

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 88/TT/2011

Coram:

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

Date of Hearing : 01.04.2014

Date of Order : 15.05.2014

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, for determination of Transmission Tariff for Asset 1 (a) LILO of 400 kV D/C Bina –Nagda at Shujalpur S/S along with 50 MVAR Line Reactor at Shujalpur & Switchable Scheme for Reactor at Bina & Nagda S/S, and (b) New 400/220 kV S/S at Shujalpur(Anticipated Date of commercial operation: 1.4.2011), Asset 2: Combined Asset of (a) LILO of 400 kV D/C Bina –Nagda at Shujalpur S/S along with 50 MVAR line Reactor at Shujalpur & Switchable Scheme for Reactor at Bina & Nagda S/S (b) New 400/220 kV S/S at Shujalpur (Anticipated Date of commercial operation: 1.4.2011 and 400kV, 63 MVAR Bus Reactor at Shujalpur along with associated bays of 400kV(Anticipated Date of commercial operation :1.8.2011) Asset 3: 400/220 kV ICT I at Shujalpur along with associated bays of 400kV & 220kV (*Anticipated* DOCO 1.6.2011)and Asset 4: Combined Asset of (a) 400/220 kV ICT II at Shujalpur along with associated bays of 400kV & 220kV(Anticipated Date of commercial operation 1.8.2011) (Notional Date of commercial operation 1.8.2011) under WRSS IX Transmission scheme in WR, for the Tariff Block 2009-2014.

And

In the matter of:

Power Grid Corporation of India Limited, Gurgaon

.....**Petitioner**

Vs

1. Madhya Pradesh Power Management Company Ltd.,
Shakti Bhawan, Rampur
Jabalpur-482 008.



2. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, 4th floor
Andehri (East), Mumbai-400 052.
 3. Gujarat Urja Vikas Nigam Ltd.,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390 007.
 4. Electricity Department, Government of Goa,
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa-403 001.
 5. Electricity Department,
Administration of Daman and Diu,
Daman-396 210.
 6. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T. Silvassa-396 230.
 7. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh-492 013.
 8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.,
3/54, Press Complex, Agra-Bombay Road
Indore -452 008.
- Respondents

Representatives of the Petitioner: Shri M. M. Mondal, PGCIL
Shri S.S. Raju, PGCIL
Shri Piyush Awasthi, PGCIL

Counsel for the Respondent(s) : None

ORDER

This petition has been filed seeking approval for determination of Wheeling charges in respect of Asset-1 (Anticipated date of commercial operation 1.4.2011) (a) LILO of 400 kV D/C Bina –Nagda at Shujalpur S/S



along with 50 MVAR Line Reactor at Shujalpur & Switchable Scheme for Reactor at Bina & Nagda S/S, and (b) New 400/220 kV S/S at Shujalpur, Asset-2: Combined Asset (Notional DOCO:1.8.2011) (a) LILO of 400 kV D/C Bina –Nagda at Shujalpur S/S along with 50 MVAR line Reactor at Shujalpur & Switchable Scheme for Reactor at Bina & Nagda S/S & New 400/220 kV S/S at Shujalpur (Anticipated DOCO: 1.4.2011) and (b) 400 kV, 63 MVAR Bus Reactor at Shujalpur alongwith associated bays of 400kV(Anticipated DOCO :1.8.2011) Asset-3: (Anticipated DOCO 1.6.2011) 400/220 kV ICT I at Shujalpur along with associated bays of 400kV & 220kV and Asset-4: Combined Asset (Notional/ DOCO:1.8.2011) (a) 400/220 kV ICT I at Shujalpur along with associated bays of 400kV & 220kV(Anticipated DOCO 1.6.2011) and (b) ICT II at Shujalpur along with associated bays of 400kV & 220kV (Anticipated DOCO 1.8.2011) under WRSS IX Transmission scheme in WR, for the Tariff Block 2009-2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as “the 2009 Tariff Regulations”).

2. Investment approval for the "Western Region Strengthening Scheme- IX" was accorded by the petitioner vide their letter no. C/CP/WRSSS-IX dated 25.4.2008 at an estimated cost of ₹ 23089 lakh including IDC of ₹1761 lakh (based on 1st Quarter'2008 price level). The scope of work covered under the project is as follows: -

Transmission Lines

- (a) LILO of Bina-Nagda 400 kV D/C Line at Shujalpur

Sub-Stations



- (a) Establishment of 400/220 kV, 2x315 MVA Sub-Station at Shujalpur;
- (b) Installation of 1x315 MVA, 400/220 kV transformer, each at Vapi and Dehgam Sub-station;
- (c) Provision of two nos. 220 kV bays at Dehgam

3. The instant petition, at the time of filling was based on the anticipated dates of commercial operation and the clubbing of assets as proposed by the petitioner therein, there were subsequent revisions in the manner of clubbing of assets. The petitioner has also submitted the actual dates of commercial operation subsequently. Details of the clubbing of assets and the dates of commercial operation are as under: -

Assets name	Date of commercial operation
Asset-1(i): LILO of 400 kV D/C Bina –Nagda at Shujalpur S/S along with 50 MVAR Line Reactor at Shujalpur	1.6.2011
Asset-1(ii): Switchable Scheme for Reactor at Nagda S/S	1.6.2013
Asset-1(iii): Switchable Scheme for Reactor at Bina S/S	1.10.2013
Asset-2: 400kV, 63 MVAR Bus Reactor at Shujalpur alongwith associated bays of 400kV	1.4.2012
Asset-3: 400/220 kV ICT I at Shujalpur along with associated bays of 400kV & 220kV	1.10.2011
Asset-4: ICT II at Shujalpur along with associated bays of 400kV & 220kV	1.12.2011

4. Details of the transmission charges claimed by the petitioner are as follows: -

(₹ in lakh)

Asset 1(i)			
	2011-12	2012-13	2013-14
Depreciation	221.45	306.33	340.18
Interest on Loan	270.25	355.32	373.49
Return on equity	236.35	329.76	369.51
Interest on Working Capital	24.52	32.46	35.02
O & M Expenses	208.11	264.02	279.11
Total	960.68	1287.89	1397.31

(₹ in lakh)

