

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 557/TT/2014**

**Coram:**

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

**Date of Hearing : 13.1.2016  
Date of Order : 23.2.2016**

**In the matter of:**

Truing up of transmission tariff of **Combined Element-1** (i) 400 kV D/C RAPP-Kankroli transmission line along with associated bays (ii) 50 MVAR Bus Reactor along with associated bays at Kankroli Sub-station and (iii) 400 kV S/C RAPP – Kota line along with 80 MVAR Bus Reactor and **Combined Element- 2** (i) 400/220 kV 315 MVA ICT-II along with associated bays and two no. 220 kV line bays at Kankroli Sub-station (ii) 400/220 kV 315 MVA ICT-I along with associated bays & 2 no. 220 kV line bays at Kankroli Sub-station and (iii) 400/220 kV 315 MVA ICT-I and ICT-II at Kota Sub-station and ICT-III at Kankroli Sub-station along with associated bays at Kota and Kankroli Sub-station under Transmission System associated with RAPP 5&6 (Notional COD 1.4.2009) in Northern Region for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and under 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. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.  
Vidyut Bhawan, Vidyut Marg,  
Jaipur-302 005



2. Ajmer Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road  
Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road  
Heerapura, Jaipur
4. Jodhpur Vidyut Vitran Nigam Ltd.  
400 kV GSS Building (Ground Floor), Ajmer Road  
Heerapura, Jaipur
5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan,  
Kumar House Complex Building II  
Shimla-171004
6. Punjab State Power Corporation Ltd.  
Thermal Shed T1 A, Near 22 Phatak  
Patiala-147001
7. Haryana Power Purchase Centre  
Shakti Bhawan, Sector-6  
Panchkula (Haryana) 134 109
8. Power Development Deptt.  
Govt. of Jammu & Kashmir  
Mini Secretariat, Jammu
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

....Respondents

The following were present:-

For Petitioner:                      Shri M.M. Mondal, PGCIL  
   Shri Vivek Kumar Singh, PGCIL  
   Shri S.S. Raju, PGCIL  
   Shri D.K. Karma, PGCIL  
   Smt. Sangeeta Edwards, PGCIL  
   Shri S.C. Taneja, PGCIL  
   Shri Rakesh Prasad, PGCIL  
   Shri B.L. Sharma, PGCIL  
   Shri Ved Prakash Rastogi, PGCIL

For Respondent:                      Shri S.K. Agarwal, Advocate, Rajasthan Discoms  
   Shri S.P. Das, Advocate, Rajasthan Discoms  
   Smt. Neelam, Advocate, Rajasthan Discoms

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd.  
("the petitioner") for truing up of capital expenditure of (A) **Combined Element-1**



(i) 400 kV D/C RAPP-Kankroli transmission line along with associated bays (ii) 50 MVAR Bus Reactor along with associated bays at Kankroli Sub-station and (iii) 400 kV S/C RAPP – Kota line along with 80 MVAR Bus Reactor and, (B) **Combined Element- 2** (i) 400/220 kV 315 MVA ICT-II along with associated bays and two no. 220 kV line bays at Kankroli Sub-station (ii) 400/220 kV 315 MVA ICT-I along with associated bays & 2 no. 220 kV line bays at Kankroli Sub-station and (iii) 400/220 kV 315 MVA ICT-I and ICT-II at Kota Sub-station and ICT-III at Kankroli Sub-station along with associated bays at Kota and Kankroli Sub-stations under Transmission System associated with RAPP 5&6 (Notional COD 1.4.2009) in Northern Region (hereinafter referred as “transmission asset”) under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) based on actual capital expenditure for the period 1.4.2009 to 31.3.2014, and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from 1.4.2014 to 31.3.2019.

