

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 92/TT/2012

Coram:

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

Date of Hearing : 20.06.2013

Date of Order : 10.10.2013

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 LILO of 400 KV S/C Meramundali – Jeypore Transmission Line and associated bays at Bolangir Sub-Station along with 2 Nos. 50 MVAR Shunt Reactor, 1 No. 80 MVAR Bus Reactor and 2x 315 MVA ICTs associated with Eastern Region Strengthening Scheme-III in Eastern Region from anticipated DOCO (1.6.2012) to 31.3.2014.

And

In the matter of:

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

.....**Petitioner**

VERSUS

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 Limited,
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,
Doranda, Ranchi – 834 002.

...Respondents

Representatives of the Petitioner : Shri S.S Raju, PGCIL
Shri Avinash M. Pavgi, PGCIL
Shri Prashant Sharma, PGCIL

Counsel for the Respondent : Shri R.B. Sharma, Advocate for JSEB

ORDER

This is a petition filed by Power Grid Corporation Limited (PGCIL) seeking approval of transmission tariff for determination of transmission tariff for LILO of 400 KV S/C Meramundali – Jeypore Transmission Line and associated bays at Bolangir Sub-Station along with 2 Nos. 50 MVAR Shunt Reactor, 1 No. 80 MVAR Bus Reactor and 2x 315 MVA ICTs associated with Eastern Region Strengthening Scheme-III in Eastern Region (hereinafter referred to as "transmission assets") from anticipated date of commercial operation (1.6.2012) to 31.3.2014, under Regulation 86 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "2009 Tariff Regulations").

2. The administrative approval and the expenditure sanction for the "Eastern Region Strengthening Scheme-III" scheme was accorded by the Board of

Directors of the petitioner, vide their letter no. C/CP/ERSS-III dated 7.7.2010 at an estimated cost of ₹127280 lakh including IDC of ₹8152 lakh (based on 1st Quarter 2010 price level). The scope of work covered under the project is as follows:-

Transmission Lines

1. Sasaram-Daltonganj 400KV D/C line;
2. Mendhasal-Uttara 400KV D/C line;
3. LILO of Kahalgaon-Biharsharif 400KV D/C line (1st Line) at Lakhisarai;
4. LILO of Kahalgaon-Biharsharif 400 kV D/C line (2nd Line) at Banka;
5. LILO of Meramundali-Jeypore 400 kV S/C line at Bolangir ;
6. LILO of Rengali-Baripada 400KV S/C line at Keonjhar;
7. LILO of one circuit of Baripada-Mendhasal 400 kV D/C line at Dubri;
8. LILO of both circuits at Jamshedpur –Rourkela 400 kV D/C line at Chaibasa;

Sub-Stations

1. 2x315 MVA, 400/220 kV Substation at Daltonganj (New);
2. 2x315 MVA, 400/132 kV Substation at Lakhisarai (New);
3. 2x315 MVA, 400/132 kV Substation at Banka (New);
4. 2x315 MVA, 400/220 kV Substation at Bolangir (New);
5. 2x315 MVA, 400/220 kV Substation at Keonjhar (New);
6. 2x315 MVA, 400/220 kV Substation at Chaibasa (New);
7. 2x315 MVA, 400/220 kV Substation at Uttara (New);
8. Extension at 400KV Sasaram Substation (POWERGRID) and 400KV Dubri (OPTCL) & Mendhasal S/S (OPTCL).

