

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 152/TT/2011

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

**Date of Hearing: 20.6.2013
Date of Order : 17.9.2013**

In the matter of:

Approval of transmission tariff for (i) Combined assets of 400/220 kV Pune S/S with Bus Reactor and bays for LILO of Kalwa- Lonikhand D/C at Pune, Solapur S/S with Bus Reactor and Bays for LILO of Solapur- Karad and Solapur Kolhapur along with Reactors & 400 kV Bays for Solapur-Parli D/C (WRMML) line at Solapur S/S and Parli S/S, (ii) Combined Assets of (i) & 400 kV bays of Solapur- Kolhapur D/C (WRMML) line at Kolhapur (MSETCL) S/S, 400 kV bays for Pune- Parli D/C (WRMML) line at Pune S/S and Parli S/S, 400 kV bays for Pune- Aurangabad D/C (WRMML) line at Pune S/S and Aurangabad S/S under WRSS- II, Set B Scheme of Western Region for tariff block 2009-14 period

And

In the matter of:

Power Grid Corporation of India Ltd., Gurgaon

...Petitioner

Vs

1. Madhya Pradesh Power Trading Co. Ltd., Jabalpur
2. Maharashtra State Electricity Distribution Co. Ltd., Mumbai
3. Gujarat Urja Vikas Nigam Ltd., Vadodara
4. Electricity Department, Government of Goa, Panaji
5. Electricity Department, Administration of Daman & Diu, Daman
6. Electricity Department, Administration of Dadra Nagar Haveli, Silvassa
7. Chhattisgarh State Electricity Board, Raipur
8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd., Indore

...Respondents

The following were present:-

1. Shri S.S. Raju, PGCIL
2. Shri M.M. Mondal, PGCIL



ORDER

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) for determination of transmission tariff for (i) Combined Assets of 400/220 kV Pune S/S with Bus Reactor and bays for LILO of Kalwa- Lonikhand D/C at Pune, Solapur S/S with Bus Reactor and Bays for LILO of Solapur- Karad and Solapur Kolhapur along with Reactors & 400 kV Bays for Solapur-Parli D/C (WRTML) line at Solapur S/S and Parli S/S, and (ii) Combined Assets of (i) & 400 kV bays of Solapur- Kolhapur D/C (WRTML) line at Kolhapur (MSETCL) S/S, 400 kV bays for Pune- Parli D/C (WRTML) line at Pune S/S and Parli S/S, 400 kV bays for Pune- Aurangabad D/C (WRTML) line at Pune S/S and Aurangabad S/S under WRSS- II, Set B Scheme of Western Region (hereinafter referred to as "the transmission system") under 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 transmission system was accorded by the Government of India, Ministry of Power, vide its letter No. 12/7/2004-PG, 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 to be implemented by PGCIL and (ii) `163983 lakh including IDC of `12980 lakh for Independent Private Transmission Company's portion.



3. The petitioner is implementing 11 assets in Western Region System Strengthening – II (WRSS-II), Set B Scheme of Western Region and the petitioner has filed three different petitions claiming transmission tariff for these assets. The details of the petitions filed, assets covered and their date of commercial operation are given hereunder:-

Srl. No.	Name of the Assets	Anticipated date of commercial operation	Actual date of commercial operation	Petition No.
1.	400/220 kV Solapur S/S with 63 MVAR Bus Reactor along with Bays of LILO of Solapur-Karad & Solapur- Kolhapur along with 2x50 MVAR Reactors in Kolhapur bays as switchable Reactor	1.2.2011	1.2.2011	24/TT2011
2.	ICT I at Solapur S/S along with Bays	1.2.2011	1.2.2011	
3.	ICT II at Solapur S/S along with Bays	1.3.2011	1.4.2011	
4.	400/220 kV Pune S/S with bays for LILO Ckt-I of Kalwa-Lonikhand D/C at Pune	1.4.2011	1.5.2011	81/TT2011
5.	Bus Reactor along with LILO Ckt-II of Kalwa-Lonikhand D/C at Pune	1.4.2011	1.9.2011	
6.	ICT I at Pune S/S along with associated bays	1.4.2011	1.5.2011	
7.	ICT II at Pune S/S along with associated bays	1.4.2011	1.9.2011	
8.	400 KV Bays for Solapur- Parli D/C line at Solapur S/S and Parli S/S	1.8.2011	1.9.2011	152/TT/2011
9.	400 kV Bays for Solapur-Kolhapur D/C line at Kolhapur S/S	1.9.2011	1.9.2011	
10.	400 kV Bays for Pune-Parli D/C (WRTML) line at Pune S/S and Parli S/S	1.9.2011	1.9.2011	
11.	400 kV Bays for Pune-Aurangabad D/C line at Pune S/S and Aurangabad S/S	1.9.2011	1.9.2011	

