CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 62/TT/2012

Coram:

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

Date of Hearing: 30.07.2013
Date of Order : 23.12.2013

In the matter of

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 for determination of Transmission Tariff for Extension of 765/400 kV Bilaspur Pooling Station (near Sipat) along with LILO of Sipat-Seoni Ckt-2 with 3 X 80 MVAR switchable line Reactor and 765/400 kV, 1500 MVA Auto Transformer-3 under WRSS XI Scheme in Western Region for tariff block 2009-14 period

And in the matter of:

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

Vs

1. Madhya Pradesh Power Trading Company Ltd.,
   Shakti Bhawan, Rampur
   Jabalpur-482008

2. Maharashtra State Electricity Distribution Co. Ltd.,
   Prakashgad, 4th floor
   Andehri (East),Mumbai-400052

3. Gujarat Urja Vikas Nigam Ltd.,
   Sardar Patel Vidyut Bhawan
   Race Course Road, Vadodara-390007

4. Electricity Department, Government of Goa,
   Vidyut Bhawan, Panaji,
   Near Mandvi Hotel, Goa-403001

5. Electricity Department,
   Administration of Daman and Diu,
   Daman-396210

6. Electricity Department,
   Administration of Dadra Nagar Haveli, U.T.,
   Silvassa-396230

7. Chhattisgarh State Electricity Board,
   P.O. Sunder Nagar, Dangania, Raipur
   Chhattisgarh-492013

8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.,
   3/54, Press Complex, Agra-Bombay Road
   Indore -452008 **….Respondents**

Representatives of the Petitioner **:**Shri U.K. Tyagi, PGCIL
Shri M.M. Mondal, PGCIL

Counsel for the Respondent : None

ORDER

The petition has been filed for determination of tariff for "Extension of 765/400 kV Western Region Pooling Station at Bilaspur (near Sipat) along with LILO of Sipat-Seoni transmission line Ckt-2 with 3X80 MVAR switchable line Reactor (**Asset-I**) and 765/400 kV, 1500 MVA Auto Transformer-3 **(Asset-II)** under WRSS Scheme XI **(the Scheme)** in Western Region from 1.3.2012, from anticipated date of commercial operation of the Scheme, 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 investment approval for the Scheme was accorded by Board of Directors of the petitioner company vide Memorandum dated 16.2.2009 at an estimated cost of ₹40950 lakh, including Interest During Construction (IDC) of ₹3125 lakh (based on 4th Quarter, 2008 price level) The scope of works covered under the transmission system broadly includes:-

Transmission Lines

LILO of Sipat-Seoni 765 kV second S/C transmission line at Western Region Pooling Station near Sipat (Asset-I)

Sub-stations

(i) Extension of Western Region Pooling Station near Sipat by installation of 765/400 kV, 1X1500 MVA 3rd transformer along with bays (Asset-II), and

(ii) Provision of 1X240 MVAR switchable line Reactor at 765/400 kV Western Region Pooling Station -Seoni 765 kV 2nd transmission line (Asset-I)

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3. The transmission charges claimed by the petitioner for the Scheme are as under-:

(₹ in lakh)

Particulars	**2011-12**	**2012-13**	**2013-14**
Depreciation	61.14	828.08	867.26
Interest on Loan	77.90	1013.07	983.85
Return on Equity	62.09	840.60	880.80
Interest on Working Capital	5.58	73.40	75.53
O & M Expenses	32.61	413.65	437.31
Total	239.32	3168.80	3244.75

4. 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	58.70	62.05	65.60
O & M Expenses	32.61	34.47	36.44
Receivables	478.64	528.13	540.79
Total	569.95	624.65	642.83
Rate of Interest	11.75%	11.75%	11.75%
Interest	5.58	73.40	75.53

5. 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. None of the respondents have filed reply.

6. 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.

