

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 97/TT/2011

Coram:

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

Date of Hearing: 04.7.2013

Date of Order : 27.1.2014

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 of tariff for Assets of **(i)** 400 kV Parli Switching Station (New) with Bus Reactor and Bhadrawati- Parli 400 kV D/C Line Parli (POWERGRID) - Parli (MSETCL) first circuit (Anticipated DOCO: 01.04.2011), **(ii)** Combined Assets of 400 kV Parli Switching Station (New) with Bus Reactor and 400 kV D/C Bhadrawati - Parli Line, 400 kV Parli (POWERGRID)- Parli (MSETCL) 1st circuit (Anticipated DOCO 01.04.2011) & 400 kV Parli (PowerGrid)- Parli (MSETCL) 2nd Circuit (Anticipated DOCO: 01.05.2011), **(iii)** Combined Assets of (ii) & 400 kV D/C Wardha – Parli line along with associated bays (Anticipated DOCO: 01.07.2011) under WRSS-II, Set A Scheme of Western Region for tariff block 2009-14 period.

And in the matter of:

Power Grid Corporation of India Limited
Soudamini, Plot No 2, Sector 29
Gurgaon – 122 001

.....**Petitioner**

Vs

1. Madhya Pradesh Power Trading Co Ltd
Shakti Bhawan, Rampur,
Jabalpur – 482008
2. Maharashtra State Electricity Distribution Co Ltd
Prakashgad, 4th Floor,
Andheri (East), Mumbai – 400052
3. Gujarat Urja Vikas Nigam Ltd
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodra – 390007



4. Electricity Department, Government of Goa
Vidyut Bhawan,,
NER Mandvi Hotel, Panaji – 403001
5. Electricity Department,
Administration of Daman & Diu
Daman – 396210
6. Electricity Department,
Administration of Dadra Nagar Haveli
UT Silvassa – 396230
7. Chhattisgarh State Electricity Board
PO Sundernagar, Dangania,
Raipur – 492013
8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.
3/54, Press Complex, Agra-Bombay Road
Indore – 452008

.....Respondents

For Petitioner : Sh. S. S. Raju, PGCIL
Sh. P. Sharma, PGCIL

For Respondents : None

ORDER

The petition has been filed by Power Grid Corporation of India Limited for approval of transmission charges for the following assets in Western Region, constructed under the Western Region System Strengthening Scheme – II (the Scheme), Set – A, from the anticipated date of commercial operation of the respective asset to 31.3.2014 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (the 2009 Tariff Regulations):-

- (i) 400 kV Parli Switching Station (New) with Bus Reactor and
Bhadrawati- Parli 400 kV D/C transmission line Parli



(POWERGRID)- Parli (MSETCL) (First Circuit) (Anticipated DOCO: 1.4.2011) **(Asset – I)**,

(ii) 400 kV Parli (POWERGRID)- Parli (MSETCL) D/C transmission line (Second Circuit) (Anticipated DOCO 1.5.2011) **(Asset – II)**,

(iii) 400 kV Wardha –Parli D/C transmission line along with associated bays (Anticipated DOCO: 1.7.2011) **(Asset – III)**.

2. The Investment Approval (IA) for the Scheme was accorded by Ministry of Power under its letter dated 24.7.2006 at an estimated cost of ₹522123 lakh including IDC of ₹38042 lakh, based on 4th Quarter, 2005 price level, consisting of (i) ₹358140 lakh (including IDC of ₹25062 lakh) for the petitioner's portion and (ii) ₹163983 lakh (including IDC of ₹12980 lakh) for IPTC portion. The Scheme comprises four sets, named as Set A, Set B, Set C and Set D. While Sets A and D are to be implemented exclusively by the petitioner, sub-station portions of Sets B and C are to be implemented by the petitioner and transmission lines portions by IPTC. The assets forming part of Set A, meant for import of power in eastern and central parts of Western Region, are listed below:-

Transmission Lines

1. 765 kV Seoni (PGCIL) – Wardha (PGCIL) 2nd S/C transmission line (initially to be operated at 400 kV) (268 km),
2. 400 kV Wardha (PGCIL)–Parli (PGCIL) D/C (Quad) transmission line (363 km),
3. 400 kV Raipur (PGCIL) – Wardha (PGCIL) D/C transmission line (363 km),
4. 400 kV Bhadravati (PGCIL) – Parli (PGCIL) D/C transmission line (380 Km), and

5. 400 kV Parli (MSEB) – Parli (PGCIL) D/C transmission line (7 km).

