

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 295/TT/2013

Coram:

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

Date of Hearing : 26.08.2014

Date of Order : 17.07.2015

In the matter of:

Approval of transmission tariff for assets associated with Vindhyachal IV & Rihand III (1000 MW) Generation Project (group-3) in Western & 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 Condition) Regulations, 2009

And in the matter of:

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

.....**Petitioner**

Vs

1. Madhya Pradesh Power Trading Company Ltd.,
Shakti Bhawan, Rampur
Jabalpur-482 008
2. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, 4th floor
Andehri (East), Mumbai-400 052
3. Gujarat Urja Vikas Nigam Ltd.,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390 007
4. Electricity Department, Government of Goa,
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa-403 001
5. Electricity Department,
Administration of Daman and Diu,
Daman-396 210



6. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa-396 230
7. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh-492 013
8. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Ltd.,
3/54, Press Complex, Agra-Bombay Road,
Indore -452 008
9. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur- 302 005
10. Ajmer Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
11. Jaipur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
12. Jodhpur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
13. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171 004
14. Punjab State Electricity Board,
The Mall, Patiala-147 001
15. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula (Haryana)-134 109
16. Power Development Department,
Govt. of Jammu and Kashmir,
Mini Secretariat, Jammu
17. Uttar Pradesh Power Corporation Ltd.,
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226 001



18. Delhi Transco Ltd.,
Shakti Sadan, Kotla Road,
New Delhi-110 002
19. BSES Yamuna Power Ltd.,
BSES Bhawan, Nehru Place,
New Delhi
20. BSES Rajdhani Power Ltd.,
BSES Bhawan, Nehru Place,
New Delhi
21. 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
22. Chandigarh Administration,
Sector-9, Chandigarh
23. Uttarakhand Power Corporation Ltd.,
Urja Bhawan, Kanwali Road,
Dehradun
24. North Central Railway,
Allahabad
25. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110 002

....Respondents

- For Petitioner : Shri S.S Raju, PGCIL
Shri P.V. Nath, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri M.M. Mondal, PGCIL
Ms. Sangeeta Edwards, PGCIL
Ms. Seema Gupta, PGCIL
Shri Swapnil Verma, PGCIL
- For Respondents : Shri R.B. Sharma, Advocate, BRPL
Shri Padamjit Singh, PSPCL
Shri T.P.S. Bawa, PSPCL



ORDER

The present petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of transmission charges for the assets associated with Vindhyachal IV & Rihand III (1000 MW) Generation Project (group-3) in Western & Northern Region, for tariff block 2009-14, 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 Board of Directors of the petitioner company vide Memorandum dated 17.3.2010, at an estimated cost of ₹467299 lakh, including IDC of ₹29779 lakh (based on 3rd Quarter, 2009 price level).

3. The scope of work covered under the project is as follows:-

Part –I Generation specific transmission system

A- Rihand-III: For NR only

Transmission Line

(i) Rihand –III Vindhyachal Pooling station 765 kV 2xS/C (initially to be operated at 400 kV)

: Ckt-I- 32 km (approx.)

: Ckt-II- 31 km (approx.)

Sub-station

(i) 765/400 kV Vindhyachal Pooling station (Extension)

B- Vindhyachal-IV : For WR only

Transmission Line

(i) Vindhyachal-IV-Vindhyachal Pooling station 400 kV D/C (Quad) line:
31 km



Sub-station

- (i) 765/400 kV Vindhyachal Pooling Station (Extension)

Part-II: Common System for both WR and NR

Transmission Line

- (i) Vindhyachal Pooling station –Satna 765 kV 2xS/C line (Ckt-I- 237 km, Ckt – II – 234 km, D/C Portion – 12 km)
- (ii) Satna-Gwalior 765 kV 2xS/C line (Ckt-I 360 km, Ckt-II – 359 km & D/C Portion – 30 km)
- (iii) Sasan-Vindhyachal Pooling station 765 kV S/C line : 6 km
- (iv) Sasan-Vindhyachal Pooling station 400 kV D/C line : 5 km