Date of commercial operation

7. The petitioner filed an affidavit dated 14.6.2012 stating that Asset-I was in commercial operation since 1.4.2012. Another affidavit dated 21.9.2012 was filed stating that Asset-II was declared under commercial operation on 1.8.2012, was filed. The scheduled and actual dates of commercial operation of the respective asset are indicated hereunder:-

Asset	Scheduled date of commercial operation	Actual date of commercial operation	Delay
Asset-I	1.3.2012	1.4.2012	1 Month
Asset-II	1.3.2012	1.8.2012	5 Months

Capital cost

8. Regulation 7 of the 2009 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 approved capital cost, capital cost as on the dates of commercial operation and estimated additional capital expenditure projected to be incurred for the Scheme given by the petitioner are as hereunder:-

(₹ in lakh)

Particulars	**Approved cost**	**Actual cost on date of commercial operation**	**Projected additional capital expenditure**		**Estimated completion cost**
			2012-13	**2013-14**	
Asset-I	40949.50	8559.43	1533.13	-	10092.56
Asset-II		4776.36	2420.26	214.93	7412.55

<u>Treatment of initial spares</u>

10. The actual cost on the date of commercial operation claimed by the petitioner is inclusive of the cost of initial spares pertaining to sub-station of ₹126.30 lakh in case of Asset-I and of ₹197.83 lakh in case of Asset-II.

11. Regulation 8 of the 2009 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. It is seen that though the initial spares claimed for Asset-I are within the ceiling limit, the initial spares claimed by the petitioner are in excess of the normative initial spares in case of Asset-II, being 2.67% of the estimated completion cost. It is observed that the initial spares claimed for the Scheme as a whole are within the overall ceiling limit specified under Regulation 8 of the 2009 Tariff Regulations. Accordingly, the initial spares claimed have been allowed in the present petition. The working of the initial spares is given as follows:-

(₹ in lakh)

Particular	Capital cost as on cut-off date	Initial spares claimed	Percentage of Initial spares
Asset-1	8824.43	126.30	1.43%
Asset-2	7412.55	197.83	2.67%
Total	**16236.98**	**324.13**	**2.00%**

13. The initial spares allowed will be reviewed at the time of truing up, on the basis of actual capital expenditure incurred.

Projected additional capital expenditure

14. 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:"

15. 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".

16. After taking into account the dates of commercial operation of the assets, cut-off date arrived at is 31.3.2015.

17. The additional capital expenditure during 2012-13 and 2013-14 claimed by the petitioner, as at Paragraph No.9 above, is within the cut-off date and has been allowed.

Cost overrun

18. The estimated completion cost of the scheme is within the approved cost of ₹40949.50 lakh and as such no cost over-run is anticipated as of now.

Time Over-run

19. The Scheme was approved at 27th Meeting of the Standing Committee on Power System Planning in Western Region held on 30.7.2007. However, the Investment Approval was granted on 16.2.2009, with a delay of more than 18 months. The petitioner vide affidavit dated 20.9.2012 has explained the reasons for delay in granting investment approval as under:

(i) Transmission system planning is part of overall power system planning taken up by the stakeholders such as generators, beneficiaries of regions, CEA and CTU. The transmission system gets technically approved at the Standing Committee meeting and is subsequently considered at various forums like Technical Coordination Committee (TCC) and Regional Power Committee (RPC). At times it takes more than one RPC meeting to approve/ratify the transmission system, already agreed to by the Standing Committee. As ratification of any transmission system in RPCs is a pre-requisite of investment approval, there may be considerable time gap between the Standing Committee approval and investment approval for the reasons described above.

(ii) The Scheme was initially conceptualized with the current scope of work and Western Region Pooling Point-Seoni 765 kV S/C line and upgradation of Seoni-Wardha 400 D/C to 765 kV level with establishment of 765 kV sub-station at Wardha. Due to modification in the transmission system of Korba–III, Western Region Pooling Point-Seoni 765 kV S/C line was deleted. Also, upgradation of Seoni-Wardha 400 kV D/C line to 765 kV level was included in Associated Transmission System of Mundra UMPP.

Due to frequent revision in scope of the Scheme, there was a time gap between the investment approval of the project and its approval in the Standing Committee Meeting.

20. As per the Investment Approval, the Scheme was scheduled to be completed within 36 months. The completion time of 36 months for a small project under the Scheme was considered to be on the higher side. Explaining the basis for arriving at implementation period of 36 months, the petitioner has submitted that each transmission package, irrespective of its size has to undergo certain essential steps right from the stage of awarding of tenders to the stage of execution, followed by testing and commissioning. It has been submitted that the whole process, starting from tendering and award of works till commissioning is independent of volume of the nature of work involved. The petitioner has outlined the entire process as given below:

(a) The tendering and award of any package takes around 6 months' time irrespective of project execution time.