	Asset 1(ii)	Asset 1 (iii)	Asset 2	
	2013-14	2013-14	2012-13	2013-14
Depreciation	9.05	4.78	34.05	36.51
Interest on Loan	10.73	5.81	39.88	39.64
Return on equity	8.99	4.75	33.82	36.26
Interest on Working Capital	6.54	3.88	5.90	6.20
O & M Expenses	109.10	65.46	61.92	65.46
Total	144.41	84.68	175.57	184.07

(₹ in lakh)

Asset 3			
	2011-12	2012-13	2013-14
Depreciation	67.45	152.19	165.58
Interest on Loan	78.84	168.28	169.96
Return on equity	66.77	150.59	163.89
Interest on Working Capital	10.57	22.77	24.10
O & M Expenses	131.79	278.62	294.56
Total	355.42	772.45	818.09

(₹ in lakh)

Asset 4			
	2011-12	2012-13	2013-14
Depreciation	21.93	72.51	80.26
Interest on Loan	26.17	82.34	84.75
Return on equity	21.78	72.02	79.72
Interest on Working Capital	2.99	9.58	10.22
O & M Expenses	33.19	105.26	111.28
Total	106.06	341.71	366.23

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

(₹ in lakh)

Asset 1(i)			
	2011-12	2012-13	2013-14
Maintenance Spares	37.46	39.60	41.87
O & M expenses	20.81	22.00	23.26
Receivables	192.14	214.65	232.89
Total	250.41	276.25	298.02
Interest	24.52	32.46	35.02
Rate of Interest	11.75%	11.75%	11.75%

(₹ in lakh)

	Asset 1(ii)	Asset 1 (iii)	Asset 2	
	2013-14	2013-14	2012-13	2013-14
Maintenance Spares	19.64	19.64	9.29	9.82
O & M expenses	10.91	10.91	5.16	5.46
Receivables	28.88	28.23	29.26	30.68
Total	59.43	58.78	43.71	45.96
Interest	6.54	3.88	5.90	6.20
Rate of Interest	13.20%	13.20%	13.50%	13.50%

(₹ in lakh)

Asset 3			
	2011-12	2012-13	2013-14
Maintenance Spares	39.54	41.79	44.18
O & M expenses	21.97	23.22	24.55
Receivables	118.47	128.74	136.35
Total	179.98	193.75	205.08
Interest	10.57	22.77	24.10
Rate of Interest	11.75%	11.75%	11.75%

(₹ in lakh)

Asset 4			
	2011-12	2012-13	2013-14
Maintenance Spares	14.94	15.79	16.69
O & M expenses	8.30	8.77	9.27
Receivables	53.03	56.95	61.04
Total	76.27	81.51	87.00
Interest	2.99	9.58	10.22
Rate of Interest	11.75%	11.75%	11.75%

6. 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 to the petition.

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

Capital cost

8. As regards the capital cost, Regulation 7(1) 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.”

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

(₹ in lakh)

Particular	Apportioned approved cost	Actual expenditure incurred as on DOCO	Projected additional capital expenditure			Estimated completion cost up to 31.3.2014	Projected add cap for 2014-15	Total estimated completion cost
			2011-12	2012-13	2013-14			
Asset-1(i)	10533.96	4996.02	824.01	935.63	580.28	7335.94	0.00	7335.94
Asse-1(ii)	307.81	189.05		-	33.48	222.53	14.35	236.88
Asset-1(iii)	282.02	143.33		-	75.53	218.86	32.37	251.23
Asset-2	879.09	631.93	-	25.89	67.16	724.98	-	724.98
Asset-3	3854.72	2396.40	300.18	350.00	157.27	3203.85		
Asset-4	2106.09	1183.32	125.00	130.00	163.49	1601.81		

10. Details of the capital cost as on the dates of commercial operation of the assets are as under:-

(₹ in lakh)

	Apportioned approved cost	Actual expenditure incurred as on Date of commercial operation
Asset-1(i)	10533.96	4996.02
Asse-1(ii)	307.81	189.05
Asset-1(iii)	282.02	143.33
Asset-2	879.09	631.93
Asset-3	3854.72	2396.40
Asset-4	2106.09	1183.32

Time over-run

11. As per the investment approval dated 25.4.2008, the assets were scheduled to be commissioned within 33 months from the date of investment approval, i.e. by 25.1.2011 say 1.2.2011.

12. Subsequently, the petitioner vide its affidavit dated 16.7.2012 and 14.10.2013, submitted the actual dates of commercial operation of the assets covered under the petition as given below:-

Srl. No.	Name of assets	Schedule commissioning	Actual date of commercial operation	Delay
1	Asset-1 (i): (a) LILO of 400kV D/C Bina-Nagda at Shujalpur S/S along with 50 MVAR Line Reactor at Shujalpur (b) New 400/220 kV S/S at Shujalpur.	1.2.2011	1.6.2011	4 months
2	Asset- 1(ii): Switchable scheme for Reactor at Nagda S/S		1.6.2013	28 months
	Asset- 1 (iii) : Switchable scheme for Reactor at Bina & Nagda S/S		1.10.2013	32 months
3	Asset-2: 400 kV, 63 MVAR Bus Reactor at Shujalpur along with associated bays of 400kV.		1.04.2012	14 months
4	Asset-3: 400/220 kV ICT-I at Shujalpur along with associated bays of 400kV & 220 kV		1.10.2011	8 months
5	Asset-4: 400/220 kV ICT-II at Shujalpur along with associated bays of 400 & 220kV		1.12.2011	10 months

13. The petitioner has adduced delay to land acquisition. Based on the written submissions of petitioner and documentary evidence submitted on 21.9.2012, it emerges that there was delay in land acquisition at Shujalpur and law and order problem was there due to protest by villagers and land owners. One portion of small land of about 0.703 Ha could not be acquired initially due to omission on the part of local administration in regard to land area to be handed over and this portion was acquired in July, 2010. This piece of land was the only approach to the sub-station from the main road. However, the problem caused by this factor had limited impact on the progress of work. As

stated by the petitioner in its submission dated 26.11.2012, an alternative approach was created and work started in September, 2009.

