

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 40/TT/2013

Coram:

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

Date of Hearing : 27.03.2014

Date of Order : 15.10.2014

In the matter of:

Approval of transmission tariff of **Asset I:** 400 kV, 125 MVAR Bus Reactor along with associated bays at Patna Sub-station; **Asset II:** 400 kV, 125 MVAR Bus Reactor along with associated bays at Ranchi Sub-station under ERSS-IV in Eastern Region from anticipated date of commercial operation (1.1.2013) to 31.3.2014 for tariff block 2009-14 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009.

And in the matter of:

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

.....**Petitioner**

Vs

1. Bihar State Electricity Board
Vidyut Bhawan, Bailey Road
Patna-800 001.
2. West Bengal State Electricity Distribution Company Ltd.
Bidyut Bhawan, Bidhan Nagar
Block DJ, Sector-II, Salt Lake City
Calcutta-700 091.
3. Grid Corporation of Orissa Ltd.
Shahid Nagar, Bhubaneswar-751 007.
4. Damodar Valley Corporation
DVC Tower, Maniktala
Civic Centre, VIP Road
Calcutta-700 054.



5. Power Department,
Government of Sikkim,
Gangtok- 737 101

6. Jharkhand State Electricity Board
In Front of Main Secretariat
Doranda, Ranchi-834 002.

....Respondents

For petitioner : Shri M. M. Mondal, PGCIL
Shri S.K. Venkatesan, PGCIL
Mrs. Sangeeta Edwards, PGCIL
Shri S.S Raju, PGCIL
Shri R.V.M.M. Rao, PGCIL

For respondents : None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of the transmission charges for **Asset I**: 400 kV, 125 MVAR Bus Reactor along with associated bays at Patna Sub-station; **Asset II**: 400 kV, 125 MVAR Bus Reactor along with associated bays at Ranchi Sub-station under ERSS-IV in Eastern 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 for the project was accorded by the Board of Directors of the petitioner vide letter dated 13.7.2011 for ₹6036 lakh including an IDC of ₹245 lakh (Based on 2nd Quarter, 2011 price level). The project was scheduled to be commissioned within 21 months from the date of investment approval i.e. 1.5.2013. The scope of works covered under the project broadly includes:-

- 1) Additional 1X160 MVA, 220/132kV transformer with associated bays at Siliguri sub-station.
- 2) Replacement of 1X50 MVA, 220/132kV transformer by 1X160 MVA, 220/132kV transformer with associated bays at 220/132kV Birpara sub-station.
- 3) Installation of additional bay/breaker against 400kV Malda-Farakka-I feeder at Malda sub-station.
- 4) Replacement of 2X50 MVA, 220/132kV transformer by 2X160 MVA, 220/132kV transformer with associated bays at 220/132 kV Malda sub-station.
- 5) 125 MVAR bus reactor alongwith associated bays at Ranchi 400/220 kV sub-station.
- 6) 125 MVAR bus reactor alongwith associated bays at Patna 400/220 kV sub-station.

3. The scheme includes assets of 6 different sub-stations in Eastern Region. Out of which 2 assets i.e. 400kV, 125 MVAR Bus Reactor along with associated bays at Patna Sub-station and 400 kV, 125 MVAR Bus Reactor along with associated bays at Ranchi Sub-station are covered in the instant petition.

4. The petitioner initially claimed tariff of the instant asset on the basis of anticipated date of commercial operation of 1.1.2013. Accordingly, the petitioner submitted the Auditor's Certificate and tariff forms alongwith the petition. Later, the

petitioner, vide affidavit dated 5.8.2013, has submitted that the assets were put under commercial operation as per the details given below:-

Asset	Scheduled DOCO	DOCO
Asset-I: 400kV, 125 MVAR Bus Reactor alongwith associated bays at Patna S/s (hereinafter referred to as Asset-I)	1.5.2013	1.4.2013
Asset-II: 400kV, 125 MVAR Bus Reactor alongwith associated bays at Ranchi S/s (hereinafter referred to as Asset-II)	1.5.2013	1.3.2013

5. The transmission tariff for other assets covered in the instant scheme has been claimed in Petition No. 206/TT/2012, which is under consideration.

