

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 214/TT/2012

Coram:

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

**Date of Hearing : 09.10.2014
Date of Order : 20.01.2015**

In the matter of:

Approval of transmission tariff of (i) 765kV, 4X333 MVA ICT-I at Bina along with associated bays of 765kV & 400kV (Anticipated DOCO: 01.10.12) (ii) 765kV, 3X333 MVA ICT-II at Satna along with associated bays of 765kV & 400kV (Anticipated DOCO: 1.10.12) (iii) 400kV, D/C Bina-Bina (MPPTCL) Ckt 3 & 4 Transmission Line along with associated bays at Bina (MPPTCL) Sub-Station (Anticipated DOCO: 1.10.12) and (iv) Up-gradation of existing Bina-Gwalior Ckt 2 Transmission Line at 765kV level along with associated bays at Bina Sub-Station & Gwalior Sub-Station (Notional DOCO: 1.10.12) under Sasan UMPP Transmission System in Western Region for tariff block 2009-14 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.

And in the matter of:

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

.....**Petitioner**

Vs

1. Madhya Pradesh Power Trading Company Ltd.,
Shakti Bhawan, Rampur
Jabalpur – 482008.
2. Madhya Pradesh Audyogik Kendra,
Vikas Nigam (Indore) Ltd.



3/54, Press Complex, Agra-Bombay Road,
Indore – 452 008.

3. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur – 302 005.
4. Ajmer Vidyut Vitran Nigam Ltd.
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura,
Jaipur – 302 004.
5. Jaipur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura,
Jaipur– 302 004.
6. Jodhpur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura,
Jaipur– 302 004.
7. Punjab State Electricity Board,
The Mall, Patiala
Patiala- 147 001.
8. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchukla (Haryana)- 134 109.
9. Uttar Pradesh power Corporation Ltd.,
Shakti Bhawan, 14, Ashok Marg,
Lucknow – 226 001.
10. Delhi Transco Ltd.,
Shakti Sadan, Kotla Road,
New Delhi – 110 002.
11. BSES Yamuna Power Ltd.,
BSES Bhawan, Nehru Place,
New Delhi – 110 019.
12. BSES Rajdhani Power Ltd.,
BSES Bhawan, Nehru Place,
New Delhi – 110 019.
13. North Delhi Power Ltd.,
Power Trading & Load Dispatch Group,
Cennet Building Pitampura,

New Delhi – 110 034.

14. Chandigarh Administration
Sector - 9, Chandigarh.
15. Uttarakhand Power Corporation Ltd.,
Urja Bhawan Kanwali Road,
Dehradun – 248 001.
16. North Central Railway,
Allahabad – 211 002.
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi – 110 002.
18. SASAN Power Ltd.,
1st Floor, I Block DhirubhaiAmbani Knowledge City,(DAKC)
Thane-Belapur Road, Koparkharane,
Navi Mumbai – 400 614.
19. Maharashtra State Electricity Distribution Co. Ltd.,
Prakashgad, 4th Floor, Andheri (East),
Mumbai – 400 052.
20. Gujarat Urja Vikas Nigam Ltd.,
Sardar Patel Vidyut Bhawan,
Race Course Road,
Vadodara-390 007.
21. Electricity Department, Govt. of Goa,
Vidyut Bhawan Panaji,
Goa – 403 001.
22. Electricity Department, Administration of Daman & Diu,
Administration of Daman & Diu,
Daman – 396 210.
23. Electricity Department, Administration of Dadra Nagar Haveli,
Administration of Dadra Nagar Haveli,
Silvassa – 396 230.
24. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur,
Chhattisgarh – 492 013.

....Respondents

For petitioner : Shri M. M. Mondal, PGCIL
Shri S.K Venkatesan, PGCIL
Shri S.S Raju, PGCIL
Shri Rakesh Prasad, PGCIL

For respondent : None

ORDER

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of the transmission tariff for i) 765 kV, 4X333 MVA ICT-I at Bina along with associated bays of 765 kV & 400 kV (Anticipated DOCO: 1.10.12) (ii) 765 kV, 3X333 MVA ICT-II at Satna along with associated bays of 765 kV & 400 kV (Anticipated DOCO: 1.10.12) (iii) 400 kV, D/C Bina-Bina (MPPTCL) Ckt 3 & 4 Transmission Line along with associated bays at Bina (MPPTCL) Sub-Station (Anticipated DOCO: 1.10.12) (iv) Up-gradation of existing Bina-Gwalior Ckt 2 Transmission Line at 765 kV level along with associated bays at Bina Sub-Station & Gwalior Sub-Station (Notional DOCO: 1.10.12) (hereinafter referred to as "transmission assets") under Sasan UMPP Transmission System in Western Region for tariff block 2009-14 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The petitioner has been entrusted with the implementation of Sasan UMPP Transmission System in Western & Northern Region. The Investment Approval for the said system was accorded by Board of Directors of POWERGRID vide letter C/CP/Sasan dated 10.12.2008 at an estimated cost of ₹703188 lakh including IDC of ₹76782 lakh (based on 2nd Quarter, 2008 price level). The scope of work covered under the scheme is as follows:-



A: Transmission System of Sasan (4000 MW) UMPP

Transmission Lines

- (i) Sasan - Satna 765 kV 2xS/C line : Ckt I –268 km & Ckt II –279 km
- (ii) Satna – Bina 765 kV 2xS/C line : Ckt I –272 km & Ckt II –274 km
- (iii) LILO of both circuits of one of Vindhyachal-Jabalpur 400 kV D/C line at Sasan - 8 km
- (iv) Bina-Bina (MPPTCL) 400 kV D/C line - 5 km
- (v) Sasaram-Fatehpur 765 kV S/C line - 352 km
- (vi) Fatehpur - Agra 765 kV S/C line - 340 km

Sub-stations

- (i) Establishment of 765/400 kV, 2x1000 MVA substation at Satna.
- (ii) Line bays for operation of Agra-Gwalior–Bina-Seoni S/C lines at 765 kV level.

B: Regional System Strengthening in WR for Sasan UMPP

Transmission Lines

- (i) Bina-Indore 765 kV S/C Line - 320km
- (ii) Indore-Indore (MPPTL) 400 kV D/C (Quad) line - 60 km

Substations

- (i) Establishment of 765/400 kV, 2x 1500 MVA sub-station at Indore.
- (ii) Upgrading Bina and Gwalior Sub-stations to 765/400 kV: 2x1000MVA, 765/400 kV at Bina and 2x1500 MVA, 765/400 at Gwalior.

3. The original petition was filed on 4.9.2012, consisting of 4 Nos. assets based on estimated capital cost as on anticipated date of commercial operation. Later, vide affidavit dated 25.7.2013, the petitioner submitted the details of actual date of commercial operation of all the assets and also submitted that the “Asset-3” as specified in original petition has been commissioned in two parts on different dates, which lead to splitting of the Asset-3 in to two sub-assets viz. Asset-3A and Asset-3B. Therefore, the tariff determination in the instant petition covers five assets.

4. The petitioner, vide affidavit dated 25.7.2013, has submitted that the assets covered under the original petition have now been commissioned as below:-

Asset	Scheduled DOCO	DOCO
Asset-1 : 765 kV , 4x333 MVA ICT-I at Bina along with associated bays of 765 kV & 400 kV	1.1.2013	1.9.2012
Asset-2 : 765 kV , 3x333 MVA ICT-II at Satna along with associated bays of 765 kV & 400 kV	1.1.2013	1.9.2012
Asset-3A : 400 kV, D/C Bina-Bina (MPPTCL) Ckt 3 TL along with associated bays at Bina (MPPTCL) S/S &	1.1.2013	1.3.2013
Asset-3B : 400 kV, D/C Bina-Bina (MPPTCL) Ckt 4 TL along with associated bays at Bina (MPPTCL) S/S	1.1.2013	1.6.2013
Asset - 4 : Upgradation of existing Bina-Gwalior Ckt 2 TL at 765 kV level alongwith associated bays at Bina S/S and Gwalior S/S	1.1.2013	1.4.2013

5. The petitioner has also submitted the Management Certificate as on the actual date of commercial operation along with revised tariff forms vide affidavit dated 25.7.2013.

