commercial Operation	Delay (Months)
Asset-I	1.10.2012	7
Asset-II	1.5.2013	14
Asset-III	1.6.2013	15

14. The petitioner in its affidavit dated 27.8.2013 has explained the reasons for delay in commercial operation. The petitioner has explained that delay in completion of the transmission assets is primarily on account of the court cases filed by the land owners in different courts. The petitioner has filed the copies of petitions/complaints filed by the land owners and orders of the courts finally dismissing the petition/suit. Another factor responsible for the delay is stated to be the delay in obtaining forest clearance and tower clearance. The petitioner has filed documentary evidence in support of the efforts made by it for obtaining the forest clearance and tower clearance. We have considered the explanation of the petitioner as also the documentary evidence available on record. We are satisfied that delay in commercial operation of the assets was beyond the control of the petitioner. As such, the delay is condoned in respect of each of the assets.

Cost over-run

15. As seen from the cost details given at para 9 above, the estimated completion cost of the Asset-I and Asset-II exceeds the apportioned approved cost though the estimated completion cost of Asset-III is within the apportioned approved cost. The petitioner in its affidavit dated 26.8.2013 has explained that cost increase is mainly on account of increase in line length from 5 km to 12.91 km in case of Asset-I and from 240 km to 252 km in case of Asset-II. The petitioner has stated that on account of increase in line length, preliminary

investigation/ROW/forest clearance/general civil works, tower quantity, Conductor, Earthwire and Hardware fittings increased resulting in cost exceeding the apportioned approved cost. At the hearing on 13.11.2014 the Commission directed the petitioner to submit the following details, namely:-

- (a) The reasons for increase in line length of all the three assets and approval of Board of Directors for revised scope of the project.
- (b) The segregation of head-wise increase in cost and its justification in terms of rate and quantity variation. The impact of variation in length on hard cost and other items like ROW etc.;
- (c) Energization certificate issued by CEA (RIO) for the assets; Revised Form-5B for all the assets may be submitted as the length of line has been increased; and Data for capital cost benchmarking.

16. In response, the petitioner has submitted, vide its affidavit dated 11.12.2014, the reasons for increase in line length as tabulated hereunder:-

Particulars	Estimated Line Length (km)	Actual Line Length (km)	Reasons for increase in line length
Asset-I	5.0	12.91	At the time of finalization of FR, it was envisaged that sub-station land would be available in Jhatikara village area which was at the approximately 5 to 6 km away from LILO line. However, the petitioner could get the land in the village Ghumonhera which is another 7-8 km far away from Jhatikara village, resulting line length increase from 5 to 12.91 km.
Asset-II	240.0	252.0	At the time of finalization of FR, it was envisaged, that said line shall cross the NH-8 at the particular point but at the time of execution, line was diverted and crossed at another point, further away from Delhi/ NCR. Further, KMP expressway also came in the corridor of

			said line which was not envisaged in FR, resulting in increase in line length due to both the reasons.
Asset-III	260.0	268.0	Line length in FR is finalized on the basis of walk over survey. During execution, actual survey was done to minimize ROW problem and finalize shortest feasible route, therefore variation of 8 km took place.

17. While explaining the reasons for variation in capital cost, the petitioner has explained that final amendments for the major contract of the transmission line (Tower and conductor) issued for change in line lengths how change in quantity only and there is no change in rates from the original award. The petitioner has submitted the Revised Management Certificate vide affidavits dated 1.4.2013 and 14.7.2014 for Asset-I and Asset-II and Asset-III respectively. Copy of the energization certificate issued by CEA (RIO) has also been submitted with the affidavit dated 11.12.2014. It is noted that, capital cost benchmarking data has not been submitted and the petitioner has stated that it would be submitting the data after completion of the project. In the past the petitioner has been submitting capital cost benchmarking data in some cases, but has not submitted the same in the present case.

