

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 64/TT/2012

Coram:

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

Date of Hearing : 26.11.2013

Date of Order : 03.07.2014

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:-

(i) Combined asset of 400 kV D/C Mundra-Bachau (Triple Snowbird) Transmission line along with associated Bays at Bachau Substation (Extension), 400 kV D/C Bachau- Ranchodpura T/L with associated bays at Bachau and Ranchodpura S/S, 400 kV D/C Mundra-Limbdli Transmission Line (Triple Snowbird) with associated bays at Limbdli S/S and 400kV D/C Mundra- Jetpur line with associated bays at Jetpur S/S (GETCO),

(ii) Combined asset of New 400/220 kV Bachau Substation (Gujarat) and 1X63 MVAR Bus Reactor at Bachau Substation (New) along with associated bays, 400 kV Gandhar (NTPC)- Navsari line along with associated bays at Gandhar (NTPC) and Navsari (GIS) S/S, Navsari GIS S/S (New) and

(iii) Combined asset of 400/220 kV ICT-I at Bachau Substation along with associated 400 kV and 220 kV bays, 400/220 kV ICT-2 at Bachau Substation along with associated 400 kV and 220 kV bays, LILO of 220 kV D/C Kawas-Navsari line at Navsari GIS S/S & 400/220 kV ICT-I and ICT-2 along with associated bays at Navsari GIS S/S under ATS for Mundra (4000 MW) UMPP for the period from dates of commercial operation to 31.3.2014.

And



In the matter of:

Power Grid Corporation of India Limited, Gurgaon

.....**Petitioner**

Vs

1. Madhya Pradesh Power Trading 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.
9. Punjab State Electricity Board
The Mall, Patiala-147 001.
10. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula (Haryana)-134 109.
11. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur- 302 005.



12. Ajmer Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
13. Jodhpur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
14. Jaipur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
15. Costal Gujarat Power Limited
(A Tata power Company)
Tata Power Backbay Receiving Station
148, LT. GEN J Bhonsle Marg,
Nariman point, Mumbai-400 021

..... Respondents

- For petitioner** : Shri M. M. Mondal, PGCIL
Shri Prashant Sharma, PGCIL
Shri B. K. Sahoo, PGCIL
Shri S.S Raju, PGCIL
Ms. Sangeeta Edwards, PGCIL
Shri A. M. Pavgi, PGCIL
- For respondent** : Shri Padamjit Singh, PSPCL
Shri S. Lazarus, MPPMCL

ORDER

This petition has been filed seeking approval for determination of transmission tariff for (i) Combined asset of 400 kV D/C Mundra-Bachau (Triple Snowbird) Transmission line along with associated Bays at Bachau Substation (Extension), 400 kV D/C Bachau- Ranchodpura T/L with associated bays at Bachau and Ranchodpura S/S, 400 kV D/C Mundra-Limbdli Transmission Line (Triple Snowbird) with associated bays at Limbdli S/S and 400kV D/C Mundra- Jetpur line with associated bays at Jetpur S/S



(GETCO), (ii) Combined asset of New 400/220 kV Bachau Substation (Gujarat) and 1X63 MVAR Bus Reactor at Bachau Substation (New) along with associated bays, 400 kV Gandhar (NTPC)-Navsari line along with associated bays at Gandhar (NTPC) and Navsari (GIS) S/S, Navsari GIS S/S (New) and (iii) Combined asset of 400/220 kV ICT-I at Bachau Substation along with associated 400 kV and 220 kV bays, 400/220 kV ICT-2 at Bachau Substation along with associated 400 kV and 220 kV bays, LILO of 220 kV D/C Kawas- Navsari line at Navsari GIS S/S & 400/220 kV ICT-I and ICT-2 along with associated bays at Navsari GIS S/S under ATS for Mundra (4000 MW) UMPP for the period from dates of commercial operation to 31.3.2014. 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 transmission scheme was accorded by the petitioner's Board on 15.10.2008 at an estimated cost of ₹ 482412 lakh including IDC of ₹ 44686 lakh (based on 1st Quarter, 2008 price level). The project was scheduled to be commissioned within 48 months from the date of Investment Approval i.e by 1.11.2012.

3. The scope of work covered under the project is as follows:-

Part (A) : Transmission System of Mundra (4000 MW) UMPP.

Transmission Lines:

- (a) Mundra- Limbdi 400 kV D/C (Triple Snowbird)—301 km
- (b) Mundra- Bachchau- Ranchodpura 400 kV D/C (Triple snowbird)—388 km
- (c) Mundra- Jetpur 400 kV D/C (Triple snowbird)—328 km

Part (B) : Regional System Strengthening in WR for Mundra UMPP

Transmission Lines:-

- (a) Gandhar- Navsari 400 kV D/C—134 km
- (b) Navsari- Mumbai (New location) 400 kV D/C—204 km
- (c) LILO of both circuits of Kawas- Navsari 220 kV D/C at Navsari—50 km
- (d) Wardha- Aurangabad 400 kV D/C (Quad) along with 40 % Fixed Series Compensation with provision to upgrade the line to 1200 kV S/C at a later date.—400 km
- (e) Aurangabad- Aurangabad (MSETCL)- 400 kV D/C (Quad) line—30 km.

Sub-stations:-

- (a) Establishment of new 400/220 kV, 2X315 MVA Sub-station at Bachchau
- (b) Establishment of new 400/220 kV, 2X315 MVA GIS Sub-station at Navsari
- (c) Establishment of new 400 kV, GIS switching station at Mumbai (New location)
- (d) Establishment of 765/400 kV, 3X1500 MVA Sub-station at Wardha
- (e) 765 kV line bays for operation of Seoni- Wardha 2XS/C lines at 765 kV level
- (f) Establishment of 400/220 kV, 2X315 MVA, Sub-station at Aurangabad.

4. The details of the new assets and the anticipated dates of commercial operation (DOCO) for which petitioner has filed petition for determination of transmission tariff are as follows:-

Description	Anticipated DOCO
400 kV D/C Mundra –Jetpur line with associated bays at Jetpur S/S (GETCO) (hereinafter referred to as " Asset-1 ")	1.3.2012
400 kV Gandhar (NTPC)- Navsari line along with associated bays at Gandhar (NTPC) and Navsari (GIS)S/S, Navsari GIS S/S (New) (hereinafter referred to as " Asset-2 ")	1.3.2012
LILO of 220 kV D/C Kawas –Navsari line at Navsari GIS S/S & 400/220 kV ICT I and ICTII along with associated bays at Navsari GIS S/S (hereinafter referred to as " Asset-3 ")	1.3.2012

5. In response to the Commission's letter No. C-7/189(204)/2009-CERC dated 23.10.2009, the petitioner had clubbed the above assets with the following existing assets:-

Description	Notional Anticipated DOCO	Petition Reference
Combined Assets of 400 kV D/C Bachchau-Ranchodpura TL with associated bays at Bachchau and Ranchodpura S/S, 400 kV D/C Mundra- Limbdi TL (Triple Snowbird) with associated bays at Limbdi S/S and 400 kV D/C Mundra-Bachchau (Triple Snowbird) Transmission line along with associated bays at Bachchau Substation (Extension) (hereinafter referred to as " Asset-A ")	1.1.2012	Order dated 6.2.2012 in petition no. 104/TT/2012
New 400/220 kV Bachchau Substation (Gujarat) and 1*63 MVAR Bus Reactor at Bachchau Substation (New) along with associated bays (hereinafter referred to as " Asset-B ")	1.10.2011	Order dated 15.5.2013 in petition no. 105/TT/2011
Combined Asset of 400/220 kV ICT-I at Bachchau substation along with associated 400 kV and 220 kV bays & 400/220 kV ICT-II at Bachchau substation along with associated 400 kV and 220 kV bays (hereinafter referred to as " Asset-C ")	1.10.2011	

6. Accordingly, in the original petition, petitioner had prayed for determination of transmission tariff after clubbing 'Asset-1 with Asset-A', 'Asset-2 with Asset-B' and 'Asset-3 with Asset-C' from notional anticipated DOCO to 31.3.2014 based on the 2009 Tariff Regulations. Details of the combined assets and corresponding notional anticipated DOCOs is as follows:-