(b) The post-award activities before commencement of the actual work in the field involve sub-vendor finalization for various items, sequential development and submission of drawings by the vendor /sub-vendors, followed by its review and approval by the petitioner which normally takes around 8-12 months after award, depending on the number of revisions in the drawings.

(c) After finalization and approval of drawings, the activities pertaining to procurement of raw materials, manufacturing of various items, prototype testing and stage inspection of various items under manufacture like stubs, tower material, insulators, hardware fittings, conductors, earth wire, accessories for conductors & earth wire etc. are undertaken which normally takes around 10-22 months, inclusive of activities involved at para (b). Further, packing, dispatch and transportation of finished goods and materials from the manufacture's works to site takes approximately another 2 to 4 months, depending upon the distance, terrain and the State borders en-route.

(d) Subsequent to arrival of material at site, the construction activities are undertaken. The construction period normally ranges between 14-30 months.

(e) After physical completion of the works, final checking and pre-commissioning tests (which are system and procedures driven) followed by inspection and clearance by the CEA electrical inspectors for commissioning of the various elements of the transmission system normally takes one to two months making the post award execution period around 32 months and total period of commissioning from investment approval around 36 to 38 months.

(f) Initially, the scheme was conceived for execution along with WRSS X scheme, but later on it was considered prudent to implement the two schemes in two phases.

(g) The Scheme being an extension of WRSS X project, its schedule is in line with that of WRSS X project.

(h) The transformers and reactors for the Scheme were imported items which took additional time in shipping and customs clearance etc.

21. The Scheme was to be completed by 16.2.2012. Therefore, the Scheme could be declared under commercial operation latest by 1.3.2012. However, as already seen, a part of the Scheme was declared under commercial operation on 1.4.2012 and another part on 1.8.2012. The petitioner has explained the reasons for the delay as under:-

(a) LILO of 765 kV Sipat- Seoni-II at Bilaspur Sub-station and 240 MVAR switchable line reactor for Seoni-II at Bilaspur, Sub-station along with associated bays – Asset-I

Because of existence of some hutments under the corridor of LILO of 765 kV S/C Sipat-Seoni transmission line, there was severe ROW problem in regard to removal of these hutments and payment of compensation. The matter was taken up with SDM, Bilaspur in October 2011. A number of meetings were held with the State revenue authorities and finally, a settlement was reached with the hutment owners on 2.3.2012. Thereafter, the work was taken up and completed in March 2012 and put under commercial operation on 1.4.2012, with a marginal delay of one month.

(b) 1500 MVA ICT III at Bilaspur Sub-station (Asset-II)

The transformer has been supplied by M/s CGL Electric System, Hungary. After the transformers were inspected and cleared for dispatch by the petitioner, these were shipped on board for further dispatch from the port at Antwerp, Belgium on 19.12.2011. However, due to very bad weather conditions and very low temperature in Northern Europe, the river and sea were frozen, because of which, the transformers were stuck up at the port and could not be transported in time. The transformers could reach at site only by 19.6.2012. It took approximately a transit time of 6 months as against a normal transit time of 2 months (40 days for sea travel and 20 days for land travel from Mumbai to Bilaspur). On receipt of the transformers at site, they were erected, checked for all pre-commissioning tests, commissioned and declared under commercial operation on 1.8.2012. The reasons for the delay in transportation of the transformers were beyond the control of the petitioner and its supplier.

22. We have considered the time overrun aspect very carefully. The delay in commercial operation of Asset-I is marginal, of one month, and is condoned. As regards the delay in commercial operation of Asset-II, it is seen from the documents submitted by the petitioner that the transformers were delivered at Antwerp (Belgium) on 19.12.2011 for loading. These transformers arrived at Bombay port on 2.5.2012, loaded for Bilaspur on 11.5.2012 and are stated to have reached at site on 19.6.2012. It has been mentioned by the petitioner that the delay in transportation of the transformers is on account of bad weather conditions leading to freezing of sea. However, the petitioner has failed to produce any documentary evidence in support of its plea. It is further seen that it took 1½ months for the transformer to reach the site. As such, delay in execution of 1500 MVA ICT III at Bilaspur sub-station (Asset-II) cannot be condoned. Accordingly, IDC and IEDC incurred by the petitioner during the period of delay of 5 months are disallowed.

