CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 75/TT/2012

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

Date of Hearing: 20.6.2013
Date of Order : 08.7.2013

In the matter of:

Approval of transmission tariff for Spare Converter Transformer at Rihand for Rihand - Dadri HVDC Bipole Terminal from date of commercial operation to 31.3.2014 in Northern Region for tariff block 2009-14 period

And

In the matter of:

Power Grid Corporation of India Limited, Gurgaon ……**Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited
2. Ajmer Vidyut Vitran Nigam Limited, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited, Jaipur
4. Jodhpur Vidyut Vitran Nigam Limited, Jaipur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Power Purchase Centre, Panchkula
8. Power Development Department, Jammu
9. Uttar Pradesh Power Corporation Ltd., Lucknow
10. Delhi Transco Limited, New Delhi
11. BSES Yamuna Power Limited, New Delhi
12. BSES Rajdhani Power limited, New Delhi
13. North Delhi Power Limited, New Delhi
14. Chandigarh Administration, Chandigarh
15. Uttarakhand Power Corporation Ltd., Dehradun
16. North Central Railway, Allahabad
17. New Delhi Municipal Council, New Delhi ……**Respondents**

The following were present:

1. Shri S.S Raju, PGCIL
2. Shri Upendra Pande, PGCIL
3. Shri Padamjit Singh, PSPCL
4. Shri R.B. Sharma, Advocate, BRPL

ORDER

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of transmission tariff for Rihand-Dadri HVDC bipole terminal (hereinafter referred to as the "transmission asset") from date of commercial operation (1.12.2011) to 31.3.2014 in Northern Region for 2009-14 tariff period based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The administrative approval and expenditure sanction for the procurement of two nos. of 315 MVA Spare Converter Transformers for Rihand-Dadri HVDC System was accorded by the Board of Directors of the petitioner vide letter No. C/CP/Spare Conv-Rihand-Dadri dated 11.7.2006 for ₹7230 lakh including an IDC of ₹148 lakh based on 4th quarter 2005 price level. As per the approval, the commissioning schedule of these spare converter transformers was 18 months from the date of letter of award.

3. The scope of work covered under the project broadly includes construction of following sub-station:-

Sub-Station

2x315 MVA Spare Converter Transformer for Rihand-Dadri HVDC System in Northern Region

4. The petitioner had earlier filed Petition No 38/2005 seeking approval of the Commission for procurement of two additional converter transformers of ABB make because of their satisfactory performance, for the replacement at Rihand-Dadri HVDC link in Northern Region. The Commission, vide order dated 21.6.2005, while giving approval for replacement of two converter transformers directed that cost of one converter transformer shall be borne by the petitioner and the second converter transformer shall be allowed to be capitalized for the purpose of tariff, provided the cost of replaced transformer is de-capitalized. Aggrieved by the said order, the petitioner filed Appeal No. 120 of 2005 before the Appellate Tribunal for Electricity (hereinafter referred to as "the Tribunal"). The Tribunal, vide judgement dated 5.4.2006, directed that cost of one converter transformer shall be borne by the petitioner and not capitalized for tariff fixation and the second converter transformer shall be allowed to be capitalized for the purpose of tariff, provided the existing spare converter remains to be in service and is not de-capitalized.

5. Accordingly, the petitioner has procured spare converter transformer and commissioned it on 1.12.2011. The petitioner has claimed transmission tariff for one spare converter transformer at Rihand from the date of commercial

operation, i.e. 1.12.2011, based on capital expenditure incurred upto date of commercial operation and estimated additional capital expenditure projected to be incurred from date of commercial operation to 31.3.2014.

6. Details of the transmission charges claimed by the petitioner are given hereunder:-

(₹ in lakh)

Particulars	**2011-12**	**2012-13**	**2013-14**
Depreciation	47.41	154.79	154.79
Interest on loan	56.72	176.03	161.80
Return on equity	47.09	153.74	153.74
Interest on working capital	3.02	9.68	9.39
O & M expenses	0.00	0.00	0.00
Total	154.24	494.24	479.72

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

(₹ in lakh)

Particulars	**2011-12**	**2012-13**	**2013-14**
Maintenance spares	0.00	0.00	0.00
O & M expenses	0.00	0.00	0.00
Receivables	77.12	82.37	79.95
Total	77.12	82.37	79.95
Interest	3.02	9.68	9.39
Rate of Interest	11.75%	11.75%	11.75%

8. 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. Respondent No. 6, Punjab State Power Corporation (PSPCL), Respondent No.9, Uttar Pradesh Power Corporation Ltd. (UPPCL) and Respondent No. 12, BSES Rajdhani Power Ltd. (BRPL) have filed replies in which they have raised objections regarding time over-run, petition filing fee, license fee, declaration of date of commercial operation etc. The petitioner has

filed rejoinder to the replies of PSPCL, UPPCL, and BRPL. The objections raised by the respondent and the clarifications given by the petitioner are dealt in relevant paragraphs of this order.