3. The petitioner initially, in the petition, has claimed transmission tariff for “LILO of 400 KV S/C Meramundali – Jeypore Transmission Line and associated bays at Bolangir Sub-Station along with 2 Nos. 50 MVAR Shunt Reactor, 1 No. 80 MVAR Bus Reactor and 2x 315 MVA ICTs” as a whole, from anticipated date of commercial operation to 31.3.2014. The petitioner was directed, vide Technical Validation dated 11.9.2012, to furnish the actual status of the commissioning of the asset covered in the instant petition. In reply, the petitioner has submitted,

vide affidavit dated 9.10.2012, that the asset has been split into three individual assets and also submitted the following status of the assets:-

S. No	Asset Name	Anticipated DOCO	Actual DOCO
1	LILO of 400 kV S/C Meramundali-Jeypore line at Bolangir & associated bays along with 2 nos. 50 MVAR Shunt Reactors, 1 no. 315 MVA ICT-II & associated bays and 2nos. 220 kV line bays kV (I&II) (hereinafter referred as to "Asset-1")	1.6.2012	1.9.2012
2	1 No. 80 MVAR Bus Reactor & associated bays at Bolangir Substation (hereinafter referred as to "Asset-2")		1.10.2012
3	1 no. 315 MVA ICT-I & associated bays and 2 nos. 220 kV line bays (Line-III&IV) (hereinafter referred as to "Asset-3")		1.11.2012

4. The petitioner was later directed, vide query note dated 22.10.2012, to submit the status of Asset 3 and the Management certificates and tariff forms for all the assets covered in the instant petition. In response, the petitioner has submitted, vide affidavit dated 4.1.2013, that Asset-3 has been put under commercial operation on 1.11.2012 and also submitted the Auditor's certificate along with tariff forms for all the three assets.

5. Details of the transmission charges claimed by the petitioner are as under:-

Particulars	(` in lakh)					
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
	Asset-1		Asset-2		Asset-3	
Depreciation	230.58	453.28	17.83	42.00	35.10	99.79
Interest on Loan	283.01	531.01	21.71	49.33	42.69	117.63
Return on equity	236.93	469.31	18.05	43.15	35.26	102.02
Interest on Working Capital	32.47	61.00	3.04	6.71	7.02	18.56
O & M Expenses	275.04	498.45	30.96	65.46	79.98	202.92
Total	1058.03	2013.05	91.59	206.65	200.95	540.92

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

Particulars	(` in lakh)					
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
	Asset-1		Asset-2		Asset-3	
Maintenance Spares	70.72	74.77	9.29	9.82	28.79	30.44
O & M expenses	39.29	41.54	5.16	5.46	16.00	16.91
Receivables	302.29	355.51	30.53	34.44	80.02	90.15
Total	412.30	451.82	44.98	49.72	124.81	137.50
Interest	32.47	61.00	3.04	6.71	7.02	18.56
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%

7. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under section 64 of the Electricity Act, 2003. Reply to the petitioner has been filed by Respondent No.6, Jharkhand State Electricity Board (JSEB), vide affidavit dated 21.6.2013. JSEB has raised the issue of cost over-estimation, additional return on equity, application filing fee and publication expenses, licence fee, service tax, etc. The petitioner has filed its rejoinder to the reply filed by JSEB, vide affidavit dated 16.7.2013. The issues raised by the respondent, JSEB and the clarifications given by the petitioner are dealt in the relevant paragraphs of this order.

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

9. Provisional tariff in respect of the above mentioned transmission assets from anticipated date of commercial operation i.e. 1.6.2012 to 31.3.2014, was

approved by the Commission vide its order dated 29.3.2012. The petitioner is already billing respondents on provisional basis in accordance with the said order. The provisional transmission charges allowed shall be adjusted as per proviso to clause (3) of Regulation 5 of the 2009 Tariff Regulations.

10. The instant petition covers determination of tariff based on actual expenditure incurred up to date of commercial operation and estimated additional capital expenditure projected to be incurred from date of commercial operation to 31.3.2014.

Capital cost

11. 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;”

Cost over-run

12. JSEB has submitted that the apportioned cost of ₹13541 lakh of the instant transmission assets is higher than the estimated completion cost of ₹11479 lakh resulting in saving of 18%. It is not possible to determine the cost over-run because of the over estimation. In response, the petitioner in its rejoinder has submitted that the in

the instant case the awarded price were above the estimated FR rates in certain substation/TL items like Tower steel, hardware fittings/ earthwire/ insulators, outdoor lightning and structure for switchyard. However, in certain cases of main equipment such as the transformer and switchgears (CT, CVT Breaker, and Isolator etc.) there has been reduction in the price and that there is overall reduction in the cost of asset.