4. The petitioner, vide affidavit dated 16.7.2012 in the present petition, has submitted revised management certificates and revised tariff forms pertaining to the assets of Petition Nos. 24/TT/2011, 81/TT/2011 and 152/TT/2011. Petition Nos. 24/TT/2011 and 81/TT/2011 are related to the present petition and the tariff calculations/ revision in the earlier petitions would impact the present petition. In view of this, tariff has been calculated on the basis of the information submitted by the petitioner vide affidavits dated 16.7.2012, and 19.6.2013. The Commission has already determined tariff in Petition No. 81/TT/2011 vide order dated 23.5.2013. The petitioner's request submitted vide subsequent affidavit dated 19.6.2013 shall be taken up at the time of truing-up in Petition No. 81/TT/2011. The details of the assets covered under Petition Nos. 24/TT/2011 and 81/TT/2011 are given hereunder:-

Assets	Name of the assets	DOCO	Remarks
I	400/220 kV Solapur S/S with 63 MVAR Bus Reactor along with Bays of LILO of Solapur-Karad, 2x50 MVAR Reactors in Solapur bays as switchable Reactors	1.2.2011	Covered in Petition No. 24/TT/2011
II	400/220 kV ICT I at Solapur S/S along with Bays	1.2.2011	
III	Combined Assets of 400/220 kV ICT I and ICT II at Solapur along with associated bays	1.4.2011	
IV	400/220 kV Pune S/S (New) with LILO Ckt-I of Lonikhand- Kalwa D/C at Pune	1.5.2011	New Assets covered in Petition No. 81/TT/2011
V	ICT I at 400/220 kV Pune S/S (New) along with associated bays	1.5.2011	
VI	ICT II at 400/220 kV Pune S/S (New) along with associated bays	1.9.2011	

5. The revised cost submitted by the petitioner vide affidavit dated 16.7.2012 pertaining to the above three assets covered under Petition No. 24/TT/2011 are given hereunder:-

(` in lakh)

Assets (DOCO)	Capital cost claimed as on DOCO/ Notional DOCO	Projected additional capital expenditure							Total Estimated Completion Cost considered	
		2010-11	2011-12					2012-13		2013-14
		1.2.11 to 31.3.11	1.4.11 to 30.4.11	1.5.11 to 31.8.11	1.9.11 to 31.1.12	1.2.12 to 31.3.12				
I (1.2.2011)	4807.89*	185.85	20.07	133.86	365.83	110.10	809.19	0.00	6432.79	
II (1.2.2011)	2198.04	25.91	0.00	24.50	38.15	88.17	102.60	0.00	2477.37	
III (Combined Assets II & III) (1.4.2011)	3948.34		0.00	36.48	96.82	125.46	102.60	0.00	4309.70	

*Capital cost as on date of commercial operation was inclusive of initial spares amounting to ` 213.72 lakh for Asset-I corresponding to Sub-station.

6. The Commission vide order dated 2.4.2013 in Petition No. 24/TT/2011 has approved the following capital cost as on date of commercial operation for the assets covered therein:-

(` in lakh)

Assets	Particulars	DOCO/ Notional DOCO	Capital cost considered in Petition No. 24/2011	Applicable tariff period
Asset-I	400/220 kV Solapur S/S with 63 MVAR Bus Reactor along with Bays of LILO of Solapur- Karad & Solapur Kolhapur along with 2x50 MVAR	1.2.2011	4753.63	1.2.2011 to 31.3.2014
Asset-II	400/220 kV ICT I at Solapur S/S along with Bays	1.2.2011	2198.04	1.2.2011 to 31.3.2011
Asset-III (Combined Assets of II & III)	Combined Assets of 400/220 kV ICT I and ICT II at Solapur along with associated bays (hereinafter referred to as "Asset-III")	1.4.2011	3948.34	1.4.2011 to 31.3.2014