Sub-stations

1. 400 /220 kV Seoni Sub-station (PGCIL) Extension,
2. 400 kV Parli (New) Switching Station (PGCIL),
3. 400/220 kV Parli Sub-station (MSEB) (Extension),
4. 400 kV Bhadravati Sub-station (PGCIL) Extension,
5. 400/220 kV Wardha Sub-station (PGCIL) Extension along with 25% Fixed Series Compensation, and
6. 400/220 kV Raipur Sub-station (PGCIL) Extension.

3. In accordance with the IA dated 24.7.2006, the Scheme was scheduled to be commissioned within 48 months from that date, that is, by 23.7.2010. Though the tariff was claimed based on the anticipated dates of commercial operation, the petitioner filed an affidavit dated 21.10.2011 stating that Assets I and II were put under commercial operation on 1.6.2011 and Asset III on 1.8.2011. The details in regard to the anticipated and actual dates of commercial operation are given hereunder:-

S. No.	Description of Assets	Anticipated DOCO	Actual DOCO
1.	Asset I	1.4.2011	1.6.2011
2.	Asset II	1.5.2011	
3.	Asset III	1.7.2011	1.8.2011

4. The transmission charges claimed by the petitioner based on the anticipated date of commercial operation of the assets are given overleaf:-

(₹ in lakh)

Particulars	2011-12			2012-13	2013-14
	Asset I	Asset I & II (Pro-rata)	Asset I, II & III (Pro-rata)		
Depreciation	1905.03	1790.56	3458.63	4846.61	4864.36
Interest on Loan	486.26	455.72	873.93	1171.81	1106.10
Return on Equity	1930.03	1814.28	3464.86	4956.01	5068.64
Interest on Working Capital	131.71	128.71	227.88	320.84	326.70
O & M Expenses	677.42	729.71	1038.34	1463.57	1546.93
Total	5130.45	4918.98	9063.64	12758.84	12912.73

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.

Capital cost

7. Regulation 7 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.
- (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.”

Initial spares

8. Regulation 8 of the 2009 Tariff Regulations provide for ceiling norms for capitalization of initial spares in respect of the 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.

9. The actual cost on the date of commercial operation claimed by the petitioner is inclusive of the cost of initial spares which is within the ceiling limits specified under the 2009 Tariff Regulations and hence the claim is in order.

Time Over-run

10. As per the IA dated 24.7.2006, the assets were scheduled to be commissioned within 48 months from the date of approval, that is, by July, 2010. As

already noticed, Assets I and II have been commissioned on 1.6. 2011 and Asset III has been commissioned on 1.8.2011. Thus, there is delay in commissioning of Assets I and II by 10 months and the delay is 12 months in case of Asset III. The petitioner has submitted the reasons for delay as stated hereunder.

400 kV Parli Switching Station

11. The petitioner has stated that it initiated action for acquisition of land for Parli switching sub-station on 19.7.2006 but possession was handed over on 26.3.2008. Thereafter, there was Kam Roko agitation by the Project Affected Persons. The petitioner has placed on record the evidence in the form of cutting of Marathi newspaper.

12. It is seen that the local administration took more than 20 months in acquisition of land and handing over possession to the petitioner. The delay in handing over the possession of land which was not within the control of the petitioner, was responsible for the delayed completion of the asset. From the record we find that there was Kam Roko agitation by the project affected persons during August to October 2010 for nearly three months. The agitation caused obstruction in the work. In view of the foregoing, the delay of ten months cannot be attributed to the petitioner and is condoned.

400 kV Bhadrawati – Parli D/C transmission line

13. The petitioner has submitted that the Stage-II Forest Clearance for 0.80 km stretch of Bhadrawati-Parli transmission line, passing through the forest area was granted by Ministry of Environment and Forests on 20.7.2010. The petitioner has submitted that the “Tree cutting & Site clearance”, “Foundation casting” and

“Erection of tower” took 12-14 weeks, as no road is located in the hilly forest area. The petitioner has further submitted that delay was on account of heavy rains.