Assets	Notional anticipated DOCO
Combined Assets of 400 kV D/C Bachchao- Ranchodpura TL with associated bays at Bachau and Ranchodpura S/S, 400 kV D/C Mundra- Limbdi TL (Triple Snowbird) with associated bays at Limbdi S/S, 400 kV D/C Mundra-Bachchau (Triple Snowbird) Transmission line along with associated bays at Bachchau Substation (Extension) and 400 kV D/C Mundra – Jetpur line with associated bays at Jetpur S/S (GETCO) (hereinafter referred to as "Combined Asset-I")	1.3.2012
Combined assets of New 400/220 kV Bachchau Substation (Gujarat) and 1*63 MVAR Bus Reactor at Bachchau Substation (New) along with associated bays and 400 kV Gandhar (NTPC)- Navsari line along with associated bays at Gandhar (NTPC) and Navsari (GIS)S/S, Navsari GIS S/S (New) (hereinafter referred to as "Combined Asset-II")	1.3.2012
Combined Assets of 400/220 kV ICT-I at Bachchau Substation along with associated 400 kV and 220 kV lines bays, 400/220 kV ICT-2 at Bachchau Substation along with associated 400 kV and 220kV bays and LILO of 220 kV D/C Kawas –Navsari line at Navsari GIS S/S & 400/220 kV ICT I and ICTII alongwith associated bays at Navsari GIS S/S (hereinafter referred to as "Combined asset-III")	1.3.2012

7. Tariff for some of the assets mentioned above in project scope has been claimed vide Petition No. 105/TT/2011, 72/TT/2012, 104/TT/2012, 57/TT/2013, and 296/TT/2013. Some of the assets are still under construction.

8. As stated above, tariff for the assets covered in the instant petition was claimed from notional anticipated DOCO(s) to 31.3.2014. The petitioner, in reply to the queries regarding commissioning of the assets, submitted vide affidavit dated 27.7.2012 the revised anticipated DOCOs of the assets. Subsequently, petitioner vide affidavit dated 13.9.2013 referring to the

Commission's letter no. C7/189(204)2009-CERC dated 28.3.2012 de-clubbed the new assets from the existing assets i.e. Asset-A, Asset-B and Asset-C. Further, the petitioner has split the new assets into six parts and submitted separate management certificate and tariff forms accordingly vide affidavit dated 13.9.2013. Details of the split up assets along with the dates of commercial operation are as follows:-

As per Petition	As per affidavit dated 13.9.2013	DOCO
Asset-1: 400 kV D/C Mundra- Jetpur Transmission Line with associated bays at Jetpur S/S (GETCO) (Anticipated DOCO 1.3.2012)	Asset-1 (Part-A): 400 kV D/C Surajbari-Jetpur TL (Part of 400 kV D/C Mundra-Jetpur) (Triple snowbird) with associated bays at Jetpur (GETCO)	1.9.2012
	Asset-1 (Part-B): 400 kV D/C Mundra – Surajbari TL (Part of 400 kV D/C Mundra-Jetpur) (Triple snowbird)	1.1.2013
Asset-2: 400 kV Gandhar (NTPC) – Navsari Transmission line along with associated bays at Gandhar (NTPC) and Navsari (GIS) S/S, Navsari GIS S/S (New) (Anticipated DOCO 1.3.2012)	Asset-2 (Part-A): 400 kV Gandhar (NTPC) – Navsari TL ckt-II associated bays at Gandhar (NTPC) – Navsari (GIS) S/S, Navsari GIS S/S (new) and Bus reactor at Navsari GIS	1.8.2012
	Asset-2 (Part-B): 400 kV Gandhar (NTPC) – Navsari TL ckt-I associated bays at Gandhar (NTPC) & Navsari (GIS) S/S, Navsari GIS S/S (new)	1.11.2012
Asset-3: LILO of 220 kV D/C Kawas – Navsari Line at Navsari GIS S/S & 400/220 kV ICT-I and ICT-II along with associated bays at Navsari GIS S/S (Anticipated DOCO 1.3.2012)	Asset-3 (Part-A): LILO of 220 kV D/C Kawas – Navsari T/L at Navsari GIS S/S & 400/220 kV ICT-II alongwith associated bays at GIS S/S at Navsari	1.8.2012
	Asset-3 (Part-B): 400/220 kV ICT-I along with associated bays at Navsari GIS S/S	1.9.2012

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

(₹ in lakh)

Particulars	Asset 1(Part A)		Asset 1(Part B)	
	2012-13	2013-14	2012-13	2013-14
Depreciation	906.57	1596.42	432.67	1794.21
Interest on Loan	1082.99	1792.09	247.72	998.05
Return on equity	900.44	1585.47	429.74	1782.08
Interest on Working Capital	74.53	129.00	27.28	112.58
O & M Expenses	144.96	262.65	31.21	131.94
Total	3109.49	5365.63	1168.62	4818.86

(₹ in lakh)

Particulars	Asset 2(Part A)		Asset 2(Part B)	
	2012-13	2013-14	2012-13	2013-14
Depreciation	526.07	837.34	120.96	304.51
Interest on Loan	670.56	1014.65	146.40	348.92
Return on equity	560.87	900.18	119.94	301.86
Interest on Working Capital	49.63	78.62	11.77	29.23
O & M Expenses	166.18	276.37	51.60	130.92
Total	1973.31	3107.16	450.67	1115.67

(₹ in lakh)

Particulars	Asset 3(Part A)		Asset 3(Part B)	
	2012-13	2013-14	2012-13	2013-14
Depreciation	286.44	461.05	48.69	86.91
Interest on Loan	341.98	516.20	58.18	97.70
Return on equity	284.36	457.63	48.36	86.33
Interest on Working Capital	31.74	50.05	6.96	12.38
O & M Expenses	194.33	308.16	61.40	111.28
Total	1138.85	1793.09	223.59	394.60

10. Details of apportioned approved cost, capital cost as on actual date of commercial operation and estimated additional capitalization (hereinafter referred to as “addcap”) projected to be incurred for the assets covered in this petition are given overleaf:-

(₹ in lakh)

Particulars	Apportioned approved cost*	Exp. as on DOCO	Projected additional capitalization		Estimated capital cost up to 31.3.2014	Projected add cap for 2014-15	Total estimated completion cost
			2012-13	2013-14			
Asset-1 (Part-A)	30523.74	28855.63	1156.75	439.75	30452.13	475.73	30927.86
Asset-1 (Part-B)	31427.16	32137.04	1281.76	1124.87	34543.67	993.44	35537.11
Asset-2 (Part-A)	18052.07	15546.21	992.22	1253.04	17791.47	355.14	18146.61
Asset-2 (Part-B)	6094.87	5454.11	69.29	465.21	5988.61	95.74	6084.35
Asset-3 (Part-A)	9520.44	7851.58	563.40	622.36	9037.34	232.18	9269.52
Asset-3 (Part-B)	1767.69	1567.73	26.15	104.42	1698.30	0.74	1699.04
Total	97385.97	91412.30	4089.57	4009.65	99511.52	2152.97	101664.49

11. None of the respondents had filed reply to the petition till the final hearing of the case. However, during hearing on 26.11.2013, the representative of MPPMCL filed the reply and representative of PSPCL sought some time to file reply in the matter. The representative of the petitioner sought time to file rejoinder to both the replies of MPPMCL and PSPCL, if filed. PSPCL was directed to file its reply by 15.12.2013 and PGCIL to file its rejoinder, if any, by 25.12.2013. However, PSPCL did not file any reply.

12. The petitioner, vide its rejoinder dated 12.2.2014, submitted that the following benefits were envisaged by early commissioning (DOCO as 1.9.2012) of the Jetpur-Surajbari line (part of 400 kV Mundra –Jetpur D/C Transmission line):-

- (i) Improved power stability in evacuation of power generated from Mundra UMPP.
- (ii) Improved power stability to 400 kV Jetpur substation.
- (iii) Considerable reduction in loading of 400 kV S/C Hadala – Jetpur and 220 kV D/C Hadala – Nyara lines.
- (iv) To cater anticipated rise in agriculture power supply demand (700-800 MW) of Saurashtra area from August onwards , mainly fed from 400 kV Jetpur and Amreli substation.

M/s GETCO had requested for LILO (Loop in & Loop out) of existing 400 kV D/C Mundra – Limbdi line with under construction 400 kV Surajbari – Jetpur part of 400 kV D/C Mundra – Jetpur line along with 2 nos. of bays at Jetpur (GETCO) Substation for providing temporary relief of loading at 400 kV Hadala (GETCO) S/S until the entire 400 kV Mundra –Jetpur line is complete & commissioned.

