

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 108/TT/2013**

**Coram:**

**Shri A. S. Bakshi, Member  
Dr. M. K. Iyer, Member**

**Date of Hearing : 27.1.2016  
Date of Order : 28.3.2016**

**In the matter of:**

Determination of transmission tariff of **Asset-I:** Bay extension at 765 kV Satna Sub-station along with Line Reactor in Sasan #2 Line Bay of 765 kV S/C Sasan-Satna Ckt#2; **Asset-II:** 765 kV S/C Sasan-Satna Ckt#2 TL portion only along with PLCC equipments at both ends; **Asset-III:** 765 kV, 240 MVAR (3 x 80 MVAR) Bus Reactor at BINA Sub-station along with associated bays of 765 kV; **Asset-IV:** 765 kV, 240 MVAR (3 x 80 MVAR) Bus Reactor at Gwalior Sub-station along with associated bays of 765 kV; **Asset-V:** 765 kV, 4 x 80 MVAR Bus Reactor at Indore & 400 kV, 63 MVAR Bus Reactor at Indore Sub-station (**Part-VI**) 765/400 kV, Indore Sub-station (New) including (a) Bay extension at Indore to facilitate charging of Bina (PG) – Indore (PG) TL at 765 kV level (initially charged at 400 kV on 1.4.2012) along with 3 x 80 MVAR Line Reactor at Indore Sub-station, (b) Bay Extension at Indore (PG) for direct connection of Indore (MPPTCL) – Indore (PG) 400 kV D/C TL (initially made direct interconnection under interim contingency scheme) & (c) 765/400 kV ICT#1 (3 x 500 MVA) along with 765 kV and 400 kV bays (**Part-VII**) 765/400 kV ICT#2 (4 x 500 MVA) along with 765 kV and 400 kV isolator bays at Indore Sub-station under Sasan UMPP TS in Western Region for 2009-14 tariff period under under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

**And in the matter of:**

Power Grid Corporation of India Ltd.  
'SAUDAMINI', Plot No-2,  
Sector-29, Gurgaon -122 001 (Haryana).

.....**Petitioner**

**Versus**



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-452008
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
5. Jaipur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road  
Heerapura, Jaipur
6. Jodhpur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road  
Heerapura, Jaipur
7. Punjab State Power Corporation Ltd.  
Thermal Shed T1 A, Near 22 Phatak  
Patiala-147001
8. Haryana Power Purchase Centre  
Shakti Bhawan, Sector-6  
Panchkula (Haryana) 134 109
9. Uttar Pradesh Power Corporation Ltd.  
Shakti Bhawan, 14, Ashok Marg  
Lucknow- 226001
10. Delhi Transco Ltd.  
Shakti Sadan, Kotla Road  
New Delhi- 110002
11. BSES Yamuna Power Ltd.  
BSES Bhawan, Nehru Place  
New Delhi
12. BSES Rajdhani Power Ltd.  
BSES Bhawan, Nehru Place



New Delhi

13. North Delhi Power Ltd.  
Power Trading & Load Dispatch Group  
Cennet Building  
Pitampura, New Delhi-110034
  14. Chandigarh Administration  
Sector-9, Chandigarh
  15. Uttarakhand Power Corporation Ltd.  
Urja Bhawan, Kanwali Road  
Dehradun
  16. North Central Railway  
Allahabad
  17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg  
New Delhi-110002
  18. SASAN Power Ltd.  
1<sup>st</sup> floor, I Block  
Dhirubhai Ambani Knowledge City (DAKC)  
Thane-Belapur Road, Koparkhairane,  
Navi Mumbai
  19. Maharashtra State Electricity Distribution Co. Ltd.  
Prakashgad, 4<sup>th</sup> Floor, Andheri (East), Mumbai-400052
  20. Gujarat Urja Vikas Nigam Ltd.  
Sardar Patel Vidyut Bhawan,  
Race Course Road  
Vadodara- 390007
  21. Electricity Department  
Govt. Of GOA,  
Vidyut Bhawan, Panaji- 403001
  22. Electricity Department  
Administration of Daman & Diu,  
Daman- 396210
  23. Electricity Department  
Administration of Dadar Nagar Haveli,
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U.T., Silvassa- 396230

24. Chhattisgarh State Electricity Board  
P.O Sunder Nagar, Dangania, Raipur  
Chhatisgaarh-492013

.....**Respondents**

The following were present:-

For Petitioner: Shri S. S. Raju, PGCIL  
Shri Anshul Garg, PGCIL  
Shri Jasbir Singh, PGCIL  
Shri M. M. Mondal, PGCIL  
Shri S. K. Venkatesan, PGCIL  
Ms Treepti Sonkatar, PGCIL  
Shri Rakesh Prasad, PGCIL  
Smt. Sangeeta Edwards, PGCIL  
Shri Subhash C. Taneja, PGCIL

For Respondent: None

### **ORDER**

The present petition has been preferred by Power Grid Corporation of India Ltd. ("the petitioner") for determination of transmission tariff under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") for **(Asset-I)** Bay extension at 765 kV Satna Sub-station along with Line Reactor in Sasan #2 Line Bay of 765 kV S/C Sasan-Satna Ckt#2 **(Asset-II)** 765 kV S/C Sasan-Satna Ckt#2 TL portion only along with PLCC equipments at both ends **(Asset-III)** 765 kV, 240 MVAR (3 x 80 MVAR) Bus Reactor at BINA Sub-station along with associated bays of 765 kV **(Asset-IV)** 765 kV, 240 MVAR (3 x 80 MVAR) Bus Reactor at Gwalior Sub-station along with associated bays of 765 kV **(Asset-V)** 765 kV, 4 x 80 MVAR Bus Reactor at Indore & 400 kV, 63 MVAR Bus

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Reactor at Indore Sub-station **(Part-VI)** 765/400 kV, Indore Sub-station (New) including (a) Bay extension at Indore to facilitate charging of Bina (PG) – Indore (PG) TL at 765 kV level (initially charged at 400 kV on 1.4.2012) along with 3 x 80 MVAR Line Reactor at Indore Sub-station, (b) Bay Extension at Indore (PG) for direct connection of Indore (MPPTCL) – Indore (PG) 400 kV D/C TL (initially made direct interconnection under interim contingency scheme) & (c) 765/400 kV ICT#1 (3 x 500 MVA) along with 765 kV and 400 kV bays **(Part-VII)** 765/400 kV ICT#2 (4 x 500 MVA) along with 765 kV and 400 kV isolator bays at Indore Sub-station under Sasan UMPP thermal station in Western Region (hereinafter referred as “transmission asset”) based on actual capital expenditure from COD to 31.3.2014.