6. The transmission charges claimed by the petitioner based on the actual date of commercial operation are as under:-

(₹ in lakh)

Particulars	Asset-1		Asset-2	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Depreciation	135.35	323.28	151.20	272.77
Interest on Loan	67.46	197.14	179.61	305.13
Return on equity	134.43	321.09	150.18	270.92
Interest on Working Capital	10.55	24.43	15.86	28.22
O & M Expenses	50.56	91.64	86.68	157.10
Total	398.35	957.58	583.53	1034.14

(₹ in lakh)

Particulars	Asset 3A		Asset-3B	Asset-4
	2012-13 (pro-rata)	2013-14	2013-14 (pro-rata)	2013-14
Depreciation	3.84	48.72	29.68	451.35
Interest on Loan	4.64	56.40	34.45	101.16
Return on equity	3.82	48.39	29.48	447.52
Interest on Working Capital	0.57	7.21	5.10	40.87
O & M Expenses	5.25	66.63	55.53	340.38
Total	18.12	227.35	154.24	1381.28

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

(₹ in lakh)

Particulars	Asset-1		Asset-2	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Maintenance Spares	13.00	13.75	22.29	23.56
O & M Expenses	7.22	7.64	12.38	13.09
Receivables	113.81	159.60	166.72	172.36
Total	134.03	180.99	201.39	209.01
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	10.55	24.43	15.86	28.22

(₹ in lakh)

Particulars	Asset 3A		Asset-3B	Asset-4
	2012-13 (pro-rata)	2013-14	2013-14 (pro-rata)	2013-14
Maintenance Spares	9.45	9.99	10.00	51.06
O & M Expenses	5.25	5.55	5.55	28.37
Receivables	36.24	37.89	30.85	230.21
Total	50.94	53.43	46.40	309.64
Rate of Interest	13.50%	13.50%	13.20%	13.20%
Interest	0.57	7.21	5.10	40.87

8. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003 (hereinafter referred to as "the Act"). Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No.1 has filed reply vide affidavit dated 7.10.2014, Maharashtra State Electricity Distribution Company Limited (MSEDCL), Respondent No.19 has filed reply vide affidavit dated 10.10.2013. The petitioner has filed rejoinder to the reply of MSEDCL, vide affidavit dated 30.4.2013. The petitioner has not filed rejoinder to the reply of MPPMCL. MPPMCL and MSEDCL have raised the issue of time and cost over-run. The objections raised by the respondents in their reply and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order.

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

Capital cost

10. Regulation 7 of the 2009 Tariff Regulations provides as follows:-

“(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.”

11. The details of apportioned approved cost, capital cost as on actual the date of commercial operation and estimated additional capital expenditure projected to be incurred for the assets covered in this petition are as follows:-

(₹in lakh)

Name of the asset	Appor-tioned approved cost	Actual cost incurred as on DOCO	Actual/ projected additional capitalization		Estimated comple-tion cost as on 31-03-2014	Projec-ted Add. Cap 2014-15	Estimated completio n cost	Initial spare include in the comple-tion cost
			2012-13	2013-14				
Asset-1	15270.05	3281.11	2226.67	1229.72	6737.50	604.95	7342.45	170.73
Asset-2	9442.38	4828.19	162.01	351.63	5341.83	273.51	5615.34	67.31
Asset-3A	1205.42	863.15	20.87	77.40	961.42	16.59	978.01	15.09
Asset-3B	1680.82	656.32	0.00	36.61	692.93	9.15	702.08	15.09
Asset-4	12777.19	7878.35	0.00	1310.18	9188.53	1875.05	11063.58	249.79
Total	40375.86	17507.12	2409.55	3005.54	22922.21	2779.25	25701.46	518.01

12. Thus, capital cost claimed by the petitioner, as on the date of commercial operation, is as follows:-

(₹ in lakh)

Assets	DOCO	Capital Cost considered for the purpose of tariff before adjustment of IEDC/IDC & Initial Spares, if any, as on DOCO
Asset-1	1.9.2012	3281.11
Asset-2	1.9.2012	4828.19
Asset-3A	1.3.2013	863.15
Asset-3B	1.6.2013	656.32
Asset-4	1.4.2013	7878.35

Cost over-run

13. It was observed that the estimated completion cost of all the assets covered in the instant petition is within the apportioned approved cost. It was further observed that there was cost variation in some of the elements. Accordingly, the petitioner was directed to submit the reasons for huge variation in cost of certain items as per original estimate and actual award cost and the reason for not considering Control, Relay and Protection panel in the original estimates for Asset-II, as the cost taken is zero in FR.

14. In response, the petitioner vide affidavit dated 9.4.2014 has submitted as under:-

- (i) For procurement, open competitive bidding route is followed and by providing equal opportunity to all eligible firms, lowest possible market prices for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders are

lower than the cost estimates depending upon prevailing market condition. The major variation in case of Asset-1 is mainly due to decrease in the cost of Switchgear (CT, PT, CB, Isolator, etc) from ₹2480 lakh to ₹1038 lakh and decrease in cost of transformer from ₹7325 lakh to ₹4726 lakh. As regards Asset-2, the major variation is mainly due to decrease in the cost of Switchgear (CT, PT, CB, Isolator, etc.) from ₹791 lakh to ₹586 lakh, and transformer cost also reduced from ₹5493 lakh to ₹4162 lakh. The decrease in cost of transformer/other 765 kV equipments is due to increase in the suppliers of the 765 kV equipments which have resulted in reduction in competitive cost. As regards Asset-3, the major reason for decrease in cost is due to decrease in the quantity of tower steel from 479 MT to 153 MT, Conductor earth-wire, Insulators and other hardware fittings, etc. due to decrease in line length from 5 km to 1.5 km and lower awarded rates received in competitive bidding. As regards Asset-4, there is decrease in cost of Switchgear (CT, PT, CB, Isolators, etc.) from ₹2845 lakh to ₹1788 lakh, decrease in cost of structure for Switchyard decreased from ₹460 lakh to ₹260 lakh, which is mainly due to lower awarded cost.

(ii) Major variation in cost of Structure for Switchyard for Asset-I (increase from ₹ 348 lakh to ₹708 lakh) and Asset-II (increase from ₹56 lakh to ₹218 lakh) is due to awarded LOA cost, PV, applicable taxes and duties which is more than the amount envisaged in FR.

Detailed engineering was not done at the time of preparation of FR, the cost of "Structure for Switchyard" is considered on lump-sum basis based on the number of bays for each sub-station, while in actual it is constructed based on actual site requirement.

(iii) Due to inadvertent typographical error, the cost of Control and Relay Panel was not shown in the instant asset separately and was clubbed in other asset.

15. MSEDCL has submitted that the petitioner should be directed to make realistic estimations for costs and the petitioner should adopt a prudent procedure to make cost estimates of different elements of the transmission projects more realistic. MPPMCL has submitted that the actual date of commercial operation of the instant assets has been achieved in the years 2012 and 2013. Still the petitioner is furnishing the estimated completed cost of the assets. The petitioner should submit the actual completed cost of the respective assets to save them from frequent revision of tariff in future. MPPMCL has further submitted that there is considerable variation on the approved cost and the completed cost of the assets and the petitioner should explain the reason for such major variations.