The issue (interim arrangement for re-configuration of one circuit of Mundra-Limbdi 400 kV D/C line for LILO at Jetpur) was discussed and agreed in the 35th Standing Committee on 3.1.2013. Further, MD-GETCO also informed that the above interim arrangement has helped them in meeting the increased demand of Saurashtra.

13. Having heard the representatives of the parties and perused the material on records, we proceed to dispose of the petition addressing the above concerns in the respective paragraphs.

Capital cost

14. As regards the capital cost, Regulation 7 of the 2009 Tariff Regulations provides as under:-

“(1) Capital cost for a project shall include:-

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.
- (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
- (c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

15. Details of the capital cost as on the dates of commercial operation of the assets claimed by the petitioner as per separate management certificates dated 3.8.2013, are as follows:-

(₹ in lakh)

Asset	Capital cost
Asset-1 (Part-A)	28855.63
Asset-1 (Part-B)	32137.04
Asset-2 (Part-A)	15546.21
Asset-2 (Part-B)	5454.11
Asset-3 (Part-A)	7851.58
Asset-3 (Part-B)	1567.73

Cost over-run

16. The petitioner has claimed projected additional capital expenditure for the instant assets for the year 2014-15, which is within the cut-off date but beyond the current tariff block i.e. 2009-14. We are inclined to allow additional capital expenditure incurred only upto 2013-14 and the projected additional capital expenditure for the year 2014-15 will be considered during the next tariff period.

17. The total estimated capital cost up to 31.3.2014 of all the assets covered in the instant petition falls within the apportioned approved cost except for Asset-1 (Part-B) where estimated capital cost up to 31.3.2014 exceeds apportioned approved cost by ₹ 3116.51 lakh. During the hearing on 26.11.2013, in response to the query of the Commission, the representative of the petitioner submitted the completion cost of the project is within the approved cost and hence there is no need to file the RCE. In accordance with the judgment dated 28.11.2013 of the Hon'ble Appellate Tribunal for Electricity in Appeal No. 165 of 2012, the Commission, vide its order dated 18.2.2014 in Petition number 216/TT/2012, has considered the apportioned approved cost of individual asset for restricting the capital expenditure due to

cost-overrun for the purpose of tariff determination. Accordingly, the same approach has been adopted in present case and capital expenditure has been restricted to apportioned approved cost in case of Asset 1 (Part-B). However, the same will be reviewed on the submission of actual expenditure or revised apportioned approved cost, as the case may be, at the time of truing up.

Time over-run

18. As per investment approval dated 15.10.2008, the assets were scheduled to be commissioned within 48 months from the date of investment approval i.e. by 1.11.2012. Against this, Asset-1 (Part-A), Asset-1 (Part-B), Asset-2 (Part-A), Asset-2 (Part-B), Asset-3 (Part-A) and Asset-3 (Part-B) were put under commercial operation on 1.9.2012, 1.1.2013, 1.8.2012, 1.11.2012, 1.8.2012 and 1.9.2012 respectively. Accordingly, there is a delay of 2 months in case of Asset-1 (Part-B).

19. The petitioner has submitted, vide affidavit dated 12.2.2014, that the time over-run is due to severe ROW issues. It has been stated that due to high prevailing price of land, the land owners were demanding higher compensation than the compensation fixed by the District Administration of Bhuj. The petitioner has submitted that in order to resolve the RoW issues, number of meetings with villagers and District Administration were held during construction of lines. The petitioner has also submitted that it was advised by the District Administration to directly negotiate with land owners and resolve the RoW issues. Accordingly, higher compensation was paid and the RoW issues were settled. It is observed that the petitioner has approached the

authorities to resolve the RoW/compensation issue on 4.9.2010 and they were resolved on 7.2.2011. It took about 5 months to resolve the issue. We are convinced that the delay of two months was attributable to reasons beyond the control of the petitioner and accordingly we condone time over-run of two months.

Initial Spares

20. 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%

21. Details of the date of commercial operation, cut- off date and the initial spares claimed by the petitioner are as follows:-

(₹ in lakh)

Assets	DOCO	Cut-off date	Elements	
Asset-1 (Part-A)	1.9.2012	31.3.2015	Transmission Line	100.74
			Sub-station	134.75
Asset-1 (Part-B)	1.1.2013	31.3.2016	Transmission Line	100.70
Asset-2 (Part-A)	1.8.2012	31.3.2015	Transmission Line	43.82
			Sub-station	99.01
Asset-2 (Part-B)	1.11.2012	31.3.2015	Transmission Line	43.82
			Sub-station	169.11
Asset-3 (Part-A)	1.8.2012	31.3.2015	Transmission Line	3.99
			Sub-station	291.23
Asset-3 (Part-B)	1.9.2012	31.3.2015	Sub-station	44.00

22. The petitioner has submitted that the Investment Approval of the project was accorded in October, 2008, i.e. during the 2004-09 tariff period

and accordingly initial spares were procured as per the 2004 Tariff Regulations. During the 2004-09 tariff period the upper cap for initial spares was 1.5% of the capital cost and there was upper limit individually for sub-station or transmission line. The petitioner has requested to allow initial spares as per the provisions of 2004 Tariff Regulations as the project was conceived during the 2004-09 tariff period. The petitioner has further requested to relax Regulation 8 of the 2009 Tariff Regulations and allow higher initial spares than specified by invoking Regulation 44 of the 2009 Tariff Regulations.

23. MPPMCL has submitted that since the instant assets are put under commercial operation during current 2009 -14 tariff period, the initial spares should be allowed as per 2009 Tariff Regulations and not as per the 2004 Tariff Regulations as prayed by the petitioner. Further, the respondent has strongly objected to invocation of Power to Relax under Regulation 44 of 2009 Tariff Regulations to allow higher % of initial spares. MPPMCL has also submitted that the petitioner has adopted an incorrect approach by including the of cost of PLCC, land, building, civil works and colony as part of the sub-station along with sub-station and lines for working out the percentage of initial spares to be capitalized.

24. We have considered the submissions of the petitioner and MPPMCL regarding initial spares. As the transmission assets covered in the instant petition were commissioned during the 2009-14 period, we are inclined to

allow initial spares as per the norms applicable for the 2009-14 period, i.e the 2009 Tariff Regulations. This has been our approach in all earlier petitions and we would not like to deviate from it. Further, we do not find any reason to relax Regulation 8 of the 2009 Tariff Regulations and allow higher initial spares as prayed by the petitioner. As regards MPPMCL's contention that cost of PLCC, land, building, civil works and colony should not form part of the cost of the sub-station, we would like to clarify that the norms for initial spares for sub-station specified in the 2009 Tariff Regulations were worked out by considering the cost pertaining to land, building, civil works and PLCC and hence the cost of these elements has been included for working out the initial spares for sub-station.

25. The petitioner has claimed projected additional capital expenditure pertaining to the year 2014-15, which is within the cut-off date but beyond current tariff block i.e. 2009-14. As stated in para 16 of this order, the tariff is being approved for the tariff block 2009-14, as such we have taken into account only the projected additional capital expenditure within the current tariff period. Accordingly, initial spares have been worked out considering projected additional capitalization only up to 31.3.2014.