Sub-stations

- (i) Establishment of new 765/400 kV, 2x1500 MVA sub-station at Vindhyachal Pooling Station
- (ii) Extension of 765/400 kV Satna Substation
- (iii) Extension of 765/400 kV Gwalior Substation
- (iv) Extension of 765/400 kV Sasan Substation

Part-III: NR Strengthening in regional pool

Transmission Lines

- (i) Gwalior- Jaipur (RVPN) 765 kV S/C line : 300 km
- (ii) Bassi- Jaipur (RVPN) 400 kV D/C (Quad) line : 57 km

Sub-stations

- (i) Extension of 765/400 kV Gwalior Substation
- (ii) Extension of 765/400 kV Jaipur (RVPN) Substation.
- (iii) Extension of 400/220 kV Bassi Substation.

4. The petitioner initially filed the instant petition for determination of tariff based on their anticipated dates of commercial operation, viz. Asset-I: 765 kV S/C Satna-Gwalior ckt.-I with associated bays at Gwalior and Satna Sub-stations and line reactor (anticipated COD: 1.12.2013), Asset-II: 765 kV D/C Rihand III-Vindhyachal Pooling Station Transmission line (anticipated COD: 1.1.2014), and Asset-III: 765 kV S/C Sasan- Vindhyachal Pooling Station Transmission line (anticipated COD: 1.1.2014). Provisional tariff in respect of the above mentioned

assets was allowed by the Commission vide order dated 16.12.2013, subject to adjustment as per Regulation 5 (4) of the 2009 Tariff Regulations. The petitioner vide affidavit dated 4.6.2014 has submitted that Asset-I has been commissioned on 1.3.2014. Subsequently, vide affidavit dated 24.9.2014, the petitioner has submitted that it would file separate petition for Asset II (commissioned on 6.7.2014) and Asset III (anticipated to be commissioned in February, 2015). Thus, the instant petition covers only one asset, i.e. 765 kV S/C Satna-Gwalior ckt-I with associated bays at Gwalior and Satna Sub-stations and line reactor (hereinafter referred to as "Asset").

5. The petitioner has claimed the following transmission charges for the instant asset:-

(₹ in lakh)

Particulars	2013-14
Depreciation	261.06
Interest on Loan	264.39
Return on Equity	259.26
Interest on working capital	20.32
O & M Expenses	49.37
Total	854.40

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

(₹ in lakh)

Particulars	2013-14
Maintenance Spares	88.87
O & M Expenses	49.37
Receivables	1708.80
Total	1847.04
Rate of Interest	13.20%
Interest	20.32

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. Madhya Pradesh Power Management Co. Limited, Respondent No. 1, has filed its reply vide affidavit dated 2.12.2013 and Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL), Respondent No. 2, has filed its reply vide affidavit dated 9.1.2014. Punjab State Power Corporation Limited, (PSPCL), Respondent No. 14, has filed its reply vide affidavit dated 30.8.2014, and BSES Rajdhani Power Ltd (BRPL), Respondent No. 20, has filed its reply vide affidavit dated 22.8.2014. The petitioner has filed rejoinders to the replies of BRPL and PSPCL, vide affidavits dated 5.2.2015 and 11.4.2015 respectively. The objections raised by the respondents in their replies and the clarifications given by the petitioner in its rejoinder are addressed in the relevant paragraphs of this order.

8. We have heard the representatives of the parties present at the hearing, and have perused the material on record. We proceed to dispose of the petition. While doing so, the submissions of the respondent shall be duly taken note of.

Capital cost

9. 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.”

Time Over-run

10. As per the I.A. dated 17.3.2010, the asset was to be commissioned within 32 months from the date of I.A., i.e. by 1.12.2012. The asset has been commissioned on 1.3.2014, after a delay of 15 months. The petitioner has submitted vide affidavit dated 4.6.2014 that the delay in the commissioning of the asset is mainly on account of change in configuration, forest clearance in Madhya Pradesh and Uttar Pradesh, and RoW issues.