13. It is observed that there is a huge over-estimation of the cost of the transmission assets by the petitioner. It appears that the petitioner has not adopted prudent procedure while estimating the cost and the procedure adopted by the petitioner in estimating the cost is not realistic. The petitioner is directed to adopt a prudent procedure while estimating the cost of different elements of the transmission projects.

14. The petitioner has claimed capital cost of ₹6933.43 lakh, ₹603.20 lakh and ₹1513.64 lakh for Asset-1, Asset-2 and Asset-3 respectively as on the date of commercial operation vide Auditor's certificate dated 21.9.2012 for Asset-1 and Auditor's certificate dated 14.12.2012 for Asset-2 and Asset-3. The same capital cost has been considered as opening capital cost for the purpose of tariff determination.

15. The details of capital cost as on date of commercial operation and estimated additional capitalization projected to be incurred for the asset covered in this petition are summarized hereunder:-

(₹ in lakh)

Particulars	Actual expenditure incurred as on DOCO	Projected additional capital expenditure		Total estimated completion cost
		2012-13	2013-14	
Asset-1	6933.43	1623.24	784.51	9341.18
Asset-2	603.20	170.00	99.10	872.30
Asset-3	1513.64	200.00	463.27	2176.91
Total	9050.27	1993.24	1346.88	12390.39

16. Total estimated completion cost of the three assets covered in the instant petition is ₹12390.39 lakh which falls within the total apportioned approved cost i.e. ₹13541.34 lakh. The capital cost as on the date of commercial operation is inclusive of initial spares amounting to ₹93.77 lakh, ₹20.42 lakh ₹26.95 lakh pertaining to sub-station (including cost of land, building and PLCC) for Asset-1, Asset-2 and Asset-3 respectively, which falls within the ceiling limit specified in Regulation 8 of the 2009 Tariff Regulations.

Projected additional capital expenditure

17. 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.”

18. The 2009 Tariff Regulations further defines cut-off date as-

“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”.

19. As per the above definition, cut-off date in respect of the transmission assets whose transmission tariff is being allowed in the instant petition is 31.3.2015.

20. The petitioner has claimed the following projected additional capital expenditure for the transmission assets:-

(₹ in lakh)			
Year	Work proposed to be added after date of commercial operation upto cut-off date	Amount to be capitalized /proposed to be capitalized	Justification
Asset-1			
DOCO to 31.3.2013	Freehold Land	20.00	Balance /Retention Payments
	Building & civil works	300.00	
	Transmission Line	500.00	
	Sub station	800.00	
	PLCC	3.24	
	Sub Total	1623.24	
1.4.2013 to 31.3.2014	Leasehold land	30.00	
	Building & civil works	140.37	
	Transmission Line	305.45	
	Sub station	308.69	
	Sub Total	784.51	
Asset-2			
DOCO to 31.3.2013	Building & civil works	50.00	Balance /Retention Payments
	Sub station	120.00	
	Sub Total	170.00	
1.4.2013 to 31.3.2014	Building & civil works	29.87	
	Sub station	69.23	

	Sub Total	99.10	
Asset-3			
DOCO to 31.3.2013	Building & civil works	50.00	Balance /Retention Payments
	Sub station	150.00	
	Sub Total	200.00	
1.4.2013 to 31.3.2014	Building & civil works	152.76	
	Sub station	310.51	
	Sub Total	463.27	

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

Debt- equity ratio

22. Regulation 12 of the 2009 Tariff Regulations provides that:-

“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.”