26. Based on the above, initial spares claimed for Asset-1 (Part-A), Asset-2 (Part-B), Asset-3 (Part-A) and Asset-3 (Part-B) pertaining to Transmission Line and/or substation, as the case may be, exceed the ceiling limit defined under regulation 8 of 2009 Tariff Regulations whereas initial spares claimed for rest of the assets falls within the ceiling limit. Detail of the excess initial

spares claimed in case of Asset-1 (Part-A) and Asset-2 (Part-B), Asset-3 (Part-A) and Asset-3 (Part-B) is given below. Since the instant assets are put under commercial operation during current 2009 -14 tariff period, the initial spares should be allowed as per 2009 Tariff Regulations and not as per the 2004 Tariff Regulations as prayed by the petitioner:-

(₹ in lakh)

Calculation of Initial Spares						
Particulars	Elements	Capital Cost pertaining to T/L or S/S (including Land, building, PLCC) up to 31.3.2014	Initial Spares Claimed	Ceiling Limits as per clause 8 Regulation 2009	Initial Spares worked out	Excess Initial Spares
		(a)	(b)	(c)	$(d) = \frac{(a-b) * (c)}{100 - (c)}$	(e) = (d)-(b)
Asset-1 (Part-A)	S/S	2282.30	134.75	2.50%	55.07	(79.68)
Asset-2 (Part-B)	T/L	2398.62	43.82	0.75%	17.79	(26.03)
	S/S	3589.99	169.11	2.50%	87.71	(81.40)
Asset-3 (Part-A)	S/S	5132.07	291.23	2.50%	124.12	(167.11)
Asset-3 (Part-B)	S/S	1698.30	44.00	2.5%	42.42	(1.58)

27. Excess initial spares claimed have been deducted from the capital expenditure of the respective element i.e. Transmission Line and Sub-Station as on dates of commercial operation. Needless to add that apart from the review at the time of truing up, the petitioner is also at liberty to claim the excess initial spares based on the projected additional capital expenditure during the next tariff period in accordance with law.

28. Considering the cost over-run, time over-run and excess initial spares, detail of the capital cost considered as on date of commercial operation for the purpose of the tariff calculation is as follows:-

(₹ in lakh)

Particular	Asset-1 (Part-A)	Asset-1 (Part-B)	Asset-2 (Part-A)	Asset-2 (Part-B)	Asset-3 (Part-A)	Asset-3 (Part-B)
Apportioned approved cost	30523.74	31427.16	18052.07	6094.87	9520.44	1767.69
Capital cost claimed as on DOCO (A)	28855.63	32137.04	15546.21	5454.11	7851.58	1567.73
Less: Cost overrun as on DOCO (B)	0.00	(709.88)	0.00	0.00	0.00	0.00
Less: Excess Initial Spares (C)	(79.68)	0.00	0.00	(107.42)	(167.11)	(1.58)
Capital Cost considered as on DOCO (A)-(B)-(C)	28775.95	31427.16	15546.21	5346.69	7684.47	1566.15

Additional Capital Expenditure

29. As regards additional capital expenditure Regulation 9(1) of the 2009

Tariff Regulations provides as under:-

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

- (i) Undischarged liabilities;
- (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.”

30. Further, the 2009 Tariff Regulations defines cut-off date as-

“cut-off date means 31st march of the year closing after 2 years of the year of commercial operation of the project, and incase of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation”.

31. Details of the projected additional capital expenditure claimed by the petitioner are as under:-

(₹ in lakh)		
Particulars	2012-13	2013-14
Asset-1 (Part-A)		
Claimed and considered		
Transmission Line	629.09	323.37
Sub-Station Equipments	527.66	87.43
PLCC	0.00	28.95
Total	1156.75	439.75
Asset-1 (Part-B)		
Claimed		
Transmission Line	1281.76	1124.87
Asset-2 (Part-A)		
Claimed and Considered		
Building, Civil work & Colony	381.87	764.72
Transmission Line	290.27	25.49
Sub-Station Equipments	320.08	447.23
PLCC	0.00	15.60
Total	992.22	1253.04
Asset-2 (Part-B)		
Claimed and Considered		
Transmission Line	0.00	22.49
Sub-Station Equipments	69.29	427.12
PLCC	0.00	15.60
Total	69.29	465.21
Asset-3 (Part-A)		
Claimed and Considered		
Transmission Line	484.95	293.31
Sub-Station Equipments	78.45	313.27
PLCC	0.00	15.78
Total	563.40	622.36
Asset-3 (Part-B)		
Claimed and Considered		
Sub-Station Equipment	26.15	104.42

32. Additional capital expenditure claimed by the petitioner falls within the cut-off date and is mainly on account of balance and retention payments. Hence, the same has been allowed for the purpose of tariff determination

under Regulations 9 (1) of the 2009 Tariff Regulations in respect of all the assets covered in the instant petition, except for Asset-1 (Part B). Projected additional capital expenditure in respect of Asset-1 (Part-B) has not been considered due to cost over-run and the same will be reviewed at the time of truing up based on actual additional capital expenditure and/or revised apportioned approved cost, as the case may be.

Debt- Equity Ratio

33. 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.”

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

(₹ in lakh)

Asset-1(Part-A)	AppORTIONED APPROVED COST		Cost as on Date of commercial operation	
	Amount	%	Amount	%
Debt	21366.62	70.00	20143.16	70.00
Equity	9157.12	30.00	8632.78	30.00
Total	30523.74	100.00	28775.95	100.00
Asset-1(Part-B)	Amount	%	Amount	%
Debt	21999.01	70.00	21999.01	70.00
Equity	9428.15	30.00	9428.15	30.00
Total	31427.16	100.00	31427.16	100.00
Asset-2 (Part-A)	Amount	%	Amount	%
Debt	12636.45	70.00	10882.35	70.00
Equity	5415.62	30.00	4663.86	30.00
Total	18052.07	100.00%	15546.21	100.00
Asset-2 (Part-B)	Amount	%	Amount	%
Debt	4266.41	70.00	3742.68	70.00
Equity	1828.46	30.00	1604.01	30.00
Total	6094.87	100.0	5346.69	100.00
Asset-3 (Part-A)	Amount	%	Amount	%
Debt	6664.31	70.00	5379.13	70.00
Equity	2856.13	30.00	2305.34	30.00
Total	9520.44	100.00	7684.47	100.00
Asset-3 (Part-B)	Amount	%	Amount	%
Debt	1237.38	70.00	1096.30	70.00
Equity	530.31	30.00	469.84	30.00
Total	1767.69	100.00	1566.15	100.00

35. Debt-equity ratio in respect of additional capital expenditure are given overleaf:-

(₹ in lakh)

Particulars	Asset-1 (Part-A)		Asset-2 (Part-A)	
	Amount	%	Amount	%
	Normative		Normative	
	2012-13		2012-13	
Debt	809.73	70.00	694.55	70.00
Equity	347.03	30.00	297.67	30.00
Total	1156.75	100.00	992.22	100.00
Particulars	2013-14		2013-14	
Debt	307.83	70.00	877.13	70.00
Equity	131.93	30.00	375.91	30.00
Total	439.75	100.00	1253.04	100.00
Particulars	Asset-1 (Part-B)		Asset-2 (Part-B)	
		%		%
	Normative		Normative	
	2012-13		2012-13	
Debt	Not Considered due to cost overrun		48.50	70.00
Equity			20.79	30.00
Total			69.29	100.00
Particulars	2013-14		2013-14	
Debt	Not Considered due to cost overrun		325.65	70.00
Equity			139.56	30.00
Total			465.21	100.00
Particulars	Asset-3 (Part-A)		Asset-3 (Part-B)	
		%		%
	Normative		Normative	
	2012-13		2012-13	
Debt	394.38	70.00	18.31	70.00
Equity	169.02	30.00	7.85	30.00
Total	563.40	100.00	26.15	100.00
Particulars	2013-14		2013-14	
Debt	435.65	70.00	73.09	70.00
Equity	186.71	30.00	31.33	30.00
Total	622.36	100.00	104.42	100.00

36. Detail of debt-equity ratio of assets as on 31.3.2014 is as follows:-

(₹ in lakh)

Asset-1(Part-A)	Apportioned Approved Cost		As on 31.3.2014	
	Amount	%	Amount	%
Debt	21366.62	70.00	21260.71	70.00
Equity	9157.12	30.00	9111.73	30.00
Total	30523.74	100.00	30372.45	100.00
Asset-1(Part-B)	Amount	%	Amount	%
Debt	21999.01	70.00	21999.01	70.00
Equity	9428.15	30.00	9428.15	30.00
Total	31427.16	100.00	31427.16	100.00
Asset-2 (Part-A)	Amount	%	Amount	%
Debt	12636.45	70.00	12454.03	70.00
Equity	5415.62	30.00	5337.44	30.0
Total	18052.07	100.00	17791.47	100.00
Asset-2 (Part-B)	Amount	%	Amount	%
Debt	4266.41	70.00	4116.83	70.00
Equity	1828.46	30.00	1764.36	30.00
Total	6094.87	100.00	5881.19	100.00
Asset-3 (Part-A)	Amount	%	Amount	%
Debt	6664.31	70.00	6209.17	70.00
Equity	2856.13	30.00	2661.07	30.00
Total	9520.44	100.00	8870.23	100.00
Asset-3 (Part-B)	Amount	%	Amount	%
Debt	1237.38	70.00	1187.70	70.00
Equity	530.31	30.00	509.02	30.00
Total	1767.69	100.00	1696.72	100.00

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

Return on Equity

38. Regulation 15 of the 2009 Tariff Regulations provides that:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of

the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations".