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



3. The petitioner has served the petition on the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the 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. The hearing in this matter was held on 13.1.2016. Reply has been filed by Rajasthan Discoms vide affidavit dated 11.1.2016. The concerns expressed by respondents are being addressed in the respective paras of this order. 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 administrative approval and expenditure sanction for the transmission system was accorded by Government of India vide Ministry of Power letter No. 12/22/2033-PG dated 3.6.2005 at an estimated cost of ₹49945 lakh, which included IDC of ₹2238 lakh (based on 4th quarter 2004 price level). Subsequently, Investment Approval for Revised Cost Estimate (RCE) for transmission system was approved by the Board of Directors of the petitioner company vide letter No. C/CP/RCE RAPP-5&6 dated 29.12.2008 at an estimated cost of ₹62665 lakh including IDC of ₹4088 lakh (based on 1st quarter, 2008 price level). The petitioner has built the transmission asset in the Northern Region. The date of the commercial operation of the transmission asset is 1.4.2009.



(b) The tariff for the 2009-14 period for combined element-1 and combined element-2 was allowed vide order dated 29.2.2012 in Petition No. 340/2010 in accordance with the 2009 Tariff Regulations. The tariff allowed for the tariff period 2009-14 is as under:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Combined Element-1</b>					
Depreciation	2100.05	2122.52	2126.74	2126.74	2126.74
Interest on Loan	2451.95	2285.23	2095.01	1897.28	1699.56
Return on Equity	2099.72	2122.99	2127.92	2127.92	2127.92
Interest on Working Capital	158.88	157.51	154.97	152.14	149.38
O & M Expenses	404.63	427.79	452.30	478.15	505.41
<b>Total</b>	<b>7215.22</b>	<b>7116.05</b>	<b>6956.94</b>	<b>6782.23</b>	<b>6609.02</b>
<b>Combined Element-2</b>					
Depreciation	785.89	799.59	803.64	803.64	803.64
Interest on Loan	1003.80	952.87	888.43	813.74	739.05
Return on Equity	849.95	868.12	875.85	875.85	875.85
Interest on Working Capital	91.97	93.69	94.83	95.63	96.58
O & M Expenses	738.84	781.14	825.85	873.02	922.96
<b>Total</b>	<b>3470.46</b>	<b>3495.41</b>	<b>3488.59</b>	<b>3461.88</b>	<b>3438.07</b>

(c) The tariff for combined element-1 and combined element-2 for the tariff period 2009-14 was determined vide order dated 29.2.2012 in Petition No. 340/2010 based on admitted capital cost of ₹39780.06 lakh (excluding excess initial spares of ₹0.67 lakh) and ₹16008.20 lakh as on 31.3.2009.

(d) The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for 2009-14 tariff period.



## **TRUING UP OF ANNUAL FIXED CHARGES FOR TARIFF PERIOD 2009-14**

5. The truing up of tariff for 2009-14 tariff period has been determined as discussed below:-

6. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd., Respondents No. 2, 3 & 4, (collectively referred to as "Rajasthan Discoms" have submitted that the truing up exercise cannot be undertaken on vague figures. In accordance with the Hon'ble Appellate Tribunal for Electricity Judgment in Appeal No. 266 of 2006, prudence check should be exercised in determination of tariff. Further, the annual fixed cost for Combined Element-2 has been shown on higher side without any supporting data. The proposal is not maintainable as the same appears to be filed in casual manner without considering the actual data. A reference to provisions contained in the Tariff Regulations and mere reference to return on equity, interest on loan, depreciation, interest on working capital, operation and maintenance expenses by itself does not justify the truing up exercise unless some realistic reasons with specific figures are shown. Rajasthan Discoms requested to carry out the prudence check and consumers should not be burdened for vague proposals of truing up. The petitioner in response submitted that additional capitalization on account of forest payments and other contractors has been claimed under Regulation 9(2)(viii) of the 2009 Tariff Regulations and the same has already been submitted vide affidavit dated 11.2.2016. Further, the petitioner has submitted that in accordance with Regulation 15 of the 2009 Tariff Regulations, the petitioner is allowed to recover the shortfall or refund the excess

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Annual Fixed Charges, 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. Further, Annual Fixed charges with respect to Tax rates applicable shall be trued up in accordance with Regulation 6 of the 2009 Tariff Regulations. The differential claim will be settled directly with the beneficiaries.