18. We have considered the petitioner's explanation in support of cost over-run. In the absence of the revised apportioned approved cost, for the purpose of tariff in the present petition the capital cost of Asset-I and Asset-II, is restricted to apportioned approved cost of ₹1904.70 lakh and ₹35511.57 lakh respectively, though for the purpose of O&M Expenses, increased length of the transmission lines is considered. The decision to restrict the capital cost to the apportioned approved cost gets further sustenance from the Appellate Tribunal's judgment

dated 28.11.2013 in Petition No 165/2012 (Power Grid Corporation of India Ltd Vs Central Electricity Regulatory Commission and others).

Projected additional capital expenditure

19. Clause (1) of Regulation 9 of the Tariff Regulations provides as under:-

“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.”

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

“cut-off date” means 31st 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 31st March of the year closing after 3 years of the year of commercial operation”.

21. After taking into account the dates of commercial operation of the transmission assets, cut-off date arrived at is 31.3.2015 for Asset I and 31.3.2016 for Asset II and III.

22. The additional capital expenditure during 2012-13 and 2013-14 claimed by the petitioner, as at para 9 above, is within the cut-off date and is on account of balance payments. Therefore, additional capital expenditure is admissible. However, the capital cost of Asset-I and Asset-II is restricted to apportioned approved cost on account of cost over-run, as already held.

23. Based on the above, gross block as given below has been considered for the purpose of computation of the transmission charges for the transmission assets, after allowing additional capitalization as claimed, within the limits of apportioned approved cost:-

(₹ in lakh)

Particulars	Apportioned Approved Cost	Actual Cost on Date of Commercial Operation	Projected Additional Capital Expenditure		Estimated Completion Cost
			2012-13	2013-14	
Asset-I	1904.70	1777.15	127.55	-	1904.70
Asset-II	35511.57	35511.57	-	-	35511.57
Asset-III	43837.99	39596.89	-	1102.30	40699.19

Debt- equity ratio

24. Regulation 12 of the 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 capital cost on the dates of commercial operation arrived at as above and additional capitalization allowed, have been considered in the normative debt-equity ratio of 70:30. Details of debt-equity as on dates of commercial operation and 31.3.2014 considered on normative basis are as follows:-

(₹ in lakh)

Particulars	Capital cost on date of commercial operation			Capital cost on 31.3.2014		
	Asset-I	Asset-II	Asset-III	Asset-I	Asset-II	Asset-III
Debt	1244.01	24858.10	27717.82	1333.29	24858.10	28489.43
Equity	533.15	10653.43	11879.07	571.41	10653.43	12209.76
Total	1777.16	35511.53	39596.89	1904.70	35511.53	40699.19

Return on equity

26. 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".

27. The petitioner has submitted that it may be allowed to recover the shortfall or refund the excess Annual Fixed Charges, on account of return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission under Regulation 15(5) of the 2009 Tariff Regulations. We would like to clarify that the petitioner is allowed to recover the shortfall or refund the excess Annual Fixed Charges under Regulation 15(5) of the 2009 Tariff Regulations. Accordingly, Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15(5) of the 2009 Tariff Regulations. RoE allowed for the years 2012-2013 and 2013-2014 is as below:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14 (Pro-rata)
Opening Equity	533.15	571.41	10653.47	11879.07
Addition due to Additional Capitalisation	38.27	0.00	0.00	330.69
Closing Equity	571.42	571.41	10653.47	12209.76
Average Equity	552.28	571.41	10653.47	12044.41
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre-tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre-tax)	48.27	99.89	1707.14	1754.57

Interest on loan

28. Regulation 16 of the 2009 Tariff Regulations provides as follows:-

“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.”

29. In keeping with the provisions of Regulation 16, the petitioner's entitlement

to interest on loan has been calculated. Interest on loan has been calculated on the basis of prevailing rate of actual loan available as on the date of commercial operation given in following table. The petitioner has considered the proposed loan for working out interest on loan. The proposed loan is not considered as it is not supported by the relevant proof of interest on loan. Any change in rate of interest subsequent the date of commercial operation will be considered at the time of truing-up.

30. Detailed calculations in support of the weighted average rate of interest have been given in Annexure I, Annexure II and Annexure III for Asset-I, Asset-II and Asset-III respectively, to this order.