14. As order for sub-station work at Shujalpur was given in January, 2009 and work could not be started till September, 2009 due to delay in land acquisition and problem of law and order due to villagers' protest, we attribute the delay of nine months from January to September, 2009, to be out of petitioner's control and there is justification for condoning this delay. We therefore condone the delay of 4 months in case of Asset-1(i), 9 months in case of Asset-2 and Asset 4 and 8 months in case of Asset-3.

15. However, as the Bina and Nagda sub-stations are old sub-stations, the petitioner's contention that delay was due to land acquisition is not justified. Hence, we do not condone the delay in respect of Asset 1(ii) and Asset 1(iii)

16. Overall position regarding the condonation of delay is as under:

Asset	Scheduled Commissioning	Actual date of commercial operation	Delay (Months)	Delay Condoned (Months)	Delay not condoned (Months)
1 (i)	1.2.2011	1.06.2011	4	4	Nil
1(ii)	1.2.2011	1.06.2013 (Nagda S/s)	28	0	28
1(iii)	1.2.2011	1.10.2013 (Bina S/s)	32	0	32
2	1.2.2011	1.04.2012	14	9	5
3	1.2.2011	1.10.2011	8	8	Nil
4	1.2.2011	1.12.2011	10	9	1

Treatment of IDC and IEDC

17. The total time over-run in case of Asset-1(i) and Asset-3 is condoned and in case of Asset-2 and Asset-4 the time over-run is partially condoned.

The details of the IDC and IEDC disallowed are given hereunder:-

(₹ in lakh)

Asset-1(ii)		
Detail of IDC and IEDC as per Management Certificate dated 21.11.2013		
	IEDC	IDC
Up to 31.03.2013	28.89	30.48
From 01.04.2013 to 31.5.2013	4.62	2.60
Total IDC and IEDC Claimed	33.51	33.08
Detail of IDC and IEDC Disallowed for 28 months		
From 1.2.2011 to 31.3.2013 (26 months)	12.73	13.43
From 1.4.2013 to 31.5.2013 (2 months)	4.62	2.60
Total Disallowed IDC and IEDC (for 28 months)*	17.35	16.03

*IDC and IEDC for 2 months have been taken directly from the management certificate and IDC and IEDC for balance period i.e. 26 months has been computed pro-rata basis from the IDC and IEDC up to 31.3.2013.

(₹ in lakh)

Asset-1 (iii)		
Detail of IDC and IEDC as per Management Certificate dated 21.11.2013		
	IEDC	IDC
Up to 31.03.2013	12.92	14.08
From 01.04.2013 to 30.9.2013	11.73	4.13
Total IDC and IEDC Claimed	24.65	18.21
Detail of IDC and IEDC Disallowed for 32 months		
From 1.2.2011 to 31.3.2013 (26 months)	5.69	6.20
From 1.4.2013 to 30.9.2013 (6 months)	11.73	4.13
Total Disallowed IDC and IEDC (for 32 months)*	17.42	10.33

*IDC and IEDC for 6 months (April to September, 2013) have been taken directly from the management certificate and IDC and IEDC for balance period i.e. 26 months has been computed pro-rata basis from the IDC and IEDC up to 31.3.2013.

(₹ in lakh)

Asset-2		
Detail of IDC and IEDC as per Management Certificate dated 10.7.2012		
	IEDC	IDC
Up to 31.03.2011	24.53	12.55
From 01.04.2011 to 31.3.2012	21.99	31.14
Total IDC and IEDC Claimed	46.52	43.69
Detail of IDC and IEDC Disallowed for 5 months		
From 1.11.2011 to 31.3.2012 (5 months)	9.16	12.98
Total Disallowed IDC and IEDC (for 5 months)*	9.16	12.98

*IDC and IEDC for 5 months (November, 2011 to March, 2012) have been worked out pro-rata basis from the IDC and IEDC for 2011-12.

(₹ in lakh)

Asset-4		
Detail of IDC and IEDC as per Management Certificate dated 2.3.2012		
	IEDC	IDC
Up to 31.03.2011	39.22	42.67
From 01.04.2011 to 30.09.2011	21.66	34.86
From 01.10.2011 to 30.11.2011	0.24	0.02
Total IDC and IEDC Claimed	61.12	77.55
Detail of IDC and IEDC Disallowed for 1 month		
For the month of November'11*	0.12	0.01
Total Disallowed IDC and IEDC (for 1 month)	0.12	0.01

* Disallowed IDC and IEDC has been taken pro-rata basis from the IDC and IEDC from 1.10.2011 to 30.11.2011 period.

Treatment for Initial Spares

18. Regulation 8 of 2009 Tariff Regulations provides that :-

"Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:

Transmission line	0.75%
Transmission Sub-station	2.5%
Series compensation devices & HVDC Station	3.5%"

19. As may be seen from above, in respect of Asset-1(ii) and Asset-1(iii) petitioner has furnished the details of projected additional capital expenditure for 2014-15, which is within the cut-off date but beyond current tariff block i.e.

2009-14. We propose to consider the additional capital expenditure only up to the end of current tariff block i.e. up to 31.3.2014 and provide a enabling window for adjusting initial spares up to the prescribed percentage of total capitalization (up to cut-off date) which in this case is falling in next tariff period.

20. Accordingly, initial spares have been worked out considering projected additional capital expenditure only up to 31.3.2014.

21. Detail of the initial spares claimed by the petitioner against corresponding capital cost is as follows:-

₹ in lakh)		
Particular	Element	Initial Spares
Asset-1(i)	Sub-station	211.40
Asse-1(ii)		29.67
Asset-1(iii)		28.45
Asset-2		7.59

22. While the initial spares claimed in respect of Asset-2 and 4 is within the norms, it is noticed that in respect of the remaining assets it exceeds the prescribed norms. The details of the excess spares claimed by the petitioner are given hereunder:-

(₹ in lakh)							
Asset	Cost as on cut-off date	Initial spares claimed	Cost as on cut-off date after disallowing IDC & IEDC	Proportionate initial spares claimed in respect to restricted cost	Ceiling limits as per Regulation 8 of 2009 Tariff Regulation	Initial spares worked out	Excess initial spares claimed
Asset-1(i)	5175.20	211.4	5175.20	211.4	2.50%	127.28	-84.12
Asset-1(ii)	222.53	29.67	189.15	25.22	2.50%	4.20	-21.02
Asset-1(iii)	218.83	28.45	191.07	24.84	2.50%	4.26	-20.58
Asset 3	3203.85	89.26	NIL	89.26	2.50%	79.86	9.40