7. The petitioner, vide affidavit dated 16.7.2012, in Petition No. 81/TT/2011 has claimed actual expenditure incurred up to date of commercial operation and projected additional capital expenditure during 2009-14 as per details given hereunder:-

(` in lakh)

Asset (DOCO)	Capital cost claimed as on DOCO	Projected Additional Capitalization					Total estimated completion cost
		2011-12			2012-13	2013-14	
		1.5.11 to 31.8.11	1.9.11 to 31.1.12	1.2.12 to 31.3.12			
IV (1.5.2011)	3923.68*	95.36	270.01	125.77	2289.13	178.21	6882.16
V (1.5.2011)	2238.41#	1.79	133.78	0.00	32.75	0.00	2406.73
VI (1.9.2011)		1943.89#	116.09	0.00	37.68	0.00	2097.66

*Capital cost as on DOCO was inclusive of Initial Spares amounting to ` 187.61 lakh for Asset-IV corresponding to Sub-Station.

Capital cost as on DOCO was inclusive of Initial Spares amounting to ` 48.73 lakh (` 47.01 lakh for Asset-V and ` 1.72 lakh for Asset-VI) corresponding to Sub-Station.

8. The capital cost as on the date of commercial operation, for the assets covered under Petition No. 81/TT/2011, as approved by the Commission in order dated 23.5.2013, is as under:-

(` in lakh)

Combination of the above mentioned Assets	Notional DOCO	Capital cost considered in Petition No. 81/2011 as on DOCO / Notional DOCO	Applicable tariff period
I & IV	1.5.2011	8867.28	1.5.2011 to 31.3.2014
III & V	1.5.2011	6186.75	1.5.2011 to 31.8.2011
III, V & VI	1.9.2011	8168.91	1.9.2011 to 31.3.2014

9. The petitioner, in the instant petition, has filed tariff petition for the following assets (with combination) with their respective dates of commercial operation:-

Assets	Name of the asset	DOCO	Remarks
I	400/220 kV Solapur S/S with 63 MVAR Bus Reactor along with Bays of LILO of Solapur –Karad, 2x 50 MVAR Reactors in Kolhapur Bays as Switchable Reactors	1.2.2011	Covered in Petition No. 24/2011
IV	400/220 kV Pune S/S (New) with LILO Ckt-I of Lonikhand- Kalwa D/C at Pune	1.5.2011	Covered in the Petition No.81/2011
VII	400/220kV Pune S/S (New) with LILO Ckt-II of Lonikhand-Kalwa D/C	1.9.2011	New assets covered in the instant petition.
VIII	400kV Bays for Solapur-Parli D/C line at Solapur S/S and Parli S/S		
IX	400kV Bays for Solapur-Kolhapur D/C line at Kolhapur		
X	400kV Bays for Pune-Parli D/C line at Pune S/S and Parli S/S		
XI	400kV Bays for Pune-Aurangabad D/C line at Pune S/S and Aurangabad S/S		

10. The petitioner, vide affidavit dated 16.7.2012, has submitted that Asset-VII, i.e. "400/220 kV Pune S/S (New) with LILO Ckt-II of Lonikhand- Kalwa D/C at Pune" (DOCO: 1.9.2011) which was originally claimed in Petition No. 81/TT/2011, has now been deleted from Petition No. 81/TT/2011, and is now being claimed in the instant petition. Accordingly, the petitioner has requested to combine Asset-I, IV, VII, VIII, IX, X & XI and claimed tariff in the following way:-

Particular	Combination of the above mentioned Assets	Notional DOCO	Applicable tariff period
Combined Assets	I,IV,VII,VIII,IX,X &XI	1.9.2011	1.9.2011 to 31.3.2014

In respect of Combined Asset- I & IV, transmission tariff in Petition No. 81/TT/2011 would now be applicable from 1.5.2011 to 31.8.2011.