2. The respondents are distribution licensees or electricity departments or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Western and Northern Region.

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with the Section 64 of Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. None of the respondents have filed any reply to the petition. The hearing in this matter was held on 27.1.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.



4. The brief facts of the case are as follows:-

(a) The investment approval for the project was accorded by Board of Directors of the petitioner vide memorandum ref: C/CP/Sasan dated 10.12.2008 at an estimated cost of ₹703188 lakh including IDC of ₹76782 lakh.

(b) The scope of work covered under the project is as follows:-

**Part-A: Transmission system of Sasan (4000 MW) UMPP**

**Transmission Lines:**

- i) Sasan-Satna 765 kV 2 x S/C line : Ckt I- 268 km & Ckt II- 279 km
- ii) Satna-Bina 765 kV 2 x S/C line: Ckt I-272 km and 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, 2 x 1000 MVA Sub-station at Satna
- ii) Line bays for operation of Agra-Gwalior-Bina-Seoni S/C lines at 765 kV level

**Part-B: Regional System Strengthening in WR for Sasan UMPP**

**Transmission lines:**

- i) Bina-Indore 765 kV S/C line: 320 km



- ii) Indore-Indore (MPPTL) 400 kV D/C(Quad) line

**Sub-stations:**

- i) Establishment of 765/400 kV, 2 x 1500 MVA Sub-station at Indore
- ii) Upgrading Bina & Gwalior Sub-stations to 765/400 kV: 2 x 1000 MVA, 765/400 kV at Bina and 2 x 1500 MVA, 765/400 kV at Gwalior

5. The petitioner has claimed the revised transmission charges as under:-

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
Depreciation	300.3	2185.78	47.46	29.92
Interest on Loan	345.33	2506.07	10.16	6.35
Return on equity	334.59	2434.92	52.87	33.34
Interest on Working Capital	27.00	168.54	3.72	2.39
O & M Expenses	91.64	152.32	22.91	15.27
<b>Total</b>	<b>1098.86</b>	<b>7447.63</b>	<b>137.12</b>	<b>87.27</b>

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset-VI a	Asset-VI b	Asset-VII
Depreciation	53.09	341	190.19	135.73
Interest on Loan	11.41	90.35	40.78	29.15
Return on equity	59.15	466.11	211.9	151.24
Interest on Working Capital	4.84	32.91	16.33	11.35
O & M Expenses	38.18	235.65	117.83	78.55
<b>Total</b>	<b>166.67</b>	<b>1166.02</b>	<b>577.03</b>	<b>406.02</b>

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

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
Maintenance Spares	13.75	24.93	13.75	13.74
O & M expenses	7.64	13.85	7.64	7.64
Receivables	183.14	1354.12	91.42	87.27



Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
Total	204.53	1392.9	112.81	108.65
Rate of Interest (%)	13.20	13.20	13.20	13.20
<b>Interest</b>	<b>27.00</b>	<b>168.54</b>	<b>3.72</b>	<b>2.39</b>

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
Maintenance Spares	13.74	47.13	23.57	23.57
O & M expenses	7.64	26.18	13.09	13.09
Receivables	66.67	259.11	128.23	135.34
Total	88.05	332.42	164.89	172
Rate of Interest (%)	13.20	13.20	13.20	13.20
<b>Interest</b>	<b>4.84</b>	<b>32.91</b>	<b>16.33</b>	<b>11.35</b>

### Capital Cost

7. Regulation 7 of the 2009 Tariff Regulations specifies 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.”

### **Time Over-run**

8. As per the investment approval, the commissioning schedule of the project was 48 months from the date of investment approval. The investment approval was accorded on 10.12.2008 and the schedule date of commercial operation was 9.12.2012 i.e. 1.1.2013.

Particulars	Scheduled COD	Actual COD	Delay in months
Asset-I	1.1.2013	1.4.2013	3
Asset-II		1.5.2013	4
Asset-III		1.1.2014	12
Asset-IV		1.2.2014	13
Asset-V a		1.11.2013	10
Asset-VI a		1.7.2013	6
Asset-VI b		1.7.2013	6
Asset-VII		1.10.2013	9

9. The reasons submitted by the petitioner for time over-run in case of the instant assets are discussed below.

### **Asset-I and Asset-II**

#### **Delay in Forest Clearances:**

10. The petitioner has submitted that it has made the application for forest clearance to the Government of Madhya Pradesh on 22.7.2009 i.e. after almost 7 months from the date of investment approval (IA), for Sasan-Satna ckt-II transmission line. Forest proposal was delayed at DFO level due to delay in preparation of compensatory afforestation scheme, delay in issuance of FRA



certificates, arranging digital maps of the forest area, route revision due to encounter of coal blocks etc. The petitioner has also submitted chronology of events for forest clearance and documentary evidence for the efforts made vide affidavit dated 20.3.2014. We have considered the submissions of the petitioner and have condoned the time over-run of 3 months and 4 months for Asset-I and Asset-II respectively as the time over-run is basically due to delay in forest clearances and it cannot be attributable to the petitioner.

### **Asset-III, Asset-IV and Asset-V a**

#### **Delay in procurement of reactors**

11. The petitioner submitted that scope of work including procurement of reactors under the said transmission system was further divided into defined packages based on the definite scope of works falling under various categories viz., 'Supply-cum-Installation' and 'Supply' packages etc. for the purpose of competitiveness, efficiency, availability of prospective bidder, project execution schedule, combination/clubbing of equipment/ services that can be advantageously engineered with regard to its work content and clear cut terminal points for interfacing. The bidding process for these packages was carried out in staggered manner to match the project execution schedule. Keeping in view the delay in handing over of land for Indore Sub-station, the procurement of reactors was deferred and was taken up in March, 2010 under the World Bank funding to match the overall project execution schedule. The award was placed in January, 2012 after a delay of about 29 months w.r.t. IA.