14. It is observed that one tower was to be constructed on 0.80 km stretch falling in the forest area for which environment clearance was given on 20.7.2010. For want of environment clearance, the work on construction of tower could not be started by the petitioner. It is reasonable to allow 12-14 weeks time 'tree cutting and site clearance', foundation casting and erection of tower after the forest clearance was granted by Ministry of Environment and Forests. It also bears notice that because of heavy rains in the area in the month of October 2010, for which evidence in the form of newspaper cuttings has been produced; the work of construction of towers could not be taken up by the petitioner in right earnest. Keeping these factors in view, delay of 4 months against the total delay of 10 months in commissioning of Asset II is condoned.

Bay Extension in 400 kV Girwali (Parli) Sub-station of MSETCL (Asset III)

15. There is a delay of 12 months in commissioning of Asset III. The petitioner has submitted that there was delay in finalization of levels at which the sub-station was to be constructed and providing work clearance by Maharashtra State Electricity Transmission Company Ltd (MSETCL). According to the petitioner, both these factors contributed delay in completion of the work approximately by one year and a half. It has been stated that MSETCL was not agreeing for levels of the bays and finally the matter was ruled out on 1.4.2010.

16. The petitioner has explained that there existed dispute with MSETCL regarding the level of bay being constructed by the petitioner. The petitioner was

constructing bay at higher level than the level of existing bay of MSETCL. MSETCL felt that the bay being constructed by the petitioner should be at the same level as of the existing bay at Girwali. The record shows that it took nearly 23 months (May 2008 to March 2010) to resolve the issue and during this period the petitioner continued negotiation with the authorities of MSETCL. Once the issue was resolved, the petitioner entrusted the construction work to the contractor. It is also observed that there was some delay in getting drawings of MSETCL switchyard. Keeping in view the reasons given by the petitioner, delay of 12 months is condoned.

17. We have condoned delay of four months out of total delay of ten months in case of 400 kV Bhadrawati - Parli D/C transmission line and condone the entire delay for the remaining assets covered in the petition. Therefore, IDC and IEDC for the period of delay is to be disallowed and adjusted in the capital cost. Details of IDC and IEDC disallowed are as under:-

Details of IDC and IEDC of Bhadrawati - Parli 400 kV D/C transmission line as per Management Certificate dated 25.7.2013		
	(₹ in lakh)	
	IEDC	IDC
Upto 31.3.2011	856.89	824.81
1.4.2011 to DOCO (1.6.2011)	68.33	63.04
Total IDC and IEDC Claimed	925.22	887.85
Details of IDC and IEDC Disallowed		
December 2010 to March 2011 (4 months)*	61.21	58.92
April 2011 to May 2011 (2 months)	68.33	63.04
Total Disallowed IDC and IEDC (for Six months)	129.54	121.96

*IDC and IEDC for four months has been worked out pro-rata basis from the total IDC & IEDC upto 31.3.2011

Projected additional capital expenditure

18. 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.”

19. 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”.

20. After taking into account the dates of commercial operation of the assets, cut-off date arrived at is 31.3.2014.

21. The details of the approved capital cost, capital cost as on the dates of commercial operation and projected additional capital expenditure for the Scheme given by the petitioner are as follows:-

(₹ in lakh)

Particulars	Apportioned approved cost	Actual cost incurred as on date of commercial operation	Projected Expenditure				Total estimated completion cost
			2011-12		2012-13	2013-14	
			June-July	August-March			
Asset I & II	47031.20	35475.81	159.75	1702.35	438.13	3890.53	41666.57
Asset III	67052.06		46054.46	5376.95	-	-	51434.41
Total Assets I, II & III	114083.26		81690.02	7079.30	438.13	3890.53	93100.98

22. The additional capital expenditure claimed by the petitioner is stated to be on account of balance payments, freight and insurance charges, is within the cut-off date and has been allowed.

Gross Block

23. Based on the above, the gross block of ₹81438.53 lakh as on 1.8.2011 and of ₹92846.48 lakh as on 31.3.2014 has been considered for the purpose computation of the transmission charges:-

(₹ in lakh)			
Asset	Combined Assets I & II	Asset III	Combined Assets I, II & III
Capital cost as on 1.6.2011/DOCO	35475.81		
Less: IDC & IEDC disallowed	251.50		
Capital cost considered as on 1.6.2011	35224.31		
Capital expenditure for 1.6.2011 to 31.7.2011	159.75		
Capital cost as on 1.8.2011	35384.06	46054.46	81438.53
Projected additional capital expenditure for 1.8.2011 to 31.3.2012	1702.35	5376.95	7079.30
Projected additional capital expenditure 2012-13	438.13	-	438.13
Projected additional capital expenditure 2013-14	3890.53	-	3890.53
Capital cost as on 31.3.2014	41415.07	51431.41	92846.48

Debt- equity ratio

24. 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.”