11. The petitioner, vide affidavit dated 16.7.2012, in Petition No. 152/TT/2011, has claimed actual expenditure incurred up to date of commercial operation and projected additional capital expenditure during 2009-14 as per details given hereunder:-

(` in lakh)

Sl.	Asset (DOCO)	Capital cost claimed as on DOCO	Projected additional capital expenditure				Total estimated completion cost
			2011-12		2012-13	2013-14	
			1.9.11 to 31.1.12	1.2.12 to 31.3.12			
1.	VII (1.9.2011)	1176.69*	47.24	25.00	29.05	0.00	1277.98
2.	VIII (1.9.2011)	1047.88*	56.18	16.95	57.31	0.00	1178.32
3.	IX (1.9.2011)	406.41*	4.38	65.55	113.28	0.00	589.62
4.	X (1.9.2011)	2096.92*	57.13	163.58	104.75	0.00	2422.38
5.	XI (1.9.2011)	2375.06*	56.33	196.08	251.09	0.00	2878.56

*Capital cost as on date of commercial operation was inclusive of initial spares amounting to ` 317.24 lakh (` 10.86 lakh for Asset-VII, ` 138.71 lakh for Asset-VIII, ` 74.64 lakh for Asset-IX, ` 10.68 lakh for Asset-X and ` 82.35 lakh for Asset-XI) corresponding to Sub-station.

12. The petitioner has claimed the following capital cost up to notional date of commercial operation of the Combined Assets for the purpose of tariff:-

(` in lakh)

Particular	Combination of the above mentioned Assets	Notional DOCO	Apportioned / approved cost	Capital cost claimed by the petitioner as on DOCO/ Notional DOCO	Applicable tariff period
Combined Assets	I,IV,VII,VIII,IX, X & XI	1.9.2011	25795.57	16269.67	1.9.2011 to 31.3.2014

13. 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. None of the respondents have filed reply. Having heard the representative of the petitioner and perused the material on records, we proceed to dispose of the petition.

Capital cost:-

14. 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 funds deployed,-up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.”

15. The capital cost up to notional date of commercial operation of the Combined Assets being considered for further analysis is given hereunder:-

(` in lakh)

Particular	Assets after combination	Notional date of commercial operation	Capital cost considered for the purpose of tariff before adjustment of initial spares as on notional DOCO
Combined Assets	I,IV,VII,VIII,IX,X & XI	1.9.2011	16269.67*

*Capital cost as on Notional DOCO is inclusive of initial spares amounting to `718.57 lakh.

Time over-run

16. As per investment approval dated 24.7.2006, the project was to be completed within 48 months from the date of investment approval, i.e., by

1.8.2010. The assets have been commissioned on 1.2.2011, 1.5.2011 and 1.9.2011. Under WRSS-II, Set-B, the petitioner is implementing sub-station portion (including bay extension works), whereas associated transmission lines are being implemented by WRTML. The assets executed by the petitioner are integral part of the assets being executed on competitive bidding by WRTML. The petitioner has submitted, vide affidavit dated 14.12.2011, that the aim of the project has been to align the commissioning of sub-station and transmission line portion simultaneously. The Commission has already granted extension of RCOD for assets being executed by WRTML up to August 2011. Extension of RCOD till 31.8.2011 was thus granted to WRTML by the petitioner by amending the Implementation Agreement. In view of this, the petitioner has submitted that it made efforts to execute sub-stations/ bay extensions to match with commissioning of associated transmission lines being implemented by WRTML progressively. Assets-I, II, III and IV were put under commercial operation w.e.f. 1.9.2011. Since, the Commission has already granted extension of RCOD for assets being executed by WRTML up to August, 2011, the delay by the petitioner to match the timeline of WRTML assets is being condoned.

Treatment of initial spares

17. Capital costs, in respect of Combined Assets-I, IV, VII, VIII, IX, X & XI, as on the cut-off date, would be ₹ 21661.81 lakh. The petitioner has claimed initial spares amounting to ₹ 718.57 lakh (₹ 213.72 lakh for Asset-I, ₹ 187.61 for Asset-IV, ₹ 10.86 lakh for Asset-VII, ₹ 138.71 lakh for Asset-VIII, ₹ 74.64 lakh for Asset-IX, ₹ 10.68 lakh for Asset-X and ₹ 82.35 lakh for Asset-XI) corresponding

to sub-station, which has been found to be in excess of the ceiling norms of 2.5% as per the 2009 Tariff Regulations by ₹ 181.56 lakh. This amount has been reduced pro-rata from the cost of all the elements (except transmission line) of Combined Assets. Initial spares have been worked out by taking into consideration the land, building and civil works expenditures, as per the details given below:-