23. Based on the above, the capital cost of the five assets after the disallowance of IDC and IEDC where applicable and adjustment of the cost of initial spares is given below:-

(₹ in lakh)				
Particulars	Capital cost claimed as on DOCO	Disallowed IDC and IEDC	Excess initial spares	Capital cost of individual assets considered as on DOCO
Asset-1(i)	4996.02	0.00	-84.12	4911.90
Asset-1(ii)	189.05	-33.38	-21.02	134.65
Asset-1(iii)	143.30	-27.76	-20.58	94.96
Asset-2	631.93	-22.14	0.00	609.79
Asset -3	2896.40	0.00	9.40	2387.00
Asset -4	1183.32	-0.13	0.00	1183.19

Additional capital expenditure

24. As regards Additional Capital Expenditure clause 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;
- (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:”

25. 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”.

26. Details of the projected additional capital expenditure claimed by the petitioner are given below:-

(₹ in lakh)

Asset-1(i)			
Particulars	2011-12	2012-13	2013-14
Building & Other Civil Works	167.23	448.00	188.64
Transmission Line	72.37	50.86	46.99
Sub-Station Equipments	563.17	436.77	344.65
PLCC	21.24	0.00	0.00
Total	824.01	935.63	580.28

(₹ in lakh)

Particular	Asset-1(ii)	Asset-1(iii)	Asset-2	
	2013-14	2013-14	2012-13	2013-14
Sub-Station Equipments	33.48	75.53	25.89	67.16

(₹ in lakh)

Year	Work proposed to be added after COD upto cut off date	Amount to be capitalized /proposed to be capitalized	Justification
Asset-3			
DOCO to 31.3.2012	Sub station	276.18	Balance /Retention Payments
	PLCC	24.00	
2012-13	Sub station	350.00	
2013-14		157.27	

(₹ in lakh)

Asset-4			
DOCO to 31.3.2012	Sub station	125.00	Balance /Retention Payments
2012-13		130.00	
2013-14		163.49	

27. The additional capital expenditure claimed is mainly on account of balance/retention payment and is within cut-off date. Hence, the same has been allowed for the purpose of tariff calculation.

Debt- equity ratio

28. 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.”

29. Details of debt-equity in respect of the assets comprising the transmission assets as on date of commercial operation are as under:-

(₹ in lakh)

Capital Cost as on date of commercial operation		
Asset-1 (i)		
Particulars	Amount	%
Debt	3438.37	70.00
Equity	1473.53	30.00
Total	4911.90	100.00
Asset- 1 (ii)		
Debt	94.26	70.00
Equity	40.40	30.00
Total	134.65	100.00

(₹ in lakh)

Asset- 1 (iii)		
Debt	66.47	70.00
Equity	28.49	29.9984
Total	94.96	100.00
Asset- 2		
Debt	426.85	70.00
Equity	182.94	30.00
Total	609.79	100.00

(₹ in lakh)

Capital Cost as on DOCO		
Asset-3		
Particulars	Amount	%
Debt	1670.92	70.00
Equity	716.08	30.00
Total	2387.00	100.00
Asset- 3		
Debt	828.24	70.00
Equity	354.95	30.00
Total	1183.19	100.00

30. Projected additional capital expenditure has been considered in the debt-equity ratio of 70:30.

31. Details of debt equity ratio as on 31.3.2014 are as under:-

(₹ in lakh)

Capital Cost as on 31.3.2014		
Asset-1 (i)		
Particulars	Amount	%
Debt	5076.31	70.00
Equity	2175.50	30.00
Total	7251.82	100.00
Asset- 1 (ii)		
Debt	117.69	70.00
Equity	50.44	30.00
Total	168.13	100.00
Asset- 1 (iii)		
Debt	119.35	70.00
Equity	51.15	30.00
Total	170.49	100.00

Asset- 2		
Debt	491.99	70.00
Equity	210.85	30.00
Total	702.84	100.00
Asset- 3		
Debt	2236.14	70.00
Equity	958.32	30.00
Total	3194.45	100.00
Asset- 4		
Debt	1121.19	70.00
Equity	480.49	30.00
Total	1601.68	100.00

32. The above stated debt–equity ratios have been applied for the purpose of tariff calculation in this order.

Return on equity

33. Regulation 15 of the 2009 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:

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

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".

34. In this order, return on equity has been calculated as per Regulation 15 of the 2009 Tariff Regulations with pre-tax return on equity of 17.481% based on the tax rate of 11.330% for the year 2008-09.

35. Details of return on equity calculated are as under:-

(₹ in lakh)

Asset 1(i)			
	2011-12	2012-13	2013-14
Opening Equity	1473.53	1720.73	2001.42
Addition due to additional capital expenditure	247.20	280.69	174.08
Closing Equity	1720.73	2001.42	2175.50
Average Equity	1597.13	1861.08	2088.46
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
Return on Equity (Pre-tax)	232.66	325.33	365.08

(₹ in lakh)

	Asset 1(ii)	Asset 1 (iii)	Asset 2	
	2013-14	2013-14	2012-13	2013-14
Opening Equity	40.40	28.49	182.94	190.70
Addition due to additional capital expenditure	10.04	22.66	7.77	20.15
Closing Equity	50.44	51.15	190.70	210.85
Average Equity	45.42	39.82	186.82	200.78
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	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)	6.62	3.48	32.66	35.10

(₹ in lakh)

Asset 3			
	2011-12	2012-13	2013-14
Opening Equity	716.08	806.13	911.13
Addition due to additional capital expenditure	90.05	105.00	47.18
Closing Equity	806.13	911.13	958.32
Average Equity	761.11	858.63	934.72
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
Return on Equity (Pre-tax)	66.52	150.10	163.40

(₹ in lakh)

Asset 4			
	2011-12	2012-13	2013-14
Opening Equity	354.95	392.45	431.45
Addition due to additional capital expenditure	37.50	39.00	49.05
Closing Equity	392.45	431.45	480.49
Average Equity	373.70	411.95	455.97
Return on Equity (Base Rate)	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%
Return on Equity (Pre-tax)	21.78	72.01	79.71

Interest on loan

36. 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.”