12. The time over-run of 10 months in Asset-Va is mainly due to delay in handing over of land for Indore Sub-station which has further delayed the procurement of reactors. The detailed justification for delay in handing over of land for Indore Sub-station is discussed under the time over-run section for Asset-VI and Asset-VII. Hence, the reason for time over-run for Asset-Va is justifiable and accordingly, the time over-run of 10 months in case of Asset-Va is condoned. The petitioner has submitted that the time over-run in case of Asset-III and Asset-IV is due to delay in placing the award. We are not convinced with the justification given by petitioner for time over-run in case of Asset-III and Asset-IV. We are of the view that the petitioner could have avoided the time over-run in case of Asset-III and Asset-IV, i.e. Bus Reactors at Bina and Gwalior Sub-stations, as these two assets have nothing to do with the delay in handing over of land for Indore Sub-station. The petitioner could have initiated the process of procurements of reactors for Asset-III and Asset-IV leaving behind Asset-Va when they started experiencing the problem in getting the land for Indore Sub-station. The consumers cannot be burdened with additional costs for the failure of the petitioner to place the award for reactors in time. Accordingly, the time over-run of 12 months and 13 months in case of Asset-III and Asset-IV respectively is not condoned.

### **Asset-VI a, Asset VI b and Asset-VII**

#### **Delay in handing over the land**

The petitioner has submitted that for construction of 765/400 kV Sub-station at Indore, earlier site for 37.939 Ha land was selected at Village Rajoda, Sanwear

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Road in consultation with local revenue department officials and accordingly, the land acquisition process was initiated. The proposal for acquisition of said private land was submitted to the Collector, Indore on 6.9.2007. In principle approval for acquisition of land was accorded on 31.5.2008 by Land Acquisition Committee, Government of MP subject to compliance of 17 points. The petitioner did not accept 3 points and wrote a letter to Principal Secretary (Revenue) for waiver of these 3 conditions out of 17 conditions. Meanwhile, resentment and agitation started among the farmers of the proposed land and legal notice was received by the petitioner from 22 persons against the land acquisition. Further, in petitioners meeting with Collector, Indore on 12.8.2008, the Collector stated that the proposed land is fertile and irrigated, and is not possible to acquire them due to intense resentment. Subsequently, the meeting was held between the then ED(WR-II) of the petitioners company and Chief Secretary, Government of Madhya Pradesh at Bhopal on 22.8.2008 wherein the alternative site at Hatunia Village, Tehsil Sanver was discussed and agreed upon. The fresh proposal was initiated for land acquisition for alternate site at Hatunia on 25.8.2008. The petitioner also persuaded upto to highest level of Ministry of Revenue, Government of Madhya Pradesh to expedite the process of land acquisition vide letter dated 1.1.2009. Further, Ministry of Revenue, Government of Madhya Pradesh has granted permission to acquire 36.459 hectare of land at Village Hatunia on 14.2.2009. The handing over and advance possession of land was jointly signed by the petitioner and officials of Revenue Department, Sanver on 6.5.2009. The petitioner has further submitted that even though the advance



possession of land was arranged by Revenue Department, the local villagers did not allow the petitioner to mobilise at site and created hindrances regularly. The petitioner has written several letters to concerned local revenue authorities to intimate the condition at site. The possession of land was taken with the help of local administration and police department. The petitioner has submitted detailed chronology of events along with supporting documents. It is observed that fresh proposal for alternate site was initiated on 25.8.2008 even before the IA date and physical possession of land was taken under police protection on 15.2.2010 after the compensation was approved by local administration. Therefore 18 months was consumed in alternate land acquisition. Generally 11-12 months are taken in land acquisition. Further, after the mobilization by turn-key contractor on 1.3.2011, the mob ransacked the sub-stations site and disrupted the works on 13.4.2011. FIR was lodged and site levelling contractor left the site. Further, the LOA was placed for levelling after retendering on 7.7.2011. Further, 3 months was consumed in placing of LOA and retendering. In view of the above the time over-run of 6 months each in case of commissioning of Asset-VIa and Asset-VI b and 9 months in case of Asset-VII has been condoned.

### **Initial Spares**

13. Regulation 8 of the 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 Series compensation devices:	2.5%

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Series Compensation devises and HVDC Station:

3.5%

14. The petitioner has claimed the initial spares by considering the capital cost upto COD and additional capital expenditure upto cut-off date which falls beyond 31.3.2014. We have worked out allowable initial spares considering the capital cost upto 31.3.2014 as it lies within the control period 2009-14. The initial spares claimed is within the ceiling limit in case of Asset-II, Asset-III, Asset-IV, Asset-V a and Asset-VIb considering the capital cost upto 31.3.2014. The initial spares claimed in case of Asset-I, Asset-VI a and Asset-VII is higher than the ceiling limit specified in the 2009 Tariff Regulations and it is restricted to the specified limits. The details of the initial spares claimed and allowed is as follos:-

**(₹ in lakh)**

Particulars	Estimated completion cost claimed	Initial spares claimed	Capital Cost allowed upto 31.3.14	Initial spares			
				Proportionate initial spares	Ceiling limit (%)	Admissible as per ceiling limit	Excess initial spares
Asset-I (Sub-station)	6225.19	170.23	5179.30	141.63	2.50	129.17	12.46
Asset-VIa (Sub-station)	14578.53	416.00	11532.97	329.09	2.50	287.28	41.82
Asset-VII (Sub-station)	7525.22	416.00	5280.64	291.92	2.50	127.92	164.00



## IDC and IEDC

15. As discussed in foregoing paragraphs, we have not condoned the time over-run of 12 months and 13 months for Asset-II and Asset-III. Accordingly, the proportionate IDC and IEDC disallowed is worked out as below:-

**(₹ in lakh)**

Particulars	Asset-III		Asset-IV	
	IDC	IEDC	IDC	IEDC
IDC & IEDC upto COD	349.36	66.48	419.55	89.42
Number of months from IA to Actual COD	60	60	61	61
Number of months from SCOD to Actual COD disallowed	12	12	13	13
<b>Proportionate IDC &amp; IEDC disallowed</b>	<b>69.87</b>	<b>13.30</b>	<b>89.41</b>	<b>19.06</b>

16. There is cost over-run in Asset-I. The capital cost of ₹5450.36 lakh claimed as on COD for Asset-I is exceeding the approved apportioned cost of ₹5179.30 lakh as per FR. Therefore we have restricted the completion cost as on 31.3.2014 to approved apportioned cost. Accordingly, the details of the capital cost considered as on the date of COD after adjustment of excess initial spares, IDC and IEDC disallowed and IDC to be discharged during 2013-14 for the instant assets are as follows:-