23. Details of debt-equity considered for the purpose of tariff calculation, as on the date of commercial operation, are given as under:-

(₹ in lakh)

Capital cost as on DOCO		
Asset-1	Amount (₹ in lakh)	%
Debt	4853.40	70.00
Equity	2080.03	30.00
Total	6933.43	100.00
Asset-2	Amount (₹ in lakh)	%
Debt	422.24	70.00
Equity	180.96	30.00
Total	603.20	100.00
Asset-3	Amount (₹ in lakh)	%
Debt	1059.55	70.00
Equity	454.09	30.00
Total	1513.64	100.00

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

(₹ in lakh)

Capital cost as on DOCO		
Asset-1	Amount (₹ in lakh)	%
Debt	6538.83	70.00
Equity	2802.35	30.00
Total	9341.18	100.00
Asset-2	Amount (₹ in lakh)	%
Debt	610.61	70.00
Equity	261.69	30.00
Total	872.30	100.00
Asset-3	Amount (₹ in lakh)	%
Debt	1523.84	70.00
Equity	653.07	30.00
Total	2176.91	100.00

25. The debt:equity ratio considered for the projected additional capital expenditure is as follows:-

Particulars	Asset 1		Asset 2		Asset 3	
	2012-13		2012-13		2012-13	
	(₹ in lakh)	%	(₹ in lakh)	%	(₹ in lakh)	%
	Normative		Normative		Normative	
Debt	1136.27	70.00	119.00	70.00	140.00	70.00
Equity	486.97	30.00	51.00	30.00	60.00	30.00
Total	1623.24	100.00	170.00	100.00	200.00	100.00
Particulars	Asset 1		Asset 2		Asset 3	
	2013-14		2013-14		2013-14	
	(₹ in lakh)	%	(₹ in lakh)	%	(₹ in lakh)	%
	Normative		Normative		Normative	
Debt	549.16	70.00	69.37	70.00	324.29	70.00
Equity	235.35	30.00	29.73	30.00	138.98	30.00
Total	784.51	100.00	99.10	100.00	463.27	100.00

Return on equity

26. 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."

27. The petitioner has made a prayer for allowing 0.5% additional return on equity in the petition and later withdrew the said prayer, vide affidavit 9.10.2012, as the complete scheme of ERSS-III is unlikely to be commissioned as per the schedule given in the investment approval. However, during the hearing on 11.10.2012, the representative of the petitioner has again made a request for additional return on equity of 0.5% as the assets covered in the petition are commissioned ahead of schedule. JSEB has submitted that the petitioner is not eligible for additional return on equity of 0.5% as all the elements of the Scheme are not completed. We would like to clarify that additional return on equity is allowable only if all the elements of the project are commissioned within the stipulated time in the 2009 Tariff Regulations. This has been our consistent view and this view has been upheld by the Hon'ble Appellate Tribunal for Electricity in its judgment dated 10.5.2012 in Appeal No.155 of 2011. It is observed that all the elements of the ERSS-III are not commissioned within the stipulated time and as such, the petitioner's prayer for additional return on equity is rejected.

28. Based on the above, the following return on equity has been allowed:-

(` in lakh)

Particulars	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
	Asset-1		Asset-2		Asset-3	
Opening Equity	2080.03	2567.00	180.96	231.96	454.09	514.09
Addition due to additional capital expenditure	486.97	235.35	51.00	29.73	60.00	138.98
Closing equity	2567.00	2802.35	231.96	261.69	514.09	653.07
Average equity	2323.52	2684.68	206.46	246.83	484.09	583.58
Return on equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	236.93	469.31	18.05	43.15	35.26	102.02

29. The petitioner's prayer to allow grossing up the base rate of return with the applicable tax rate as per relevant Finance Act and direct settlement of tax liability between the generating company/transmission licensee and the beneficiaries/long term transmission customers on year to year basis, shall be settled in accordance with the provisions of Regulation 15 of 2009 regulations.

Interest on loan

30. Regulation 16 of the 2009 Tariff Regulations provides that,-

“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.”