9. The matter was heard on 12.2.2013 and order was reserved. As two of the members of the Commission demitted office, the matter was heard again on 20.6.2013. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition.

Capital cost

10. As regards the capital cost, Regulation 7 (1) (a) of the 2009 Tariff Regulations 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."

11. The details of apportioned approved cost, capital cost as on date of commercial operation and estimated additional capital expenditure projected to be incurred for the transmission asset are summarized below:-

(₹ in lakh)

Apportioned approved cost as per FR	**Actual cost incurred as on date of commercial operation**	**Projected additional capital expenditure**		**Total estimated completion cost**
		2011-12	**2012-13**	
3615.00	2456.43	475.17	--	2931.60

The petitioner has not claimed any initial spares for the transmission asset.

12. The petitioner has claimed capital cost of ₹2456.43 lakh, as on date of commercial operation, for the transmission asset vide Auditor's certificate dated 2.1.2012. The capital cost amounting to ₹2243.77 lakh (excluding disallowed IDC and IEDC) has been considered for the purpose of determination of transmission tariff.

<u>Time over-run</u>

13. As per the investment approval, the commissioning schedule of the Spare Converter Transformer was 18 months from the date of letter of award of the package. The letter of award was placed on 30.12.2006 and accordingly the transmission asset was scheduled to be commissioned by 1.7.2008. However, the asset was commissioned on 1.12.2011 and accordingly there was a delay of 41 months.

14. The petitioner in its petition and subsequent affidavits dated 29.10.2012 and 17.12.2012 has submitted the following reasons for delay:-

(i) Consequent to the order of the tribunal dated 5.4.2006 in Appeal No. 120 of 2005, an LOA was placed on M/s. BHEL for installation, erection, commissioning and testing of 2 nos. converter transformers with delivery schedule of 14 months i.e. up to 30.3.2008. The transformers were manufactured by BHEL under the technology transfer from ABB, Sweden and they were manufactured in Bhopal. The transformers were tested in the factory in Bhopal after fitting the accessories procured from ABB, Sweden. Thereafter the transformers were dismantled and dispatched to site for necessary erection and commissioning.

(ii) The OLTC of these transformers were to be supplied by M/s. ABB Sweden. The transformer tanks and OLTC were separately dispatched to the site at Rihand. The OLTC was received at Rihand in March 2009. The OLTC were damaged in transit due to bad road condition. The ABB engineer inspected the OLTC in April, 2009 and declared the OLTC beyond repair and advised procurement of new OLTC. So, BHEL initiated the process of procurement of 2 Nos. new OLTC and since it had a long delivery schedule, the OLTC arrived at site in January, 2011 i.e. after a lapse of 18 months. The Transformer was erected in May, 2011 and the OLTC was found to be misaligned. ABB engineer finally arrived in November, 2011 and rectified the OLTC and finally the asset was commissioned on 1.12.2011.

(iii) The delay in completion of work was mainly due to damaged OLTC received at site and subsequent procurement of new set of OLTC by BHEL from ABB, Sweden. The Converter Transformer used for Rihand-Dadri HVDC Bipole system are specially designed and manufactured by ABB, Sweden. As a part of technology transfer, the design of Converter Transformer was transferred to BHEL. All the accessories of the Transformer, such as bushing, OLTC, etc. are being specially designed and manufactured by ABB Sweden only and hence the same are being imported by BHEL for manufacturing of the said Converter Transformer. Manufacturing and transportation time for these specially designed OLTC is 12-18 months.