(₹ in lakh)				
Particulars	Asset-I	Asset-II	Asset-III	Asset-IV
Capital cost claimed as on COD	5179.30	45149.81	3476.56	3200.56
Less: Proportionate IDC & IEDC disallowed	0.00	0.00	83.17	108.47
Less: IDC discharged during 2013-14	134.90	1407.94	17.04	17.04
Less: Excess Initial spares	12.46	0.00	0.00	0.00
<b>Capital cost considered as on COD for tariff computation</b>	<b>5031.94</b>	<b>43741.87</b>	<b>3376.35</b>	<b>3075.05</b>

(₹ in lakh)				
Capital cost claimed as on COD	Asset-Va	Asset-VIa	Asset-VIb	AssetVII
Less: Proportionate IDC and IEDC disallowed	2286.16	9672.62	4714.18	5012.09
Less: IDC discharged during 2013-14	0.00	0.00	0.00	0.00
Less: Excess Initial spares	6.74	48.17	23.46	9.79
<b>Capital cost considered as on COD for tariff computation</b>	<b>0.00</b>	<b>41.82</b>	<b>0.00</b>	<b>164.00</b>
Capital cost claimed as on COD	<b>2279.42</b>	<b>9582.63</b>	<b>4690.72</b>	<b>4838.30</b>

### **Additional Capital Expenditure**

17. As regards Additional Capital Expenditure, Clause 9(1) of the 2009 Tariff

Regulations provides as under:-

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

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;





- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

18. The petitioner has claimed additional capital expenditure towards balance and retention payment for all the assets. The petitioner vide affidavit dated 4.3.2016 has revised the additional capitalization for all the assets. Further, the petitioner's claim for additional capitalization projected to be incurred during 2014-19 has not been considered because the claim pertains to the period beyond the control period 2009-14. As discussed above the completion cost for Asset-I has been restricted upto approved apportioned cost, the additional capital expenditure for 2013-14 has been considered as difference of approved apportioned cost and capital cost as on COD and IDC discharged during 2013-14. The completion cost as on 31.3.2014 is within the approved apportioned cost as per FR for all the assets except for Asset-I, therefore we have allowed the additional capitalization towards balance and retention payment under Regulation 9(1)(i) of the 2009 Tariff Regulations except for Asset-I. In addition to the additional capitalization approved in this order for 2013-14, we have also considered IDC discharged during 2013-14 as submitted by the petitioner vide affidavit dated 4.3.2016. The additional capitalization claimed and approved for 2013-14 for all the assets is as follows:-



<b>Approved apportioned cost as per FR is ₹5179.30 lakh</b>			
Asset-I	Capital cost as on COD	Additional capitalisation including IDC discharged during 2013-14	Completion cost as on 31.3.2014
Claimed	5315.46	743.96	6059.42
Approved in this order	5031.94	147.36	5179.30

<b>Approved apportioned cost as per FR is ₹60590.7 lakh</b>			
Asset-II	Capital cost as on COD	Additional capitalisation including IDC discharged during 2013-14	Completion cost as on 31.3.2014
Claimed	43741.87	2819.61	46561.48
Approved in this order	43741.87	2819.61	46561.48

<b>Approved apportioned cost as per FR is ₹9232.11 lakh</b>			
Asset-III	Capital cost as on COD	Additional capitalisation including IDC discharged during 2013-14	Completion cost as on 31.3.2014
Claimed	3459.52	271.20	3730.72
Approved in this order	3376.35	271.20	3647.55

<b>Approved apportioned cost as per FR is ₹6798.20 lakh</b>			
Asset-IV	Capital cost as on COD	Additional capitalisation including IDC discharged during 2013-14	Completion cost as on 31.3.2014
Claimed	3200.56	398.83	3599.39
Approved in this order	3075.05	398.83	3473.88

<b>Approved apportioned cost as per FR is ₹4623.39 lakh</b>			
Asset-V a	Capital cost as on COD	Additional capitalisation including IDC discharged during 2013-14	Completion cost as on 31.3.2014
Claimed	2279.42	267.71	2547.13
Approved in this order	2279.42	267.71	2547.13

<b>Approved apportioned cost as per FR is ₹16757.75 lakh</b>			
Asset-VI a	Capital cost as on COD	Additional capitalisation including IDC discharged during 2013-14	Completion cost as on 31.3.2014
Claimed	9624.45	1908.52	11532.97
Approved in this order	9582.63	1908.52	11491.15



<b>Approved apportioned cost as per FR is ₹14675.40 lakh</b>			
Asset-VI b	Capital cost as on COD	Additional capitalisation including IDC discharged during 2013-14	Completion cost as on 31.3.2014
Claimed	4690.72	224.12	4914.84
Approved in this order	4690.72	224.12	4914.84

<b>Approved apportioned cost as per FR is ₹14359.82 lakh</b>			
Asset-VII	Capital cost as on COD	Additional capitalisation including IDC discharged during 2013-14	Completion cost as on 31.3.2014
Claimed	5002.30	278.34	5280.64
Approved in this order	4838.30	278.34	5116.64

### **Debt:Equity Ratio**

19. 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.”



20. We have considered the capital cost as on COD and additional capitalization approved in this order for the tariff period 2009-14 for the transmission asset. The details of the debt:equity in respect of the asset as on the date of COD and as on 31.3.2014 is shown in Table below:-

(₹ in lakh)

Asset-I	As on 1.4.2013		Additional capitalization during 2009-14		As on 31.3.2014	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	3522.36	70.00	103.15	70.00	3625.51	70.00
Equity	1509.58	30.00	44.21	30.00	1553.79	30.00
<b>Total</b>	<b>5031.94</b>	<b>100.00</b>	<b>147.36</b>	<b>100.00</b>	<b>5179.30</b>	<b>100.00</b>

(₹ in lakh)

Asset-II	As on 1.5.2013		Additional capitalization during 2009-14		As on 31.3.2014	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	30619.31	70.00	1973.73	70.00	32593.04	70.00
Equity	13122.56	30.00	845.88	30.00	13968.44	30.00
<b>Total</b>	<b>43741.87</b>	<b>100.00</b>	<b>2819.61</b>	<b>100.00</b>	<b>46561.48</b>	<b>100.00</b>

(₹ in lakh)

Asset-III	As on 1.1.2014		Additional capitalization during 2009-14		As on 31.3.2014	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	2363.45	70.00	189.84	70.00	2553.29	70.00
Equity	1012.91	30.00	81.36	30.00	1094.27	30.00
<b>Total</b>	<b>3376.35</b>	<b>100.00</b>	<b>271.20</b>	<b>100.00</b>	<b>3647.55</b>	<b>100.00</b>