16. We have considered the submission of the petitioner and the respondents. It is observed that the estimates made by the petitioner are very high in case of all the assets. The reason submitted by the petitioner for cost variation is mainly due to lower awarded rates received through competitive bidding. The cost variation in case of the instant assets is approved. However,

the petitioner is directed to adopt a prudent procedure while estimating the cost of different elements of the transmission projects. We also direct that in all tariff petitions to be submitted in future, the petitioner shall submit in detail the basis of FR cost estimates of the assets covered in the petition and actual cost along with reasons for variation as per format given under:-

Sr. No	Element	Basis forming FR Cost									FR Cost			Actual Cost			Remarks
		Project-1			Project-2			Project-3			Estimated			Q	R	PL	
		Q	R	PL	Q	R	PL	Q	R	PL	Q	R	PL				
1																	
2																	
3																	

Q=Quantity

R-Rate

PL- Price Level

Time over-run

17. As per Investment Approval dated 10.12.2008, the Assets were scheduled to be commissioned within 48 months from the date of Investment Approval i.e. by 1.1.2013. There is no delay in commissioning of Asset-I and II. However, there is a delay of 2, 5 and 3 months in commissioning of Assets-3A, 3B and 4 respectively. The petitioner has, vide affidavit dated 9.4.2014, submitted the following reasons for delay in commissioning of Asset-3A, 3B and 4:-

- (i) Reason for delay in commissioning of Asset-3A: under Sasan UMPP project at Bina Sub-station, the existing 400 kV Seoni-Bina was designated for usage as 400 kV Bina-I bay after up-gradation of 765 kV Seoni-Bina line. As per the scheme, 765 kV Seoni-Bina Line was upgraded on 1.7.2012 and the 400 kV bay was vacated for inter-connecting Bina-Bina Ckt-3 (MPPTCL) line. The work involved shifting of

line Reactors and reconfiguration of protection and automation panels. The work commenced after shifting of 765 kV Seoni-Bina line and got completed by 26.2.2013 and the asset was put under commercial operation on 1.3.2013 after a marginal delay of 2 months. In view of the up-gradation work for commissioning, the work relating to the asset was to be undertaken in the existing and charged sub-station which was under regular use.

(ii) Reason for delay in commissioning of Asset-3B: The bay at Bina (PG) for the line was initially utilized for charging of 765 kV, Satna-Bina Ckt-I at 400 kV level as per approved contingency scheme. After up-gradation of 765 kV, Satna-Bina Ckt-I to 765 kV level on 31.8.2012, the bay was utilized for 400 kV, side for ICT-I. The intended bay of 400 kV side of ICT-I was freed after up gradation of 765 kV Bina-Gwalior Ckt-II (DOCO-1.4.2013). Subsequently, on availability of this bay at Bina (PG), the 400 kV Bina (PG)-Bina (MPPTCL) Ckt-IV was commissioned and put under (commercial operation) on 1.6.2013. In view of up-gradation work for commissioning, the work of this asset was to be undertaken in the existing and charged sub-station which was under regular use.

(iii) Reason for delay in commissioning of Asset-4: The testing/commissioning of ICTs/Reactors at site is done on different dates as the commissioning activities required special Tools & Plant (T&P) and expert from manufacturer. In the instant case, all the Reactors were scheduled to be commissioned by 1.1.2013. However, normally in the

region/site, only few set of T&P and team of testing specialists are available. So, deployment of simultaneous gangs and expert from manufacturer would require additional cost. Therefore, commissioning of ICTs/ Reactors is done one after other. Further, the ICTs/reactors are tested at site and at times during testing some of the parameters do not meet the specific technical requirements. In spite of best efforts to commission the up-gradation of existing Bina-Gwalior Ckt-2 Transmission Line at 765 kV level along with associated bays at Bina Sub-Station & Gwalior Sub-Station within time schedule, the delay was due to the above conditions which are beyond the control of the petitioner.

18. MPPMCL has submitted that there has been a considerable delay in commissioning of Assets-3A, 3B and 4 and the petitioner has failed to offer satisfactory reasons for time over-run of these assets. Hence, the IDC and IEDC for the period of delay caused should not be allowed to be serviced through tariff.

19. We have considered the submission made by the petitioner and MPPMCL regarding the time over-run. As regards Assets-3A and 3B it is evident that the delay in commissioning was mainly due to up-gradation works that were carried out in the existing and charged sub-station. The work commenced after shifting of 400 kV line bay from 400 kV Seoni-Bina line which was up-graded to 765 kV Seoni-Bina line, i.e. after 1.7.2012 and got completed 26.2.2013. Similarly, in case of Asset 3B, the work commenced after up-gradation of 765

kV Satna-Bina Ckt- I to 765 kV level on 31.8.2012, the vacated 400 kV bay was utilized for 400 kV side for ICT-I the intended bay of 400 kV side of ICT-I became free after up-gradation of 765 kV Bina-Gwalior Ckt-II (DOCO 1.4.2013). Subsequently, on availability of this bay at Bina (PG), the 400 kV Bina (PG) – Bina (MPPTCL) Ckt –IV was commissioned and put under commercial operation on 1.6.2013. Further, the petitioner has not submitted any documentary evidence regarding the request made for carrying out the upgradation work at the existing sub-station. The petitioner was aware that the works were to be carried out in existing sub-station and hence proper planning should have been done by the petitioner for timely execution of the work. Submissions made by the petitioner and perusal of the documents on record do not show that the petitioner has taken sufficient steps for timely execution of the work and hence we are not inclined to condone the time over-run of two months in case of Assets-3A and five months in case of 3B respectively.

20. The petitioner has vast experience in installation and commissioning of ICTs and Reactors at different sub-stations in the country. The petitioner is well aware that special tools are required for commissioning of ICTs and Reactors. The petitioner should have taken into account that special tools are required for commissioning Asset-4 and accordingly planned the use of the limited special tools and expert manpower at the inception stage itself. The petitioner has not submitted any documents to show that planning has been done sufficiently in advance taking into account the infrastructure required for the commissioning of the ICTs and Reactors and their limited availability. We are not convinced with

the justification given by the petitioner for the time over-run in case of Asset-4 and accordingly time over-run of three months is not condoned.

21. The details of IEDC/IDC disallowed for the period of delay are as follows:-

(₹ in lakh)

Asset-3A			
As per Management Certificate vide affidavit dated 25.7.2013	IEDC	IDC	TOTAL
IEDC/IDC upto 31.3.2012 (39 months)	4.26	53.47	57.73
IEDC/IDC for the period 1.4.2012 to 28.2.2013 (11 months)	3.00	37.38	40.38
Total IDC and IEDC Claimed for the total period of Completion (50 Months)	7.26	90.85	98.11
Detail of IEDC/IDC Disallowed for 2 months			
Pro Rata IEDC/IDC Disallowed (2 months)	0.55	6.80	7.34
Total Disallowed (2 months)	0.55	6.80	7.34

(₹ in lakh)

Asset-3B			
As per Management Certificate vide affidavit dated 25.7.2013	IEDC	IDC	TOTAL
IEDC/IDC up to 31.3.2012 (39 months)	3.81	46.57	50.38
IEDC/IDC for the period 1.4.2012 to 31.3.2013 (12 months)	1.76	21.99	23.75
IEDC/IDC for the period 1.4.2013 to 31.5.2013 (2 months)	0.10	1.21	1.31
Total IDC and IEDC Claimed for the total period of Completion (53 Months)	5.67	69.77	75.44
Detail of IEDC/IDC Disallowed for 5 months			
IEDC/IDC for the period 1.4.2013 to 31.5.2013 (2 months)	0.10	1.21	1.31
Pro Rata IEDC/IDC Disallowed (3 months)	0.44	5.50	5.94
Total Disallowed (5 months)	0.54	6.71	7.25

(₹ in lakh)