(iv) IDC & IEDC are booked on yearly basis for the period of delay from 1.4.2008 to 28.11.2011 and the details are as under:-

(₹ in lakh)

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Year	IEDC	IDC
2008-09	0	16.96
2009-10	0	135.36
2010-11	0	166.49
2011-12 (November, 2011)	0.56	105.95
Total	0.56	424.76

15. During the hearing on 12.2.2013, the representative of the petitioner submitted that it was the responsibility of BHEL to supply the Transformer and OLTC at site. Further, they have analyzed the failure of converter transformer and found that Nomax insulation strip was the cause for failure, which deteriorated in the tropical climate in India. After the findings, suitable action was taken and failure rate has since reduced drastically. The representative of the petitioner further submitted that the first transformer was received in good condition at Dadri site in 2009, but the transformer was damaged in transit because of the bad condition of the roads to Rihand and they were not able to visualize that the OLTC would be damaged in transit. However, transportation of the second delivery was supervised by the petitioner and thus the impact of damage due to poor road conditions was mitigated.

16. In response to the query of the Commission regarding the liquidated damages (LD) clause in the Indemnification Agreement (I.A.), the representative of the petitioner submitted that LD covers only 5% of the purchase order and would be around ₹1.25 lakh, whereas the liability of IDC and IEDC was about ₹48 lakh.

17. PSPCL, vide affidavit dated 4.3.2013, has submitted as under:-

(i) The damage to OLTC probably during transportation should not be approved, as it is the responsibility of the petitioner/ its supplier, BHEL.

(ii) The IDC for delay of three years should not be allowed and cost of damaged OLTC should not be included in the capital cost.

(iii) The declaration of date of commercial operation without even charging the transformer is not permissible as per the 2009 Tariff Regulations. PSPCL further requested the petitioner to submit the date of charging of transformer and to state how the transformer has been kept ready for use. PSPCL also enquired whether the cost of ₹2031 lakh includes the cost of damaged OLTC.

(iv) Four bids were received for the spare transformer while the work was awarded to BHEL at ₹2221 lakh. The petitioner should give the bid rate of other three bidders, and of ABB in particular if it had submitted its bid.

18. The petitioner in response has clarified in its affidavit dated 17.4.2013 that the cost of the damaged OLTC was borne by BHEL, and its cost has not been

included in the capital cost of the transmission asset. The Spare Converter Transformer being a spare unit is not energized, and hence the date of commercial operation is declared on the basis of erection and pre-commissioning testing done and it is ready for charging as and when required within shortest possible time. The petitioner has further submitted that inadvertently it stated in Form-5C that 4 bids were received, whereas Limited Tender Enquiry (LTE) for procurement of spare Transformer was done between BHEL, India and ABB, Sweden and only two bids were invited.

19. BRPL, vide affidavit dated 7.2.2013, has submitted that the justification given by the petitioner for delay of 41 months in commissioning the assets is inadequate and hence time over-run should not be condoned. The representative of BRPL during the hearing submitted that the liability of IDC and IEDC is of the order of ₹424 lakh, while the liquidated damages claim would be only ₹125 lakh. The IDC and IEDC should not be allowed and the increased impact of IDC and IEDC should not be passed on to the beneficiaries.

20. UPPCL, vide affidavit dated 2.3.2013, has submitted that the claim of petitioner regarding determination of tariff of a Spare Converter Transformer, Rihand for Rihand-Dadri HVDC Bi-pole Terminal may be rejected for the reason that upto May, 2005, total four Spare Converter Transformers were available. Out of these, two transformers were of ABB make and the other two transformers were of BHEL make. The petitioner is claiming two more Converter Transformers to replace two defective BHEL make Converter Transformers

without giving the status of the four additional converter transformers. As four spare Converter Transformers are already available, there is no requirement for two converter transformers to replace the defective BHEL make converter transformers.

21. The petitioner in its affidavit dated 8.4.2013 has submitted that procurement of two additional converter transformers was agreed in NRPC. Subsequently, the Tribunal vide its judgment dated 5.4.2006 directed that cost of one converter transformer shall be borne by the petitioner and not capitalized for tariff fixation and the second Converter Transformer shall be allowed to be capitalized for the purpose of tariff. The administrative approval and expenditure sanction for the procurement of two Spare Converter Transformers for Rihand-Dadri HVDC system was accorded by the Board of Directors of the petitioner in its 179th meeting held on 1.6.2006 at New Delhi at an estimated cost of ₹7230 lakh including an IDC of ₹148 lakh based on 4th quarter, 2005 price level. Accordingly the petitioner has filed this petition.

22. The Appellate Tribunal for Electricity in its judgement dated 27.4.2011 in Appeal No. 72/2010 (MSPGCL Vs. MERC & Ors.) has laid down the following principles for prudence check of time over-run related cost:-

> "7.4. The delay in execution of a generating project could occur due to following reasons:
>
> i) due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in

project management like improper co-ordination between the various contractors, etc.

ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.

iii) situation not covered by (i) & (ii) above.

In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices."

23. In the light of the above principles, the issue of time over-run in respect of the subject asset has been considered. The petitioner selected BHEL to execute the project out of the two bidders who submitted the bids through a process of international competitive bidding. BHEL is a Central Public Sector Undertaking executing the electrical works in the country. Therefore, it cannot be said that the petitioner has committed any imprudence in selecting the contractor/ suppliers. In the present case, it is noted that the commissioning of Spare Transformer got delayed due to transportation problem. The new set of OLTC was procured by the BHEL from ABB, Sweden and after erection, the problem in OLTC was rectified by the BHEL through ABB Engineer from Sweden which caused inordinate delay. In our view, delay in execution of the project cannot be entirely

attributed to the petitioner. Clause 10.0 of the LoA dated 30.12.2006 deals with liquidated damages for delay under which BHEL is required to pay a sum equivalent to half per cent (0.5%) of contract price as liquidated damages subject to the limit of 5% of contract price. The representative of the petitioner during the hearing on 12.2.2013 has submitted that the maximum liquidated damages of 5% of contract price would be imposed on BHEL and it would be adjusted in the capital cost. In our view, the petitioner cannot totally absolve itself of the responsibility for the delay. Accordingly, we are of the view that the petitioner should be equally held liable for the delay in execution of the project. As regards liquidated damages, the petitioner has submitted that the amount of liquidated damages is yet to be finalised as contract of this package is not yet closed.

24. In the instant petition, the amount of LD levied would be known after the closing of contract. In Petition No. 33/TT/2011, where the contract was not closed and LD was not quantifiable, the amount of LD was not considered. We are taking the same stand in dealing with the issue of LD in this petition also. Accordingly, 50% of IDC and IEDC has been disallowed without considering LD which will be adjusted on actual realization during truing-up. The details of disallowed IDC and IEDC is as follows:-

(₹ in lakh)

Details of IDC and IEDC as per Management Certificate dated 2.1.2012			
	IEDC	**IDC**	**Total**
Total IDC and IEDC claimed from FY 2008-09 to FY 11-12 (till November, 2011)	0.56	424.76	**425.32**
Details of LD, IDC and IEDC disallowed			
Allowed 50% of (IDC+IEDC)	0.28	212.38	**212.66**

25. Capital expenditure is worked out by adjusting allowable IDC and IEDC as under:-

(₹ in lakh)

Capital Expenditure	As per Auditor's Certificate dated 2.1.2012	Capital Cost excluding IDC and IEDC	Capital Cost including allowable IDC and IEDC
Freehold land	0.00	0.00	0.00
Leasehold land	0.00	0.00	0.00
Building & other civil works	0.00	0.00	0.00
Transmission line	0.00	0.00	0.00
Sub-station equipments	2456.43	2031.11	2243.77
PLCC	0.00	0.00	0.00
Total	**2456.43**	**2031.11**	**2243.77**

Cost over-run

26. PSPCL has submitted that the Board of Directors of the petitioner approved ₹7230 lakh for imported transformers, whereas the petitioner has procured BHEL make transformers. Hence, it appears that the approved cost was based on ABB rates while the actual supply was from BHEL.

27. The petitioner clarified that the original estimate of ₹7230 lakh was based on the budgetary offer received from ABB and the same was quoted by ABB during the process of bidding also.

28. Total anticipated estimated completion cost of Spare Transformers at Rihand HVDC Terminal is ₹2931.60 lakh against the approved cost of ₹ 3615.00 lakh. Estimated completion cost is lower than the apportioned approved cost in spite of

time over-run. The cost estimates of the petitioner in this petition, besides a few other petitions, are not realistic. In our view, the petitioner should adopt a prudent procedure to make cost estimates of different elements of the transmission projects more realistic.

<u>Projected additional capital expenditure</u>

29. With regard to additional capital expenditure, Regulation 9 (1) 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;
> (i) Works deferred for execution;
> (ii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
> (iii) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
> (iv) Change in Law:"

30. The 2009 Tariff Regulations further 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 incase of 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".

31. As per the above definition, cut-off date in respect of the subject transmission asset is 31.3.2014.

32. The petitioner has claimed additional capital expenditure of ₹475.17 lakh pertaining to Sub-station for the year 2011-12 (date of commercial operation to

31.3.2012). The additional capital expenditure claimed falls within the cut-off and hence same has been considered for the purpose of tariff.