(₹ in lakh)

Asset-IV	As on 1.2.2014		Additional capitalization during 2009-14		As on 31.3.2014	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	2152.54	70.00	279.18	70.00	2431.72	70.00
Equity	922.52	30.00	119.65	30.00	1042.16	30.00
<b>Total</b>	<b>3075.05</b>	<b>100.00</b>	<b>398.83</b>	<b>100.00</b>	<b>3473.88</b>	<b>100.00</b>



(₹ in lakh)

Asset- V a	As on 1.11.2013		Additional capitalization during 2009-14		As on 31.3.2014	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	1595.59	70.00	187.40	70.00	1782.99	70.00
Equity	683.83	30.00	80.31	30.00	764.14	30.00
<b>Total</b>	<b>2279.42</b>	<b>100.00</b>	<b>267.71</b>	<b>100.00</b>	<b>2547.13</b>	<b>100.00</b>

(₹ in lakh)

Asset- VI a	As on 1.7.2013		Additional capitalization during 2009-14		As on 31.3.2014	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	6707.84	70.00	1335.96	70.00	8043.81	70.00
Equity	2874.79	30.00	572.56	30.00	3447.35	30.00
<b>Total</b>	<b>9582.63</b>	<b>100.00</b>	<b>1908.52</b>	<b>100.00</b>	<b>11491.15</b>	<b>100.00</b>

(₹ in lakh)

Asset-VI b	As on 1.7.2013		Additional capitalization during 2009-14		As on 31.3.2014	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	3283.50	70.00	156.88	70.00	3440.39	70.00
Equity	1407.22	30.00	67.24	30.00	1474.45	30.00
<b>Total</b>	<b>4690.72</b>	<b>100.00</b>	<b>224.12</b>	<b>100.00</b>	<b>4914.84</b>	<b>100.00</b>

(₹ in lakh)

Asset-VII	As on 1.10.2013		Additional capitalization during 2009-14		As on 31.3.2014	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	3386.81	70.00	194.84	70.00	3581.65	70.00
Equity	1451.49	30.00	83.50	30.00	1534.99	30.00
<b>Total</b>	<b>4838.30</b>	<b>100.00</b>	<b>278.34</b>	<b>100.00</b>	<b>5116.64</b>	<b>100.00</b>

### Interest on Loan (“IOL”)

21. 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.”



22. In view of provisions of the 2009 Tariff Regulations, interest on loan has been computed as detailed hereinafter:-

- (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 have been considered as equal to the depreciation allowed for that period;
- (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.
- (e) As per Regulation 16(5) only actual loans have been considered for computation of weighted average rate of interest.

23. The petitioner has prayed to be allowed to bill and adjust impact of interest on loan due to change in interest rate on account of floating rate of interest applicable, if any, during the tariff period 2009-14, from the respondents. The interest on loan has been calculated on the basis of prevailing rate of actual loan available as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up.

24. Detailed calculation of the weighted average rate of interest for Asset-I has been given at Annexure to this order.



(₹ in lakh)

Particulars	2013-14 (Pro rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
Gross loan opening as on COD	3522.36	30619.31	2363.45	2152.54
Cumulative Repayment upto COD	0.00	0.00	0.00	0.00
Net Loan-Opening as on COD	3522.36	30619.31	2363.45	2152.54
Additions during the year	103.15	1973.73	189.84	279.18
Repayment during the year	269.58	2188.50	45.72	27.95
Net Loan-Closing	3355.93	30404.54	2507.56	2403.77
Average Loan for the year	3439.15	30511.92	2435.51	2278.15
Rate of Interest (%) for the year	9.0140	8.9597	1.6309	1.6101
<b>Interest</b>	<b>310.01</b>	<b>2509.10</b>	<b>9.79</b>	<b>5.93</b>

(₹ in lakh)

Particulars	2013-14 (Pro rata)			
	Asset-V a	Asset-VI a	Asset-VI b	Asset-VII
Gross loan opening as on COD	1595.59	6707.84	3283.50	3386.81
Cumulative Repayment upto COD	0.00	0.00	0.00	0.00
Net Loan-Opening as on COD	1595.59	6707.84	3283.50	3386.81
Additions during the year	187.40	1335.96	156.88	194.84
Repayment during the year	52.71	329.54	190.36	131.05
Net Loan-Closing	1730.28	7714.27	3250.02	3450.60
Average Loan for the year	1662.94	7211.06	3266.76	3418.71
Rate of Interest (%) for the year	1.6469	1.6641	1.6642	1.6508
<b>Interest</b>	<b>11.33</b>	<b>90.08</b>	<b>40.81</b>	<b>28.14</b>

### **Return on Equity (“ROE”)**

25. 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".

26. The petitioner has computed ROE at the rate of 19.61 % after grossing up the ROE with MAT rate. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2009-14 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

27. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including



interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

28. Above Regulation provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2008-09 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 15 (4) (i) of the 2009 Tariff Regulations. Accordingly, the ROE determined by the Commission is shown in the table below:-

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
Opening Equity as on COD	1509.58	13122.56	1012.91	922.52
Additional Capitalization after COD	44.21	845.88	81.36	119.65
Closing Equity	1553.79	13968.44	1094.27	1042.16
Average Equity for the year	1531.69	13545.50	1053.59	982.34
Return on Equity (Base Rate) (%) for the year	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610
<b>Return on Equity (Pre Tax)</b>	<b>300.36</b>	<b>2437.95</b>	<b>50.94</b>	<b>31.14</b>

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset-VI a	Asset-VI b	Asset-VII
Opening Equity as on COD	683.83	2874.79	1407.22	1451.49
Additional Capitalization after COD	80.31	572.56	67.24	83.50
Closing Equity	764.14	3447.35	1474.45	1534.99
Average Equity for the year	723.98	3161.07	1440.83	1493.24
Return on Equity (Base Rate) (%) for the year	15.50	15.50	15.50	15.50
MAT rate for the year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610



Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset-VI a	Asset-VI b	Asset-VII
<b>Return on Equity (Pre Tax)</b>	<b>58.73</b>	<b>465.34</b>	<b>212.10</b>	<b>146.01</b>

### Depreciation

29. 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.”