31. Based on the above, interest on loan has been calculated as given hereunder:-

Particulars	(₹ in lakh)			
	Asset-I		Asset-II	Asset-III
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14 (Pro-rata)
Gross Normative Loan	1244.01	1333.29	24858.10	27717.82
Cumulative Repayment upto previous year	0.00	48.60	0.00	0.00
Net Loan-Opening	1244.01	1284.69	24858.10	27717.82
Addition due to additional capital expenditure	89.29	0.00	0.00	771.61
Repayment during year	48.60	100.57	1718.76	1766.51
Net Loan-Closing	1284.69	1184.12	23139.34	26722.92
Average Loan	1264.35	1234.41	23998.72	27220.37
Weighted Average Rate of Interest on Loan	8.8805%	8.8800%	9.1284%	9.0726%
Interest	56.14	109.61	2008.13	2057.99

Depreciation

32. Regulation 17 of the Tariff Regulations provides as under:-

“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.”

33. The petitioner has claimed actual depreciation. In our calculations, depreciation has been calculated in accordance with clause (4) of Regulation 17 of the 2009 Tariff Regulations extracted above.

34. The assets were put under commercial operation during 2012-13. Accordingly, these assets will complete 12 years beyond 2013-14 and hence depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-III to the 2009 Tariff Regulations, as per details given overleaf:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14 (Pro-rata)
Opening Gross Block	1777.15	1904.70	35511.57	39596.89
Addition due to Projected Additional Capitalisation	127.55	0.00	0.00	1102.30
Closing Gross Block	1904.70	1904.70	35511.57	40699.19
Average Gross Block	1840.93	1904.70	35511.57	40148.04
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	1656.83	1714.23	31960.41	36133.24
Remaining Depreciable Value	1656.83	1665.63	31960.41	36133.24
Depreciation	48.60	100.57	1718.76	1766.51

Operation & Maintenance Expenses (O&M Expenses)

35. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for O&M Expenses for the transmission system based on the type of sub-station and the transmission line. Norms prescribed in respect of 765 kV elements covered in the instant petition are as under:-

Element	2012-13	2013-14
D/C four or more conductor transmission line (₹ lakh per km)	1.111	1.174
S/C four or more conductor transmission line (₹ lakh per km)	0.635	0.671

36. The allowable O&M Expenses for the assets are as under:-

Particulars	Line Length	(₹ in lakh)	
		2012-13	2013-14
Asset-I	12.91	7.17 (Pro-rata)	15.16
Asset-II	252	-	155.00 (Pro-rata)
Asset-III	267	-	149.30 (Pro-rata)

37. The petitioner has stated 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 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 submitted that it would approach the Commission for suitable revision in the norms for O&M Expenses in case the impact of wage hike w.e.f 1.1.2007 is more than 50%.

38. While specifying the norms for O&M Expenses, the Commission has in the 2009 Tariff Regulations already factored 50% on account of pay revision of the employees of PSUs after extensive consultation with the stakeholders. At this stage, there does not seem to be any justification for deviating from the norms.

Interest on working capital

39. 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 discussed hereunder.

(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 1 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 in case of transmission assets declared under commercial operation after 1.4.2009 shall be equal to State Bank of India Base Rate as applicable on 1st April of the year of commercial operation plus 350 bps. State Bank of India base interest rate on 1.4.2012 was 10.00%. Therefore, interest rate of 13.50% has been considered. The interest on working capital for the assets covered in the petition has been worked out accordingly.

40. Necessary computations in support of interest on working capital are as follows:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	Asset-III
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14 (Pro-rata)
Maintenance Spares	2.15	2.27	25.36	26.87
O & M Expenses	1.20	1.26	14.09	14.93
Receivables	54.70	55.53	1039.93	1172.39
Total	58.05	59.06	1079.38	1214.19
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	3.92	7.97	130.61	133.56

Transmission charges

41. The transmission charges being allowed for the transmission assets are summarized hereunder:-

Particulars	(₹ in lakh)			
	Asset-I		Asset-II	Asset-III
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14 (Pro-rata)
Depreciation	48.60	100.57	1718.76	1766.51
Interest on Loan	56.14	109.61	2008.13	2057.99
Return on Equity	48.27	99.89	1707.14	1754.57
Interest on Working Capital	3.92	7.97	130.61	133.56
O & M Expenses	7.17	15.16	155.00	149.30
Total	164.10	333.20	5719.64	5861.93