Change in configuration

11. The petitioner has submitted that in 11th WRPC meeting on 25.9.2009 and 13th NRPC meeting on 27.6.2009, two 765 kV S/C Satna-Gwalior transmission lines were proposed to be laid. During survey and construction stage, the petitioner faced RoW constraint (for about 115 km length) on account of forest stretches and coal block mines which were recently allocated to coal mining companies. In 34th meeting of Standing Committee on Power System Planning of

Western Region held on 9.5.2012, the petitioner proposed to implement one D/C line instead of two S/C lines in the portion where RoW constraints were being faced. Subsequently, incorporation of 765 kV D/C line in the major RoW constraint stretches and forest stretches were agreed and finalized in the 34th meeting of Western Region.

Delay in forest clearance

12. For forest clearance in Satna-Charkheri part covering 78.839 ha of forest stretches in Madhya Pradesh, the petitioner submitted proposal in August, 2011. Compliances of Stage-I approval from all DFOs was submitted to CCF Gwalior on 12.9.2013 and forwarded on 24.9.2013 to Ministry of Environment & Forests, New Delhi, which issued a letter on 11.10.2013 with two observations for compliance. State Government of Madhya Pradesh forwarded clarification on 28.10.2013 to MoEF which issued Stage-II clearance on 1.11.2013. The process took almost 27 months.

13. As regards forest clearance in Charkheri-Gwalior part for both circuits involving 27.645 ha of forest stretches in Uttar Pradesh, the petitioner submitted proposal for forest clearance in December, 2011. In principle approval was received on 29.1.2013. Stage-I approval was issued by RMoEF, Lucknow on 17.1.2013. Compliance report was forwarded from DFOs to Nodal Officer, Lucknow on 5.4.2013. DFOs raised demand note for additional amount which was deposited on 25.6.2013. Compliance report of In-principle approval from DFO, Jhansi, was forwarded on 29.6.2013. Final approval of Stage-II was issued by RMoEF, Lucknow on 10.9.2013. It took around 22 months.

14. The petitioner has submitted that the time over-run in the commissioning of the asset is due to the time taken in handling the RoW issue and getting the forest clearance from MP and UP forest divisions. These were reasons beyond its control, and hence the delay may be condoned.

15. BRPL has submitted that the petitioner is well conversant with problems like forest clearance, land acquisition and RoW. Keeping all these aspects in view, a completion period of 32 months was decided by the petitioner. The entire cost due to time over-run should be borne by the petitioner. PSPCL has submitted that the full utilization of the scheme is possible to the beneficiaries only when both the S/C lines were commissioned and the petitioner has delayed the commissioning of the second S/C line.

16. We have considered the submissions of the petitioner and the respondents. The petitioner has claimed that delay occurred due to time taken in forest clearance. However, it is not possible to assess the impact of the delay in getting the forest clearance on project implementation, as it is difficult to assess the time the petitioner considered for forest clearance while deciding schedule of 32 months at the time of planning. It has been observed that the petitioner took 17 months for applying for forest clearance, for which no justification/ reason has been given. The petitioner has not submitted how much time was envisaged for this activity in original schedule. Further, the petitioner cannot claim that route was not final for applying for forest clearance because the petitioner applied for forest clearance in August, 2011 whereas the re-routing was done in May, 2012. The petitioner could have applied for first stage forest clearance immediately after I.A. based on preliminary survey and the project could have been

commissioned in time even after delay in availability of forest clearance. So in the absence of reasons for delay in applying for forest clearance, delay of 15 months is not being condoned as of now. We will consider the claim of the petitioner if the aforesaid information is furnished, at the time of truing up.

Interest During Construction

17. The petitioner has not submitted Form 8 (i.e., details of allocation of corporate loans to various transmission elements) and Form 14 A (i.e., actual cash expenditure). Form 14 (i.e., Draw Down schedule for calculation of IDC & finance charges) contains only the amount of loan drawn as on the date of commercial operation. Quarter-wise details of drawl amount, repayment amount, rate of interest, IDC, finance charges and FERV/ hedging cost are not provided. The petitioner has vide affidavit dated 27.6.2014 submitted documentary proof for rate of interest for SBI loan @ 10.05% and for interest rate of foreign loan for the period from September, 2013 to March, 2014. The information submitted is insufficient to determine IDC.