6. The petitioner, vide affidavit dated 5.8.2013, has also submitted revised Management Certificates for the expenditure based on the actual date of commercial operation of the assets. In the instant petition tariff is determined on the basis of the actual expenditure incurred up to date of commercial operation and projected additional capital expenditure to be incurred from the date of commercial operation to 31.3.2014.

7. The transmission charges claimed by the petitioner are as follows:-

(` in lakh)

Particulars	Asset-I	Asset-II	
	2013-14	2012-13 (pro-rata)	2013-14
Depreciation	43.64	1.74	41.37
Interest on Loan	47.29	2.08	47.47
Return on Equity	43.34	1.73	41.09
Interest on working capital	6.56	0.41	6.61
O & M Expenses	65.46	5.16	65.46
Total	206.29	11.12	202.00

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

(` in lakh)

Particulars	Asset-I	Asset-II	
	2013-14	2012-13 (pro-rata)	2013-14
Maintenance Spares	9.82	9.29	9.82
O & M Expenses	5.46	5.16	5.46
Receivables	34.38	22.24	33.67
Total	49.66	36.69	48.95
Rate of Interest	6.56	0.41	6.61
Interest	13.20%	13.50%	13.50%

9. 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 respondent has filed any reply.

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

Capital Cost

11. 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.”

12. The details of apportioned approved cost, actual cost incurred as on date of commercial operation and details of additional capital expenditure incurred / projected to be incurred for the assets covered in the petition are summarized below:-

(` in lakh)					
Name of the Asset	Apportioned approved cost	Expenditure up to DOCO	Projected expenditure from DOCO to 31.3.2013	Projected expenditure 2013-14	Total estimated completion cost
Asset-I	993.30	652.55	-	347.89	1000.44
Asset-II	944.20	197.58	395.93	379.93	973.44

Cost Over-run

13. The total estimated completion cost of the Asset-I is ₹1000.44 lakh and Asset-II is ₹973.44 lakh against the apportioned approved cost of ₹993.30 lakh and ₹944.20 lakh, hence there is cost over-run in case of both the assets.

14. The petitioner was directed to furnish the reasons for increase in the cost of the instant asset vide Commission's letter dated 15.10.2013. In response, the petitioner in its affidavit dated 10.12.2013 submitted that:-

- a) The assets under the scope of ERSS-IV consists of number of elements and only a small part of expenditure of the total approved cost of the project has been incurred on the assets of the current petition. The Commission may look into the comparison of completed cost against the approved cost in totality for the entire project.
- b) The award of contract for these items was made on the basis for various items under the sub-station package. Number of bids were received from different vendors through domestic competitive bidding and the award was made to the lowest evaluated bidder. The item-wise comparison of different items under the turnkey package with respective cost estimates may not lead to appropriate results since the actual prices solely depend on how the bifurcation of the total price has been made by the vendor while quoting for different items under complete turnkey package. The bids for a particular package containing many small components (items) are invited on overall basis and comparison of bidder's prices and decision of the successful bidder is done on the basis of the total bid price of each bidder. Price comparison of any individual item is not done for the above purpose. The package, based on the overall comparison is awarded as a whole based on the lowest cost of complete package. The rates of individual items are asked only for the purpose of On Account payment and not for any comparison.

15. During the hearing on 27.3.2104, the Commission directed the petitioner to submit the item-wise break-up of both FR cost and completion cost and documentary proof of the soil condition in Patna and Ranchi.