23. The petitioner, vide Management Certificate dated 2.8.2012, has submitted the following details of IDC and IEDC for the period up to 31.7.2012:-

(₹ in lakh)

Period	IEDC	IDC	TOTAL
Upto 31.3.2011	(12.83)	21.26	8.43
1.4.2011 to 31.3.2012	(5.65)	148.75	143.10
1.4.2012 to 30.6.2012	(0.85)	93.68	92.83
1.7.2012 to 31.7.2012	(0.28)	31.23	30.95
Total	(19.61)	294.92	275.31

24. IDC and IEDC disallowed for the period of five months have been computed on *pro-rata* basis. The details of IDC and IEDC disallowed are as follows:-

(₹ in lakh)

Period	IEDC	IDC	TOTAL
March 2012 (1 month)	(0.47)	12.40	11.93
April 2012 to June 2012 (3 months)	(0.85)	93.68	92.83
July 2012 (1 month)	(0.28)	31.23	30.95
Total IDC and IEDC Disallowed	**(1.13)**	**124.91**	**123.78**

25. The amounts disallowed on account of IDC and IEDC have been deducted from the capital cost of Asset-II as on the date of commercial operation.

Gross Block

26. Based on the above, after disallowing IDC and IEDC of ₹123.78 lakh, gross block of ₹4653.58 lakh as on the date of commercial operation has been considered for the purpose of computation of the transmission charges for Asset-II. After accounting for the projected additional expenditure claimed, the gross block of ₹ 7288.77 lakh as on 31.3.2014 has been arrived at.

27. The petitioner has claimed capital cost of ₹8559.43 lakh as on date of commercial operation of Asset-I, and ₹10092.56 lakh as on 31.3.2014 which have been considered for the purpose of determination of transmission tariff.

Debt- equity ratio

28. 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."

29. The detail of opening debt-equity ratio of assets considered for the purpose of tariff calculation is as follows:-

(₹ in lakh)

Asset-1	**Capital Cost on Date of Commercial Operation**	
Particulars	Amount	%
Debt	5991.60	70.00
Equity	2567.83	30.00
Total	8559.43	100.00
Asset-2		
	Amount	%
Debt	3257.51	70.00
Equity	1396.07	30.00
Total	4653.58	100.00

30. Details of debt-equity in respect of the assets as on 31.3.2014 are as follows:-

(₹ in lakh)

Asset-1	**Capital Cost on 31.3.2014**	
Particulars	Amount	%
Debt	7064.79	70.00
Equity	3027.77	30.00
Total	10092.56	100.00
Asset-2		
	Amount	%
Debt	5102.14	70.00
Equity	2186.63	30.00
Total	7288.77	100.00

31. The debt: equity ratio for projected additional capitalisation considered is as follows:-

(₹ in lakh)

Asset-1	**2012-13**	
Particulars	Amount	%
Debt	1073.19	70.00
Equity	459.94	30.00
Total	1533.13	100.00
Asset-2	**2012-13**	
	Amount	%
Debt	1694.18	70.00
Equity	726.08	30.00
Total	2420.26	100.00
	2013-14	
	Amount	%
Debt	150.45	70.00
Equity	64.48	30.00
Total	214.93	100.00

Return on equity

32. 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".

33. The petitioner has claimed Return on Equity at the rate of 15.5% in accordance with clause (2) of Regulation 15 ibid which has been allowed. Return on Equity allowed is given overleaf:-

(₹ in lakh)

Particulars	Asset-I		Asset-II	
	2012-13	**2013-14**	**2012-13**	**2013-14**
Opening Equity	2567.83	3027.77	1396.07	2122.15
Addition due to Additional Capitalisation	459.94	0.00	726.08	64.48
Closing Equity	3027.77	3027.77	2122.15	2186.63
Average Equity	2797.80	3027.77	1759.11	2154.39
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	489.08	529.28	205.01	376.61

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, the petitioner's entitlement to interest on loan has been calculated on the following basis:-

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

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

(c) 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 is applied on the notional average loan during the year to arrive at the interest on loan.