Asset-4			
As per Management Certificate vide affidavit dated 25.07.2013	IEDC	IDC	TOTAL
IEDC/IDC upto 31.03.2012 (39 months)	27.87	365.16	393.03
IEDC/IDC for the period 1.4.2012 to 31.1.2013 (10 months)	38.04	563.29	601.33
IEDC/IDC for the period 1.2.2013 to 31.3.2013 (2 months)	3.96	58.60	62.56
Total IDC and IEDC Claimed for the total period of Completion (51 Months)	69.87	987.05	1056.92
Detail of IEDC/IDC Disallowed for 3 months			
IEDC/IDC for the period 1.2.2013 to 31.3.2013 (2 months)	3.96	58.60	62.56
Pro Rata IEDC/IDC Disallowed (1 months)	3.80	56.33	60.13
Total Disallowed (3 months)	7.76	114.93	122.69

Initial spares

22. As per Regulation 8 (iv) (a) of the 2009 Tariff Regulations, the Initial Spares to be allowed for sub-station is 2.5% of total sub-station cost and for transmission line is 0.75% of the total transmission line cost. The petitioner has claimed initial spares amounting to ₹170.73 lakh, ₹67.31 lakh, ₹15.09 lakh, ₹15.09 lakh and ₹249.79 lakh for Assets-1, 2, 3A, 3B and 4 respectively, corresponding to sub-station.

23. Initial spares, claimed by the petitioner, in respect of Assets-2, 3A and 3B are within the ceiling as prescribed in the 2009 Tariff Regulations. However, initial spares in respect of Assets-1 and 4 exceed the norms prescribed in the 2009 Tariff Regulations and therefore are being adjusted as given hereunder:-

(₹ in lakh)							
Particulars	Capital cost claimed as on cut-off date (31.3.2014)	Initial spares claimed against capital cost claimed as on cut-off date (31.3.2014)	Capital cost after adjustment of IEDC/IDC disallowed as on cut-off date (31.3.2014)	Proportionate claim of Initial Spares against the adjusted capital cost after cut-off date (31.3.2014)	Ceiling limit as per 2009 Tariff Regulations, (Sub-Station)	Allowable initial spares as per 2009 Tariff Regulations	Excess initial spares to be adjusted
Asset-1	6,737.50	170.73	-	-	2.50%	168.38	2.35
Asset-4	9188.53	249.79	9065.84	246.45	2.50%	226.14	20.32

It is observed that the petitioner has claimed additional capital expenditure for the financial year 2014-15 which falls beyond current tariff period, i.e. 2009-14, but which is within cut-off date. Therefore, spares have been allowed by considering additional capital expenditure up to 31.3.2014. These shall be reviewed on submission of actual capital cost certified by the

Auditor at the time of truing up and also during next tariff period considering additional capital expenditure upto cut-off date i.e. 2014-15.

24. Accordingly, capital cost as on the date of commercial operation considered after adjustment of IDC & IEDC and initial spares, are as follows:-

(₹ in lakh)				
Assets	Capital cost considered for the purpose of tariff before adjustment of IEDC/IDC & initial spares, if any, as on DOCO	Deduction in respect of Excess IDC/IEDC	Deduction in respect of excess initial spares	Capital cost considered for the purpose of tariff after scrutiny of IEDC/IDC & initial spares as on DOCO
Asset-1	3281.11	0.00	2.35	3278.76
Asset-2	4828.19	0.00	0.00	4828.19
Asset-3A	863.15	7.34	0.00	855.81
Asset-3B	656.32	7.25	0.00	649.07
Asset-4	7878.35	122.69	20.32	7735.34

Projected additional capital expenditure

25. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“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.”

26. 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”.

Therefore, cut-off date for the above mentioned assets is 31.3.2015.

27. The petitioner has submitted revised management certificates for Assets-1, 2, 3A, 3B and 4 vide affidavit dated 25.7.2013. The details of additional capital expenditure claimed by the petitioner are given as under:-

Asset-1:

(₹ in lakh)				
Sr. No.	Year	Work/Equipment proposed to be added after COD up to cut-off date/beyond cut-off date	Amount capitalized and proposed to be capitalized	Justification as per proposed
1	2012-13	Sub-station	2226.67	Balance Retention & payments
	Total		2226.67	
2	2013-14	Sub-station	1229.72	Balance Retention & payments
	Total		1229.72	
3	2014-15	Sub-station	604.95	Balance Retention & payments
	Total		604.95	

Asset-2:

(₹ in lakh)				
Sr. No.	Year	Work/Equipment proposed to be added after COD up to cut off date/beyond cut-off date	Amount capitalized and proposed to be capitalized	Justification as per proposed
1	2012-13	Sub-station	162.01	Final/Retention Payment, PV, etc.
	Total		162.01	
2	2013-14	Sub-station	351.63	Final/Retention Payment, PV, etc.
	Total		351.63	
3	2014-15	Sub-station	273.51	Final/Retention Payment, PV, etc.
	Total		273.51	

Asset-3 (A):

(₹ in lakh)

Sr. No.	Year	Work/Equipment proposed to be added after COD up to cut-off date/beyond cut-off date	Amount capitalized and proposed to be capitalized	Justification as per proposed
1	2012-13	Transmission Line	0.17	Balance Retention & payments
		Sub-station	20.70	Balance Retention & payments
	Total		20.87	
2	2013-14	Transmission Line	38.04	Balance Retention & payments
		Sub-station	39.36	Balance Retention & payments
	Total		77.40	
3	2014-15	Transmission Line	8.04	Balance Retention & payments
		Sub-station	8.55	Balance Retention & payments
	Total		16.59	

Asset-3 (B)

(₹ in lakh)

Sr. No.	Year	Work/Equipment proposed to be added after COD up to cut off date/beyond cut-off date	Amount capitalized and proposed to be capitalized	Justification as per proposed
1	2013-14	Transmission Line	2.42	Balance Retention & payments
		Sub-station	34.19	Balance Retention & payments
	Total		36.61	
2	2014-15	Transmission Line	0.61	Balance Retention & payments
		Sub-station	8.55	Balance Retention & payments
	Total		9.16	

Asset-4

(₹ in lakh)

Sr. No.	Year	Work/Equipment proposed to be added after COD up to cut off date/beyond cut-off date	Amount capitalized and proposed to be capitalized	Justification as per proposed
1	2013-14	Sub-station	1300.90	Balance Retention & payments
		PLCC	9.28	Balance Retention & payments
	Total		1310.18	
2	2014-15	Sub-station	1870.91	Balance Retention & payments
		PLCC	4.14	Balance Retention & payments
	Total		1875.05	

28. The additional capital expenditure/projected expenditure incurred for the instant assets from the date of commercial operation to 2012-13 and 2013-14 are mainly on account of Balance/Retention payments and are within cut-off date.

28. The claim of the petitioner is admissible up to 31.3.2014 as per the 2009 Tariff Regulations. The claim of the petitioner for additional capital expenditure for the year 2014-15 shall be dealt as per the 2014 Tariff Regulations. However, the entire projected additional capital expenditure will be reviewed at the time of truing up on submission of the actual additional capital expenditure.