42. The transmission charges allowed are subject to truing up in accordance with the 2009 Tariff Regulations.

Filing fee, licence fee and publication expenses

43. The petitioner has sought reimbursement of fee paid by it for filing the petition, licence fee and also the publication expenses. BRPL has opposed the prayers of the petitioner. The petitioner shall be entitled for reimbursement of fee and licence fee directly from the beneficiaries in accordance with Regulation 42A of the Tariff Regulations. Similarly, the petitioner shall also be entitled to recover the publication expenses incurred in connection with the present petition. The reimbursement of filing fee, licence fee and the publication expenses shall be on *pro-rata* basis in the same ratio as the transmission charges.

Service tax

44. 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. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of transmission charges

45. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

46. This order disposes of Petition No. 199/TT/2012.

sd/-	sd/-	sd/-	sd/-
(A. S. Bakshi) Member	(A.K. Singhal) Member	(M. Deena Dayalan) Member	(Gireesh B. Pradhan) Chairperson

Annexure – I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	Bond XXXIII		
	Gross loan opening	80.00	80.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	80.00	80.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	80.00	80.00
	Average Loan	80.00	80.00
	Rate of Interest	8.64%	8.64%
	Interest	6.91	6.91
	Rep Schedule	12 Annual installments from 8.7.2014	
2	Bond XXIX		
	Gross loan opening	5.00	5.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.42
	Net Loan-Opening	5.00	4.58
	Additions during the year	0.00	0.00
	Repayment during the year	0.42	0.42
	Net Loan-Closing	4.58	4.17
	Average Loan	4.79	4.38
	Rate of Interest	9.20%	9.20%
	Interest	0.44	0.40
	Rep Schedule	12 Annual installments from 12.3.2013	
3	BOND XXVIII		
	Gross loan opening	5.00	5.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.42
	Net Loan-Opening	5.00	4.58
	Additions during the year	0.00	0.00
	Repayment during the year	0.42	0.42
	Net Loan-Closing	4.58	4.17
	Average Loan	4.79	4.38
	Rate of Interest	9.33%	9.33%
	Interest	0.45	0.41
	Rep Schedule	12 Annual installments from 15.12.2012	
4	Bond XXXIV		
	Gross loan opening	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	200.00	200.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	200.00	200.00
	Average Loan	200.00	200.00

	Rate of Interest	8.84%	8.84%
	Interest	17.68	17.68
	Rep Schedule	12 Annual installments from 21.10.2014	
5	Bond XXXI		
	Gross loan opening	70.00	70.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	70.00	70.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	5.83
	Net Loan-Closing	70.00	64.17
	Average Loan	70.00	67.08
	Rate of Interest	8.90%	8.90%
	Interest	6.23	5.97
	Rep Schedule	12 Annual installments from 25.02.2014	
6	Bond XXXVI		
	Gross loan opening	22.00	22.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	22.00	22.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	22.00	22.00
	Average Loan	22.00	22.00
	Rate of Interest	9.35%	9.35%
	Interest	2.06	2.06
	Rep Schedule	15 Annual installments from 29.8.2016	
7	Bond XXX		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	3.33
	Net Loan-Closing	40.00	36.67
	Average Loan	40.00	38.33
	Rate of Interest	8.80%	8.80%
	Interest	3.52	3.37
	Rep Schedule	15 Annual installments from 29.9.2013	
8	Bond XXXV		
	Gross loan opening	20.00	20.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	20.00	20.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	20.00	20.00

Average Loan	20.00	20.00
Rate of Interest	9.64%	9.64%
Interest	1.93	1.93
Rep Schedule	12 Annual installments from 31.5.2015	
Total Loan		
Gross loan opening	442.00	442.00
Cumulative Repayment upto DOCO/previous year	0.00	0.83
Net Loan-Opening	442.00	441.17
Additions during the year	0.00	0.00
Repayment during the year	0.83	10.00
Net Loan-Closing	441.17	431.17
Average Loan	441.58	436.17
Weighted Average Rate of Interest	8.8805%	8.8800%
Interest	39.21	38.73