### **Capital Cost**

7. The petitioner has claimed admitted capital cost of of ₹39780.06 lakh (excluding excess initial spares of ₹0.67 lakh) for Combined Element-1 and ₹16008.20 lakh for Combined Element-2 as on 31.3.2009 for the purpose of tariff.

8. Last proviso to Clause (2) of Regulation 7 of the 2009 Tariff Regulations provides that:-

“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”

9. The capital cost admitted as on 31.3.2009 vide order dated 29.2.2012 in Petition No. 340/2010 has been considered as the opening capital cost as on 1.4.2009 for determination of tariff in accordance with Regulation 7 of the 2009 Tariff Regulations. The admitted capital cost ₹39780.73 lakh (including excess





initial spares of ₹0.67 lakh) for Combined Element-1 and ₹16008.20 lakh (without adjustment of LD amount recovered from contractor) for Combined Element-2 as on 1.4.2009 has been considered to work out the trued up tariff for the tariff period 2009-14. However, with regard to Asset III of Combined element II i.e. “400/220 kV 315 MVA ICT -I and ICT-II at Kota Sub-station and ICT-III at Kankroli Sub-station along with associated bays at Kota and Kankroli Sub-stations”, we have adjusted the LD amount recovered from the contractor in the subsequent paragraphs.

### **Initial Spares**

10. 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%
& HVDC Station:	3.5%”

11. In order dated 29.2.2012 in Petition No. 340/2010, the excess initial spares amounting to ₹0.67 lakh in case of Asset-III of Combined Element-1 (400 kV S/C RAPP-Kota line along with 80 MVAR bus reactor) is deducted. The relevant portion of the order is extracted hereunder:-

“15. Initial spares calculated as per Regulation 8 of 2009 regulations is given hereunder:-



(₹ in lakh)

Particulars	Rate as per Regulation 8 of 2009 regulations	Expenditure Pertaining to Sub-station upto cut-off date	Amount claimed by the petitioner	Initial spares calculated as per Regulation	Excess amount claimed
Sub-station (including PLCC)	2.50%	2969.48	74.89	74.22	0.67

Initial spares claimed by the petitioner for Sub-station (including PLCC) in Asset-III of Combined Element-1 exceeds the ceiling limit specified in the 2009 regulations, i.e. 2.5% as on cut-off date, by ₹0.67 lakh which has already been deducted from Sub-station as on the date of commercial operation. In case of transmission line, the initial spares claimed for both the Combined Elements is within the specified ceiling limit and hence no adjustment of initial spares is being done.”

12. The petitioner in instant petition has submitted that the above initial spares of ₹74.89 lakh claimed for sub-station is within the specified ceiling limit if building and civil work, which is also a part of sub-station works, is included. Hence, the petitioner has requested to allow amount of ₹0.67 lakh for Asset-III of Combined Element-1. In this regard, the petitioner was directed vide letter dated 13.1.2016 asked the petitioner to provide Auditor Certificate for Asset-III (i.e. 400 kV S/C RAPP- Kota line along with 80 MVAR Bus Reactor) of Combined Element-1 to work out the initial spares. However, the petitioner has not provided the Auditor Certificate for Asset-III of Combined Element-1.

13. Further, with regard to Asset III of Combined element II i.e. “400/220 kV 315 MVA ICT -I and ICT-II at Kota Sub-station and ICT-III at Kankroli Sub-station along with associated bays at Kota and Kankroli Sub-stations”, the Commission vide its order dated 17.03.2011 in Petition No. 89/2010 at Para 17 had directed the petitioner to adjust the LD amount recovered from the contractor as follows:-



“17. In the light of the foregoing, we hold that the time over-run is attributable to reasons beyond the control of the petitioner. Needless to add that’s the petitioner shall abide by its assurance and ensure that the LD recovered from the contractor shall be adjusted against the capital cost.”