<u>Debt- equity ratio</u>

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

> "12. **Debt-Equity Ratio** (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:
>
> Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:
>
> Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.
>
> **Explanation-** The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.
>
> (2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.
>
> (3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

34. Details of debt-equity in respect of the transmission assets as on date of commercial operation is as follows:-

(₹ in lakh)

	Capital cost as on 1.12.2011	
	Amount	**%**
Debt	1570.64	70.00
Equity	673.13	30.00
Total	**2243.77**	**100.00**

35. Debt- equity ratio as on 31.3.2014 is as under:-

(₹ in lakh)

	Capital cost as on 31.3.2014	
Particulars	**Amount**	**%**
Debt	1903.26	70.00
Equity	815.68	30.00
Total	**2718.94**	**100.00**

36. Debt-equity ratio for additional capital expenditure considered is given hereunder:-

(₹ in lakh)

	Additional capital expenditure for 2011-12	
	Normative	
Particulars	**Amount**	**%**
Debt	332.62	70.00
Equity	142.55	30.00
Total	**475.17**	**100.00**

<u>Return on equity</u>

37. Regulation 15 of the 2009 Tariff Regulations provides that:-

"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 year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations."

38. The petitioner's prayer to allow grossing up the base rate of return with the applicable tax rate as per the Finance Act for the relevant year and direct settlement of tax liability between the transmission licensee and the beneficiaries, shall be settled in accordance with the provisions of Regulation 15 of 2009 Tariff Regulations.

39. Based on the above, the following return on equity has been given hereunder:-

(₹ in lakh)

Particulars	2011-12	2012-13	2013-14
Opening equity	673.13	815.68	815.68
Addition due to additional capital expenditure	142.55	0.00	0.00
Closing equity	815.68	815.68	815.68
Average equity	744.41	815.68	815.68
Return on equity (Base Rate)	***15.50%***	***15.50%***	***15.50%***
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%
Rate of return on equity (Pre Tax)	17.481%	17.481%	17.481%
Return on equity (Pre-tax)	**43.38**	**142.59**	**142.59**

Interest on loan

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

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

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

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

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

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

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

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

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

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

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

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

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

41. In these calculations, interest on loan has been worked out as detailed hereunder:-

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

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

(c) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

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

42. Accordingly, the interest on loan has been calculated on the basis of prevailing rate available as on the date of commercial operation. Any change in rate of interest subsequent to date of commercial operation will be considered at the time of truing up.

43. Detailed calculation of the weighted average rate of interest has been given in the Annexure to this order.

44. Details of the interest on loan worked on the above basis are given hereunder:-

(₹ in lakh)

Particulars	**2011-12**	**2012-13**	**2013-14**
Gross normative loan	1570.64	1903.26	1903.26
Cumulative repayment upto previous year	0.00	43.67	187.23
Net loan-opening	1570.64	1859.59	1716.03
Addition due to additional capital expenditure	332.62	0.00	0.00
Repayment during the year	43.67	143.56	143.56
Net loan-closing	1859.59	1716.03	1572.47
Average loan	1715.11	1787.81	1644.25
Weighted average rate of interest on loan	9.1377%	9.1334%	9.1283%
Interest	52.24	163.29	150.09

Depreciation

45. Regulation 17 of the 2009 Tariff Regulations provides for computation of depreciation in the following manner, namely:-

> "17. (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.
>
> (2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.
>
> Provided that 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."

46. The transmission asset in the petition was put under commercial operation as on 1.12.2011 and accordingly 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.

47. Details of the depreciation worked out are as under:-

(₹ in lakh)

Particulars	2011-12	2012-13	2013-14
Opening gross block	2243.77	2718.94	2718.94
Addition during 2009-14 due to Projected additional capital expenditure	475.17	0.00	0.00
Closing gross block	2718.94	2718.94	2718.94
Average gross block	2481.36	2718.94	2718.94
Rate of depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	2233.22	2447.05	2447.05
Remaining depreciable value	2233.22	2403.37	2259.81
Depreciation	43.67	143.56	143.56

Operation and maintenance expenses

48. The petitioner has not claimed any O&M expenses.

Interest on working capital

49. As per the 2009 Tariff Regulations the components of the working capital and the interest thereon are discussed as per details given below:-

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables 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 in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Maintenance spares and O&M expenses

Regulation 18(1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance Spares @15% per annum of the O&M expenses from 1.4.2009. The petitioner has not claimed O&M expenses and hence maintenance spares and O&M expenses for the purpose of interest on working capital is 'Nil'.