16. The petitioner in its reply dated 20.6.2014 submitted the following information:-

(` in lakh)

Asset-I: 125 MVAR Bus Reactor at Patna Sub-station			
Sr. No.	Break Down	As per Original Estimate	Total Completion Cost
1.0	Preliminary works & land		-
a	Site preparation	20.00	20.00
	Total preliminary works & land	20.00	20.00
2.0	Civil Works		
a	Foundation for structures	50.37	85.03
b	Misc. civil works		
	Total Civil works	50.37	85.03
3.0	Substation Equipments		
a	Switchgear (CT, PT, Circuit Breaker, Isolator etc)	82.26	102.03
b	Compensating Equipment (Reactor, SVCs etc)	557.60	626.78
c	Control, Relay & Protection Panel	47.37	61.84
d	Bus -Bars/ Conductors/ Insulators	18.00	33.03
e	Outdoor lighting	4.00	1.54
f	Structure for switchyard	53.00	32.44
	Total Substation Equipments	762.23	857.66
	Total (Sub-station)	832.60	962.69

(` in lakh)

Asset-II: 125 MVAR Bus Reactor at Ranchi Sub-station			
Sr. No.	Break Down	As per Original Estimate	Total Completion Cost
1.0	Preliminary works & land		-
a	Site preparation	20.00	20.00
	Total preliminary works & land	20.00	20.00
2.0	Civil Works		
a	Foundation for structures	51.18	79.80
b	Misc. civil works		
	Total Civil works	51.18	79.80
3.0	Substation Equipments		
a	Switchgear (CT, PT, Circuit Breaker, Isolator etc)	82.15	101.84
b	Compensating Equipment (Reactor, SVCs etc)	518.12	627.36
c	Control, Relay & Protection Panel	45.00	63.88
d	Bus-Bars/ Conductors/ Insulators	18.00	29.12
e	Outdoor lighting	4.00	1.54
f	Structure for switchyard	53.00	32.44
	Total Substation Equipments	720.27	856.18
	Total (Sub-station)	791.45	955.98

17. The petitioner submitted that the difference of ₹26 lakh in the foundation cost of bus reactors at Patna and Ranchi sub-stations, even though they were procured around the same time from the same OEM, was a result of estimated liabilities and proposed expenditure. However, after the completion of works, the actual completed cost for Asset-I & Asset-II under head "foundation for structure & civil works" is ₹85.03 lakh & ₹79.80 lakh respectively. The difference of ₹5.23 lakh is due to variations as per actual site conditions.

18. The information submitted by the petitioner (given in para 16 above) indicates only the hard cost. As such, comparison of apportioned approved cost and total

estimated completion cost is shown in para 12 above. The petitioner has not furnished the RCE for assets covered in the instant case. Accordingly, the capital cost of transmission assets is restricted to the apportioned approved cost. The apportioned approved cost of the individual asset is considered for the purpose of tariff calculations. However, the capital cost in case of transmission assets shall be reviewed at the time truing-up, subject to the petitioner filing the RCE and justification for cost over-run. This approach has been upheld by the Appellate Tribunal for Electricity in its order dated 28.11.2013 in Appeal No. 165 of 2012, and subsequently the Commission, vide its order dated 18.2.2014 in Petition number 216/TT/2012, has considered the apportioned approved cost of individual asset for restricting the capital expenditure due to cost-overrun for the purpose of tariff determination. The same approach has been adopted in the present case and capital expenditure has been restricted to apportioned approved cost.

Time over-run

19. As per the investment approval dated 13.7.2011, the scheme was scheduled to be commissioned within 21 months from the date of investment approval. Accordingly, the schedule of completion works out to 7.4.2013, i.e. 1.5.2013. The assets were commissioned on 1.4.2013 and 1.3.2013 and hence there is no time over-run in commissioning of the assets.