29. After considering the aspects of time over-run, cost over-run, initial spares and additional capital expenditure, following capital cost and additional capital expenditure has been considered for tariff purpose:-

(₹ in lakh)

Assets	Capital cost considered for the purpose of tariff after scrutiny of IEDC/IDC & initial spares as on DOCO	Additional capital expenditure		Capital cost as on 31.3.2014
		2012-13	2013-14	
Asset-1	3278.76	2226.67	1229.72	6735.15
Asset-2	4828.19	162.01	351.63	5341.83
Asset-3A	855.81	20.87	77.40	954.08
Asset-3B	649.07	0.00	36.61	685.68
Asset-4	7735.34	0.00	1310.18	9045.52

Debt- equity ratio

30. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

31. Debt-equity ratio as on the respective dates of commercial operation considered for the purpose of tariff calculation is as follows:-

(₹ in lakh)

Capital Cost as on DOCO		
Asset-1		
Particulars	Amount	%
Debt	2295.13	70.00
Equity	983.62	30.00
Total	3278.76	100.00
Asset -2		
Particulars	Amount	%
Debt	3379.75	70.00
Equity	1448.44	30.00
Total	4828.19	100.00
Asset -3A		
Particulars	Amount	%
Debt	599.07	70.00
Equity	256.74	30.00
Total	855.81	100.00
Asset -3B		
Particulars	Amount	%
Debt	454.35	70.00
Equity	194.72	30.00
Total	649.07	100.00
Asset -4		
Particulars	Amount	%
Debt	5414.74	70.00
Equity	2320.60	30.00
Total	7735.34	100.00

32. Debt-equity ratio for additional capital expenditure during 2012-13 and 2013-14 has been considered in the ratio of 70:30. Therefore, details of debt-equity ratio of assets as on 31.3.2014 are as follows:-

(₹ in lakh)

Capital cost as on 31.3.2014		
ASSET-1		
Particulars	Amount	%
Debt	4714.61	70.00
Equity	2020.54	30.00
Total	6735.15	100.00
ASSET-2		
Particulars	Amount	%
Debt	3739.30	70.00
Equity	1602.53	30.00
Total	5341.83	100.00
ASSET-3A		
Particulars	Amount	%
Debt	667.86	70.00
Equity	286.22	30.00
Total	954.08	100.00

ASSET-3B		
Particulars	Amount	%
Debt	479.98	70.00
Equity	205.70	30.00
Total	685.68	100.00
ASSET-4		
Particulars	Amount	%
Debt	6331.87	70.00
Equity	2713.65	30.00
Total	9045.52	100.00

Return on equity

33. Regulation 15 of the 2009 Tariff Regulations provides as under:-

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

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

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

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

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

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

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".

34. The petitioner's prayer to recover the shortfall or refund the excess Annual Fixed Charges, on account on return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission shall be dealt under Regulation 15(3) as stated above. Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15 of the 2009 Tariff Regulations.

35. Based on the above, the following return on equity has been considered:-

Particular	(₹ in lakh)			
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
	Asset-1		Asset-2	
Opening Equity	983.62	1651.63	1448.44	1497.04
Addition due to Additional Capitalisation	668.00	368.92	48.60	105.49
Closing Equity	1651.63	2020.54	1497.04	1602.53
Average Equity	1317.63	1836.08	1472.74	1549.79
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)	134.36	320.97	150.18	270.92

(₹ in lakh)

Particular	2012-13 (pro-rata)	2013-14	2013-14 (pro-rata)	2013-14
	Asset-3A		Asset-3B	Asset-4
Opening Equity	256.74	263.00	194.72	2320.60
Addition due to Additional Capitalisation	6.26	23.22	10.98	393.05
Closing Equity	263.00	286.22	205.70	2713.65
Average Equity	259.87	274.61	200.21	2517.12
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)	3.79	48.00	29.17	440.02

Interest on loan

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

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

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

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

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

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

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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

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

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

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

37. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner’s entitlement to interest on loan has been calculated on the following basis:-

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition.

(b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period.

(c) 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.

(d) 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.

38. Accordingly, the interest on loan has been calculated on the basis of prevailing rate as on the date of commercial operation. Any change in rate of interest subsequent to date of commercial operation will be considered at the time of truing up.

39. Detailed calculations in support of the weighted average rates of interest have been given in Annexure 1, 2, 3, 4 and 5 to this order.

40. Based on the above, interest on loan has been calculated as given hereunder:-

Particulars	(₹ in lakh)			
	Asset-1		Asset-2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Gross Normative Loan	2295.13	3853.80	3379.75	3493.16
Cumulative Repayment upto previous year	0.00	135.28	0.00	151.20
Net Loan-Opening	2295.13	3718.53	3379.75	3341.95
Addition due to additional capital expenditure	1558.67	860.80	113.41	246.14
Repayment during the year	135.28	323.15	151.20	272.77
Net Loan-Closing	3718.53	4256.18	3341.95	3315.33
Average Loan	3006.83	3987.35	3360.85	3328.64
Weighted Average Rate of Interest on Loan	3.8438%	4.9421%	9.1615%	9.1668%
Interest	67.42	197.06	179.61	305.13

(₹ in lakh)

Particulars	Asset-3A		Asset-3B	Asset-4
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14
Gross Normative Loan	599.07	613.68	454.35	5414.74
Cumulative Repayment upto previous year	0.00	3.81	0.00	0.00
Net Loan-Opening	599.07	609.87	454.35	5414.74
Addition due to additional capital expenditure	14.61	54.18	25.63	917.13
Repayment during the year	3.81	48.33	29.36	443.78
Net Loan-Closing	609.87	615.71	450.61	5888.09
Average Loan	604.47	612.79	452.48	5651.42
Weighted Average Rate of Interest on Loan	9.1249%	9.1308%	9.0374%	1.7600%
Interest	4.60	55.95	34.08	99.46

Depreciation

41. Regulation 17 of the 2009 Tariff Regulations provides as follows:-

“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.”

42. Assets in the instant petition were put on date of commercial operation as on 1.9.2012, 1.9.2012, 1.3.2013, 1.6.2013 and 1.4.2013 and accordingly will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of the 2009 Tariff Regulations, as follows:-

(₹ in lakh)

Particulars	Asset-1		Asset-2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Opening Gross Block	3278.76	5505.43	4828.19	4990.20
Addition due to Projected Additional Capitalisation	2226.67	1229.72	162.01	351.63
Closing Gross Block	5505.43	6735.15	4990.20	5341.83
Average Gross Block	4392.09	6120.29	4909.20	5166.02
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	3952.88	5508.26	4418.28	4649.41
Remaining Depreciable Value	3952.88	5372.98	4418.28	4498.21
Depreciation	135.28	323.15	151.20	272.77
Cumulative Depreciation	135.28	458.43	151.20	423.97

(₹ in lakh)

Particulars	Asset-3A		Asset-3B	Asset-4
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14
Opening Gross Block	855.81	876.68	649.07	7735.34
Addition due to Projected Additional Capitalisation	20.87	77.40	36.61	1310.18
Closing Gross Block	876.68	954.08	685.68	9045.52
Average Gross Block	866.24	915.38	667.38	8390.43
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2891%
Depreciable Value	779.62	823.84	600.64	7551.39
Remaining Depreciable Value	779.62	820.03	600.64	7551.39
Depreciation	3.81	48.33	29.36	443.78
Cumulative Depreciation	3.81	52.14	29.36	443.78

Operation & Maintenance Expenses (O&M Expenses)

43. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The norms for assets covered in this petition are as follows:-

Norms for AC and HVDC lines:-

Element	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
D/C (Twin & Triple Conductor)	0.627	0.663	0.701	0.741	0.783

Norms for Sub-station:-

Element	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV bay	52.40	55.40	58.57	61.92	65.46
765 kV bay	73.36	77.56	81.99	86.68	91.64

44. After up-gradation of existing Bina-Gwalior-II to 765 kV level from 400 kV level, the 400 kV Bay of Bina-Gwalior-II line at Bina was utilized as 400 kV ICT-I Bay at Bina Sub-station. The O&M Expenses of 400 kV Bay is continued in the instant petition with up-gradation of Bina-Gwalior ckt#2 calculations. So, O&M Expenses are not being claimed here for 400 kV Bay. It is observed that the O&M Expenses for 400 kV ICT-1 has been allowed from 1.4.2013 for the instant asset, as it was available after up-gradation of 400 kV Bina-Gwalior Line since 1.4.2013.

45. After up-gradation of existing Sasan-Satna-I to 765 kV level from 400 kV level (Petition No.95/2012), 400 kV Bay of Sasan-Satna-I at Satna has been utilized as 400 kV ICT-2 Bay at Satna since 1.9.2012. The O&M Expenses claimed in Petition No. 95/2012 have been discontinued for this bay and is being included in the instant petition.