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

40. Details of Return on Equity calculated are given overleaf:-

(₹ in lakh)

Particulars	Asset 1(A)		Asset 1(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Opening Equity	8632.78	8979.81	9428.15	9428.15
Addition due to Additional Capitalisation	347.03	131.93	0.00	0.00
Closing Equity	8979.81	9111.73	9428.15	9428.15
Average Equity	8806.30	9045.77	9428.15	9428.15
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	898.00	1581.29	412.03	1648.13
	Asset 2(A)		Asset 2(B)	
Particulars	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Opening Equity	4663.86	4961.53	1604.01	1624.79
Addition due to Additional Capitalisation	297.67	375.91	20.79	139.56
Closing Equity	4961.53	5337.44	1624.79	1764.36
Average Equity	4812.69	5149.48	1614.40	1694.57
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	560.87	900.18	117.59	296.23
	Asset 3(A)		Asset 3(B)	
Particulars	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Opening Equity	2305.34	2474.36	469.84	477.69
Addition due to Additional Capitalisation	169.02	186.71	7.85	31.33
Closing Equity	2474.36	2661.07	477.69	509.02
Average Equity	2389.85	2567.71	473.77	493.35
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)	278.51	448.86	48.31	86.24

Interest on Loan

41. 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.”

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

- (a) Gross amount of loan, repayment of instalments & rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition.
- (b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period.
- (c) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.
- (d) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

43. Detailed calculation of the weighted average rate of interest has been given in Annexure 1 to 6 to this order.

44. Details of Interest on Loan calculated are given overleaf:-

(₹ in lakh)

Particulars	Asset 1(A)		Asset 1(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Gross Normative Loan	20143.16	20952.89	21999.01	21999.01
Cumulative Repayment upto Previous Year	0.00	904.11	0.00	414.84
Net Loan-Opening	20143.16	20048.77	21999.01	21584.18
Addition due to Additional Capitalisation	809.73	307.83	0.00	0.00
Repayment during the year	904.11	1592.21	414.84	1659.35
Net Loan-Closing	20048.77	18764.39	21584.18	19924.82
Average Loan	20095.97	19406.58	21791.59	20754.50
Weighted Average Rate of Interest on Loan	9.2135%	9.2101%	4.3597%	4.4442%
Interest	1080.06	1787.37	237.51	922.38
Particulars	Asset 2(A)		Asset 2(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Gross Normative Loan	10882.35	11576.90	3742.68	3791.19
Cumulative Repayment upto Previous Year	0.00	526.07	0.00	118.60
Net Loan-Opening	10882.35	11050.83	3742.68	3672.59
Addition due to Additional Capitalisation	694.55	877.13	48.50	325.65
Repayment during the year	526.07	837.34	118.60	298.83
Net Loan-Closing	11050.83	11090.62	3672.59	3699.40
Average Loan	10966.59	11070.73	3707.63	3685.99
Weighted Average Rate of Interest on Loan	9.1719%	9.1652%	9.2910%	9.2896%
Interest	670.56	1014.65	143.53	342.41
Particulars	Asset 3(A)		Asset 3(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Gross Normative Loan	5379.13	5773.51	1096.30	1114.61
Cumulative Repayment upto Previous Year	0.00	280.56	0.00	48.64
Net Loan-Opening	5379.13	5492.95	1096.30	1065.97
Addition due to Additional Capitalisation	394.38	435.65	18.31	73.09
Repayment during the year	280.56	452.23	48.64	86.83
Net Loan-Closing	5492.95	5476.38	1065.97	1052.23
Average Loan	5436.04	5484.67	1081.14	1059.10
Weighted Average Rate of Interest on Loan	9.2426%	9.2320%	9.2159%	9.2159%
Interest	334.95	506.35	58.12	97.61

Depreciation

45. Regulation 17 of the 2009 Tariff Regulations provides for computation of depreciation in the following manner, namely:

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

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

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

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

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

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

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

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

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

46. Asset-1 (Part-A), Asset-1 (Part-B), Asset-2 (Part-A), Asset-2 (Part-B), Asset-3 (Part-A) and Asset-3 (Part-B) were put under commercial operation on 1.9.2012, 1.1.2013, 1.8.2012, 1.11.2012, 1.8.2012 and 1.9.2012

respectively. Accordingly assets will complete 12 years beyond 2013-14. Thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of Tariff Regulation 2009-14.

47. Details of the depreciation worked out are as follows:-

(₹ in lakh)

Particulars	Asset 1(A)		Asset 1(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Opening Gross Block	28775.95	29932.70	31427.16	31427.16
Addition during 2009-14 due to Projected Additional Capitalisation	1156.75	439.75	0.00	0.00
Closing Gross Block	29932.70	30372.45	31427.16	31427.16
Average Gross Block	29354.32	30152.57	31427.16	31427.16
Rate of Depreciation	5.2800%	5.2805%	5.2800%	5.2800%
Depreciable Value	26418.89	27137.31	28284.44	28284.44
Remaining Depreciable Value	26418.89	26233.20	28284.44	27869.61
Depreciation	904.11	1592.21	414.84	1659.35
Particulars	Asset 2(A)		Asset 2(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Opening Gross Block	15546.21	16538.43	5346.69	5415.98
Addition during 2009-14 due to Projected Additional Capitalisation	992.22	1253.04	69.29	465.21
Closing Gross Block	16538.43	17791.47	5415.98	5881.19
Average Gross Block	16042.32	17164.95	5381.33	5648.58
Rate of Depreciation	4.9189%	4.8782%	5.2894%	5.2904%
Depreciable Value	13704.80	14715.17	4843.20	5083.73
Remaining Depreciable Value	13704.80	14189.10	4843.20	4965.13
Depreciation	526.07	837.34	118.60	298.83
Particulars	Asset 3(A)		Asset 3(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Opening Gross Block	7684.47	8247.87	1566.15	1592.30
Addition during 2009-14 due to Projected Additional Capitalisation	563.40	622.36	26.15	104.42
Closing Gross Block	8247.87	8870.23	1592.30	1696.72
Average Gross Block	7966.17	8559.05	1579.22	1644.51
Rate of Depreciation	5.2828%	5.2836%	5.2800%	5.2800%
Depreciable Value	7169.56	7703.15	1421.30	1480.06
Remaining Depreciable Value	7169.56	7422.59	1421.30	1431.42
Depreciation	280.56	452.23	48.64	86.83

Operation & Maintenance Expenses (O&M Expenses)

48. Clause (g) of regulation 19 of the 2009 Tariff Regulations prescribes the norms for O&M 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:-

Elements	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C, twin conductor T/Line (₹ lakh/km)	0.627	0.663	0.701	0.741	0.783
400 kV D/C, single conductor T/Line	0.269	0.284	0.301	0.318	0.336
765 kV bays (₹ lakh/km)	73.36	77.56	81.99	86.68	91.64
400 kV bays (₹ lakh/km)	52.40	55.40	58.57	61.92	65.46

49. Based on the above norms, the following O&M Expenses are allowed:-

(₹ in lakh)

Element	2012-13	2013-14
(Asset-I (a))	(Pro-rata)	
168.242 km D/C triple conductor Surajbari- Jetpur T/L	72.72	131.73
2 nos. 400 kV bays	72.24	130.92
Total O&M Expenses – Asset-I(a)	144.96	262.65
Asset-I (b):	(Pro-rata)	
168.5 km, D/C triple conductor, Mundra- Surabari, T/L,	31.21	131.94
Total O&M Expenses	31.21	131.94
(Asset-II (a):	(Pro-rata)	
102.152 km, 400 kV D/C twin conductor, Gandhar- Navsari T/L:	50.46	79.99
3 nos. 400 kV bays	123.84	196.38
Total O&M Expenses	174.30	276.37
Asset-II(b):	(Pro-rata)	
2 no. 400 kV bay	51.60	130.92

Total O&M Expenses	51.60	130.92
Asset-III (a):	(Pro-rata)	
40.49 km, 220 kV D/C single conductor, LILO of Kawas-Navsari T/L	8.58	13.60
1 no., 400 kV bay	41.28	65.46
5 nos., 220 kV bays	144.47	229.10
Total O&M expenses	194.33	308.16
Asset – III (b)	(Pro-rata)	
1 no., 400 kV bay	36.12	65.46
1 no., 220 kV bays	25.28	45.82
	61.40	111.28

50. 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 additional manpower cost on account of wage revision (if any) during the tariff block 2009-14 for claiming in the tariff.