Treatment of Initial Spares

20. The petitioner vide affidavit dated 5.8.2013 has claimed initial spares amounting to ₹24.53 lakh each for Asset-I and Asset-II corresponding to Ranchi Sub-station and Patna Sub-station. Initial spares for Asset-I and Asset-II work out to

₹24.84 and ₹23.60 lakh as per the ceiling limits specified in Regulation 8 of 2009 Tariff Regulations. Initial spares in respect of Asset-II is being adjusted. The capital cost considered for the purpose of tariff is as follows:-

(` in lakh)

Particulars	Capital cost claimed as on 31.3.2014	Initial spares claimed	Restricted capital cost considered up to 31.3.2014	Proportionate claim of initial spares against the restricted capital cost up to 31.3.2014	Ceiling limits as per clause 8 of 2009 Tariff Regulation	Initial spares worked out	Excess initial spares claimed
Asset-I	1,000.44	24.53	993.30	24.35	2.50%	24.84	-
Asset-II	973.44	24.53	944.20	23.79	2.50%	23.60	0.19

The petitioner may file the details of the initial spares at the time of truing up along with the RCE, if any.

21. The following capital cost as on the date of commercial operation has been considered for the purpose of tariff computation:-

(₹ in lakh)

Assets	Capital cost considered for the purpose of tariff before adjustment of IEDC/IDC & initial spares, if any, as on DOCO	Deduction in respect of excess initial spares	Capital cost considered for the purpose of tariff after scrutiny of IEDC/IDC & initial spares as on DOCO
Asset-I	652.55	-	652.55
Asset-II	197.58	0.19	197.39

Projected Additional Capital Expenditure

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

“Additional Capitalisation: (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

23. Clause (11) of Regulation 3 of the 2009 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”.

Accordingly, the cut-off date for the instant assets is 31.3.2016.

24. The petitioner has claimed the following additional capital expenditure:-

Name of Assets	DOCO	(` in lakh)	
		2012-13	2013-14
Asset-I	1.4.2013	-	347.89
Asset-II	1.3.2013	395.93	379.93

The additional capital expenditure claimed falls within the cut-off date and has been incurred/projected to be incurred for balance and retention payment.

25. The estimated completion cost of both the assets has exceeded the apportioned approved cost. Therefore, additional capital expenditure for 2013-14 for Asset-I and Asset-II have been restricted to ₹340.75 lakh and ₹350.69 lakh (besides ₹395.93 lakh during 2012-13 for Asset-II) respectively so as to make estimated completion cost before adjustment of initial spares equal to its apportioned approved

cost. The same will be reviewed at the time of truing-up subject to the petitioner filing the RCE.

26. The details of the capital cost as on 31.3.2014, after restricting capital cost as per apportioned approved cost and adjusting initial spares is given hereunder:-

Particulars	Capital cost as on DOCO after adjustments	Add-cap during 2012-13	Add-cap for 2013-14*	Total estimated completion cost as 31.3.2014
Asset-I	652.55	-	340.75	993.30
Asset-II	197.39	395.93	650.69	944.01

* Add-cap restricted to the apportioned approved cost.

Debt- Equity Ratio

27. 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.”

28. The detail of debt Debt-Equity ratio as on date of commercial operation of assets are as follows:-

(` in lakh)

Asset-I		
Particulars	Amount	%
Debt	456.79	70.00
Equity	195.77	30.00
Total	652.55	100.00
Asset-II		
Particulars	Amount	%
Debt	138.17	70.00
Equity	59.21	30.00
Total	197.39	100.00

29. Detail of Debt-Equity ratio for the additional capital expenditure are as follows:-

(` in lakh)

Asset-I		
Add-Cap for 2013-14		
Particulars	Amount	%
Debt	238.53	70.00
Equity	102.23	30.00
Total	340.75	100.00

(` in lakh)

Asset-II		
Add-Cap for 2012-13		
Particulars	Amount	%
Debt	277.15	70.00
Equity	118.78	30.00
Total	395.93	100.00
Asset-II		
Add-Cap for 2013-14		
Particulars	Amount	%
Debt	245.48	70.00
Equity	105.21	30.00
Total	350.69	100.00

30. Details of Debt-Equity ratio as 31.3.2014 are as follows:-

(` in lakh)

Asset-I		
Capital cost as on 31.3.2014		
Particulars	Amount	%
Debt	695.31	70.00
Equity	297.99	30.00
Total	993.30	100.00

Asset-II		
Capital cost as on 31.3.2014		
Particulars	Amount	%
Debt	660.81	70.00
Equity	283.20	30.00
Total	944.01	100.00

Return on Equity

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 tried up in accordance with Regulation 6 of these regulations".

32. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account on return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission shall be dealt under Regulation 15(3) as state above. Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15 of the 2009 Tariff Regulations.

33. Based on the above, the following return on equity has been considered:-

(` in lakh)

Particulars	Asset-I	Asset-II	
	2013-14	2012-13 (pro-rata)	2013-14
Opening Equity	195.77	59.21	177.99
Addition due to Additional Capitalisation	102.23	118.78	105.21
Closing Equity	297.99	177.99	283.20
Average Equity	246.88	118.60	230.59
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)	43.16	1.73	40.31

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 amount of loan, repayment of instalments and rate of interest on actual loan have been considered as per the affidavit dated 5.8.2013.
- (b) The repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period.
- (c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

36. Detailed calculations in support of the weighted average rates of interest have been given in Annexure-I & II to this order.

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

(` in lakh)

Particulars	Asset-I	Asset-II	
	2013-2014	2012-13 (pro-rata)	2013-14
Gross Normative Loan	456.79	138.17	415.33
Cumulative Repayment upto previous year	0.00	0.00	1.74
Net Loan-Opening	456.79	138.17	413.59
Addition due to additional capital expenditure	238.53	277.15	245.48
Repayment during the year	43.45	1.74	40.59
Net Loan-Closing	651.86	413.59	618.48
Average Loan	554.32	275.88	516.04
Weighted Average Rate of Interest on Loan	8.4945%	9.0293%	9.0254%
Interest	47.09	2.08	46.57

Depreciation

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

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

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

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

39. The assets covered in the instant petition were put under commercial operation on 1.3.2013 and 1.4.2013. The assets will complete 12 years beyond 2013-14. Accordingly, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III to the 2009 Tariff Regulations. Depreciation has been worked out on the basis of capital

expenditure as on the date of commercial operation, wherein depreciation for Asset-II for the first year has been calculated on *pro-rata* basis for the part of year, as per details given below:-

(` in lakh)

Particulars	Asset-I	Asset-II	
	2013-14	2012-13 (pro-rata)	2013-14
Opening Gross Block	652.55	197.39	593.32
Addition due to Projected Additional Capitalisation	340.75	395.93	350.69
Closing Gross Block	993.30	593.32	944.01
Average Gross Block	822.93	395.35	768.66
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	740.63	355.82	691.80
Remaining Depreciable Value	740.63	355.82	690.06
Depreciation	43.45	1.74	40.59

Operation & Maintenance Expenses (O&M Expenses)

40. 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 are as follows:-

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

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

(` in lakh)

Element	2012-13	2013-14
1 No. 400 kV bays at Patna sub-station		65.46
1 No. 400 kV bays at Ranchi sub-station	5.16 (Pro-rata for 1 month)	65.46
Total	5.16	130.92

42. The petitioner has submitted that O&M Expenses for 2009-14 tariff block had been arrived on the basis of normalized actual O&M Expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the O&M Expenses for tariff period 2009-14. The petitioner has also submitted that it would approach the Commission for suitable revision in the norms for O&M Expenses due to impact of wage revision.

43. 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

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 of fixed cost. The petitioner has claimed the receivables on the basis of 2 months of annual transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance Spares

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M Expenses as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M Expenses

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for O&M 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

As per 2009 Tariff Regulations, SBI Base Rate Plus 350 bps as on 1.4.2013 (i.e. 13.20%) has been considered as the rate of interest on working capital for the Asset-I. Similarly, SBI Base Rate Plus 350 bps as on 1.4.2012 (i.e. 13.50%) has been considered as the rate of interest on working capital for the Asset-II.