46. It has been observed that the petitioner at the time of filing Petition No. 95/TT/2012 has included 400 kV bay in the petition, as the line was initially planned to be charged at 400 kV level. However, in affidavit dated 19.9.2013 had submitted only 765 kV bay at Satna Sub-station, as the line was commissioned on 1.1.2013 and was charged at 765 kV level directly.

47. After up-gradation of existing Seoni-Bina to 765 kV level (Petition No.215/2012) one 400 kV Bay at Bina (POWERGRID) Sub-station became spare and it is being used along with Bina-Bina (MPPTCL) ckt-3 at Bina sub-station. O&M Expenses of Bina-Bina ckt-3 400 kV bay at Bina (POWERGRID) Sub-station have been claimed under Petition No.238/2010 under Barh Transmission Line.

48. We find that the Seoni-Bina line was initially charged at 400 kV level w.e.f. 1.4.2010 and the petitioner has claimed tariff for the asset in the Petition No. 238/TT/2010. The Commission vide its order 8.6.2011 has allowed O&M Expenses for 400 kV Bina end bay from 1.4.2010 to 31.3.2014. However, the Seoni-Bina line was up-graded to 765 kV since 1.7.2012 and the petitioner has claimed tariff for the asset in Petition No. 215/TT/2012. Now, 1 no. 400 kV bay at Bina end got vacated due to up-gradation of the above mentioned line w.e.f. 1.7.2012. The same bay has been used for Bina (POWERGRID)-Bina (MPPTCL) ckt-3 since 1.3.2013. Hence, the bay was not utilised for 8 months i.e. from 1.7.2012 to 1.3.2013. Thus, O&M Expenses allowed for 400 kV bay at Bina end in Petition No. 238/2010 shall be adjusted at the time of truing up.

49. After up-gradation of Satna-Bina to 765 kV level, which is covered under in Petition 95/TT/2012 under Asset "765 kV S/C Satna-Binack-I along with associated bays at Satna & Bina", one 400 kV Bay at Bina (POWERGRID) Sub-station became spare which is being used along with Bina-Bina (MPPTCL) ckt-4. O&M expenses of Bina-Bina ckt-4 400 kV bay at Bina (POWERGRID) Sub-station is covered under Petition No.95/TT/2012.

50. We find that petitioner had claimed tariff for the transmission line Satna-Binack-I in Petition No. 95/TT/2012. Initially Satna-Bina line was charged at 400 kV level w.e.f. 1.2.2012, and then it was up-graded to 765 kV level w.e.f. 1.10.2012. Now, 1 no. 400 kV bay at Bina end got vacated due to up-gradation of the above mentioned line w.e.f. 1.10.2012. The same bay has been used for Bina (POWERGRID)-Bina (MPPTCL) ckt-4 w.e.f. 1.6.2013. The O&M Expenses for 400 kV bay at Bina end till 30.9.2012, was allowed in Petition No. 95/TT/2012. Further, the O&M Expenses for the same bay is allowed w.e.f. 1.6.2013 in the instant petition, as the bay was not in utilization from 1.10.2012 to 31.5.2013 (under Asset-3B).

51. After up-gradation of existing Bina-Gwalior-II at 765 kV level from 400 kV level, the 400 kV Bay of Bina-Gwalior-II is utilized as 400 kV ICT-I Bay at Bina Sub-station in the instant petition. The O&M Expenses of 400 kV Bay is continued in the instant petition, so O&M Expenses is being claimed here in the present asset and not under asset ICT-I at Bina of the instant petition for 400 kV Bay.

52. Summary of bays considered in the instant order is as follows:-

Asset Details	Details of Bays claimed by the Petitioner	Whether dismantled / decommissioned / New	Date of availability of old bay	Date of usage of bay for the instant asset
Asset-I: 765 kV, 4*333 MVA ICT-I at Bina along with associated bays of 765 kV & 400 kV	765 kV bay-1 No and 400 kV bay-1 No.	765 kV New bay and 400 kV bay is used at 400 KV ICT – I side after up-gradation of Bina-Gwalior Ckt-II from 400 kV to 765 kV	1.4.2013	1.4.2013
Asset-II: 765 kV, 3*333 MVA ICT-II at Satna along with associated bays of 765 kV & 400 kV	765 kV bay-1 No and 400 kV bay-1 No.	New	NA	1.9.2012
Asset-III (a): 400 kV D/C Bina-Bina (MPPTCL) Ckt-3 along with associated bays of 400 kV at Bina Sub-station (POWERGRID) & Bina Sub-station (MPPTCL)	400 kV Bays-2 Nos.	400 kV new bay on Bina (MPPTCL) end and on the other end petitioner is using the bay available after up-gradation of Seoni-Bina	1.7.2012	1.3.2013
Asset-III (b): 400 kV D/C Bina-Bina (MPPTCL) Ckt-4 along with associated bays of 400 kV at Bina Sub-station (POWERGRID) & Bina Sub-station (MPPTCL)	400 kV Bays-2 Nos.	400 kV new bay on Bina (MPPTCL) end and on the other end petitioner is using the bay available after up-gradation of Satna Bina Ckt-I	1.10.2012	1.6.2013
Asset-IV: Up-gradation of existing Bina-Gwalior Ckt-2 Transmission Line at 765 kV with associated bays	765 kV line bays-2 Nos. and 1 no. 765 kV Switchable Line Reactor Bay	New	NA	1.4.2103

53. After up-gradation of Gwalior-Bina Ckt-2, it is not clear whether the 400 kV bay at Gwalior end is being utilized. Hence, the petitioner is directed to submit the details of this bay at the time of truing-up. Further, it is also found

that due to up-gradation of system from 400 kV to 765 kV, old line bays are being utilized in new assets particularly at Bina, Seoni, Satna and Gwalior sub-stations. The petitioner is directed to submit details of all such bays at the time of truing-up and also to file truing up of all the assets under Sasan UMPP together.

54. The O&M Expenses have been allowed for the transmission assets as per norms specified in 2009 Tariff Regulations and they are as under:-

Element	(₹ in lakh)	
	2012-13	2013-14
Asset-1: 765 kV bay at Bina Sub-station (DOCO:1.9.2012)	50.56	91.64
Asset-2: 400 kV and 765 kV bays for ICT-II at Satna Sub-station (DOCO:1.9.2012)	86.68	157.10
Asset-3A: 1.5km 400 kV D/C Bina-Bina (MPPTCL) line and 1 no. 400 kV Bay at Bina (MPPTCL) (DOCO:1.3.2013)	5.25	66.63
Asset-3B: 1.5km 400kV D/C Bina-Bina (MPPTCL) line and 1no. 400 kV Bay at Bina (MPPTCL) (DOCO:1.6.2013)	-	55.53
Asset-4: 1 no. 765 kV Gwalior-Bina Line bay at Bina, 1no. 765 kV Gwalior-Bina Line bay at Gwalior, 1 no.765 kV bay for Switchable Line Reactor at Gwalior and 1 no. 400 kV line bay at Bina (DOCO:1.4.2013)	-	340.38

55. The petitioner has submitted that O & M Expenses for the year 2009-14 had been arrived at on the basis of normalized actual O & M Expenses during the period 2003-04 to 2007-08 and by escalating it by 5.72% per annum for arriving at the norms for the years of tariff period. 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 man power cost on account of wage revision (if any) during the tariff block 2009-14.

56. The Commission has given effect to 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.

Interest on working capital

57. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months of annual transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance spares

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O& M Expenses as part of

the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M Expenses

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for O&M Expenses for one month to be included in the working capital. The petitioner has claimed O&M Expenses for 1 month of the respective year. This has been considered in the working capital.