51. In this order, we have allowed O&M Expenses as per the existing norms only. As regards the petitioner's submission regarding revision in the norms for O&M Expenses due to impact of wage revision, we would like to clarify that the Commission has already 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. We feel that it is premature to examine the issue raised

by the petitioner. A view will be taken by the Commission as and when the petitioner approaches the Commission.

Interest on Working Capital

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

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables will be equivalent to two months' 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 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M Expenses

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

Interest on working capital has been worked out considering interest rate @ 13.50% (Base rate as on 1.4.2012 i.e. 10% and 350 basis points) for asset.

53. Necessary computations in support of interest on working capital are as follows:-

(₹ in lakh)

Particulars	Asset 1(A)		Asset 1(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Maintenance Spares	37.28	39.40	18.73	19.79
O&M Expenses	20.71	21.89	10.40	11.00
Receivables	886.14	892.04	747.88	744.41
Total	944.12	953.32	777.01	775.20
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	74.35	128.70	26.22	104.65
Particulars	Asset 2(A)		Asset 2(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Maintenance Spares	39.22	41.46	18.58	19.64
O&M Expenses	21.79	23.03	10.32	10.91
Receivables	495.47	517.86	177.16	182.87
Total	556.48	582.35	206.06	213.42
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	50.08	78.62	11.59	28.81
Particulars	Asset 3(A)		Asset 3(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Maintenance Spares	43.72	46.22	15.79	16.69
O&M Expenses	24.29	25.68	8.77	9.27
Receivables	279.92	294.17	63.84	65.72
Total	347.93	366.07	88.40	91.69
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	31.31	49.42	6.96	12.38

Transmission Charges

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

(₹ in lakh)

Particulars	Asset 1(A)		Asset 1(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Depreciation	904.11	1592.21	414.84	1659.35
Interest on Loan	1080.06	1787.37	237.51	922.38
Return on equity	898.00	1581.29	412.03	1648.13
Interest on Working Capital	74.35	128.70	26.22	104.65
O & M Expenses	144.96	262.65	31.21	131.94
Total	3101.49	5352.22	1121.82	4466.46

(₹ in lakh)

Particulars	Asset 2(A)		Asset 2(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Depreciation	526.07	837.34	118.60	298.83
Interest on Loan	670.56	1014.65	143.53	342.41
Return on Equity	560.87	900.18	117.59	296.23
Interest on Working Capital	50.08	78.62	11.59	28.81
O & M Expenses	174.30	276.37	51.60	130.92
Total	1981.88	3107.16	442.91	1097.21

(₹ in lakh)

Particulars	Asset 3(A)		Asset 3(B)	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Depreciation	280.56	452.23	48.64	86.83
Interest on Loan	334.95	506.35	58.12	97.61
Return on Equity	278.51	448.86	48.31	86.24
Interest on Working Capital	31.31	49.42	6.96	12.38
O & M Expenses	194.33	308.16	61.40	111.28
Total	1119.67	1765.01	223.43	394.34

Other issues

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

56. 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.

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

58. 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 from time to time.

59. This order disposes of Petition No. 64/TT/2012.

sd/-

(A. K. Singhal)
Member

sd/-

(M. Deena Dayalan)
Member

sd/-

(Gireesh B. Pradhan)
Chairperson



Calculation of Weighted Average Rate of Interest on Actual Loans

		(₹ in lakh)	
	Details of Loan	2012-13	2013-14
1	Bond XXIX		
	Gross loan opening	2220.00	2220.00
	Cumulative Repayment upto DOCO/previous year	0.00	185.00
	Net Loan-Opening	2220.00	2035.00
	Additions during the year	0.00	0.00
	Repayment during the year	185.00	185.00
	Net Loan-Closing	2035.00	1850.00
	Average Loan	2127.50	1942.50
	Rate of Interest	9.20%	9.20%
	Interest	195.73	178.71
	Rep Schedule	12 annual installments from 12.3.2013	
2	Bond XXX		
	Gross loan opening	2330.00	2330.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2330.00	2330.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	194.17
	Net Loan-Closing	2330.00	2135.83
	Average Loan	2330.00	2232.92
	Rate of Interest	8.80%	8.80%
	Interest	205.04	196.50
	Rep Schedule	12 Equal Annual Installments from 29.9.2013	
3	BOND-XXXI		
	Gross loan opening	2400.00	2400.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2400.00	2400.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	200.00
	Net Loan-Closing	2400.00	2200.00
	Average Loan	2400.00	2300.00
	Rate of Interest	8.90%	8.90%
	Interest	213.60	204.70
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	

4	Bond XXXIII		
	Gross loan opening	1000.00	1000.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1000.00	1000.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1000.00	1000.00
	Average Loan	1000.00	1000.00
	Rate of Interest	8.640%	8.640%
	Interest	86.40	86.40
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
5	Bond XXXIV		
	Gross loan opening	60.00	60.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	60.00	60.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	60.00	60.00
	Average Loan	60.00	60.00
	Rate of Interest	8.84%	8.84%
	Interest	5.30	5.30
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
6	Bond XXXVI		
	Gross loan opening	8202.72	8202.72
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	8202.72	8202.72
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	8202.72	8202.72
	Average Loan	8202.72	8202.72
	Rate of Interest	9.350%	9.35%
	Interest	766.95	766.95
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
7	Bond XXXII		
	Gross loan opening	290.00	290.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	290.00	290.00
	Additions during the year	0.00	0.00

	Repayment during the year	0.00	24.17
	Net Loan-Closing	290.00	265.83
	Average Loan	290.00	277.92
	Rate of Interest	8.840%	8.84%
	Interest	25.64	24.57
	Rep Schedule	12 Equal Annual Installments from 29.3.2014	
8	Bond XL		
	Gross loan opening	296.22	296.22
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	296.22	296.22
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	296.22	296.22
	Average Loan	296.22	296.22
	Rate of Interest	9.300%	9.300%
	Interest	27.55	27.55
	Rep Schedule	12 Equal Annual Installments from 28.6.2016	
9	Bond XLI (AddCap for 2012-13 DRAWL ON 19.10.2012)		
	Gross loan opening	0.00	809.73
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	809.73
	Additions during the year	809.73	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	809.73	809.73
	Average Loan	404.87	809.73
	Rate of Interest	8.85%	8.85%
	Interest	35.83	71.66
	Rep Schedule	12 annual instalments from 19.10.2016	
10	Bond XXXV		
	Gross loan opening	3400.00	3400.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3400.00	3400.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	3400.00	3400.00
	Average Loan	3400.00	3400.00
	Rate of Interest	9.64%	9.64%
	Interest	327.76	327.76
	Rep Schedule	12 Annual Instalments from 31.5.2015	
	Total Loan		

	Gross loan opening	20198.94	21008.67
	Cumulative Repayment upto DOCO/previous year	0.00	185.00
	Net Loan-Opening	20198.94	20823.67
	Additions during the year	809.73	0.00
	Repayment during the year	185.00	603.33
	Net Loan-Closing	20823.67	20220.34
	Average Loan	20511.31	20522.00
	Rate of Interest	9.2135%	9.2101%
	Interest	1889.80	1890.10

Annexure 2

(₹ in lakh)