30. The instant asset has been put under commercial operation during 2013-14. 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 the 2009 Tariff Regulations. Details of the depreciation worked out for Asset-I are as follows:-

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
Gross block as on COD	5031.94	43741.87	3376.35	3075.05
Additional Capitalization after COD	147.36	2819.61	271.20	398.83
Gross block at the end of the year	5179.30	46561.48	3647.55	3473.88
Average gross block for the year	5105.62	45151.68	3511.95	3274.47
Rate of Depreciation (%) for the year	5.280	5.281	5.280	5.280
Freehold Land	0	0	0	0
Depreciable Value	4595.06	40636.51	3160.76	2947.02
Elapsed Life at the beginning of the year	0	0	0	0
Weighted Balance Useful life of the assets	25	35	25	25
Remaining Depreciable Value	4595.06	40636.51	3160.76	2947.02
<b>Depreciation</b>	<b>269.58</b>	<b>2188.50</b>	<b>45.72</b>	<b>27.95</b>

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset-VI a	Asset-VI b	Asset-VII
Gross block as on COD	2279.42	9582.63	4690.72	4838.30
Additional Capitalization after COD	267.71	1908.51	224.12	278.34
Gross block at the end of the year	2547.13	11491.14	4914.84	5116.64
Average gross block for the year	2413.28	10536.89	4802.78	4977.47
Freehold Land	0	1831.05	0	0
Rate of Depreciation (%) for the year	5.280	4.166	5.280	5.280
Depreciable Value	2171.95	7835.26	4322.50	4479.72
Elapsed Life at the beginning of the year	0	0	0	0
Weighted Balance Useful life of the assets	25	25	25	25
Remaining Depreciable Value	2171.95	7835.26	4322.50	4479.72
<b>Depreciation</b>	<b>52.71</b>	<b>329.54</b>	<b>190.36</b>	<b>131.05</b>



### **Operation & Maintenance Expenses (“O&M Expenses”)**

31. The petitioner has submitted that norms for 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 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 may approach the Commission for suitable revision in norms for O&M Expenses due to impact of wage revision.

32. The petitioner has also submitted that the claim for transmission tariff is exclusive of any statutory taxes, levies, duties, cess or any other kind of impositions, etc. Such kinds of payments are generally included in the O&M Expenses. While specifying the norms for the O&M Expenses, the Commission has in the 2009 Tariff Regulations, given effect to impact of pay revision by factoring 50% on account of pay revision of the employees of PSUs after extensive consultations with the stakeholders, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have allowed O&M Expenses as per the existing norms.

33. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies norms for O&M Expenses for transmission system based on type of Sub-stations and



the transmission line. The O&M Expenses allowed for transmission asset covered in the instant petition are as hereinafter:-

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
<b>O&amp;M Expenses for Lines</b>				
<b>Norm (₹ lakh/km)</b>				
Single Circuit (Bundled conductor with four or more sub-conductors)	0.671	0.671	0.671	0.671
<b>Asset (km)</b>				
765 kV S/C Sasan-Satna Ckt-2	0	247.637	0	0
<b>Total O&amp;M Expense (lines) (₹ lakh)</b>	<b>0</b>	<b>152.51</b>	<b>0</b>	<b>0</b>
<b>O&amp;M Expenses for Bays</b>				
<b>Norm (₹ lakh/Bay)</b>				
400 kV	65.46	65.46	65.46	65.46
765 kV	91.64	91.64	91.64	91.64
<b>Bays</b>				
400 kV	0	0	0	0
765 kV	1	0	1	1
<b>Total O&amp;M expense (Bay) (₹ lakh)</b>	<b>91.64</b>	<b>0</b>	<b>22.60</b>	<b>14.81</b>

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset-VI a	Asset-VI b	Asset-VII
<b>Norm (₹ lakh/Bay)</b>				
400 kV	65.46	65.46	65.46	65.46
765 kV	91.64	91.64	91.64	91.64
<b>Bays</b>				
400 kV	0	2	1	1
765 kV	1	2	1	1
<b>Total O&amp;M expense (Bay) (₹ lakh)</b>	<b>37.91</b>	<b>235.87</b>	<b>117.93</b>	<b>78.33</b>

### Interest on Working Capital ("IWC")

34. Sub-clause (c) of Clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and Clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.



35. The petitioner has considered the rate of interest on working capital as 13.20% as per Clause (3) of Regulation 18 of the 2009 Tariff Regulations and the components of working capital are also considered in accordance with Sub-clause (c) of Clause (1) of Regulation 18 of the 2009 Regulations.

36. In accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation after 1.7.2010 shall be equal to SBI Base Rate plus 350 basis points as on 1<sup>st</sup> April of the year in which the transmission asset was declared under commercial operation. State Bank of India base Rate as on 1.4.2013 was 9.70%. Therefore, interest rate of 13.20% has been considered to work out the interest on working capital in the instant case.

37. Computations in support of interest on working capital allowed are as follows:-

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
Maintenance Spares	13.75	22.88	3.39	2.22
O & M expenses	7.64	12.71	1.88	1.23
Receivables	166.05	1242.80	22.11	13.68
Total	187.44	1278.38	27.38	17.14
Rate of Interest (%)	13.20	13.20	13.20	13.20
<b>Interest</b>	<b>24.74</b>	<b>168.75</b>	<b>3.61</b>	<b>2.26</b>

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset- VI a	Asset-VI b	Asset-VII
Maintenance Spares	5.69	35.38	17.69	11.75
O & M expenses	3.16	19.66	9.83	6.53



Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset- VI a	Asset-VI b	Asset-VII
Receivables	27.58	192.24	96.26	65.77
Total	36.43	247.28	123.78	84.05
Rate of Interest (%)	13.20	13.20	13.20	13.20
<b>Interest</b>	<b>4.81</b>	<b>32.64</b>	<b>16.34</b>	<b>11.09</b>

### **Annual Transmission Charges**

38. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2009-14 is summarised below:-

Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
(₹ in lakh)				
<b>Gross Block</b>				
Opening Gross Block as on COD	5031.94	43741.87	3376.35	3075.05
Additional Capitalization after COD	147.36	2819.61	271.20	398.83
Closing Gross Block	5179.30	46561.48	3647.55	3473.88
Average Gross Block for the year	5105.62	45151.68	3511.95	3274.47
<b>Depreciation</b>				
Rate of Depreciation (%) for a year	5.280	5.281	5.280	5.280
Depreciable Value	4595.06	40636.51	3160.76	2947.02
Elapsed Life at the beginning of the year	0	0	0	0
Weighted Balance Useful life of the assets	25	35	25	25
Remaining Depreciable Value	4595.06	40636.51	3160.76	2947.02
Depreciation for the year	269.58	2188.50	45.72	27.95
<b>Interest on Loan</b>				
Gross Normative Loan as on COD	3522.36	30619.31	2363.45	2152.54
Cumulative Repayment upto COD	0.00	0.00	0.00	0.00
Net Loan-Opening upto COD	3522.36	30619.31	2363.45	2152.54
Additional Capitalization after COD	103.15	1973.73	189.84	279.18
Repayment during the year	269.58	2188.50	45.72	27.95
Net Loan-Closing	3355.93	30404.54	2507.56	2403.77
Average Loan for the year	3439.15	30511.92	2435.51	2278.15
Weighted Average Rate of Interest on Loan(%)	9.0140	8.9597	1.6309	1.6101





Particulars	2013-14 (pro-rata)			
	Asset-I	Asset-II	Asset-III	Asset-IV
Interest	310.01	2509.10	9.79	5.93
<b>Return on Equity</b>				
Opening Equity as on COD	1509.58	13122.56	1012.91	922.52
Additional Capitalization after COD	44.21	845.88	81.36	119.65
Closing Equity	1553.79	13968.44	1094.27	1042.16
Average Equity for the year	1531.69	13545.50	1053.59	982.34
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
MAT rate for the respective year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610
Return on Equity	300.36	2437.95	50.94	31.14
<b>Interest on Working Capital</b>				
Maintenance Spares	13.75	22.88	3.39	2.22
O & M expenses	7.64	12.71	1.88	1.23
Receivables	166.05	1242.80	22.11	13.68
Total	187.44	1278.38	27.38	17.14
Interest	24.74	168.75	3.61	2.26
<b>Annual Transmission Charges</b>				
Depreciation	269.58	2188.50	45.72	27.95
Interest on Loan	310.01	2509.10	9.79	5.93
Return on Equity	300.36	2437.95	50.94	31.14
Interest on Working Capital	24.74	168.75	3.61	2.26
O & M Expenses	91.64	152.51	22.60	14.81
<b>Total</b>	<b>996.33</b>	<b>7456.80</b>	<b>132.67</b>	<b>82.09</b>

(₹ in lakh)

Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset-VI a	Asset-VI b	Asset-VII
<b>Gross Block</b>				
Opening Gross Block as on COD	2279.42	9582.63	4690.72	4838.30
Additional Capitalization after COD	267.71	1908.51	224.12	278.34
Closing Gross Block	2547.13	11491.14	4914.84	5116.64
Average Gross Block for the year	2413.28	10536.89	4802.78	4977.47
<b>Depreciation</b>				
Rate of Depreciation (%) for a year	5.280	4.166	5.280	5.280
Depreciable Value	2171.95	7835.26	4322.50	4479.72



Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset-VI a	Asset-VI b	Asset-VII
Elapsed Life at the beginning of the year	0	0	0	0
Weighted Balance Useful life of the assets	25	25	25	25
Remaining Depreciable Value	2171.95	7835.26	4322.50	4479.72
Depreciation for the year	52.71	329.54	190.36	131.05
<b>Interest on Loan</b>				
Gross Normative Loan as on COD	1595.59	6707.84	3283.50	3386.81
Cumulative Repayment upto COD	0.00	0.00	0.00	0.00
Net Loan-Opening upto COD	1595.59	6707.84	3283.50	3386.81
Additional Capitalization after COD	187.40	1335.96	156.88	194.84
Repayment during the year	52.71	329.54	190.36	131.05
Net Loan-Closing	1730.28	7714.27	3250.02	3450.60
Average Loan for the year	1662.94	7211.06	3266.76	3418.71
Weighted Average Rate of Interest on Loan(%)	1.6469	1.6641	1.6642	1.6508
Interest	11.33	90.08	40.81	28.14
<b>Return on Equity</b>				
Opening Equity as on COD	683.83	2874.79	1407.22	1451.49
Additional Capitalization after COD	80.31	572.56	67.24	83.50
Closing Equity	764.14	3447.35	1474.45	1534.99
Average Equity for the year	723.98	3161.07	1440.83	1493.24
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
MAT rate for the respective year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610
Return on Equity	58.73	465.34	212.10	146.01
<b>Interest on Working Capital</b>				
Maintenance Spares	5.69	35.38	17.69	11.75
O & M expenses	3.16	19.66	9.83	6.53
Receivables	27.58	192.24	96.26	65.77
Total	36.43	247.28	123.78	84.05
Interest	4.81	32.64	16.34	11.09
<b>Annual Transmission Charges</b>				
Depreciation	52.71	329.54	190.36	131.05
Interest on Loan	11.33	90.08	40.81	28.14
Return on Equity	58.73	465.34	212.10	146.01
Interest on Working Capital	4.81	32.64	16.34	11.09



Particulars	2013-14 (pro-rata)			
	Asset-V a	Asset-VI a	Asset-VI b	Asset-VII
O & M Expenses	37.91	235.87	117.93	78.33
<b>Total</b>	<b>165.50</b>	<b>1153.47</b>	<b>577.55</b>	<b>394.63</b>

### **Filing Fee and the Publication Expenses**

39. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, 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 42 of the 2009 Tariff Regulations.

### **Licence Fee**

40. The petitioner has requested to allow the petitioner to bill and recover Licence fee separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee in accordance with Clause (1)(b) of Regulation 42 A of the 2009 Tariff Regulations.

### **Service Tax**

41. The petitioner has sought to recover Service Tax on Transmission Charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. We are of the view that the petitioner's prayer is premature.



## **Sharing of Transmission Charges**

42. The billing, collection and disbursement of the transmission charges approved 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.