18. In the absence of aforesaid information, IDC is being allowed in this order, based on following assumptions:-

- a) In the absence of loan wise actual date of deployment, the date of listing is considered as date of deployment for the Domestic bonds & Foreign Currency Bond and in case of SBI loan, the date of deployment has been considered as 21.3.2012 on the basis of the date as mentioned against the SBI Loan in Form 13;
- b) In the absence of quarter wise fund/loan deployment, the Gross Loan as on the date of commercial operation as specified in Form 13 has



been considered as amount of loan deployed from the deployment date as considered in a) above.

- c) The coupon rate has been considered as interest rate for Domestic and Foreign Currency bonds. In the absence of the rate of interest on first drawl and the subsequent change in rates, the interest rate for SBI loan has been considered as 10.05% (as provided by the petitioner for October, 2013) for the entire period for the calculation of IDC;
- d) In the absence of information like the date of drawl, exchange rate at the time of drawl, rate of interest at the time of first drawl, subsequent change in rate of interest and periodical FERV computations, it is difficult to compute IDC for foreign loans. Therefore, foreign loans are not being considered for the purpose of calculation of IDC. We will consider foreign loan if the petitioner provides sufficient information at the time of true-up;
- e) In the absence of the information regarding IDC accrued but not paid as on the date of commercial operation, IDC has been determined on cash basis, assuming that the interest are accruing annually for all loans and monthly for SBI loan and also assuming that all interest is paid on the date of accrual (i.e., the date on which the accrual happens, annually or monthly as the case may be);
- f) There is time over-run of 15 months. IDC has been restricted till the date of scheduled date of commercial operation (i.e., 1.12.2012). Since the interest on all loans computed till the scheduled date of commercial operation is accruing before the actual date of commercial

operation, IDC computed till 1.12.2012 has been paid before the actual date of commercial operation (i.e., 1.3.2014).

19. Accordingly, against the petitioner's claim for IDC of ₹4223.83 lakh, IDC of ₹1998.07 lakh has been worked out and allowed on cash basis, with the above assumptions. However, the petitioner is directed submit Form 8 (details of allocation of corporate loans to various transmission elements), Form 14 (Draw Down schedule for calculation of IDC & finance charges) and Form 14 A (actual cash expenditure) at the time of truing up. The petitioner is also directed to furnish the separate cost of 42.18 km DC tower, with respect to loading of capital cost of DC tower on ckt.-1, at the time of truing up.

20. As per Management Certificate dated 13.3.2014, the petitioner has claimed IEDC of ₹67.57 lakh. Since the entire expenditure of ₹ 67.57 lakh has been incurred during the period of time over-run, and this period of time over-run is not being condoned, the entire claim of IEDC of ₹67.57 lakh is being disallowed.

Cost over-run

21. As per the petition, total estimated completion cost of the asset is ₹66794.13 lakh against apportioned approved cost of ₹87424.00 lakh. The petitioner has submitted vide affidavit dated 4.6.2014 that though there is no cost over-run, there is cost variation on account of increase in crop compensation, vis-à-vis the estimate based on assessment by the Revenue authority. The petitioner has vide affidavit dated 4.6.2014 submitted that an amount of ₹2492.53 lakh has been paid on account of forest and crop compensation, and balance amount of

₹730.87 lakh is yet to be paid. The completed cost under the heads of Preliminary Investigation, RoW, Forest clearance, PTCC General civil works, compensation etc is ₹3130.95 lakh as against the FR estimate of ₹2117.41 lakh. BRPL has submitted that there is over estimation of cost of the instant assets and hence it is difficult to find out the actual increase in the cost of the asset. The petitioner in its rejoinder has submitted that the cost variation is due to the difference in the FR cost and the cost discovered through competitive bidding. The petitioner has submitted that the best competitive bid prices against tenders may vary as compared to the cost estimate depending upon prevailing market conditions, design and site requirements. The estimates are prepared as per well defined procedure for cost estimate. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/general practice.

22. We have considered the submissions made by the petitioner and the BRPL. Though there is no cost over-run in the case of instant asset, there is cost variation in case of some of the elements. The cost estimates of the petitioner are not realistic not only in this petition but also in other similar petitions. In our view the petitioner should adopt a prudent procedure to make cost estimates of different elements of the transmission projects more realistic.