	Details of Loan	2012-13	2013-14
1	IBRD V		
	Gross loan opening	15535.80	15535.80
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	15535.80	15535.80
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	15535.80	15535.80
	Average Loan	15535.80	15535.80
	Rate of Interest	2.00%	2.00%
	Interest	310.72	310.72
	Rep Schedule	49 half yearly installments from 15.1.2015	
2	Bond XXX		
	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	8.33
	Net Loan-Closing	100.00	91.67
	Average Loan	100.00	95.83
	Rate of Interest	8.80%	8.80%
	Interest	8.80	8.43
	Rep Schedule	12 Equal Annual Installments from 29.9.2013	
3	BOND-XXXI		
	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	8.33
	Net Loan-Closing	100.00	91.67
	Average Loan	100.00	95.83
	Rate of Interest	8.90%	8.90%
	Interest	8.90	8.53
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
4	Bond XXXIII		
	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	8.640%	8.640%
	Interest	8.64	8.64
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
5	Bond XXXIV		
	Gross loan opening	17.00	17.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	17.00	17.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	17.00	17.00
	Average Loan	17.00	17.00
	Rate of Interest	8.84%	8.84%
	Interest	1.50	1.50
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
6	Bond XXXVI		
	Gross loan opening	1402.80	1402.80
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1402.80	1402.80
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1402.80	1402.80
	Average Loan	1402.80	1402.80
	Rate of Interest	9.350%	9.35%
	Interest	131.16	131.16
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
7	Bond XXXVII		
	Gross loan opening	235.44	235.44
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	235.44	235.44
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	235.44	235.44
	Average Loan	235.44	235.44
	Rate of Interest	9.250%	9.25%
	Interest	21.78	21.78
	Rep Schedule	12 Equal Annual Installments from 26.12.2015	
8	Bond XL		
	Gross loan opening	3929.53	3929.53
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3929.53	3929.53

	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	3929.53	3929.53
	Average Loan	3929.53	3929.53
	Rate of Interest	9.300%	9.300%
	Interest	365.45	365.45
	Rep Schedule	12 Equal Annual Installments from 28.6.2016	
9	Bond XLI (AddCap for 2012-13 DRAWL ON 31.3.2013)		
	Gross loan opening	0.00	897.23
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	897.23
	Additions during the year	897.23	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	897.23	897.23
	Average Loan	448.62	897.23
	Rate of Interest	8.85%	8.85%
	Interest	39.70	79.40
	Rep Schedule	12 Equal Annual Installments from 19.10.2016	
10	Bond XXXV		
	Gross loan opening	1075.36	1075.36
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1075.36	1075.36
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1075.36	1075.36
	Average Loan	1075.36	1075.36
	Rate of Interest	9.64%	9.64%
	Interest	103.66	103.66
	Rep Schedule	12 Annual Instalments from 31.5.2015	
	Total Loan		
	Gross loan opening	22495.93	23393.16
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	22495.93	23393.16
	Additions during the year	897.23	0.00
	Repayment during the year	0.00	16.67
	Net Loan-Closing	23393.16	23376.49
	Average Loan	22944.55	23384.83
	Rate of Interest	4.3597%	4.4442%
	Interest	1000.31	1039.28

Annexure 3

		(₹ in lakh)	
	Details of Loan	2012-13	2013-14
1	Bond XXIX		
	Gross loan opening	1320.00	1320.00
	Cumulative Repayment upto DOCO/previous year	0.00	110.00
	Net Loan-Opening	1320.00	1210.00
	Additions during the year	0.00	0.00
	Repayment during the year	110.00	110.00
	Net Loan-Closing	1210.00	1100.00
	Average Loan	1265.00	1155.00
	Rate of Interest	9.20%	9.20%
	Interest	116.38	106.26
	Rep Schedule	12 Equal Annual Installments from 12.3.2013	
2	Bond XXX		
	Gross loan opening	1380.00	1380.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1380.00	1380.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	115.00
	Net Loan-Closing	1380.00	1265.00
	Average Loan	1380.00	1322.50
	Rate of Interest	8.80%	8.80%
	Interest	121.44	116.38
	Rep Schedule	12 Equal Annual Installments from 29.9.2013	
3	BOND-XXXI		
	Gross loan opening	1430.00	1430.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1430.00	1430.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	119.17
	Net Loan-Closing	1430.00	1310.83
	Average Loan	1430.00	1370.42
	Rate of Interest	8.90%	8.90%
	Interest	127.27	121.97
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
4	Bond XXXIII		
	Gross loan opening	620.00	620.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00

	Net Loan-Opening	620.00	620.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	620.00	620.00
	Average Loan	620.00	620.00
	Rate of Interest	8.640%	8.640%
	Interest	53.57	53.57
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
5	Bond XXXIV		
	Gross loan opening	40.00	40.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	8.84%	8.84%
	Interest	3.54	3.54
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
6	Bond XXXVI		
	Gross loan opening	4402.50	4402.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	4402.50	4402.50
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	4402.50	4402.50
	Average Loan	4402.50	4402.50
	Rate of Interest	9.350%	9.35%
	Interest	411.63	411.63
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
7	Bond XXXII		
	Gross loan opening	149.77	149.77
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	149.77	149.77
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	12.48
	Net Loan-Closing	149.77	137.29
	Average Loan	149.77	143.53
	Rate of Interest	8.840%	8.84%
	Interest	13.24	12.69
	Rep Schedule	12 Equal Annual Installments from 27.3.2014	

8	Bond XL		
	Gross loan opening	395.08	395.08
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	395.08	395.08
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	395.08	395.08
	Average Loan	395.08	395.08
	Rate of Interest	9.300%	9.300%
	Interest	36.74	36.74
	Rep Schedule	12 Equal Annual Installments from 28.6.2016	
9	Bond XLI (AddCap for 2012-13 DRAWL ON 31.3.2013)		
	Gross loan opening	0.00	694.55
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	694.55
	Additions during the year	694.55	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	694.55	694.55
	Average Loan	347.28	694.55
	Rate of Interest	8.85%	8.85%
	Interest	30.73	61.47
	Rep Schedule	12 annual installments from 19.10.2016	
10	Bond XXXV		
	Gross loan opening	1145.00	1145.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1145.00	1145.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1145.00	1145.00
	Average Loan	1145.00	1145.00
	Rate of Interest	9.64%	9.64%
	Interest	110.38	110.38
	Rep Schedule	12 Annual Instalments from 31.5.2015	
	Total Loan		
	Gross loan opening	10882.35	11576.90
	Cumulative Repayment upto DOCO/previous year	0.00	110.00
	Net Loan-Opening	10882.35	11466.90
	Additions during the year	694.55	0.00
	Repayment during the year	110.00	356.65
	Net Loan-Closing	11466.90	11110.25
	Average Loan	11174.63	11288.58
	Rate of Interest	9.1719%	9.1652%
	Interest	1024.92	1034.62

Annexure 4

		(₹ in lakh)	
	Details of Loan	2012-13	2013-14
1	Bond XXIX		
	Gross loan opening	140.00	140.00
	Cumulative Repayment upto DOCO/previous year	0.00	11.67
	Net Loan-Opening	140.00	128.33
	Additions during the year	0.00	0.00
	Repayment during the year	11.67	11.67
	Net Loan-Closing	128.33	116.67
	Average Loan	134.17	122.50
	Rate of Interest	9.20%	9.20%
	Interest	12.34	11.27
	Rep Schedule	12 Equal Annual Installments from 12.3.2013	
2	Bond XXX		
	Gross loan opening	160.00	160.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	160.00	160.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	13.33
	Net Loan-Closing	160.00	146.67
	Average Loan	160.00	153.33
	Rate of Interest	8.80%	8.80%
	Interest	14.08	13.49
	Rep Schedule	12 Equal Annual Installments from 29.9.2013	
3	BOND-XXXI		
	Gross loan opening	140.00	140.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	140.00	140.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	11.67
	Net Loan-Closing	140.00	128.33
	Average Loan	140.00	134.17
	Rate of Interest	8.90%	8.90%
	Interest	12.46	11.94
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
4	Bond XXXIII		
	Gross loan opening	350.00	350.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00

	Net Loan-Opening	350.00	350.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	350.00	350.00
	Average Loan	350.00	350.00
	Rate of Interest	8.640%	8.640%
	Interest	30.24	30.24
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
5	Bond XXXIV		
	Gross loan opening	25.00	25.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	25.00	25.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	25.00	25.00
	Average Loan	25.00	25.00
	Rate of Interest	8.84%	8.84%
	Interest	2.21	2.21
	Rep Schedule	12 Equal Annual Installments from 21.10.2014	
6	Bond XXXVI		
	Gross loan opening	1950.00	1950.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1950.00	1950.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1950.00	1950.00
	Average Loan	1950.00	1950.00
	Rate of Interest	9.350%	9.35%
	Interest	182.33	182.33
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
7	Bond XL		
	Gross loan opening	252.88	252.88
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	252.88	252.88
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	252.88	252.88
	Average Loan	252.88	252.88
	Rate of Interest	9.300%	9.300%
	Interest	23.52	23.52
	Rep Schedule	12 Equal Annual Installments from 28.6.2016	