(₹ in lakh)

Particulars	Accumulated capital cost upto cut-off date claimed	Initial spares claimed	Ceiling limits as per 2009 Tariff Regulations	Initial spares worked out	Excess initial spares claimed
Sub-station	21661.81	718.57	2.50%	537.01	181.56

18. Accordingly, combined capital cost as on date of commercial operation has been considered for the purpose of tariff calculation after deducting initial spares as follows:-

(₹ in lakh)

Particulars	Combination of the above mentioned Assets	Capital cost before adjustment of initial spares as on DOCO / Notional DOCO	Excess initial spares	Capital cost after deduction of excess initial spares as on DOCO/ Notional DOCO
Combined Assets	I,IV,VII,VIII,IX,X &XI	16269.67	181.56	16088.11

Projected additional capital expenditure:-

19. Regulation 9(1) of the 2009 Tariff Regulations provides as under:-

"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.

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff."

20. As per 2009 Tariff Regulations,

"'cut-off date' means 31st March of the year closing after two years of the year of commercial operation of the project, and in case the project is put under commercial operation in the last quarter of a year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation."

Therefore, cut-off date for these assets is 31.3.2014. Additional capital expenditure claimed by the petition is as per details given hereunder:-

Particulars	DOCO/ Notiona I DOCO	(` in lakh)			
		2011-12 (Pro- rata)	2012-13	2013-14	Total
Combination asset-I,IV,VII,VIII,IX,X & XI	1.9.2011	1560.13	3653.80	178.21	5392.14

Debt- equity ratio

21. 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 modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

22. The petitioner has not submitted separate funding pattern for Assets-VII, VIII, IX, X & XI. The petitioner vide affidavit dated 16.7.2012 had submitted Debt-Equity Ratio as on notional date of commercial operation for Combined Assets (I, IV, VII, VIII, IX, X & XI) as 74.39:25.61 in Form 6 along with the petition. The petitioner, vide affidavits dated 19.6.2013 and 8.8.2013, has submitted that while revising the funding pattern of Combined Assets I,IV,VII,VIII,IX,X & XI covered in this petition, there has been inadvertent error in IBRD-IV loan of `714.90 lakh, and requested the Commission to consider this IBRD-IV loan as additional capital expenditure for 2011-12. As per the 2009 Tariff Regulations, Debt-Equity Ratio as on notional date of commercial operation as 70:30 has been considered for tariff in respect of Combined Assets (I, IV, VII, VIII, IX, X & XI), as per details given overleaf:-

(` in lakh)

Combined Assets- I, IV, VII, VIII, IX, X & XI		
Particulars	Capital cost as on DOCO/ Notional DOCO	
	Amount	%
Debt	11261.67	70.00
Equity	4826.43	30.00
Total	16088.11	100.00

23. The details of debt-equity ratio for the transmission system as on 31.3.2014 are given hereunder:-

(` in lakh)

Combined Assets-I, IV, VII, VIII, IX, X & XI		
Particulars	Capital cost as on DOCO/ Notional DOCO	
	Amount	%
Debt	15036.17	70.00
Equity	6444.07	30.00
Total	21480.25	100.00

Return on equity

24. 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".

25. The following amount of equity has been allowed for calculation of return on equity:-

(` in lakh)

Combined Assets-I,IV,VII,VIII,IX,X &XI			
Particulars	2011-12 (Pro-rata)	2012-13	2013-14
Opening equity	4826.43	5294.47	6390.61
Addition due to additional capital expenditure	468.04	1096.14	53.46
Closing equity	5294.47	6390.61	6444.07
Average equity	5060.45	5842.54	6417.34
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)	516.03	1021.33	1121.82

26. 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

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

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

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

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

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

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

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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be

borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

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

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

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

28. In these calculations, the interest on loan has been worked out as per details given hereunder:-

(i) 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 details submitted by the petitioner;

(ii) The repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period; and

(iii) 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.