14. The petitioner in response submitted that LD amount of Asset III of Combined element II recovered from the contractor is ₹389326. Since the amount is less than ₹5 lakh, the same is accounted in P&L. Further, the petitioner submitted details of LD recovered from the contractor and it is as follows:-

Sr. No.	Contractor	LD Amount (in ₹)
1	Kankroli Transformer	7456
2	Kota ICT	216300
3	Line RAPP KOTA	165570
<b>Total</b>		<b>389326</b>

Accordingly, capital cost has been worked out by adjusting the LD amount of ₹389326/- recovered from the contractor.

15. We have worked out the initial spares for Combined Element-1 as per ceiling norms specified in Regulation 8 of the 2009 Tariff Regulations. The details of initial spares claimed by the petitioner and allowed for sub-station for Combined Element-1 and Combined Element-2 are shown in Table below:-

(₹ in lakh)					
Description with regard to initial spares for Sub-station	Capital cost as on cut-off date	Initial spares claimed	Ceiling limits as per Regulation 8 of the 2009 Tariff Regulation	Initial spares worked out and allowed	Excess initial spares claimed
	(a)	(b)	(c)	$(d) = ((a - b) * c) / (100 - c) \%$	$(e) = (d) - (b)$
Combined Element-1	7344.36	74.89	2.50%	186.40	0.00
Combined Element-2	17453.49	133.19	2.50%	444.11	0.00



16. Accordingly, the initial spares claimed by the petitioner are within the specified ceiling limit. As such, the Commission has considered the capital cost of ₹39780.73 lakh (i.e. equal to admitted capital cost including the excess initial spares in order dated 29.2.2012) for Combined Element-1 and ₹16004.31 lakh for Combined Element-2 as on the actual COD 1.4.2009 for the purpose of tariff for tariff period 2009-14.

### **Additional Capital Expenditure**

17. The petitioner has claimed additional capitalization of ₹215.75 lakh, ₹179.40 lakh, ₹173.25 lakh, ₹142.42 lakh and ₹2119.45 lakh in 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14, respectively, for Combined Element-1 and additional capitalization of ₹ 571.07 lakh, ₹ 355.61 lakh, ₹ 522.51 lakh, ₹ 577.64 lakh and ₹ 594.28 lakh in 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14, respectively, for Combined Element-2. The petitioner has claimed above additional capitalization towards balance & retention payment incurred in transmission line under Regulation 9(1) of the 2009 Tariff Regulations for 2009-10 to 2011-12 and Regulation 9(2)(viii) of the 2009 Tariff Regulations for 2012-13 to 2013-14.

18. Clause 1 and 2(viii) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“(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:

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

...

(2) The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

.....

(viii) Any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.”

19. The Commission vide its order dated 29.2.2012 in Petition No. 340/2010 has approved the additional capitalization of ₹699.76 lakh and ₹187.88 lakh during 2009-10 & 2010-11, respectively, for Combined Element-1 and ₹397.96 lakh and ₹294.81 lakh during 2009-10 and 2010-11, respectively, on account of expenses incurred upto cut-off date under Clause 1 of Regulation 9 of the 2009 Tariff Regulation. Against this, the petitioner has claimed additional capitalization of ₹215.75 lakh, ₹179.40 lakh, ₹173.25 lakh, ₹142.42 lakh and ₹2119.45 lakh in 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14, respectively, for Combined Element-1 and additional capitalization of ₹571.07 lakh, ₹355.61 lakh, ₹522.51 lakh, ₹577.64 lakh and ₹594.28 lakh in 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14, respectively, for Combined Element-2 towards balance and retention payment incurred in transmission line under Regulation 9(1) of the 2009 Tariff Regulations for 2009-10 to 2011-12 and Regulation 9(2)(viii) of the 2009 Tariff Regulations for 2012-13 to 2013-14. In this regard, the petitioner was directed



vide letter dated 13.1.2016 asked the petitioner to provide item wise detailed justification for increase in the additional capitalization against the approved additional capital expenditure. In response, the petitioner vide affidavit dated 9.2.2016 has submitted the item wise justification for additional capitalization for Combined Element 1 and Combined Element 2.