8	Bond XLII (AddCap for 2012-13 DRAWL ON 31.3.2013)		
	Gross loan opening	0.00	48.50
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	48.50
	Additions during the year	48.50	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	48.50	48.50
	Average Loan	24.25	48.50
	Rate of Interest	8.80%	8.80%
	Interest	2.13	4.27
	Rep Schedule	Bullet payment on 12.3.2023	
9	Bond XXXV		
	Gross loan opening	800.00	800.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	800.00	800.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	800.00	800.00
	Average Loan	800.00	800.00
	Rate of Interest	9.64%	9.64%
	Interest	77.12	77.12
	Rep Schedule	12 Annual Instalments from 31.5.2015	
	Total Loan		
	Gross loan opening	3817.88	3866.38
	Cumulative Repayment upto DOCO/previous year	0.00	11.67
	Net Loan-Opening	3817.88	3854.71
	Additions during the year	48.50	0.00
	Repayment during the year	11.67	36.67
	Net Loan-Closing	3854.71	3818.05
	Average Loan	3836.30	3836.38
	Rate of Interest	9.2910%	9.2896%
	Interest	356.43	356.39

Annexure 5

		(₹ in lakh)	
	Details of Loan	2012-13	2013-14
1	Bond XXIX		
	Gross loan opening	400.00	400.00
	Cumulative Repayment upto DOCO/previous year	0.00	33.33
	Net Loan-Opening	400.00	366.67
	Additions during the year	0.00	0.00
	Repayment during the year	33.33	33.33
	Net Loan-Closing	366.67	333.33
	Average Loan	383.33	350.00
	Rate of Interest	9.20%	9.20%
	Interest	35.27	32.20
	Rep Schedule	12 Equal Annual Installments from 12.3.2013	
2	Bond XXX		
	Gross loan opening	410.00	410.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	410.00	410.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	34.17
	Net Loan-Closing	410.00	375.83
	Average Loan	410.00	392.92
	Rate of Interest	8.80%	8.80%
	Interest	36.08	34.58
	Rep Schedule	12 Equal Annual Installments from 29.9.2013	
3	BOND-XXXI		
	Gross loan opening	440.00	440.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	440.00	440.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	36.67
	Net Loan-Closing	440.00	403.33
	Average Loan	440.00	421.67
	Rate of Interest	8.90%	8.90%
	Interest	39.16	37.53
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
4	Bond XXXIII		
	Gross loan opening	200.00	200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	200.00	200.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00

	Net Loan-Closing	200.00	200.00
	Average Loan	200.00	200.00
	Rate of Interest	8.640%	8.640%
	Interest	17.28	17.28
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
5	Bond XXXIV		
	Gross loan opening	10.00	10.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	10.00	10.00
	Average Loan	10.00	10.00
	Rate of Interest	8.84%	8.84%
	Interest	0.88	0.88
	Rep Schedule	15 Equal Annual Installments from 21.10.2014	
6	Bond XXXVI		
	Gross loan opening	2757.96	2757.96
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2757.96	2757.96
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2757.96	2757.96
	Average Loan	2757.96	2757.96
	Rate of Interest	9.350%	9.35%
	Interest	257.87	257.87
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
7	Bond XXXII		
	Gross loan opening	50.00	50.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	50.00	50.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	4.17
	Net Loan-Closing	50.00	45.83
	Average Loan	50.00	47.92
	Rate of Interest	8.840%	8.84%
	Interest	4.42	4.24
	Rep Schedule	12 Equal Annual Installments from 27.3.2014	
8	Bond XL		
	Gross loan opening	628.15	628.15
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	628.15	628.15

	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	628.15	628.15
	Average Loan	628.15	628.15
	Rate of Interest	9.300%	9.300%
	Interest	58.42	58.42
	Rep Schedule	12 Equal Annual Installments from 28.6.2016	
9	Bond XLI (AddCap for 2012-13 DRAWL ON 31.3.2013)		
	Gross loan opening	0.00	394.38
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	394.38
	Additions during the year	394.38	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	394.38	394.38
	Average Loan	197.19	394.38
	Rate of Interest	8.85%	8.85%
	Interest	17.45	34.90
	Rep Schedule	12 Equal Annual Installments from 19.10.2016	
10	Bond XXXV		
	Gross loan opening	600.00	600.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	600.00	600.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	600.00	600.00
	Average Loan	600.00	600.00
	Rate of Interest	9.64%	9.64%
	Interest	57.84	57.84
	Rep Schedule	12 Annual Instalments from 31.5.2015	
	Total Loan		
	Gross loan opening	5496.11	5890.49
	Cumulative Repayment upto DOCO/previous year	0.00	33.33
	Net Loan-Opening	5496.11	5857.16
	Additions during the year	394.38	0.00
	Repayment during the year	33.33	108.33
	Net Loan-Closing	5857.16	5748.82
	Average Loan	5676.63	5802.99
	Rate of Interest	9.2426%	9.2320%
	Interest	524.67	535.73

Annexure 6

		(₹ in lakh)	
	Details of Loan	2012-13	2013-14
1	Bond XXIX		
	Gross loan opening	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	8.33
	Net Loan-Opening	100.00	91.67
	Additions during the year	0.00	0.00
	Repayment during the year	8.33	8.33
	Net Loan-Closing	91.67	83.33
	Average Loan	95.83	87.50
	Rate of Interest	9.20%	9.20%
	Interest	8.82	8.05
	Rep Schedule	12 Equal Annual Installments from 12.3.2013	
2	Bond XXX		
	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	8.33
	Net Loan-Closing	100.00	91.67
	Average Loan	100.00	95.83
	Rate of Interest	8.80%	8.80%
	Interest	8.80	8.43
	Rep Schedule	12 Equal Annual Installments from 29.9.2013	
3	BOND-XXXI		
	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	8.33
	Net Loan-Closing	100.00	91.67
	Average Loan	100.00	95.83
	Rate of Interest	8.90%	8.90%
	Interest	8.90	8.53
	Rep Schedule	12 Equal Annual Installments from 25.2.2014	
4	Bond XXXIII		
	Gross loan opening	30.00	30.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	30.00	30.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00

	Net Loan-Closing	30.00	30.00
	Average Loan	30.00	30.00
	Rate of Interest	8.640%	8.640%
	Interest	2.59	2.59
	Rep Schedule	12 Equal Annual Installments from 8.7.2014	
5	Bond XXXVI		
	Gross loan opening	708.27	708.27
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	708.27	708.27
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	708.27	708.27
	Average Loan	708.27	708.27
	Rate of Interest	9.350%	9.35%
	Interest	66.22	66.22
	Rep Schedule	15 Equal Annual Installments from 29.8.2016	
6	Bond XXXII		
	Gross loan opening	10.00	10.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	10.00	10.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.83
	Net Loan-Closing	10.00	9.17
	Average Loan	10.00	9.58
	Rate of Interest	8.840%	8.84%
	Interest	0.88	0.85
	Rep Schedule	12 Equal Annual Installments from 27.3.2014	
7	Bond XL		
	Gross loan opening	49.14	49.14
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	49.14	49.14
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	49.14	49.14
	Average Loan	49.14	49.14
	Rate of Interest	9.300%	9.300%
	Interest	4.57	4.57
	Rep Schedule	12 Equal Annual Installments from 28.6.2016	
8	Bond XLI (AddCap for 2012-13 DRAWL ON 31.3.2013)		
	Gross loan opening	0.00	18.31
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	18.31
	Additions during the year	18.31	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	18.31	18.31

Average Loan	9.16	18.31
Rate of Interest	8.85%	8.85%
Interest	0.81	1.62
Rep Schedule	12 Equal Annual Installments from 19.10.2016	
Total Loan		
Gross loan opening	1097.41	1115.72
Cumulative Repayment upto DOCO/previous year	0.00	8.33
Net Loan-Opening	1097.41	1107.39
Additions during the year	18.31	0.00
Repayment during the year	8.33	25.83
Net Loan-Closing	1107.39	1081.55
Average Loan	1102.40	1094.47
Rate of Interest	9.2159%	9.2159%
Interest	101.60	100.87