Treatment of initial spares

23. The petitioner has vide management certificate dated 13.3.2014 claimed initial spares of ₹160.64 lakh towards transmission line and ₹161.11 lakh towards sub-station. The claim in relation to sub-station equipment exceeds the limit prescribed under the 2009 Tariff Regulations. The excess initial spares of

₹100.57 lakh has accordingly been deducted from the capital cost, as per details given hereunder:-

(₹ in lakh)							
Particulars	Cost up to cut off date under 2009-14 period	Initial Spares claimed	Project cost after scrutiny of IDC/IEDC as on cut-off date	Proportionate initial spares claimed	Ceiling limits as per regulation	Initial spares worked out	Excess initial spares claimed
	(A)	(B)	(C)	(D)=(B)*(C) / (A)	(E)	(F)=[(C)-(D)]*(E)/[100%-(E)]	(G)=(D)-(F)
T/L	57161.22	160.64	54952.77	154.43	0.75%	414.09	0.00
S/S equipment	2376.83	161.11	2291.95	155.36	2.50%	54.78	100.57
TOTAL	59538.05	321.75	57244.72	309.79		468.88	100.57

24. Capital cost being considered as on the date of commercial operation is given hereunder:-

Capital cost allowed as on COD					
1	2	3	4	5	6 =(2-3-4-5)
Asset	Capital Cost as on DOCO claimed by Petitioner	IDC disallowed	IEDC disallowed	Excess initial spares disallowed	Capital Cost as on COD allowed for tariff calculation
Asset-I	59108.21	2225.76	67.57	100.57	56714.31

Additional Capital Expenditure

25. Clause (1) of Regulation 9 of the 2009 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.”

26. The petitioner has claimed projected additional capital expenditure of

₹429.84 lakh for the year 2013-14 under Regulation 9(1) of the 2009 tariff Regulations. The projected additional capital expenditure claimed is within the cut-off date and are to be incurred towards balance and retention payment. Hence, the same has been considered for the purpose of tariff calculation.

27. The additional capital expenditure up to 31.3.2014 is being allowed in this petition, as per details given hereunder:-

(₹ in lakh)

Capital Cost considered for tariff from COD to 31.3.2014		
Capital cost as on COD	Additional capital expenditure for 2013-14	Total Capital Cost as on 31.3.2014
56714.31	429.84	57144.15

Debt- Equity Ratio

28. Regulation 12 of the 2009 Tariff Regulations provides as given overleaf:-

“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.”

29. Details of debt-equity in respect of the asset as on the date of commercial operation are given hereunder:-

(₹ in lakh)

Capital cost as on COD		
Particulars	Amount	%
Debt	39700.02	70.00
Equity	17014.29	30.00
Total	56714.31	100.00

30. Detail of debt-equity ratio of asset as on 31.3.2014 is as per details given hereunder:-

(₹ in lakh)

Capital cost as on 31.3.2014		
Particulars	Amount	%
Debt	40000.91	70.00
Equity	17143.25	30.00
Total	57144.15	100.00

Return on Equity (RoE)

31. 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".

32. Based on the above, the return on equity considered is as follows:-

(₹ in lakh)

Particulars	2013-14
Opening equity	17014.29
Addition due to additional capital expenditure	128.95
Closing equity	17143.25
Average equity	17078.77
Return on equity (Base Rate)	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%
Rate of Return on Equity (Pre Tax)	17.481%
Return on Equity (Pre Tax)	248.79

33. The petitioner has claimed RoE @ 17.481%(15.50/(1-11.33%)) per annum on the normative equity for Asset I by considering the base rate of 15.50%. Return on equity has been calculated as per Regulation 15 of the 2009 Tariff Regulations with pre-tax return on equity of 17.481%. The petitioner's request to

allow to recover the shortfall or refund the excess Annual Fixed Charges, 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, shall be settled in accordance with the provisions of Regulation 15 of the 2009 Tariff Regulations.

Interest on loan

34. 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.”