37. In these calculations, interest on loan has been worked out as detailed below:

(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.

38. Detailed calculation of the weighted average rate of interest has been given in Annexure 1 to 5 to this order.

39. Details of Interest on Load calculated are given overleaf:-

(₹ in lakh)

Asset-1(i)			
	2011-12	2012-13	2013-14
Gross Normative Loan	3438.37	4015.18	4670.12
Cumulative Repayment upto Previous Year	0.00	217.74	519.64
Net Loan-Opening	3438.37	3797.43	4150.48
Addition due to additional capital expenditure	576.81	654.94	406.20
Repayment during the year	217.74	301.89	335.74
Net Loan-Closing	3797.43	4150.48	4220.94
Average Loan	3617.90	3973.96	4185.71
Weighted Average Rate of Interest on Loan	8.8247%	8.8239%	8.8209%
Interest	266.06	350.66	369.22

(₹ in lakh)

	Asset-1(ii)	Asset-1 (iii)	Asset 2	
	2013-14	2013-14	2012-13	2013-14
Gross Normative Loan	94.26	66.47	426.85	444.98
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	32.88
Net Loan-Opening	94.26	66.47	426.85	412.10
Addition due to additional capital expenditure	23.44	52.87	18.12	47.01
Repayment during the year	6.66	3.50	32.88	35.34
Net Loan-Closing	111.03	115.84	412.10	423.77
Average Loan	102.64	91.16	419.48	417.93
Weighted Average Rate of Interest on Loan	9.1483%	9.0828%	9.1818%	9.1824%
Interest	7.83	4.14	38.52	38.38

(₹ in lakh)

Asset-3 (pro-rata)			
	2011-12	2012-13	2013-14
Gross Normative Loan	1670.92	1881.05	2126.05
Cumulative Repayment upto Previous Year	0.00	67.20	218.89
Net Loan-Opening	1670.92	1813.85	1907.15
Addition due to additional capital expenditure	210.13	245.00	110.09
Repayment during the year	67.20	151.69	165.08
Net Loan-Closing	1813.85	1907.15	1852.16
Average Loan	1742.38	1860.50	1879.66
Weighted Average Rate of Interest on Loan	9.0157%	9.0153%	9.0155%
Interest	78.54	167.73	169.46

(₹ in lakh)

Asset-4			
	2011-12	2012-13	2013-14
Gross Normative Loan	828.24	915.74	1006.74
Cumulative Repayment upto Previous Year	0.00	21.92	94.43
Net Loan-Opening	828.24	893.82	912.31
Addition due to additional capital expenditure	87.50	91.00	114.44
Repayment during the year	21.92	72.50	80.25
Net Loan-Closing	893.82	912.31	946.50
Average Loan	861.03	903.07	929.41
Weighted Average Rate of Interest on Loan	9.1175 %	9.1175%	9.1175 %
Interest	26.17	82.34	84.74

Depreciation

40. 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.

xxxx
xxxx

(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.”

41. Asset-1(i), Asset-1(ii), Asset-1(iii) and Asset-2 were put under commercial operation as on 1.6.2011, 1.6.2013, 1.10.2013 and 1.4.2012 respectively. The assets covered in instant petition will complete 12 years beyond 2013-14. Accordingly, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of 2009 Tariff Regulations.

42. Details of the depreciation worked out are as under: -

(₹ in lakh)

Asset-1(i)			
	2011-12	2012-13	2013-14
Opening Gross Block	4911.90	5735.91	6671.54
Addition during 2009-14	824.01	935.63	580.28
Closing Gross Block	5735.91	6671.54	7251.82
Average Gross Block	5323.90	6203.72	6961.68
Rate of Depreciation	4.9079%	4.8663%	4.8226%
Depreciable Value	4721.59	5513.43	6195.59
Remaining Depreciable Value	4721.59	5295.68	5675.95
Depreciation	217.74	301.89	335.74

(₹ in lakh)

	Asset-1(ii)	Asset-1 (iii)	Asset-2	
	2013-14	2013-14	2012-13	2013-14
Opening Gross Block	134.65	94.96	609.79	635.68
Addition during 2009-14	33.48	75.53	25.89	67.16
Closing Gross Block	168.13	170.49	635.68	702.84
Average Gross Block	151.39	132.73	622.74	669.26
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	136.25	119.46	560.46	602.34
Remaining Depreciable Value	136.25	119.46	560.46	569.46
Depreciation	6.66	3.50	32.88	35.34

(₹ in lakh)

Asset-3			
	2011-12	2012-13	2013-14
Opening Gross Block	2387.00	2687.18	3037.18
Addition during 2009-14	300.18	350.00	157.27
Closing Gross Block	2687.18	3037.18	3194.45
Average Gross Block	2537.09	2862.18	3115.82
Rate of Depreciation	5.2975%	5.2999%	5.2983%
Depreciable Value	2283.38	2575.96	2804.23
Remaining Depreciable Value	2283.38	2508.76	2585.34
Depreciation	67.20	151.69	165.08

(₹ in lakh)

Asset-4			
	2011-12	2012-13	2013-14
Opening Gross Block	1183.19	1308.19	1438.19
Addition during 2009-14	125.00	130.00	163.49
Closing Gross Block	1308.19	1438.19	1601.68
Average Gross Block	1245.69	1373.19	1519.94
Rate of Depreciation	5.2800%	5.2800%	5.2800%
Depreciable Value	1121.12	1235.87	1367.94
Remaining Depreciable Value	1121.12	1213.95	1273.51
Depreciation	21.92	72.50	80.25

Operation & maintenance expenses

43. 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	2009-10	2010-11	2011-12	2012-13	2013-14
D/C twin conductor T/L (₹ in lakh/km)	0.627	0.663	0.701	0.741	0.783
400 kV bay (₹ in lakh/bay)	52.40	55.40	58.57	61.92	65.46
220 kV bay (₹ in lakh/bay)	36.68	37.78	41.00	43.34	45.82

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

(₹ in lakh)

Asset 1(i)	2011-12 (Pro-rata)	2012-13	2013-14
22.05 km, 400 kV D/C twin conductor T/Line (1.6.2011)	12.88	16.34	17.27
4 nos 400 kV bays at Shujalpur sub-station	195.23	247.68	261.84
Total O&M Expenses	208.11	264.02	279.11