25. The details of opening debt-equity considered for the purpose of tariff calculation is as follows:-

		(₹ in lakh)		
Approved		Cost as on DOCO		
Combined Asset-1 and 2				
Particulars	Amount	%	Amount	%
Debt	32921.84	70.00	24657.02	70.00
Equity	14109.36	30.00	10567.30	30.00
Total	47031.20	100.00	35224.32	100.00
Combined Asset-1, 2 and 3				
Particulars	Amount	%	Amount	%
Debt	79858.28	70.00	57007.15	70.00
Equity	34224.98	30.00	24431.38	30.00
Total	114083.26	100.00	81438.53	100.00

26. The details of debt-equity as on 31.3.2014 is as follows:-

(₹ in lakh)		
Combined Asset-1, 2 and 3		
As on 31.3.2014		
Particulars	Amount	%
Debt	64992.72	70.00
Equity	27853.76	30.00
Total	92846.48	100.00

27. Details of projected additional capital expenditure are as follows:-

(₹ in lakh)

Combined Asset-1&2		
Add cap for 2011-12		
Particulars	Amount	%
Debt	1303.47	70.00
Equity	558.63	30.00
Total	1862.10	100.00
Add cap for 2012-13		
Particulars	Amount	%
Debt	4955.51	70.00
Equity	2123.79	30.00
Total	7079.30	100.00
Combined Asset-1, 2 & 3		
Add cap for 2011-12		
Particulars	Amount	%
Debt	306.69	70.00
Equity	131.44	30.00
Total	438.13	100.00
Add cap for 2012-13		
Particulars	Amount	%
Debt	2723.37	70.00
Equity	1167.16	30.00
Total	3890.53	100.00

Return on equity

28. 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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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".

29. The petitioner has claimed RoE at the base rate of 15.5% in accordance with clause (2) of Regulation 15 which has been allowed. RoE allowed is given below:-

(₹ in lakh)

Return on Equity	Assets I & II	Assets I, II & III		
	2011-12	2011-12 (Pro-rata)	2012-13	2013-14
Opening Equity	10567.30	24431.38	26555.17	26686.61
Addition due to Additional Capitalisation	558.63	2123.79	131.44	1167.16
Closing Equity	11125.93	26555.17	26686.61	27853.76
Average Equity	10846.61	25493.27	26620.89	27270.18
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)	1580.08	2970.99	4653.60	4767.10

30. The petitioner's request to allow grossing up the base rate of return with the applicable tax rate as per the relevant Finance Act for the relevant year and direct settlement of tax liability between the transmission licensee and the beneficiaries on

year to year basis, shall be settled in accordance with the provisions of Regulation 15 of the 2009 Tariff Regulations.

Interest on loan

31. 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.”

32. 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.

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

34. Based on the above, interest on loan has been calculated are given overleaf:-

(₹ in lakh)

Particulars	Assets I and II	Assets I, II and III		
	2011-12	2011-12 (Pro-rata)	2012-13	2013-14
Gross Normative Loan	24657.02	57007.15	61962.66	62269.35
Cumulative Repayment upto previous year	0.00	312.50	3277.82	7916.68
Net Loan-Opening	24657.02	56694.65	58684.85	54352.67
Addition due to additional capital expenditure	1303.47	4955.51	306.69	2723.37
Repayment during the year	1562.51	2965.32	4638.87	4654.38
Net Loan-Closing	24397.99	58684.85	54352.67	52421.66
Average Loan	24527.50	57689.75	56518.76	53387.17
Weighted Average Rate of Interest on Loan	1.73%	1.73%	1.73%	1.73%
Interest	353.60	665.36	977.77	923.60

Depreciation

35. 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.”