29. Detailed calculations of the weighted revised average rate of interest are given in Annexure-I to this order.

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

(` in lakh)

Combined Assets-I, IV, VII, VIII, IX, X & XI			
Particular	2011-12 (Pro-rata)	2012-13	2013-14
Gross Normative Loan	11261.67	12353.77	14911.43
Cumulative Repayment upto Previous Year	187.57	639.63	1523.01
Net Loan-Opening	11074.11	11714.13	13388.42
Addition due to Additional capital expenditure	1092.09	2557.66	124.75
Repayment during the year	452.07	883.37	958.90
Net Loan-Closing	11714.13	13388.42	12554.26
Average Loan	11394.12	12551.28	12971.34
Weighted Average Rate of Interest on Loan	2.1550%	2.2300%	2.1945%
Interest	143.24	279.89	284.65

Depreciation

31. Regulation 17 (4) of the 2009 Tariff Regulations provides as under:-

"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 31th 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 asset".

32. Combined Assets I, IV, VII, VIII, IX, X & XI in the present petition were put under commercial operation notionally on 1.9.2011, and accordingly will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III to the 2009 Tariff Regulations.

33. Cumulative depreciation amounting to ₹ 187.57 lakh for Combined Assets-I & IV for the period 1.2.2010 to 31.8.2011 is as per this Commission's order dated 23.5.2013 in Petition No. 81/TT/2011. Depreciation for Combined Assets (I, IV, VII, VIII, IX, X & XI) is as per details given hereunder:-

(₹ in lakh)

Combined Assets-I,IV,VII,VIII,IX,X &XI			
Particular	2011-12 (Pro-rata)	2012-13	2013-14
Opening Gross Block	16088.11	17648.24	21302.04
Addition during 2009-14 due to projected additional Capital expenditure	1560.13	3653.80	178.21
Closing Gross Block	17648.24	21302.04	21480.25
Average Gross Block	16868.17	19475.14	21391.14
Rate of Depreciation	4.5943%	4.5359%	4.4827%
Depreciable value of combined assets	14114.61	16458.63	18174.03
Remaining Depreciable Value	13927.04	15818.99	16651.03
Depreciation	452.07	883.37	958.90

Operation & maintenance expenses

34. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses for the assets covered in the petition as under:-

(₹ in lakh)

Elements	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV Bays (₹ lakh/ bay)	52.40	55.40	58.57	61.92	65.46

35. As per the existing norms of 2009 Tariff Regulations, allowable O&M expenses for the assets covered in this petition are as follows:-

(` in lakh)

Combined Assets-I, IV, VII, VIII, IX, X & XI	2010-11	2011-12	2012-13	2013-14
	(Pro-rata for 2 months)			
5 bays (DOCO: 1.2.2011)	46.17	292.85	309.60	327.30
		(Pro-rata for 11 months)		
2 bays (DOCO: 1.5.2011)		107.38	123.84	130.92
		(Pro-rata for 7 months)		
17 bays (DOCO: 1.9.2011)		580.82	1052.64	1112.82
Total O&M allowable	46.17	819.98	1486.08	1571.04

36. The petitioner has submitted that the O&M expenses for 2009-14 tariff block was arrived on the basis of normalized actual O&M expenses of the petitioner during the years 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 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%.

37. 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

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

(i) Receivables:-

As per Regulation 18 (1) (c) (i) of the 2009 Tariff Regulations, receivables will be equivalent to two months of fixed cost. 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:

O & M expenses have been considered for one month as a component of working capital in terms of the Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations.

(iv) Rate of interest on working capital:

In the calculations, SBI Base Rate Plus 350 bps as on 1.4.2011 (i.e. 11.75%) is considered as the rate of interest on working capital for

Combined Assets-I, IV, VII, VIII, IX, X & XI, as per the 2009 Tariff Regulations.

39. Necessary computations in support of interest on working capital are given hereunder:-

(` in lakh)

Combined Assets- I, IV, VII, VIII, IX, X & XI			
Particular	2011-12 (Pro-rata)	2012-13	2013-14
Maintenance Spares	210.85	222.91	235.66
O & M expenses	117.14	123.84	130.92
Receivables	569.38	630.93	676.50
Total	897.37	977.68	1043.07
Interest	61.51	114.88	122.56

Transmission charges

40. The transmission charges being allowed for the transmission lines are given hereunder:-

(` in lakh)

Combined Assets- I, IV, VII, VIII, IX, X & XI			
Particular	2011-12 (Pro-rata)	2012-13	2013-14
Depreciation	452.07	883.37	958.90
Interest on Loan	143.24	279.89	284.65
Return on Equity	516.03	1021.33	1121.82
Interest on Working Capital	61.51	114.88	122.56
O & M Expenses	819.98	1486.08	1571.04
Total	1992.82	3785.56	4058.97

Filing fee and the publication expenses

41. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. In accordance with the Commission's order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

Licence fee

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

Service tax

43. 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 premature and accordingly this prayer is rejected.