(₹ in lakh)

Asset-1(ii)	2011-12	2012-13	2013-14 (pro-rata)
2 nos 400 kV bay at Bina	---	---	65.46
Total O&M	----	---	65.46

Asset-1(iii)	2011-12	2012-13	2013-14 (pro-rata)
2 nos 400 kV bay at Nagda	---	---	109.10
Total O&M	----	----	109.10

Asset-2	2011-12	2012-13	2013-14
1 no 400 kV bay at Shujalpur (1.4.2012)	----	61.92	65.46
Total O&M Expenses	----	61.92	65.46

Asset-3	2011-12 (Pro-rata)	2012-13	2013-14
1 no 400 kV bay at Shujalpur	29.29	61.92	65.46
5 no 220 kV at bay Shujalpur	102.50	216.70	229.10
Total O&M Expenses	131.79	278.62	294.56

Asset-4	2011-12 (Pro-rata)	2012-13	2013-14
1 no 400 kV bay at Shujalpur	19.52	61.92	65.46
1 no 220 kV bay at Shujalpur	13.67	43.34	45.82
Total O&M Expenses	33.19	105.26	111.28

45. The petitioner had submitted that O & M expenses for the period 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%. The petitioner has further submitted that in O & M norms for the period 2009-14, the cost associated with license fees had not been captured and therefore licence fee be allowed to be recovered separately from the respondents.

46. 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

47. As per the 2009 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 regulations, receivables will be equivalent to two months' average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months' 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 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 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

In view of the Second Amendment dated 21-06-2011, in the 2009 tariff regulations, Interest on working capital has been worked out considering interest rate @ 11.75% (Base rate as on 1.4.2011 i.e.

8.25% and 350 basis points) for Asset-1(i), Asset (3) and Asset (4) and interest rate @ 13.20% (base rate as on 1.4.2013 i.e. 9.70% and 350 basis points) for Asset-1(ii) & Asset-1(iii) and interest rate @ 13.50% (base rate 10% as on 1.4.2012 plus 350 basis points) for Asset-2

48. Necessary computations in support of interest on working capital are appended herein below:-

(₹ in lakh)

Asset-1(i)			
	2011-12	2012-13	2013-14
Maintenance Spares	37.46	39.60	41.87
O & M expenses	20.81	22.00	23.26
Receivables	189.77	212.35	230.65
Total	248.04	273.95	295.78
Rate of Interest	11.75%	11.75%	11.75%
Interest	24.29	32.19	34.75

(₹ in lakh)

	Asset-1(ii)	Asset-1 (iii)	Asset-2	
	2013-14	2013-14	2012-13	2013-14
Maintenance Spares	19.64	19.64	9.29	9.82
O & M expenses	10.91	10.91	5.16	5.46
Receivables	27.31	26.79	28.63	30.07
Total	57.86	57.34	43.08	45.34
Rate of Interest	13.20%	13.20%	13.50%	13.50%
Interest	6.36	3.78	5.82	6.12

(₹ in lakh)

Asset-3			
	2011-12	2012-13	2013-14
Maintenance Spares	39.54	41.79	44.18
O & M expenses	21.97	23.22	24.55
Receivables	118.21	128.48	136.10
Total	179.71	193.49	204.83
Rate of Interest	11.75%	11.75%	11.75%
Interest	10.56	22.74	24.07

(₹ in lakh)

Asset-4			
	2011-12	2012-13	2013-14
Maintenance Spares	14.94	15.79	16.69
O & M expenses	8.30	8.77	9.27
Receivables	53.02	56.95	61.03
Total	76.26	81.51	87.00
Rate of Interest	11.75%	11.75%	11.75%
Interest	2.99	9.58	10.22

Transmission charges

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

(₹ in lakh)

Asset-1(i)			
	2011-12	2012-13	2013-14
Depreciation	217.74	301.89	335.74
Interest on Loan	266.06	350.66	369.22
Return on equity	232.66	325.33	365.08
Interest on Working Capital	24.29	32.19	34.75
O & M Expenses	208.11	264.02	279.11
Total	948.86	1274.09	1383.90

(₹ in lakh)

	Asset-1(ii)	Asset-1 (iii)	Asset-2	
	2013-14	2013-14	2012-13	2013-14
Depreciation	6.66	3.50	32.88	35.34
Interest on Loan	7.83	4.14	38.52	38.38
Return on equity	6.62	3.48	32.66	35.10
Interest on Working Capital	6.36	3.78	5.82	6.12
O & M Expenses	109.10	65.46	61.92	65.46
Total	136.57	80.36	171.80	180.40

(₹ in lakh)

Asset-3			
	2011-12	2012-13	2013-14
Depreciation	67.20	151.69	165.08
Interest on Loan	78.54	167.73	169.46
Return on equity	66.52	150.10	163.40
Interest on Working Capital	10.56	22.74	24.07
O & M Expenses	131.79	278.62	294.56
Total	354.61	770.88	816.57

(₹ in lakh)

Asset-4			
	2011-12	2012-13	2013-14
Depreciation	21.92	72.50	80.25
Interest on Loan	26.17	82.34	84.74
Return on equity	21.78	72.01	79.71
Interest on Working Capital	2.99	9.58	10.22
O & M Expenses	33.19	105.26	111.28
Total	106.05	341.69	366.20

Other issues

50. The petitioner had sought approval for the reimbursement of fee paid by it for filing the petition. In accordance with the Commission's decision in order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee from the beneficiaries.

51. Accordingly, expenses incurred by the petitioner on petition filing fees and publication of notices in connection with the present petition shall be directly recovered from the beneficiary on pro-rata basis.

52. The petitioner has made a specific prayer to be allowed to bill and recover the Service tax on Transmission charges separately from the respondents if the exemption granted to it is withdrawn and transmission of power is made a taxable service. We consider the prayer pre-mature. The petitioner is at liberty to approach the Commission for any relief at the appropriate as per law.

53. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. The

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

53. As regards the sharing of the transmission charges, we direct that prior to 1.7.2011, the transmission charges be shared by the respondent in accordance with Regulation 33 of the 2009 Tariff Regulations. From 1.7.2011 onwards, the charges shall be shared in accordance with Central Electricity Regulatory Commission (Sharing of inter-State transmission charges and losses) Regulations 2010.