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

- (a) Gross amount of loan, repayment of instalments & 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 (i) above is applied on the notional average loan during the year to arrive at the interest on loan.

32. Accordingly, the interest on normative loan has been calculated on the basis of prevailing rate available as on 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.

33. Detailed calculation of the weighted average rate of interest has been given in the Annexure I, II and III to this order.

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

Particulars	(` in lakh)					
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
	Asset-1		Asset-2		Asset-3	
Gross loan opening	4853.40	5989.67	422.24	541.24	1059.55	1199.55
Cumulative repayment upto DOCO/previous year	0.00	230.58	0.00	17.83	0.00	35.10
Net loan-Opening	4853.40	5759.08	422.24	523.41	1059.55	1164.44
Additions during the year	1136.27	549.16	119.00	69.37	140.00	324.29
Repayment during the year	230.58	453.28	17.83	42.00	35.10	99.79
Net loan-closing	5759.08	5854.96	523.41	550.78	1164.44	1388.94
Average loan	5306.24	5807.02	472.82	537.09	1112.00	1276.69
Rate of interest	9.0748%	9.0759%	9.1638%	9.1638%	9.1744%	9.1744%
Interest	280.89	527.04	21.66	49.22	42.51	117.13

Depreciation

35. 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.”

36. Asset-1, Asset-2 and Asset-3 were put under commercial operation as on 1.9.2012, 1.10.2012 and 1.11.2012 respectively. The assets covered in instant petition will complete 12 years beyond 2013-14. Thus, depreciation has been

calculated annually based on Straight Line Method and at rates specified in Appendix-III of 2009 Tariff Regulations.

37. Details of the depreciation worked out are given hereunder:-

Particulars	(` in lakh)					
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
	Asset-1		Asset-2		Asset-3	
As on the date of commercial operation	6933.43	8556.67	603.20	773.20	1513.64	1713.64
Addition during 2009-14	1623.24	784.51	170.00	99.10	200.00	463.27
Closing gross block	8556.67	9341.18	773.20	872.30	1713.64	2176.91
Average gross block	7745.05	8948.93	688.20	822.75	1613.64	1945.28
Rate of depreciation	5.1037%	5.0652%	5.1830%	5.1047%	5.2211%	5.1300%
Depreciable value	6943.11	8004.10	619.38	740.48	1452.28	1750.75
Remaining depreciable value	6943.11	7773.52	619.38	722.64	1452.28	1715.64
Depreciation	230.58	453.28	17.83	42.00	35.10	99.79

Operation & maintenance expenses

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

Element	(` in lakh)	
	2012-13	2013-14
400 kV S/C twin conductor T/L (₹ Lakh per km)	0.423	0.447
400 kV D/C twin conductor T/L (₹ Lakh per km)	0.741	0.783
400 kV bays (₹ Lakh per bay)	61.92	65.46
220 kV bays (₹ Lakh per bay)	43.34	45.82

39. Based on the above norms, the following operation and maintenance expenses are allowed:-

(` in lakh)		
Asset 1	2012-13 (Pro-rata)	2013-14
0.32 km, 400 kV S/C twin conductor T/L	0.08	0.14
42.84 km, 400 kV D/C twin conductor T/L	18.52	33.54
5 nos. 400 kV bays	180.60	327.30
3 nos. 220 kV bays	75.85	137.46
Total O&M expenses	275.04	498.44
Asset 3	2012-13 (Pro-rata)	2013-14
1 no. 400 kV bay	25.80	65.46
3 nos. 220 kV bays	54.18	137.46
Total O&M expenses	79.98	202.92
Asset 2	2012-13 (Pro-rata)	2013-14
1 no. 400 kV bay	30.96	65.46
Total O&M expenses	30.96	65.46

40. The petitioner has submitted that O & M expenses for the year 2009-14 had been arrived at on the basis of normalized actual O & M expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O&M expenses for the tariff period 2009-14. The petitioner has further submitted that it would approach the Commission for suitable revision in the norms for O&M expenses in case the impact of wage hike with effect from 1.1.2007 is more than 50%.