(iv) Rate of Interest on Working Capital

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate of 10.00% plus 350 bps as on 1.4.2012 (13.50%) for the Asset-1, Asset-2 and Asset-3A and SBI Base Rate Plus 350 bps as on 1.4.2013 (i.e.13.20%) for the Asset-3B and Asset-4.

58. The interest on working capital for the assets covered in the petition has been worked out accordingly.

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

Particulars	(₹ in lakh)			
	Asset-1		Asset-2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Maintenance Spares	13.00	13.75	22.29	23.57
O & M Expenses	7.22	7.64	12.38	13.09
Receivables	113.76	159.54	166.72	172.36
Total	133.99	180.92	201.40	209.01
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	10.55	24.42	15.86	28.22

(₹ in lakh)

Particulars	Asset-3A		Asset-3B	Asset-4
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14
Maintenance Spares	9.45	9.99	10.00	51.06
O & M Expenses	5.25	5.55	5.55	28.37
Receivables	36.03	37.68	30.64	227.36
Total	50.73	53.23	46.19	306.78
Rate of Interest	13.50%	13.50%	13.20%	13.20%
Interest	0.57	7.19	5.08	40.49

Transmission charges

60. The transmission charges being allowed for the assets are given hereunder:-

(₹ in lakh)

Particulars	Asset-1		Asset-2	
	2012-13 (Pro-rata)	2013-14	2012-13 (Pro-rata)	2013-14
Depreciation	135.28	323.15	151.20	272.77
Interest on Loan	67.42	197.06	179.61	305.13
Return on Equity	134.36	320.97	150.18	270.92
Interest on Working Capital	10.55	24.42	15.86	28.22
O & M Expenses	50.56	91.64	86.68	157.10
Total	398.17	957.24	583.53	1034.13

(₹ in lakh)

Particulars	Asset-3A		Asset-3B	Asset-4
	2012-13 (Pro-rata)	2013-14	2013-14 (Pro-rata)	2013-14
Depreciation	3.81	48.33	29.36	443.78
Interest on Loan	4.60	55.95	34.08	99.46
Return on Equity	3.79	48.00	29.17	440.02
Interest on Working Capital	0.57	7.19	5.08	40.49
O & M Expenses	5.25	66.63	55.53	340.38
Total	18.01	226.11	153.22	1364.14

Filing fee and the publication expenses

61. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of the

2009 Tariff Regulations. 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.

Licence fee

62. 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

Service tax

63. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. The petitioner has also clarified that if notifications regarding granting of exemption to transmission service are withdrawn at a later date, the beneficiaries shall have to share the service tax paid by the petitioner. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of transmission charges

64. 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.

65. This order disposes of Petition No. 214/TT/2012.

sd/-	sd/-	sd/-	sd/-
(A.S. Bakshi) Member	(A. K. Singhal) Member	(M. Deena Dayalan) Member	(Gireesh B. Pradhan) Chairperson

Annexure 1**Asset 1**

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
(₹ in lakh)			
	Details of Loan	2012-13	2013-14
1	IBRD-V (Exchange Rate ₹51.63)		
	Gross loan opening	2296.78	2296.78
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2296.78	2296.78
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2296.78	2296.78
	Average Loan	2296.78	2296.78
	Rate of Interest	2.00%	2.00%
	Interest	45.94	45.94
	Rep Schedule	49 half yearly instalments from 15.1.2015	
2	Bond XXXVII		
	Gross loan opening	0.00	700.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	700.00
	Additions during the year	700.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	700.00	700.00
	Average Loan	350.00	700.00
	Rate of Interest	9.25%	9.25%
	Interest	32.38	64.75
	Rep Schedule	12 annual instalments from 26.12.2015	
3	Bond XL		
	Gross loan opening	0.00	858.67
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	858.67
	Additions during the year	858.67	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	858.67	858.67
	Average Loan	429.34	858.67
	Rate of Interest	9.30%	9.30%
	Interest	39.93	79.86
	Rep Schedule	12 annual instalments from 28.6.2016	
	Total Loan		
	Gross loan opening	2296.78	3855.45
	Cumulative Repayment upto DOCO/previous	0.00	0.00

year		
Net Loan-Opening	2296.78	3855.45
Additions during the year	1558.67	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	3855.45	3855.45
Average Loan	3076.12	3855.45
Rate of Interest	3.8438%	4.9421%
Interest	118.24	190.54

Annexure 2**Asset 2**

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
(₹ in lakh)			
	Details of Loan	2012-13	2013-14
1	Bond XXX		
	Gross loan opening	400.00	400.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	400.00	400.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	33.33
	Net Loan-Closing	400.00	366.67
	Average Loan	400.00	383.33
	Rate of Interest	8.80%	8.80%
	Interest	35.20	33.73
	Rep Schedule	12 annual instalments from 29.9.2013	
2	Bond XXXII		
	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	29.17
	Net Loan-Closing	350.00	320.83
	Average Loan	350.00	335.42
	Rate of Interest	8.84%	8.84%
	Interest	30.94	29.65
	Rep Schedule	12 annual instalments from 29.3.2014	
3	Bond XXXIII		
	Gross loan opening	330.00	330.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	330.00	330.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	330.00	330.00
	Average Loan	330.00	330.00
	Rate of Interest	8.64%	8.64%
	Interest	28.51	28.51
	Rep Schedule	12 annual instalments from 8.7.2014	
4	Bond XXXIV		
	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	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00
	Rate of Interest	8.84%	8.84%
	Interest	4.42	4.42
	Rep Schedule	12 annual instalments from 21.10.2014	
5	Bond XXXV		
	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	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00
	Rate of Interest	9.64%	9.64%
	Interest	4.82	4.82
	Rep Schedule	12 annual instalments from 31.5.2015	
6	Bond XXXVI		
	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	9.35%	9.35%
	Interest	18.70	18.70
	Rep Schedule	15 annual instalments from 29.8.2016	
7	Bond XXXVII		
	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	9.25%	9.25%
	Interest	18.50	18.50
	Rep Schedule	12 annual instalments from 26.12.2015	
8	Bond XXXVIII		
	Gross loan opening	250.00	250.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	250.00	250.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	250.00	250.00
	Average Loan	250.00	250.00

	Rate of Interest	9.25%	9.25%
	Interest	23.13	23.13
	Rep Schedule	Bullet Payment as on 9.3.2027	
9	Bond XXXIX		
	Gross loan opening	1212.00	1212.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	1212.00	1212.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1212.00	1212.00
	Average Loan	1212.00	1212.00
	Rate of Interest	9.40%	9.40%
	Interest	113.93	113.93
	Rep Schedule	Bullet Payment as on 29.3.2027	
10	Bond XL		
	Gross loan opening	337.75	337.75
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	337.75	337.75
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	337.75	337.75
	Average Loan	337.75	337.75
	Rate of Interest	9.30%	9.30%
	Interest	31.41	31.41
	Rep Schedule	12 annual instalments from 28.6.2016	
11	Bond XL (Add Cap 2013-14 Drawl 31.03.2013)		
	Gross loan opening	0.00	113.41
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	113.41
	Additions during the year	113.41	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	113.41	113.41
	Average Loan	56.71	113.41
	Rate of Interest	9.30%	9.30%
	Interest	5.27	10.55
	Rep Schedule	12 annual instalments from 28.6.2016	
	Total Loan		
	Gross loan opening	3379.75	3493.16
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	3379.75	3493.16
	Additions during the year	113.41	0.00
	Repayment during the year	0.00	62.50
	Net Loan-Closing	3493.16	3430.66
	Average Loan	3436.46	3461.91
	Rate of Interest	9.1615%	9.1668%
	Interest	314.83	317.35