Annexure – II

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

	Details of Loan	2013-14
1	Bond XXXIII	
	Gross loan opening	3100.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3100.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3100.00
	Average Loan	3100.00
	Rate of Interest	8.64%
	Interest	267.84
	Rep Schedule	12 Annual installments from 8.7.2014
2	Bond XXIX	
	Gross loan opening	1230.00
	Cumulative Repayment upto DOCO/previous year	102.50
	Net Loan-Opening	1127.50
	Additions during the year	0.00
	Repayment during the year	102.50
	Net Loan-Closing	1025.00
	Average Loan	1076.25
	Rate of Interest	9.20%
	Interest	99.02
	Rep Schedule	12 Annual installments from 12.3.2013
3	BOND XXVIII	
	Gross loan opening	300.00
	Cumulative Repayment upto DOCO/previous year	25.00
	Net Loan-Opening	275.00
	Additions during the year	0.00
	Repayment during the year	25.00
	Net Loan-Closing	250.00
	Average Loan	262.50
	Rate of Interest	9.33%
	Interest	24.49
	Rep Schedule	12 Annual installments from 15.12.2012
4	Bond XXXIV	
	Gross loan opening	5550.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5550.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5550.00
	Average Loan	5550.00
	Rate of Interest	8.84%
	Interest	490.62
	Rep Schedule	12 Annual installments

		from 21.10.2014
5	Bond XXXI	
	Gross loan opening	3650.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3650.00
	Additions during the year	0.00
	Repayment during the year	304.17
	Net Loan-Closing	3345.83
	Average Loan	3497.92
	Rate of Interest	8.90%
	Interest	311.31
	Rep Schedule	12 Annual installments from 25.2.2014
6	Bond XXXVI	
	Gross loan opening	3680.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3680.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3680.00
	Average Loan	3680.00
	Rate of Interest	9.35%
	Interest	344.08
	Rep Schedule	15 Annual installments from 29.8.2016
7	Bond XXX	
	Gross loan opening	1600.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1600.00
	Additions during the year	0.00
	Repayment during the year	133.33
	Net Loan-Closing	1466.67
	Average Loan	1533.33
	Rate of Interest	8.80%
	Interest	134.93
	Rep Schedule	15 Annual installments from 29.9.2013
8	Bond XXXV	
	Gross loan opening	660.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	660.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	660.00
	Average Loan	660.00
	Rate of Interest	9.64%
	Interest	63.62
	Rep Schedule	12 Annual installments from 31.5.2015
9	Bond XLI	
	Gross loan opening	1000.00

	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1000.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1000.00
	Average Loan	1000.00
	Rate of Interest	8.85%
	Interest	88.50
	Rep Schedule	12 Annual installments from 19.10.2016
10	SBI (21.03.2012)	
	Gross loan opening	2428.25
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2428.25
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2428.25
	Average Loan	2428.25
	Rate of Interest	10.45%
	Interest	253.75
	Rep Schedule	22 Annual installments from 31.8.2016
11	BOND XL	
	Gross loan opening	4000.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4000.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4000.00
	Average Loan	4000.00
	Rate of Interest	9.30%
	Interest	372.00
	Rep Schedule	12 Annual installments from 28.6.2016
12	Bond XLIII (Add Cap for 2013-2014 drawl on 01.07.2013)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	808.09
	Repayment during the year	0.00
	Net Loan-Closing	808.09
	Average Loan	404.05
	Rate of Interest	7.93%
	Interest	32.04
	Rep Schedule	12 Annual installments from 31.5.2015
	Total Loan	
	Gross loan opening	27198.25
	Cumulative Repayment upto DOCO/previous year	127.50
	Net Loan-Opening	27070.75

Additions during the year	808.09
Repayment during the year	565.00
Net Loan-Closing	27313.84
Average Loan	27192.29
Weighted Average Rate of Interest	9.1284%
Interest	2482.21