41. We have 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

42. As per the 2009 Tariff Regulations the components of the working capital and the interest thereon are discussed hereunder:-

(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 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 from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of

the respective year as claimed in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital

The interest rate of 13.50% (SBI Base Rate 10% as on 1.4.2012 plus 350 bps) has been considered for calculating interest on working capital.

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

(` in lakh)

Particulars	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
	Asset-1		Asset-2		Asset-3	
Maintenance Spares	70.72	74.77	9.29	9.82	28.79	30.44
O & M expenses	39.29	41.54	5.16	5.46	16.00	16.91
Receivables	301.68	334.83	30.51	34.42	79.95	90.07
Total	411.69	451.13	44.96	49.70	124.74	137.42
Interest	32.42	60.90	3.03	6.71	7.02	18.55
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%

Transmission Charges

44. The transmission charges allowed for the transmission assets are summarized below:-

(` in lakh)

Particulars	Asset-1		Asset-2		Asset-3	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Depreciation	230.58	453.28	17.83	42.00	35.10	99.79
Interest on Loan	280.89	527.04	21.66	49.22	42.51	117.13
Return on equity	236.93	469.31	18.05	43.15	35.26	102.02
Interest on Working Capital	32.42	60.90	3.03	6.71	7.02	18.55
O & M Expenses	275.04	498.44	30.96	65.46	79.98	202.92
Total	1055.87	2008.97	91.54	206.53	199.87	540.41

Filing fee and the publication expenses

45. The petitioner has sought reimbursement of fee paid by it for filing the petition and expenses related to publication of notices. JSEB has submitted that the petitioner's request should be rejected in line with the Commission's order dated 11.9.2008 in Petition No.129/2005. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of 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

46. 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. JSEB has submitted that the licence fee is part of the O&M expenses and the 2009 Tariff Regulations do not provide for reimbursement of licence fee separately and hence the petitioner's prayer should be rejected. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42A (1)(b) of the 2009 Tariff Regulations.

Service tax

47. 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. JSEB has submitted that service tax on transmission has been exempted by CBEC and hence the petitioner's prayer should be rejected. We consider the prayer of the petitioner pre-mature and accordingly it is rejected.

Sharing of transmission charges

48. 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 from time to time.

49. This order disposes of Petition No. 92/TT/2012.

sd/-
(M. Deena Dayalan)
Member

sd/-
(V.S. Verma)
Member

Annexure I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
			(` in lakh)
	Details of Loan	2012-13	2013-14
1	Bond XXXI		
	Gross loan opening	531.00	531.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	531.00	531.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	44.25
	Net Loan-Closing	531.00	486.75
	Average Loan	531.00	508.88
	Rate of Interest	8.90%	8.90%
	Interest	47.26	45.29
	Rep Schedule	12 annual instalments from 25.02.2014	
2	Bond XXXIII		
	Gross loan opening	313.00	313.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	313.00	313.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	313.00	313.00
	Average Loan	313.00	313.00
	Rate of Interest	8.64%	8.64%
	Interest	27.04	27.04
	Rep Schedule	12 annual installments from 08.07.2014	
3	Bond XXXIV		
	Gross loan opening	652.00	652.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	652.00	652.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	652.00	652.00
	Average Loan	652.00	652.00
	Rate of Interest	8.84%	8.84%
	Interest	57.64	57.64
	Rep Schedule	12 annual installments from 21.10.2014	
4	Bond XXXV		
	Gross loan opening	7.00	7.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	7.00	7.00