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

37. The assets were put under commercial operation during 2011. 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 Tariff Regulations, as per details given hereunder:-

(₹ in lakh)

Particulars	Assets I & II	Assets I, II & III		
	2011-12	2011-12 (Pro-rata)	2012-13	2013-14
Opening Gross Block	35224.32	81438.53	88517.83	88955.96
Addition due to Projected Additional Capitalisation	1862.10	7079.30	438.13	3890.53
Closing Gross Block	37086.42	88517.83	88955.96	92846.49
Average Gross Block	36155.37	84978.18	88736.89	90901.22
Rate of Depreciation	5.1860%	5.2343%	5.2277%	5.1203%
Depreciable Value	32474.39	76414.92	79797.77	80101.34
Remaining Depreciable Value	32474.39	76102.42	76519.95	72184.65
Depreciation	1562.51	2965.32	4638.87	4654.38
Cumulative Depreciation	1562.51	3277.82	7916.68	12571.06

38. Depreciation of combined Asset-1&2 i.e. ₹312.50 lakh for the period from June 2011 to July 2011 has been considered as cumulative depreciation for the Combined Asset-1, 2 and 3.

Operation & Maintenance Expenses

39. 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 given hereunder:-

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C twin conductor transmission line (₹ lakh/ km)	0.627	0.663	0.701	0.741	0.783
400 kV D/C twin Quad conductor transmission line (₹ lakh/ km)	0.940	0.994	1.051	1.111	1.174
400 kV bays (₹ lakh/ bay)	52.40	55.40	58.57	61.92	65.46

40. The assets included in the petition comprise the following elements:-

Ser No.	Name of the Asset	Length (km)	No. of Bays
Transmission Lines:			
1	400 kV D/C (twin) Parli (PG) - Bhadrawati (PG) 1&2	378.667	-
2	400 kV D/C (twin) Parli (MSETCL)- Parli(PG) 1&2	4.958	-
3	400 kV D/C (win) Parli (MSETCL) - Parli (PG) 1 & 2	4.958	-
4	400 kV D/C (twin) Parli (PG)- Bhadrawati (PG)- 1&2	378.667	-
5	400 kV D/C Quad conductor Parli(PG)- Wardha (PG)- 1&2	336.94	-
Sub-stations:			
400 kV Parli Sub-station:			
1	400 kV Bhadrawati-I bay	-	1
2	400 kV Bhadrawati-II bay	-	1
400 kV Parli (MSETCL) Sub-station:			
1	400 kV (PGCIL)-I,bay	-	1
2	400 kV (PGCIL)-II, bay	-	1
400 kV Parli Sub-station:			
1	400 kV Parli(MSETCL)-I bay	-	1
2	400 kV Parli(MSETCL)-II bay	-	1
3	400 kV Bus Reactor Bay	-	1
400 kV Bhadrawati Sub-station:			
1	400 kV Parli-I bay	-	1
2	400 kV Parli-II bay	-	1
400 kV Parli Sub-station:			
1	400 kV Bhadrawati-I bay	-	1
2	400 kV Bhadrawati-II bay	-	1
400 kV Bhadrawati Sub-station:			
1	400 kV Parli-I,bay	-	1
2	400 kV Parli-II, bay	-	1
400 kV Wardha Sub-station:			
1	400 kV Parli-I bay	-	1
2	400 kV Parli-II, bay	-	1
400 kV Parli Sub-station:			
1	400 kV Wardha-I, bay	-	1
2	400 kV Wardha-II, bay	-	1
400 kV Parli (MSETCL)Sub-station:			
1	400 kV Parli (PGCIL)-1 bay	-	1
2	400 kV Parli (PGCIL)-1I bay	-	1

400 kV Parli Sub-station:			
1	400 kV Parli(MSETCL)-I bay	-	1
2	400 kV Parli(MSETCL)-II bay	-	1
3	400 kV Bus Reactor Bay	-	1

41. The allowable O&M expenses are as per details given hereunder:-

Element	(₹ in lakh)			
	Assets I & II	Assets I, II, & III		
	2011-12 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
383.625 km (378.667+4.958) D/C (twin) transmission line	44.82	-	-	-
9 Nos. 400 kV bays	87.86	-	-	-
720.565 km (4.958+378.667+336.94) D/C (twin) transmission line	-	336.74	533.94	564.20
13 Nos. of 400 kV bays	-	507.61	804.96	850.98
Total O&M	132.68	844.35	1338.90	1415.18

42. 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 reserved the right to 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%.

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 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 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 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 on 1st April of the year of commercial operation plus 350 bps. The assets were put under commercial operation during 2011-12. State Bank of India Base Rate on 1.4.2011 was 8.50%. Accordingly, interest @ 11.75% has been considered. The interest on working capital for the assets covered in the petition has been worked out accordingly.