Annexure – III

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2013-14
1	Bond XXXIII	
	Gross loan opening	3540.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3540.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3540.00
	Average Loan	3540.00
	Rate of Interest	8.64%
	Interest	305.86
	Rep Schedule	12 Annual installments from 8.7.2014
2	Bond XXIX	
	Gross loan opening	965.00
	Cumulative Repayment upto DOCO/previous year	80.42
	Net Loan-Opening	884.58
	Additions during the year	0.00
	Repayment during the year	80.42
	Net Loan-Closing	804.17
	Average Loan	844.38
	Rate of Interest	9.20%
	Interest	77.68
	Rep Schedule	12 Annual installments from 12.3.2013
3	BOND XXVIII	
	Gross loan opening	348.00
	Cumulative Repayment upto DOCO/previous year	29.00
	Net Loan-Opening	319.00
	Additions during the year	0.00
	Repayment during the year	29.00
	Net Loan-Closing	290.00
	Average Loan	304.50
	Rate of Interest	9.33%
	Interest	28.41
	Rep Schedule	12 Annual installments from 15.12.2012
4	Bond XLI	
	Gross loan opening	1641.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1641.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1641.00

	Average Loan	1641.00
	Rate of Interest	8.85%
	Interest	145.23
	Rep Schedule	12 Annual installments from 19.10.2016
5	Bond XLIII	
	Gross loan opening	808.16
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	808.16
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	808.16
	Average Loan	808.16
	Rate of Interest	7.93%
	Interest	64.09
	Rep Schedule	12 Annual installments from 20.5.2017
6	Bond XXXIV	
	Gross loan opening	6262.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	6262.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	6262.00
	Average Loan	6262.00
	Rate of Interest	8.84%
	Interest	553.56
	Rep Schedule	12 Annual installments from 21.10.2014
7	Bond XXXI	
	Gross loan opening	4113.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4113.00
	Additions during the year	0.00
	Repayment during the year	342.75
	Net Loan-Closing	3770.25
	Average Loan	3941.63
	Rate of Interest	8.90%
	Interest	350.80
	Rep Schedule	12 Annual installments from 25.2.2014
8	Bond XL	
	Gross loan opening	244.34
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	244.34
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	244.34
	Average Loan	244.34

	Rate of Interest	9.30%
	Interest	22.72
	Rep Schedule	12 Annual installments from 28.6.2016
9	Bond XXXVI	
	Gross loan opening	4996.41
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4996.41
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4996.41
	Average Loan	4996.41
	Rate of Interest	9.35%
	Interest	467.16
	Rep Schedule	15 Annual installments from 29.8.2016
10	Bond XXX	
	Gross loan opening	1370.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1370.00
	Additions during the year	0.00
	Repayment during the year	114.17
	Net Loan-Closing	1255.83
	Average Loan	1312.92
	Rate of Interest	8.80%
	Interest	115.54
	Rep Schedule	12 Annual installments from 29.9.2013
11	Bond XXXV	
	Gross loan opening	737.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	737.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	737.00
	Average Loan	737.00
	Rate of Interest	9.64%
	Interest	71.05
	Rep Schedule	12 Annual installments from 31.5.2015
12	Bond XLIII (Addcap)	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	771.61
	Repayment during the year	0.00
	Net Loan-Closing	771.61
	Average Loan	385.81

	Rate of Interest	7.93%
	Interest	30.59
	Rep Schedule	12 Annual installments from 20.05.2017
13	SBI (21.3.2013)	
	Gross loan opening	2692.91
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2692.91
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2692.91
	Average Loan	2692.91
	Rate of Interest	10.45%
	Interest	281.41
	Rep Schedule	22 Annual installments from 31.8.2016
	Total Loan	
	Gross loan opening	27717.82
	Cumulative Repayment upto DOCO/previous year	109.42
	Net Loan-Opening	27608.40
	Additions during the year	771.61
	Repayment during the year	566.33
	Net Loan-Closing	27813.68
	Average Loan	27711.04
	Weighted Average Rate of Interest	9.0726%
	Interest	2514.10