54. This order disposes of Petition No. 88/TT/2011.

sd/-

(A. K. Singhal)
Member

sd/-

(M. Deena Dayalan)
Member

sd/-

(Gireesh B. Pradhan)
Chairperson

Annexure 1**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR ASSET-1(i)**

(₹ in lakh)

	Details of Loan	2011-12	2012-13	2013-14
1	Bond XXXI			
	Gross loan opening	1175.00	1175.00	1175.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1175.00	1175.00	1175.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	97.92
	Net Loan-Closing	1175.00	1175.00	1077.08
	Average Loan	1175.00	1175.00	1126.04
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	104.58	104.58	100.22
	Rep Schedule	12 annual installments from 25.02.2014		
2	Bond XXIX			
	Gross loan opening	200.00	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	16.67
	Net Loan-Opening	200.00	200.00	183.33
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	16.67	16.67
	Net Loan-Closing	200.00	183.33	166.67
	Average Loan	200.00	191.67	175.00
	Rate of Interest	9.20%	9.20%	9.20%
	Interest	18.40	17.63	16.10
	Rep Schedule	12 annual installments from 12.03.2013		
3	Bond XXXIII			
	Gross loan opening	1600.00	1600.00	1600.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1600.00	1600.00	1600.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1600.00	1600.00	1600.00
	Average Loan	1600.00	1600.00	1600.00
	Rate of Interest	8.64%	8.64%	8.64%
	Interest	138.24	138.24	138.24
	Rep Schedule	12 annual installments from 08.07.2014		
4	Bond XXXIV			
	Gross loan opening	367.00	367.00	367.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	367.00	367.00	367.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	367.00	367.00	367.00



	Average Loan	367.00	367.00	367.00
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	32.44	32.44	32.44
	Rep Schedule	12 annual installments from 21.10.2014		
5	Bond XXXV			
	Gross loan opening	155.20	155.20	155.20
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	155.20	155.20	155.20
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	155.20	155.20	155.20
	Average Loan	155.20	155.20	155.20
	Rate of Interest	9.64%	9.64%	9.64%
	Interest	14.96	14.96	14.96
	Rep Schedule	12 annual installments from 31.05.2015		
	Total Loan			
	Gross loan opening	3497.20	3497.20	3497.20
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	16.67
	Net Loan-Opening	3497.20	3497.20	3480.53
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	16.67	114.58
	Net Loan-Closing	3497.20	3480.53	3365.95
	Average Loan	3497.20	3488.87	3423.24
	Rate of Interest	8.8247%	8.8239%	8.8209%
	Interest	308.62	307.85	301.96

Annexure 2

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR ASSET-1 (ii)

(₹ in lakh)

	Details of Loan	2013-14
1	Bond XLII	
	Gross loan opening	1.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1.00
	Average Loan	1.00
	Rate of Interest	8.80%
	Interest	0.09
	Rep Schedule	Bullet payment on 13.3.2023
2	Bond XXXIII	
	Gross loan opening	25.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	25.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	25.00
	Average Loan	25.00
	Rate of Interest	8.64%
	Interest	2.16
	Rep Schedule	12 annual installments from 08.07.2014
3	Bond XLI	
	Gross loan opening	4.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4.00
	Average Loan	4.00
	Rate of Interest	8.85%
	Interest	0.35
	Rep Schedule	12 annual installments from 19.10.2016
4	Bond XXXIV	
	Gross loan opening	20.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	20.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	20.00
	Average Loan	20.00
	Rate of Interest	8.84%
	Interest	1.77

	Rep Schedule	12 annual installments from 21.10.2014
5	Bond XXXV	
	Gross loan opening	30.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	30.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	30.00
	Average Loan	30.00
	Rate of Interest	9.64%
	Interest	2.89
	Rep Schedule	12 annual installments from 31.05.2015
6	Bond XXXVI	
	Gross loan opening	9.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	9.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	9.00
	Average Loan	9.00
	Rate of Interest	9.35%
	Interest	0.84
	Rep Schedule	15 annual installments from 29.08.2016
7	Bond XXXVII	
	Gross loan opening	20.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	20.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	20.00
	Average Loan	20.00
	Rate of Interest	9.25%
	Interest	1.85
	Rep Schedule	12 annual installments from 26.12.2015
8	Bond XL	
	Gross loan opening	12.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	12.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	12.00
	Average Loan	12.00
	Rate of Interest	9.30%
	Interest	1.12
	Rep Schedule	12 annual installments from 28.6.2016
	Total Loan	
	Gross loan opening	121.00
	Cumulative Repayment upto DOCO/previous year	0.00

Net Loan-Opening	121.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	121.00
Average Loan	121.00
Rate of Interest	9.1483%
Interest	11.07



**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR ASSET-1(iii)**

(₹ in lakh)

	Details of Loan	2013-14
1	Bond XLII	
	Gross loan opening	1.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1.00
	Average Loan	1.00
	Rate of Interest	8.80%
	Interest	0.09
	Rep Schedule	Bullet payment on 13.3.2023
2	Bond XXXIII	
	Gross loan opening	20.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	20.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	20.00
	Average Loan	20.00
	Rate of Interest	8.64%
	Interest	1.73
	Rep Schedule	12 annual installments from 08.07.2014
3	Bond XLI	
	Gross loan opening	3.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3.00
	Average Loan	3.00
	Rate of Interest	8.85%
	Interest	0.27
	Rep Schedule	12 annual installments from 19.10.2016
4	Bond XXXIV	
	Gross loan opening	17.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	17.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	17.00
	Average Loan	17.00
	Rate of Interest	8.84%
	Interest	1.50