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

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

(₹ in lakh)

Particulars	**Asset - I**		**Asset - II**	
	2012-13	2013-14	2012-13	2013-14
Gross Normative Loan	5991.60	7064.79	3257.51	4951.69
Cumulative Repayment upto previous year	0.00	481.79	0.00	202.33
Net Loan-Opening	5991.60	6583.01	3257.51	4749.35
Addition due to additional capital expenditure	1073.19	0.00	1694.18	150.45
Repayment during the year	481.79	519.71	202.33	368.44
Net Loan-Closing	6583.01	6063.30	4749.35	4531.36
Average Loan	6287.30	6323.15	4003.43	4640.36
Weighted Average Rate of Interest on Loan	9.3790%	9.3801%	9.5281%	9.5290%
Interest	589.68	593.12	254.30	442.18

Depreciation

38. 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."

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

40. Asset-1 and Asset-2 were put under commercial operation on 1.4.2012 and 1.8.2012 respectively. 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 hereunder:-

(₹ in lakh)

Particulars	**Asset - I**		**Asset - II**	
	2012-13	2013-14	2012-13	2013-14
Opening Gross Block	8559.43	10092.56	4653.58	7073.84
Addition due to Projected Additional Capitalisation	1533.13	0.00	2420.26	214.93
Closing Gross Block	10092.56	10092.56	7073.84	7288.77
Average Gross Block	9326.00	10092.56	5863.71	7181.31
Rate of Depreciation	5.1661%	5.1494%	5.1759%	5.1306%
Depreciable Value	8393.40	9083.30	5277.34	6463.17
Remaining Depreciable Value	8393.40	8601.52	5277.34	6260.84
Depreciation	481.79	519.71	202.33	368.44
Cumulative Depreciation	481.79	1001.49	202.33	570.78

Operation & maintenance expenses

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

(₹ in lakh)

Element	2009-10	2010-11	2011-12	2012-13	2013-14
765 kV S/C Quad T/L (₹ lakh/ km)	0.537	0.568	0.600	0.635	0.671
765 kV Bay (₹ lakh/ bay)	73.36	77.56	81.99	86.68	91.64
400 kV bay (₹ lakh/ bay.)	52.40	55.40	58.57	61.92	65.46

42. The allowable O&M expenses for the assets are ₹364.12 lakh (₹265.05 lakh + ₹99.07 lakh) during 2012 and ₹437.31 lakh (₹280.21 lakh + ₹157.10 lakh) during 2013-14 as per details given hereunder:-

(₹ in lakh)

	Asset-I		Asset-II	
Element	**2012-13**	**2013-14**	**2012-13**	**2013-14**
7.886 km 765 kV S/C Quad T/L (Asset-I)	5.01	5.29	-	-
765 kV Bays (3 Nos. in case of Asset-I and 1 No. in case of Asset-II)	260.04	274.92	57.79	91.64
400 kV Bay (Asset-II)	-	-	41.28	65.46
Total O&M Expenses	**265.05**	**280.21**	**99.07**	**157.10**

43. The petitioner has stated that O&M expenditure 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 charges for tariff period 2009-14. The petitioner has submitted that it would approach the Commission for suitable revision in the norms

for O&M expenditure in case the impact of wage hike w.e.f 1.1.2007 is more than 50%.

44. The Commission has given effect to the impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the employees of PSUs after extensive stakeholders' consultation. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. However, in case the petitioner approaches with any such application, the same shall be dealt with in accordance with law.

Interest on working capital

45. 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 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 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 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 tariff regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate of 10.00% bps as on 1.4.2012 plus 350 (13.50%). The interest on working capital for the assets covered in the petition has been worked out accordingly.