35. 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 normative loan of asset has been arrived based on the allowed capital cost and the debt-equity ratio considered;

(b) The normative repayment during the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period;

(c) Details of actual loans, their interest rates and repayment as submitted by the petitioner have been considered for determination of weighted average rate of interest. However, for the loan taken from SBI, the petitioner has specified the interest rate as 10.25% in Form 13 but the rate of interest shown in the supporting documents as submitted vide affidavit dated 27.6.2014 is @ 10.05%. Therefore, for the purpose of computation of weighted average rate of interest, the interest rate for SBI loan has been considered as 10.05%.

36. The interest on loan has been calculated on the basis of prevailing rate available on the date of commercial operation. Any change in rate of interest



subsequent to the date of commercial operation will be considered at the time of truing up.

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

38. Based on the above, interest on loan has been calculated are given hereunder:-

(₹ in lakh)

Particulars	2013-14
Gross Normative Loan	39700.02
Cumulative Repayment upto previous year	0.00
Net Loan-Opening	39700.02
Addition due to additional capital expenditure	300.89
Repayment during the year	250.52
Net Loan-Closing	39750.38
Average Loan	39725.20
Weighted Average Rate of Interest on Loan	7.6524%
Interest	253.33

Depreciation

39. Regulation 17 of the 2009 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.”

40. The asset in the instant petition was commissioned on 1.3.2014 and will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually, based on Straight Line Method and at rates specified in Appendix-III to the 2009 Tariff Regulations. Accordingly, depreciation has been worked out on the basis of capital expenditure allowed, wherein depreciation for the first year has been calculated on *pro-rata* basis for the part of year.

41. Based on the above, the following depreciation has been considered:-

(₹ in lakh)

Particulars	2013-14
Opening Gross Block	56714.31
Addition due to Projected Additional Capitalisation	429.84
Closing Gross Block	57144.15
Average Gross Block	56929.23
Rate of Depreciation	5.2808%
Depreciable Value	51236.31
Remaining Depreciable Value	51236.31
Depreciation	250.52

Operation & Maintenance Expenses

42. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies 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 the elements covered in the instant petition for the year 2013-14 is as follows:-

Element	2013-14
S/C Quad T/L (₹ lakh/ km)	0.671
765 kV bay (₹ lakh/ bay)	91.64

43. As per the norms specified in the 2009 Tariff Regulations, allowable O&M Expenses for the asset covered in the petition are as given under:-

(₹ in lakh)

Elements	2013-14 (pro-rata)
294.472 km S/C quad (S/C portion), T/L	16.47
42.18 km S/C quad S/C portion on D/C tower, T/L	2.36
4 nos., 765 kV bays	30.54
Total O&M Expenses	49.37

Interest on Working Capital

44. 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' fixed cost. The petitioner has claimed the receivables on the basis of 2 months'

annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Rate of interest on working capital

As per Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011 dated 21.6.2010, State Bank of India Base Rate (9.70%) plus 350 bps as on 1.4.2012 (13.20%) has been considered for as rate of interest on working capital for the asset.

(iii) 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 O&M Expenses for one month to be included in the working capital.

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

(₹ in lakh)

Particulars	2013-14
Maintenance Spares	88.87
O & M Expenses	49.37
Receivables	1643.23
Total	1781.46
Rate of Interest	13.20%
Interest	19.60

Transmission Charges

46. The transmission charges being allowed for the asset are summarized hereunder:-

(₹ in lakh)

Particulars	2013-14
Depreciation	250.52
Interest on Loan	253.33
Return on Equity	248.79
Interest on Working Capital	19.60
O & M Expenses	49.37
Total	821.61

Filing fee and the publication expenses

47. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. BRPL has submitted that the claim of the petitioner for filing fee and publication expenses is liable to be rejected in view of the order of the Commission dated 11.9.2008 in Petition No. 129 of 2005. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of 2009 Tariff Regulations. The petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis, in terms of Regulation 42 of 2009 Tariff Regulations. 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

48. 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 has clarified 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.

49. 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

50. 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. The petitioner clarified that if notifications regarding granting of exemption to transmission service are withdrawn at a later date, the beneficiaries shall have to share the service tax paid by the petitioner. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of Transmission Charges

51. 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.