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

(` in lakh)

Particulars	Asset-I	Asset-II	
	2013-14	2012-13 (pro-rata)	2013-14
Maintenance Spares	9.82	9.29	9.82
O & M Expenses	5.46	5.16	5.46
Receivables	34.28	22.23	33.25
Total	49.56	36.68	48.52
Interest	6.54	0.41	6.55

Transmission Charges

46. The transmission charges allowed for the instant assets are as follows:-

(` in lakh)

Particulars	Asset-I	Asset-II	
	2013-14	2012-13 (pro-rata)	2013-14
Depreciation	43.45	1.74	40.59
Interest on Loan	47.09	2.08	46.57
Return on Equity	43.16	1.73	40.31
Interest on Working Capital	6.54	0.41	6.55
O & M Expenses	65.46	5.16	65.46
Total	205.70	11.12	199.48

Filing Fee and the Publication Expenses

47. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis in accordance with Regulation 42A (1) (a) of the 2009 Tariff Regulations.

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

Service Tax

49. 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

50. 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.

51. This order disposes of Petition No. 40/TT/2013.

sd/-
(A. K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



Annexure-I**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

(in lakh)

	Details of Loan	2013-14
1	Bond XLIII	
	Gross loan opening	198.71
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	198.71
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	198.71
	Average Loan	198.71
	Rate of Interest	7.93%
	Interest	15.76
	Rep Schedule	12 annual installments from 20.05.2017
2	Bond XXXVII	
	Gross loan opening	74.11
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	74.11
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	74.11
	Average Loan	74.11
	Rate of Interest	9.25%
	Interest	6.86
	Rep Schedule	12 annual installments from 26.12.2015.
3	Bond XLII	
	Gross loan opening	183.96
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	183.96
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	183.96
	Average Loan	183.96
	Rate of Interest	8.80%
	Interest	16.19
	Rep Schedule	Bullet Payment as on 13.03.23
	Total Loan	
	Gross loan opening	456.78
	Cumulative Repayment upto DOCO/previous year	0.00

Net Loan-Opening	456.78
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	456.78
Average Loan	456.78
Rate of Interest	8.4945%
Interest	38.80

Annexure-II**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

(` in lakh)

	Details of Loan	2012-13	2013-14
1	Bond XXXVII		
	Gross loan opening	74.11	74.11
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	74.11	74.11
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	74.11	74.11
	Average Loan	74.11	74.11
	Rate of Interest	9.25%	9.25%
	Interest	6.86	6.86
	Rep Schedule	12 annual installments from 26.12.2015.	
2	Bond XLII		
	Gross loan opening	64.20	64.20
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	64.20	64.20
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	64.20	64.20
	Average Loan	64.20	64.20
	Rate of Interest	8.80%	8.80%
	Interest	5.65	5.65
	Rep Schedule	Bullet Payment as on 13.03.23	
3	Bond XXXVII (Add Cap 2012-13)		
	Gross loan opening	0.00	133.98
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	133.98
	Additions during the year	133.98	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	133.98	133.98
	Average Loan	66.99	133.98
	Rate of Interest	9.25%	9.25%
	Interest	6.20	12.39
	Rep Schedule	12 annual installments from 26.12.2015.	

4	Bond XLII (Add Cap 2012-13)		
	Gross loan opening	0.00	143.17
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	143.17
	Additions during the year	143.17	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	143.17	143.17
	Average Loan	71.59	143.17
	Rate of Interest	8.80%	8.80%
	Interest	6.30	12.60
	Rep Schedule	Bullet Payment as on 13.03.23	
	Total Loan		
	Gross loan opening	138.31	415.46
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	138.31	415.46
	Additions during the year	277.15	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	415.46	415.46
	Average Loan	276.89	415.46
	Rate of Interest	9.0293%	9.0254%
	Interest	25.00	37.50