Annexure 3**Asset 3 A**

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
(₹in lakh)			
	Details of Loan	2012-13	2013-14
1	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 annual instalments from 29.9.2013	
2	Bond XXXII		
	Gross loan opening	82.00	82.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	82.00	82.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	6.83
	Net Loan-Closing	82.00	75.17
	Average Loan	82.00	78.58
	Rate of Interest	8.84%	8.84%
	Interest	7.25	6.95
	Rep Schedule	12 annual instalments from 29.3.2014	
3	Bond XXXIII		
	Gross loan opening	82.00	82.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	82.00	82.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	82.00	82.00
	Average Loan	82.00	82.00
	Rate of Interest	8.64%	8.64%
	Interest	7.08	7.08
	Rep Schedule	12 annual instalments from 8.7.2014	
4	Bond XXXIV		
	Gross loan opening	15.00	15.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	15.00	15.00
	Additions during the year	0.00	0.00



	Repayment during the year	0.00	0.00
	Net Loan-Closing	15.00	15.00
	Average Loan	15.00	15.00
	Rate of Interest	8.84%	8.84%
	Interest	1.33	1.33
	Rep Schedule	12 annual instalments from 21.10.2014	
5	Bond XXXV		
	Gross loan opening	15.00	15.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	15.00	15.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	15.00	15.00
	Average Loan	15.00	15.00
	Rate of Interest	9.64%	9.64%
	Interest	1.45	1.45
	Rep Schedule	12 annual instalments from 31.5.2015	
6	Bond XXXVI		
	Gross loan opening	33.00	33.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	33.00	33.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	33.00	33.00
	Average Loan	33.00	33.00
	Rate of Interest	9.35%	9.35%
	Interest	3.09	3.09
	Rep Schedule	15 annual instalments from 29.8.2016.	
7	Bond XXXVII		
	Gross loan opening	33.00	33.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	33.00	33.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	33.00	33.00
	Average Loan	33.00	33.00
	Rate of Interest	9.25%	9.25%
	Interest	3.05	3.05
	Rep Schedule	12 annual instalments from 26.12.2015.	
8	Bond XXXVIII		
	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	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00

	Rate of Interest	9.25%	9.25%
	Interest	4.63	4.63
	Rep Schedule	Bullet Payment as on 9.3.2027	
9	Bond XXXIX		
	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	0.00
	Net Loan-Closing	50.00	50.00
	Average Loan	50.00	50.00
	Rate of Interest	9.40%	9.40%
	Interest	4.70	4.70
	Rep Schedule	Bullet Payment as on 29.3.2027	
10	Bond XL		
	Gross loan opening	114.57	114.57
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	114.57	114.57
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	114.57	114.57
	Average Loan	114.57	114.57
	Rate of Interest	9.30%	9.30%
	Interest	10.66	10.66
	Rep Schedule	12 annual instalments from 28.6.2016	
11	Bond XL (Add Cap 2012-13 Drawl 31.03.2013)		
	Gross loan opening	0.00	14.61
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	0.00	14.61
	Additions during the year	14.61	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	14.61	14.61
	Average Loan	7.31	14.61
	Rate of Interest	9.30%	9.30%
	Interest	0.68	1.36
	Rep Schedule	12 annual instalments from 28.6.2016	
12	SBI		
	Gross loan opening	29.64	29.64
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	29.64	29.64
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	29.64	29.64
	Average Loan	29.64	29.64
	Rate of Interest	10.45%	10.45%
	Interest	3.10	3.10
	Rep Schedule	22 half yearly instalment from 31.8.2016	

	Total Loan		
	Gross loan opening	604.21	618.82
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	604.21	618.82
	Additions during the year	14.61	0.00
	Repayment during the year	0.00	15.17
	Net Loan-Closing	618.82	603.65
	Average Loan	611.52	611.24
	Rate of Interest	9.1249%	9.1308%
	Interest	55.80	55.81

Annexure 3**Asset 3 B**

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN		
		(₹ in lakh)
	Details of Loan	2013-14
1	Bond XXX	
	Gross loan opening	80.00
	Cumulative Repayment upto DOCOC/previous year	0.00
	Net Loan-Opening	80.00
	Additions during the year	0.00
	Repayment during the year	6.67
	Net Loan-Closing	73.33
	Average Loan	76.67
	Rate of Interest	8.80%
	Interest	6.75
	Rep Schedule	12 annual instalments from 29.9.2013
2	Bond XXXII	
	Gross loan opening	68.00
	Cumulative Repayment upto DOCOC/previous year	0.00
	Net Loan-Opening	68.00
	Additions during the year	0.00
	Repayment during the year	5.67
	Net Loan-Closing	62.33
	Average Loan	65.17
	Rate of Interest	8.84%
	Interest	5.76
	Rep Schedule	12 annual instalments from 29.3.2014
3	Bond XXXIII	
	Gross loan opening	68.00
	Cumulative Repayment upto DOCOC/previous year	0.00
	Net Loan-Opening	68.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	68.00
	Average Loan	68.00
	Rate of Interest	8.64%
	Interest	5.88
	Rep Schedule	12 annual instalments from 8.7.2014
4	Bond XXXIV	
	Gross loan opening	15.00
	Cumulative Repayment upto DOCOC/previous	0.00

	year	
	Net Loan-Opening	15.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	15.00
	Average Loan	15.00
	Rate of Interest	8.84%
	Interest	1.33
	Rep Schedule	12 annual instalments from 21.10.2014
5	Bond XXXV	
	Gross loan opening	15.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	15.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	15.00
	Average Loan	15.00
	Rate of Interest	9.64%
	Interest	1.45
	Rep Schedule	12 annual instalments from 31.5.2015.
6	Bond XXXVI	
	Gross loan opening	27.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	27.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	27.00
	Average Loan	27.00
	Rate of Interest	9.35%
	Interest	2.52
	Rep Schedule	15 annual instalments from 29.8.2016.
7	Bond XXXVII	
	Gross loan opening	27.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	27.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	27.00
	Average Loan	27.00
	Rate of Interest	9.25%
	Interest	2.50
	Rep Schedule	12 annual instalments from 26.12.2015.
8	Bond XXXVIII	
	Gross loan opening	40.00

	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	40.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	40.00
	Average Loan	40.00
	Rate of Interest	9.25%
	Interest	3.70
	Rep Schedule	Bullet Payment as on 9.3.2027
9	Bond XXXIX	
	Gross loan opening	40.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	40.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	40.00
	Average Loan	40.00
	Rate of Interest	9.40%
	Interest	3.76
	Rep Schedule	Bullet Payment as on 29.3.2027
10	Bond XL	
	Gross loan opening	75.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	75.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	75.00
	Average Loan	75.00
	Rate of Interest	9.30%
	Interest	6.98
	Rep Schedule	12 annual instalments from 28.6.2016
11	Bond XLIII	
	Gross loan opening	4.42
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4.42
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4.42
	Average Loan	4.42
	Rate of Interest	7.93%
	Interest	0.35
	Rep Schedule	12 annual instalments from 28.5.2017
	Total Loan	

	Gross loan opening	459.42
	Cumulative Repayment upto DOCOP/previous year	0.00
	Net Loan-Opening	459.42
	Additions during the year	0.00
	Repayment during the year	12.33
	Net Loan-Closing	447.09
	Average Loan	453.25
	Rate of Interest	9.0374%
	Interest	40.96

Annexure 4**Asset 4**

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN		
		(₹ in lakh)
	Details of Loan	2013-14
1	IBRD-V (Exchange Rate ₹51.63)	
	Gross loan opening	5514.85
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5514.85
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5514.85
	Average Loan	5514.85
	Rate of Interest	1.76%
	Interest	97.06
	Rep Schedule	49 half yearly instalments from 15.1.2015
	Total Loan	
	Gross loan opening	5514.85
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5514.85
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	5514.85
	Average Loan	5514.85
	Rate of Interest	1.7600%
	Interest	97.06