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

(₹ in lakh)

Particulars	Assets I & II		Assets I, II & III	
	2012-13	2011-12 (Pro-rata)	2012-13	2013-14
Maintenance Spares	119.41	189.98	200.84	212.28
O & M Expenses	66.34	105.54	111.58	117.93
Receivables	852.24	1904.59	1979.74	2005.79
Total	1,037.99	2200.11	2292.15	2336.00
Rate of Interest	11.75%	11.75%	11.75%	11.75%
Interest	101.64	172.34	269.33	274.48

Transmission charges

46. The transmission charges being allowed for the transmission assets are summarized under:-

(₹ in lakh)

Particulars	Assets I & II		2011-12 (Pro-rata)	Asset - II	
	2011-12	2011-12 (Pro-rata)		2012-13	2013-14
Depreciation	1562.51	312.50	2965.32	4638.87	4654.38
Interest on Loan	353.60	70.72	665.36	977.77	923.60
Return on Equity	1580.08	316.02	2970.99	4653.60	4767.10
Interest on Working Capital	101.64	20.33	172.34	269.33	274.48
O & M Expenses	663.38	132.68	844.35	1338.90	1415.18
Total	4261.21	852.24	7618.35	11878.47	12034.74

47. The pro-rata transmission charges approved for the year 2011-12 in respect of Assets I & II are chargeable for the period 1.6.2011 to 31.7.2011 and in respect of Assets I, II & III are chargeable for 8 months, from 1.8.2012 to 31.3.2013.

48. The transmission charges allowed are subject to truing up in accordance with the Tariff Regulations.

Filing Fee, Licence Fee and Publication Expenses

49. The petitioner has sought reimbursement of fee paid by it for filing the petition, licence fee and also the publication expenses. The petitioner shall be entitled for reimbursement of fee and licence fee directly from the beneficiaries in accordance with Regulation 42A of the Tariff Regulations. Similarly, the petitioner shall also be entitled to recover the publication expenses incurred in connection with the present petition. The reimbursement of filing fee, licence fee and the publication expenses shall be on *pro rata* basis in the same ratio as the transmission charges.

Service tax

50. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of Transmission Charges

51. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of the 2009 Tariff Regulations for month of June 2011 and thereafter in accordance with the Central Electricity Regulatory

Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

52. This order disposes of Petition Nos. 97/TT/2011.

sd/-
(M. Deena Dayalan)
Member

sd/-
(V.S. Verma)
Member

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

(₹ in lakh)

Details of Loan	Assets I & II	Assets I, II & III		
	2011-12	2011-12	2012-13	2013-14
IBRD- IV ADDL @ 45.48				
Gross loan opening	24832.99	24832.99	24832.99	24832.99
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	419.68
Net Loan-Opening	24832.99	24832.99	24832.99	24413.31
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	419.68	846.80
Net Loan-Closing	24832.99	24832.99	24413.31	23566.51
Average Loan	24832.99	24832.99	24623.15	23989.91
Rate of Interest	1.73%	1.73%	1.73%	1.73%
Interest	429.61	429.61	425.98	415.03
Rep Schedule	52 half yearly installment from 01.02.2013			
IBRD- IV ADDL @ 44.54				
Gross loan opening	-	32863.39	32863.39	32863.39
Cumulative Repayment upto DOCO/previous year	-	0.00	0.00	555.39
Net Loan-Opening	-	32863.39	32863.39	32308.00
Additions during the year	-	0.00	0.00	0.00
Repayment during the year	-	0.00	555.39	1120.64
Net Loan-Closing	-	32863.39	32308.00	31187.36
Average Loan	-	32863.39	32585.69	31747.68
Rate of Interest	-	1.73%	1.73%	1.73%
Interest	-	568.54	563.73	549.23
Rep Schedule	52 half yearly installment from 01.02.2013			
Total Loan				
Gross loan opening	24832.99	57696.38	57696.38	57696.38
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	975.07
Net Loan-Opening	24832.99	57696.38	57696.38	56721.31
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	975.07	1967.45
Net Loan-Closing	24832.99	57696.38	56721.31	54753.86
Average Loan	24832.99	57696.38	57208.84	55737.59
Rate of Interest	1.73%	1.73%	1.73%	1.73%
Interest	429.61	998.15	989.71	964.26