Sharing of transmission charges

44. The petitioner has submitted that the transmission tariff shall be recovered on monthly basis in accordance with Regulation 23 of the 2009 Tariff Regulations and shared by the beneficiaries of Western Region in accordance with Regulation 33 of the 2009 Tariff Regulations.

45. We have considered the submissions of the petitioner. The transmission charges for the assets shall be borne by the beneficiaries in accordance with Regulation 33 of the 2009 regulations upto 30.6.2011. With effect from 1.7.2011, the billing, collection & disbursement of the transmission charges shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of inter-state transmission charges and losses) Regulations, 2010 as amended.

46. This order disposes of Petition No. 152/TT/2011.

Sd/-
(M. Deena Dayalan)
Member

Sd/-
(V.S. Verma)
Member



Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(` in Lakhs)

	Details of Loan	2011-12	2012-13	2013-14
1	IBRD- IV (Ex. Rate @46.38)			
	Gross loan opening	1823.20	1823.20	1823.20
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1823.20	1823.20	1823.20
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	40.35
	Net Loan-Closing	1823.20	1823.20	1782.84
	Average Loan	1823.20	1823.20	1803.02
	Rate of Interest	1.70%	1.70%	1.70%
	Interest	30.99	30.99	30.65
	Rep Schedule	30 HY installments from 15.11.2013		
2	IBRD IV ADDL (Ex. Rate @46.38)			
	Gross loan opening	1118.22	1118.22	1118.22
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	18.90
	Net Loan-Opening	1118.22	1118.22	1099.32
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	18.90	38.13
	Net Loan-Closing	1118.22	1099.32	1061.19
	Average Loan	1118.22	1108.77	1080.26
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	19.23	19.07	18.58
	Rep Schedule	30 HY installments from 01.02.2013		
3	IBRD- IV (Ex. Rate @46.51)			
	Gross loan opening	2708.74	2708.74	2708.74
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	2708.74	2708.74	2708.74
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	59.95
	Net Loan-Closing	2708.74	2708.74	2648.79
	Average Loan	2708.74	2708.74	2678.77
	Rate of Interest	1.70%	1.70%	1.70%

	Interest	46.05	46.05	45.54
	Rep Schedule	30 HY installments from 15.11.2013		
4	IBRD IV ADDL (Ex. Rate @46.51)			
	Gross loan opening	2263.18	2263.18	2263.18
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	38.25
	Net Loan-Opening	2263.18	2263.18	2224.93
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	38.25	77.17
	Net Loan-Closing	2263.18	2224.93	2147.75
	Average Loan	2263.18	2244.05	2186.34
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	38.93	38.60	37.61
	Rep Schedule	30 HY installments from 01.02.2013		
5	IBRD- IV (Ex. Rate @44.83)			
	Gross loan opening	2720.73	2720.73	2720.73
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	2720.73	2720.73	2720.73
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	60.22
	Net Loan-Closing	2720.73	2720.73	2660.51
	Average Loan	2720.73	2720.73	2690.62
	Rate of Interest	1.70%	1.70%	1.70%
	Interest	46.25	46.25	45.74
	Rep Schedule	30 HY installments from 15.11.2013		
6	Bond XXIX			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	8.33
	Net Loan-Opening	100.00	100.00	91.67
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	8.33	8.33
	Net Loan-Closing	100.00	91.67	83.33
	Average Loan	100.00	95.83	87.50
	Rate of Interest	9.20%	9.20%	9.20%
	Interest	9.20	8.82	8.05
	Rep Schedule	12 annual installments from 12.03.2013		
7	Bond XXVIII			