(iii) Rate of interest on working capital

Interest on working capital has been worked out considering interest rate of 11.75% (SBI Base Rate as on 1.4.2011, i.e. 8.25% and 350 basis points) for asset as per the 2009 Tariff Regulations, amended from time to time.

50. Details of interest on working capital allowed are appended herein below:-

(₹ in lakh)

Particulars	**2011-12**	**2012-13**	**2013-14**
Maintenance spares	0.00	0.00	0.00
O & M expenses	0.00	0.00	0.00
Receivables	71.04	76.40	74.16
Total	71.04	76.40	74.16
Interest	2.78	8.98	8.71

Transmission Charges

51. The transmission charges being allowed for the transmission assets are given hereunder:-

(₹ in lakh)

Particulars	**2011-12**	**2012-13**	**2013-14**
Depreciation	43.67	143.56	143.56
Interest on loan	52.24	163.29	150.09
Return on equity	43.38	142.59	142.59
Interest on working capital	2.78	8.98	8.71
O & M expenses	0.00	0.00	0.00
Total	142.07	458.41	444.95

Filing fee and the publication expenses

52. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. BRPL has submitted that no separate provisions have been made in the 2009 Tariff Regulations and hence the claim of the petitioner for the filing fee may not be allowed. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of the 2009 Tariff Regulations. In accordance with the Commission's order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

Licence fee

53. The petitioner has submitted that in O&M norms for tariff block 2009-14, the cost associated with licence fees had not been captured and the licence fee may be allowed to be recovered separately from the respondents. BRPL has

submitted that the claim of the petitioner for licence fees may not be allowed. UPPCL has submitted that licence fee is the eligibility fee of a licensee, and hence the prayer of the petitioner regarding charging of licence fee from the beneficiaries is not justified. The petitioner has clarified that the licence fee has been a new component of cost to the transmission licence under O&M stage of the project and has become incidental to the petitioner only from 2008-09. 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

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

Sharing of transmission charges

55. The billing, collection & disbursement of the transmission charges shall be governed by the provisions of Central Electricity Regulatory Commission

(Sharing of inter-state transmission charges and losses) Regulations, 2010 as amended.

56. This order disposes of Petition No. 75/TT/2012.

(M. Deena Dayalan) Member	(V. S. Verma) Member

Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of loan	2011-12	2012-13	2013-14
1	Bond XXVIII			
	Gross loan opening	775.00	775.00	775.00
	Cumulative repayment upto date of commercial operation/previous year	0.00	0.00	64.58
	Net loan-opening	775.00	775.00	710.42
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	64.58	64.58
	Net loan-closing	775.00	710.42	645.83
	Average loan	775.00	742.71	678.13
	Rate of Interest	9.33%	9.33%	9.33%
	Interest	72.31	69.29	63.27
	Rep Schedule	12 annual installments from 15.12.2012		
2	Bond XXIX			
	Gross loan opening	425.00	425.00	425.00
	Cumulative repayment upto date of commercial operation/previous year	0.00	0.00	35.42
	Net loan-opening	425.00	425.00	389.58
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	35.42	35.42
	Net Loan-Closing	425.00	389.58	354.17
	Average Loan	425.00	407.29	371.88
	Rate of Interest	9.20%	9.20%	9.20%
	Interest	39.10	37.47	34.21
	Rep Schedule	12 annual installments from 12.3.2013		
3	Bond XXX			
	Gross loan opening	519.50	519.50	519.50
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	0.00
	Net Loan-Opening	519.50	519.50	519.50
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	43.29
	Net Loan-Closing	519.50	519.50	476.21
	Average Loan	519.50	519.50	497.85
	Rate of Interest	8.80%	8.80%	8.80%
	Interest	45.72	45.72	43.81
	Rep Schedule	12 annual installments from 29.9.2013		
	Total Loan			
	Gross loan opening	1719.50	1719.50	1719.50
	Cumulative repayment upto date of commercial operation/previous year	0.00	0.00	100.00

	Net loan-opening	1719.50	1719.50	1619.50
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	100.00	143.29
	Net loan-closing	1719.50	1619.50	1476.21
	Average loan	1719.50	1669.50	1547.85
	Rate of interest	9.1377%	9.1334%	9.1283%
	Interest	157.12	152.48	141.29