43. This order disposes of Petition No. 108/TT/2013.

Sd/-  
**(Dr. M. K. Iyer)**  
Member

Sd/-  
**(A.S. Bakshi)**  
Member

**ANNEXURE**



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO**

(₹ in lakh)

Particulars (Asset-I)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXIX- DOCO	9.20%	355	0	355.00
BOND XXX- DOCO	8.80%	470	0	470.00
BOND XXXIII- DOCO DRAWL ON 8-JUL-2010	8.64%	680	0	680.00
BOND XXXII- DOCO DRAWL ON 29-MAR-2010	8.84%	480	0	480.00
BOND XXXIV- DOCO DRAWL ON 21-OCT-2010	8.84%	15	0	15.00
BOND XXXV- DOCO DRAWL ON 31-MAY-2011	9.64%	140	0	140.00
BOND XXXVI- DOCO DRAWL ON 29-AUG-2011	9.35%	80	0	80.00
BOND XXXVII- DOCO DRAWL ON 26-DEC-2011	9.25%	80	0	80.00
BOND XXXVIII- DOCO DRAWL ON 2-MAR-2012	9.25%	35	0	35.00
BOND XXXIX- DOCO DRAWL ON 29-MAR-2012	9.40%	55	0	55.00
SBI (21.3.2012)- Add Cap 2013-14	10.29%	0	426.34	426.34
BOND XL DOCO DRAWL ON 29 JUN 2012	8.80%	400	0	400.00
BOND XLI DOCO DRAWL ON 19 OCT 2012	8.85%	700	0	700.00
BOND XLII- ADDCAP FOR 2013-2014	8.80%	0	94.43	94.43
BOND-XLII-DOCO	8.80%	230.82	0	230.82
<b>Total</b>		<b>3720.82</b>	<b>520.77</b>	<b>4241.59</b>

(₹ in lakh)

Particulars (Asset-II)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXIX- DOCO DRAWL ON 12-MAR-2009	9.20%	1252	0	1252.00
BOND XXX- DOCO	8.80%	1797	0	1797.00
BOND XXXIII- DOCO	8.64%	5220	0	5220.00
BOND XXXII- DOCO	8.84%	3107.82	0	3107.82
BOND XXIV- DOCO DRAWL ON 29-OCT-2010	8.84%	103	0	103.00



Particulars (Asset-II)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXV- DOCO	9.64%	2936.67	0	2936.67
BOND XXXVI- DOCO	9.35%	189	0	189.00
BOND XXXVII- DOCO	9.25%	682.87	0	682.87
BOND XXXVIII- DOCO DRAWL ON 9-MAR-2012	9.25%	290	0	290.00
BOND XXXVIX- DOCO DRAWL ON 29-MAR-2012	9.40%	485	0	485.00
BOND XL- DOCO	9.30%	3440.43	0	3440.43
BOND XLI- DOCO	8.85%	5880.08	0	5880.08
BOND XLII- ADDCAP FOR 2013-2014 Add Cap 2013-14	8.80%	0	985.56	985.56
BOND XLII- DOCO	8.80%	5235.44	0	5235.44
BOND XLIV- ADDCAP FOR 2013-2014 Add Cap 2013-14	8.70%	0	988.17	988.17
<b>Total</b>		<b>30619.31</b>	<b>1973.73</b>	<b>32593.04</b>

(₹ in lakh)

Particulars (Asset-III)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 1- 62.41	1.63%	0	11.98	11.98
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 2- 62.02	1.63%	0	177.94	177.94
IBRD IV ADDL- DOCO- 62.41	1.63%	2421.7	0	2421.70
<b>Total</b>		<b>2421.70</b>	<b>189.92</b>	<b>2611.62</b>

(₹ in lakh)

Particulars (Asset-IV)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 1- 62.774	1.61%	0	279.16	279.16
IBRD IV ADDL- DOCO- 63.12	1.61%	2240.44	0	2240.44
<b>Total</b>		<b>2240.44</b>	<b>279.16</b>	<b>2519.60</b>

(₹ in lakh)



Particulars (Asset-Va)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 1- 62.363	1.66%	0	182.66	182.66
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 2- 62.36	1.66%	0	4.8	4.80
IBRD IV ADDL- DOCO- 62.36	1.66%	1595.61	0	1595.61
Total		1595.61	187.46	1783.07

(₹ in lakh)

Particulars (Asset-VI a)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 1- 62.89	1.66%	0	1302.26	1302.26
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 2- 59.86	1.66%	0	34	34.00
IBRD IV ADDL- DOCO- 59.86	1.66%	6741.55	0	6741.55
Total		6741.55	1336.26	8077.81

(₹ in lakh)

Particulars (Asset-VIb)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 1- 62.89	1.66%	0	140.43	140.43
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 2- 59.86	1.66%	0	16.58	16.58
IBRD IV ADDL- DOCO- 59.86	1.66%	3283.5	0	3283.50
Total		3283.50	157.01	3440.51

(₹ in lakh)

Particulars (Asset-VII)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 1- 62.89	1.65%	0	187.98	187.98
IBRD IV ADDL ADDCAP FOR 2013-2014 Add Cap 2- 63.12	1.65%	0	6.63	6.63
IBRD IV ADDL- DOCO- 63.12	1.65%	3501.58	0	3501.58
Total		3501.58	194.61	3696.19

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2013-14 FOR ASSET-I**



(₹ in lakh)

Details of Loan	Asset-I	Asset-II	Asset-III	Asset-IV
	2013-14	2013-14	2013-14	2013-14
Gross Opening Loan	3720.82	30619.3	2421.7	2240.44
Cumulative Repayment of loan upto previous year	29.58	104.33	82.09	75.95
Net Loan Opening	3691.24	30515	2339.61	2164.49
Additions during the year	520.77	1973.73	189.92	279.16
Repayment during the year	108.75	513.07	44.67	43.08
Net Loan Closing	4103.26	31975.6	2484.86	2400.57
Average Loan	3897.25	31245.3	2412.24	2282.53
Weighted Average Rate of Interest (%)	9.0140%	8.9597%	1.6309%	1.6101%
Interest	351.3	2799.5	39.34	36.75

(₹ in lakh)

Details of Loan	Asset-Va	Asset-VI a	Asset-VI b	Asset-VII
	2013-14	2013-14	2013-14	2013-14
Gross Opening Loan	1595.61	6741.55	3283.5	3501.58
Cumulative Repayment of loan upto previous year	54.09	113.93	55.49	118.7
Net Loan Opening	1541.52	6627.62	3228.01	3382.88
Additions during the year	187.46	1336.26	157.01	194.61
Repayment during the year	30.48	275.46	117.32	63.2
Net Loan Closing	1698.5	7688.42	3267.7	3514.29
Average Loan	1620.01	7158.02	3247.86	3448.59
Weighted Average Rate of Interest (%)	1.6469%	1.6641%	1.6642%	1.6508%
Interest	26.68	119.12	54.05	56.93