	Gross loan opening	366.75	366.75	366.75
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	30.56
	Net Loan-Opening	366.75	366.75	336.19
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	30.56	30.56
	Net Loan-Closing	366.75	336.19	305.63
	Average Loan	366.75	351.47	320.91
	Rate of Interest	9.33%	9.33%	9.33%
	Interest	34.22	32.79	29.94
	Rep Schedule	12 annual installments from 15.12.2012		
8	IBRD IV ADDL (Ex. Rate @45.78)			
	Gross loan opening	130.02	130.02	130.02
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	2.20
	Net Loan-Opening	130.02	130.02	127.82
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	2.20	4.43
	Net Loan-Closing	130.02	127.82	123.38
	Average Loan	130.02	128.92	125.60
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	2.24	2.22	2.16
	Rep Schedule	30 HY installments from 01.02.2013		
9	Bond XXIV			
	Gross loan opening	50.00	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	4.17	8.33	12.50
	Net Loan-Opening	45.83	41.67	37.50
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	4.17	4.17	4.17
	Net Loan-Closing	41.67	37.50	33.33
	Average Loan	43.75	39.58	35.42
	Rate of Interest	9.95%	9.95%	9.95%
	Interest	4.35	3.94	3.52
	Rep Schedule	12 annual installments from 26-03-2011		
10	IBRD IV ADDL (Ex. Rate @44.76) Add cap during the 2011-12			
	Gross loan opening	0.00	333.15	333.15
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	5.63

	Net Loan-Opening	0.00	333.15	327.52
	Additions during the year	333.15	0.00	0.00
	Repayment during the year	0.00	5.63	11.36
	Net Loan-Closing	333.15	327.52	316.16
	Average Loan	166.57	330.33	321.84
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	2.87	5.68	5.54
	Rep Schedule	30 HY installments from 01.02.2013		
11	IBRD IV ADDL (Ex. Rate @44.76)			
	Gross loan opening	107.74	107.74	107.74
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	1.82
	Net Loan-Opening	107.74	107.74	105.92
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	1.82	3.67
	Net Loan-Closing	107.74	105.92	102.24
	Average Loan	107.74	106.83	104.08
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	1.85	1.84	1.79
	Rep Schedule	30 HY installments from 01.02.2013		
12	Bond XXVIII (Add Cap for 2011-12)			
	Gross loan opening	0.00	277.05	277.05
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	23.09
	Net Loan-Opening	0.00	277.05	253.96
	Additions during the year	277.05	0.00	0.00
	Repayment during the year	0.00	23.09	23.09
	Net Loan-Closing	277.05	253.96	230.88
	Average Loan	138.53	265.51	242.42
	Rate of Interest	9.33%	9.33%	9.33%
	Interest	12.92	24.77	22.62
	Rep Schedule	12 annual installments from 15.12.2012		
13	Bond XXVIII (Add Cap for 2011-12)			
	Gross loan opening	0.00	100.14	100.14
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	8.35
	Net Loan-Opening	0.00	100.14	91.80
	Additions during the year	100.14	0.00	0.00
	Repayment during the year	0.00	8.35	8.35
	Net Loan-Closing	100.14	91.80	83.45
	Average Loan	50.07	95.97	87.62
	Rate of Interest	9.33%	9.33%	9.33%

	Interest	4.67	8.95	8.18
	Rep Schedule	12 annual installments from 15.12.2012		
14	IBRD IV ADDL (Ex. Rate @44.76) Add cap during the 2011-12			
	Gross loan opening	0.00	381.75	381.75
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	7.16
	Net Loan-Opening	0.00	381.75	374.59
	Additions during the year	381.75	0.00	0.00
	Repayment during the year	0.00	7.16	14.43
	Net Loan-Closing	381.75	374.59	360.16
	Average Loan	190.87	378.17	367.37
	Rate of Interest	1.72%	1.72%	1.72%
	Interest	3.28	6.50	6.32
	Rep Schedule	30 HY installments from 01.02.2013		
	Total Loan			
	Gross loan opening	11388.57	12480.66	12480.66
	Cumulative Repayment upto DOCO/previous year	4.17	8.33	156.78
	Net Loan-Opening	11384.41	12472.33	12323.88
	Additions during the year	1092.09	0.00	0.00
	Repayment during the year	4.17	148.45	384.22
	Net Loan-Closing	12472.33	12323.88	11939.66
	Average Loan	11928.37	12398.10	12131.77
	Rate of Interest	2.1550%	2.2300%	2.1945%
	Interest	257.06	276.48	266.23