	Rep Schedule	12 annual installments from 21.10.2014
5	Bond XXXV	
	Gross loan opening	20.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	20.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	20.00
	Average Loan	20.00
	Rate of Interest	9.64%
	Interest	1.93
	Rep Schedule	12 annual installments from 31.05.2015
6	Bond XXXVI	
	Gross loan opening	5.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5.00
	Average Loan	5.00
	Rate of Interest	9.35%
	Interest	0.47
	Rep Schedule	12 annual installments from 29.08.2016
7	Bond XXXVII	
	Gross loan opening	5.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5.00
	Average Loan	5.00
	Rate of Interest	9.25%
	Interest	0.46
	Rep Schedule	12 annual installments from 26.12.2016
8	Bond XL	
	Gross loan opening	3.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3.00
	Average Loan	3.00
	Rate of Interest	9.30%
	Interest	0.28
	Rep Schedule	12 annual installments from 28.6.2016
	Total Loan	
	Gross loan opening	74.00
	Cumulative Repayment upto DOCO/previous year	0.00

	Net Loan-Opening	74.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	74.00
	Average Loan	74.00
	Rate of Interest	9.0828%
	Interest	6.72



Annexure 4**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR ASSET-2**

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	Bond XXXI		
	Gross loan opening	27.00	27.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	27.00	27.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	2.25
	Net Loan-Closing	27.00	24.75
	Average Loan	27.00	25.88
	Rate of Interest	8.90%	8.90%
	Interest	2.40	2.30
	Rep Schedule	12 annual installments from 25.02.2014	
2	Bond XXIX		
	Gross loan opening	25.00	25.00
	Cumulative Repayment upto DOCO/previous year	0.00	2.08
	Net Loan-Opening	25.00	22.92
	Additions during the year	0.00	0.00
	Repayment during the year	2.08	2.08
	Net Loan-Closing	22.92	20.83
	Average Loan	23.96	21.88
	Rate of Interest	9.20%	9.20%
	Interest	2.20	2.01
	Rep Schedule	12 annual installments from 12.03.2013	
3	Bond XXXIII		
	Gross loan opening	45.00	45.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	45.00	45.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	45.00	45.00
	Average Loan	45.00	45.00
	Rate of Interest	8.64%	8.64%
	Interest	3.89	3.89
	Rep Schedule	12 annual installments from 08.07.2014	
4	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	
5	Bond XXXV		
	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	9.64%	9.64%
	Interest	9.64	9.64
	Rep Schedule	12 annual installments from 31.05.2015	
6	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	
7	Bond XXXVII		
	Gross loan opening	45.35	45.35
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	45.35	45.35
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	45.35	45.35
	Average Loan	45.35	45.35
	Rate of Interest	9.25%	9.25%
	Interest	4.19	4.19
	Rep Schedule	12 annual installments from 26.12.2015	
	Total Loan		
	Gross loan opening	442.35	442.35
	Cumulative Repayment upto DOCO/previous year	0.00	2.08
	Net Loan-Opening	442.35	440.27
	Additions during the year	0.00	0.00
	Repayment during the year	2.08	4.33
	Net Loan-Closing	440.27	435.93
	Average Loan	441.31	438.10
	Rate of Interest	9.1818%	9.1824%
	Interest	40.52	40.23

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
Asset-3

(₹ in lakh)

	Details of Loan	2011-12	2012-13	2013-14
1	Bond XXXI			
	Gross loan opening	400.00	400.00	400.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	400.00	400.00	400.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	33.33
	Net Loan-Closing	400.00	400.00	366.67
	Average Loan	400.00	400.00	383.33
	Rate of Interest	8.90%	8.90%	8.90%
	Interest	35.60	35.60	34.12
	Rep Schedule	12 annual installments from 25.02.2014		
2	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		
3	Bond XXXIII			
	Gross loan opening	500.00	500.00	500.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	500.00	500.00	500.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	500.00	500.00	500.00
	Average Loan	500.00	500.00	500.00
	Rate of Interest	8.64%	8.64%	8.64%
	Interest	43.20	43.20	43.20
	Rep Schedule	12 annual installments from 08.07.2014		
4	Bond XXXIV			
	Gross loan opening	259.00	259.00	259.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	259.00	259.00	259.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00

	Net Loan-Closing	259.00	259.00	259.00
	Average Loan	259.00	259.00	259.00
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	22.90	22.90	22.90
	Rep Schedule	12 annual installments from 21.10.2014		
5	Bond XXXV			
	Gross loan opening	418.50	418.50	418.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	418.50	418.50	418.50
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	418.50	418.50	418.50
	Average Loan	418.50	418.50	418.50
	Rate of Interest	9.64%	9.64%	9.64%
	Interest	40.34	40.34	40.34
	Rep Schedule	12 annual installments from 31.05.2015		
	Total Loan			
	Gross loan opening	1677.50	1677.50	1677.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	8.33
	Net Loan-Opening	1677.50	1677.50	1669.17
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	8.33	41.67
	Net Loan-Closing	1677.50	1669.17	1627.50
	Average Loan	1677.50	1673.33	1648.33
	Rate of Interest	9.0157%	9.0153%	9.0155%
	Interest	151.24	150.86	148.61

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR ASSET-4** (₹ in lakh)

	Details of Loan	2011-12	2012-13	2013-14
1	Bond XXXIII			
	Gross loan opening	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	100.00	100.00	100.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	100.00	100.00	100.00
	Average Loan	100.00	100.00	100.00
	Rate of Interest	8.64%	8.64%	8.64%
	Interest	8.64	8.64	8.64
	Rep Schedule	12 annual installments from 08.07.2014		
2	Bond XXXIV			
	Gross loan opening	416.00	416.00	416.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	416.00	416.00	416.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	416.00	416.00	416.00
	Average Loan	416.00	416.00	416.00
	Rate of Interest	8.84%	8.84%	8.84%
	Interest	36.77	36.77	36.77
	Rep Schedule	12 annual installments from 21.10.2014		
3	Bond XXXV			
	Gross loan opening	312.33	312.33	312.33
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	312.33	312.33	312.33
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	312.33	312.33	312.33
	Average Loan	312.33	312.33	312.33
	Rate of Interest	9.64%	9.64%	9.64%
	Interest	30.11	30.11	30.11
	Rep Schedule	12 annual installments from 31.05.2015		
	Total Loan			
	Gross loan opening	828.33	828.33	828.33
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	828.33	828.33	828.33
	Additions during the year	0.00	0.00	0.00

Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	828.33	828.33	828.33
Average Loan	828.33	828.33	828.33
Rate of Interest	9.1175%	9.1175%	9.1175%
Interest	75.52	75.52	75.52