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

(₹ in lakh)

Particulars	**Asset - I**		**Asset - II**	
	2012-13	**2013-14**	**2012-13**	**2013-14**
Maintenance Spares	39.76	42.03	22.29	23.57
O & M Expenses	22.09	23.35	12.38	13.09
Receivables	312.69	329.27	195.35	230.06
Total	374.54	394.65	230.03	266.71
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	50.56	53.28	20.70	36.01

Transmission charges

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

(₹ in lakh)

Particulars	Asset - I		Asset - II	
	2012-13	2013-14	2012-13	2013-14
Depreciation	481.79	519.71	202.33	368.44
Interest on Loan	589.68	593.12	254.30	442.18
Return on Equity	489.08	529.28	205.01	376.61
Interest on Working Capital	50.56	53.28	20.70	36.01
O & M Expenses	265.05	280.21	99.07	157.10
Total	1876.17	1975.60	781.41	1380.34

48. The transmission charges approved for the year 2012-13 in respect of Asset II are for 8 months, from 1.8.2012 to 31.3.2013.

49. The transmission charges allowed are at variance with those claimed by the petitioner. This is primarily on account of the following reasons:-

(a) The petitioner has claimed transmission charges from 1.3.2012, the anticipated date of commercial operation whereas the transmission charges allowed are from the actual dates of commercial operation, 1.4.2012 in case of Asset-I and 1.8.2012 in case of Asset-II.

(b) In case of Asset-II, there is reduction in capital cost on account of adjustment of IDC and IEDC because of delay of 5 months in commercial operation.

(c) The petitioner has claimed interest at the rate of 11.75% whereas interest rate of 13.50% has considered because of upward revision of SBI Base Rate on 1.4.2012, the year of commercial operation.

50. The transmission charges allowed are subject to truing up in accordance with the tariff regulations.

Filing fee and the publication expenses

51. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. 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

52. 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.

53. 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 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

55. 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.

56. This order disposes of Petition No. 62/TT/2012.

(M. DEENA DAYALAN)	**(V.S. VERMA)**
MEMBER	**MEMBER**

Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	Asset-I		Asset-II	
		2012-13	2013-14	2012-13	2013-14
1	**Bond XXXII**				
	Gross loan opening	**300.00**	**300.00**	**100.00**	**100.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	300.00	300.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	25.00	0.00	8.33
	Net Loan-Closing	300.00	275.00	100.00	91.67
	Average Loan	300.00	287.50	100.00	95.83
	Rate of Interest	8.84%	8.84%	8.84%	8.84%
	Interest	**26.52**	**25.42**	**8.84**	**8.47**
	Rep Schedule	12 annual installments from 27.3.2014			
2	**Bond XXXIII**				
	Gross loan opening	**700.00**	**700.00**	**100.00**	**100.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	700.00	700.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	700.00	700.00	100.00	100.00
	Average Loan	700.00	700.00	100.00	100.00
	Rate of Interest	8.64%	8.64%	8.64%	8.64%
	Interest	**60.48**	**60.48**	**8.64**	**8.64**
	Rep Schedule	12 Equal Annual Installments from 8.7.2014			
3	**BOND-XXXIV**				
	Gross loan opening	**780.00**	**780.00**	**192.00**	**192.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	780.00	780.00	192.00	192.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	780.00	780.00	192.00	192.00
	Average Loan	780.00	780.00	192.00	192.00
	Rate of Interest	8.84%	8.84%	8.84%	8.84%
	Interest	**68.95**	**68.95**	**16.97**	**16.97**
	Rep Schedule	12 Equal Annual Installments from 21.10.2014			
4	**Bond XXXV**				
	Gross loan opening	**4211.60**	**4211.60**	**2588.40**	**2588.40**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**	**0.00**	**0.00**

	Net Loan-Opening	4211.60	4211.60	2588.40	2588.40
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	4211.60	4211.60	2588.40	2588.40
	Average Loan	4211.60	4211.60	2588.40	2588.40
	Rate of Interest	9.640%	9.640%	9.640%	9.640%
	Interest	**406.00**	**406.00**	**249.52**	**249.52**
	Rep Schedule	12 Equal Annual Installments from 31.5.2015			
	Total Loan				
	Gross loan opening	**5991.60**	**5991.60**	**2980.40**	**2980.40**
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	5991.60	5991.60	2980.40	2980.40
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	25.00	0.00	8.33
	Net Loan-Closing	5991.60	5966.60	2980.40	2972.07
	Average Loan	5991.60	5979.10	2980.40	2976.23
	Rate of Interest	9.3790%	9.3801%	9.5281%	9.5290%
	Interest	**561.95**	**560.85**	**283.97**	**283.61**