52. This order disposes of Petition No. 295/TT/2013.

Sd/-

(A.S. Bakshi)
Member

Sd/-

(A.K. Singhal)
Member

Sd/-

(Gireesh B. Pradhan)
Chairperson



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

(₹ in lakh)

	Details of Loan	2013-14
1	Proposed Loan / Bond XLIV	
	Gross loan opening	7915.74
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	7915.74
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	7915.74
	Average Loan	7915.74
	Rate of Interest	8.70%
	Interest	688.67
	Rep Schedule	Not Available
2	Bond XLII	
	Gross loan opening	2620.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2620.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2620.00
	Average Loan	2620.00
	Rate of Interest	8.80%
	Interest	230.56
	Rep Schedule	Bullet payment on 13.3.2023
3	IFC (IFC-A LOAN) (31419-00)	
	Gross loan opening	1050.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1050.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1050.00
	Average Loan	1050.00
	Rate of Interest	3.285%
	Interest	34.49
	Rep Schedule	Not Available

4	IFC (IFC-B LOAN) (31419-01)	
	Gross loan opening	3450.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3450.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3450.00
	Average Loan	3450.00
	Rate of Interest	2.435%
	Interest	84.01
	Rep Schedule	Not Available
5	IFC (ICFF Loan) (31419-02)	
	Gross loan opening	1550.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1550.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1550.00
	Average Loan	1550.00
	Rate of Interest	3.285%
	Interest	50.92
	Rep Schedule	Not Available
6	FC-Bond (17.1.2013)	
	Gross loan opening	4150.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4150.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4150.00
	Average Loan	4150.00
	Rate of Interest	3.875%
	Interest	160.81
	Rep Schedule	Repayment Due in 2023
7	BOND XXXVIII	
	Gross loan opening	420.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	420.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	420.00
	Average Loan	420.00



	Rate of Interest	9.250%
	Interest	38.85
	Rep Schedule	Bullet payment on 9-3-2027
8	BOND XLI	
	Gross loan opening	2680.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2680.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2680.00
	Average Loan	2680.00
	Rate of Interest	8.850%
	Interest	237.18
	Rep Schedule	12 Equal Annual installments w.e.f. 19-10- 2016
9	SBI (21.3.2012)	
	Gross loan opening	2480.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2480.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2480.00
	Average Loan	2480.00
	Rate of Interest	10.050%
	Interest	249.24
	Rep Schedule	Not Available
10	BOND XXXIV	
	Gross loan opening	2260.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2260.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2260.00
	Average Loan	2260.00
	Rate of Interest	8.840%
	Interest	199.78
	Rep Schedule	12 Equal Annual instalments w.e.f. 21-10- 2014
11	BOND XXXVII	
	Gross loan opening	3600.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3600.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3600.00

	Average Loan	3600.00
	Rate of Interest	9.250%
	Interest	333.00
	Rep Schedule	12 Equal Annual instalments w.e.f.26-12-2015
12	BOND XL	
	Gross loan opening	4980.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4980.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4980.00
	Average Loan	4980.00
	Rate of Interest	9.300%
	Interest	463.14
	Rep Schedule	12 Equal Annual instalments w.e.f. 28-6-2016
13	BOND XXXVI	
	Gross loan opening	480.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	480.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	480.00
	Average Loan	480.00
	Rate of Interest	9.350%
	Interest	44.88
	Rep Schedule	15 Equal Annual instalments w.e.f. 29-8-2016
14	BOND XXXII	
	Gross loan opening	140.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	140.00
	Additions during the year	0.00
	Repayment during the year	11.67
	Net Loan-Closing	128.33
	Average Loan	134.17
	Rate of Interest	8.840%
	Interest	11.86
	Rep Schedule	12 Equal Annual installments w.e.f. 29-3-2014
15	BOND XXXIX	
	Gross loan opening	3600.00
	Cumulative Repayment upto DOCO/previous year	0.00

	Net Loan-Opening	3600.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3600.00
	Average Loan	3600.00
	Rate of Interest	9.400%
	Interest	338.40
	Rep Schedule	Bullet Re-payment 29-3-2027
	Total Loan	
	Gross loan opening	41375.74
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	41375.74
	Additions during the year	0.00
	Repayment during the year	11.67
	Net Loan-Closing	41364.07
	Average Loan	41369.91
	Rate of Interest	7.6524%
	Interest	3165.79