	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	7.00	7.00
	Average Loan	7.00	7.00
	Rate of Interest	9.64%	9.64%
	Interest	0.67	0.67
	Rep Schedule	12 annual installments from 31.05.2015	
5	Bond XXXVI		
	Gross loan opening	488.00	488.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	488.00	488.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	488.00	488.00
	Average Loan	488.00	488.00
	Rate of Interest	9.35%	9.35%
	Interest	45.63	45.63
	Rep Schedule	15 annual installments from 29.08.2016	
6	Bond XXXVII		
	Gross loan opening	1138.00	1138.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1138.00	1138.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1138.00	1138.00
	Average Loan	1138.00	1138.00
	Rate of Interest	9.25%	9.25%
	Interest	105.27	105.27
	Rep Schedule	12 annual installments from 26.12.2015	
7	Bond XXXVIII		
	Gross loan opening	253.08	253.08
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	253.08	253.08
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	253.08	253.08
	Average Loan	253.08	253.08
	Rate of Interest	9.25%	9.25%
	Interest	23.41	23.41
	Rep Schedule	Bullet payment as on 9.3.2027	
	Total Loan		

Gross loan opening	3382.08	3382.08
Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	3382.08	3382.08
Additions during the year	0.00	0.00
Repayment during the year	0.00	44.25
Net Loan-Closing	3382.08	3337.83
Average Loan	3382.08	3359.96
Rate of Interest	9.0748%	9.0759%
Interest	306.92	304.95

ANNEXURE II

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
			(₹ in lakh)
	Details of Loan	2012-13	2013-14
1	Bond XXXIV		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	100.00	100.00
	Average Loan	100.00	100.00
	Rate of Interest	8.84%	8.84%
	Interest	8.84	8.84
	Rep Schedule	12 annual installments from 21.10.2014	
2	Bond XXXVI		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	100.00	100.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	100.00	100.00
	Average Loan	100.00	100.00
	Rate of Interest	9.35%	9.35%
	Interest	9.35	9.35
	Rep Schedule	15 annual installments from 29.08.2016	
3	Bond XXXVII		
	Gross loan opening	1.00	1.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1.00	1.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1.00	1.00
	Average Loan	1.00	1.00
	Rate of Interest	9.25%	9.25%
	Interest	0.09	0.09
	Rep Schedule	12 annual installments from 26.12.2015	
3	Bond XXXVIII		
	Gross loan opening	158.62	158.62
	Cumulative Repayment upto DOCO/previous year	0.00	0.00

Net Loan-Opening	158.62	158.62
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	158.62	158.62
Average Loan	158.62	158.62
Rate of Interest	9.25%	9.25%
Interest	14.67	14.67
Rep Schedule	Bullet payment as on 9.3.2027	
Total Loan		
Gross loan opening	359.62	359.62
Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	359.62	359.62
Additions during the year	0.00	0.00
Repayment during the year	0.00	0.08
Net Loan-Closing	359.62	359.62
Average Loan	359.62	359.62
Rate of Interest	9.1638%	9.1638%
Interest	32.95	32.95

Annexure III

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
			(` in lakh)
	Details of Loan	2012-13	2013-14
1	Bond XXXIV		
	Gross loan opening	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	200.00	200.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	200.00	200.00
	Average Loan	200.00	200.00
	Rate of Interest	8.84%	8.84%
	Interest	17.68	17.68
	Rep Schedule	12 annual installments from 21.10.2014	
2	Bond XXXVI		
	Gross loan opening	270.00	270.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	270.00	270.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	270.00	270.00
	Average Loan	270.00	270.00
	Rate of Interest	9.35%	9.35%
	Interest	25.25	25.25
	Rep Schedule	15 annual installments from 29.08.2016	
3	Bond XXXVIII		
	Gross loan opening	257.22	257.22
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	257.22	257.22
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	257.22	257.22
	Average Loan	257.22	257.22
	Rate of Interest	9.25%	9.25%
	Interest	23.79	23.79
	Rep Schedule	Bullet payment as on 09.03.2027	
	Total Loan		
	Gross loan opening	727.22	727.22
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	727.22	727.22

Additions during the year	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	727.22	727.22
Average Loan	727.22	727.22
Rate of Interest	9.1744%	9.1744%
Interest	66.72	66.72