20. With regard to additional capitalization of ₹2119.45 lakh claimed for Combined Element-1 during 2013-14, the petitioner submitted that the same is on account of afforestation payments done for forest-lands and & non-forest lands and has been claimed under Regulation 9(2) as award for compliance with the order of statutory authority. However, in Form 9 at page 62 of the petition same has been claimed under Regulation 9(2)(viii) of the 2009 Tariff Regulations. In this regard, the petitioner was directed vide its letter dated 13.1.2016 asked for clarification along with detailed breakup of payment done for forest and non-forest land for (i) Jawahar Sagar wild life, (ii) forest area under Chittorgarh along with documentary evidence. The petitioner, in response, has submitted that additional capitalization of ₹2119.45 lakh in 2013-14 is on account of afforestation payments done for forest land and non-forest lands which has been claimed under Regulation 9(2)(viii) of the 2009 Tariff Regulations. Whereas, in page no. 16 of the petition, it is inadvertently written as Regulation 9(2) of the 2009 tariff Regulations.



Further, the detailed breakup of payment done in 2013-14 i.e., breakup of ₹2119.45 lakh done for forest and non-forest land for (i) Jawahar Sagar wild life, (ii) forest area under Chittorgarh is as below:-

**(a) Jawahar Sagar Wildlife:**

The petitioner submitted that total 93.187 ha of forest and non-forest land was used for construction of RAPP Kakroli RAPP Kota and RAPP Bassi transmission line under State Govt. of Rajasthan.

**(b) Chittorgarh Forest Area:**

The petitioner submitted that total area under forest land is 177.77 Ha, for which the compensation has been increased from ₹35200 per Ha to ₹58100 per Ha. The payment made against forest land is ₹24.04 lakh and ₹38.88 lakh.

21. The petitioner has also submitted the detailed breakup of ₹2119.45 lakh as follows:-

Particulars	Details	Amount (₹ in lakh)
C.A.M.P.A C.A.F A/C C.A 1581	Forest Compensation	64.15
Rajasthan Campa Fund A/c 037100101025228, Corporation Bank	Forest Compensation	2410.23
Dolly Constructions	Liability for civil works	5.66
Gopi Nursery and Gardeners		-1.16



Particulars	Details	Amount (₹ in lakh)
Laxmi Narayan Agarwal		-34.26
Laxmi Narayan Agarwal		-72.22
Petty Contractors		-3.82
Siemens Ltd.		16.97
	Recoveries from various contractors bills	-266.10
<b>Total</b>		<b>2119.45</b>

22. The petitioner has also submitted the Auditor's Certificate to verify the actual additional capital expenditure incurred in 2009-14. As the total capital cost of the Combined Element-1 and Combined Element-2 including additional capitalisation incurred during tariff period 2009-14 works out to ₹42611.01 lakh for Combined Element-1 and ₹18625.42 lakh for Combined Element-2, which is less than the approved apportioned cost of ₹43003.72 lakh for Combined Element-1 and ₹19661.14 lakh for Combined Element-2 given in the investment approval dated 29.12.2008.

23. We have considered the submissions of the petitioner. The additional capitalisation of ₹215.75 lakh, ₹179.40 lakh, ₹173.25 lakh, ₹142.42 lakh and ₹2119.45 lakh in 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14, respectively, for Combined Element-1 and additional capitalization of ₹ 571.07 lakh, ₹ 355.61 lakh, ₹ 522.51 lakh, ₹ 577.64 lakh and ₹ 594.28 lakh in 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14, respectively, for Combined Element-2, is allowed towards balance & retention payment incurred in transmission line under





Regulation 9(1) of the 2009 Tariff Regulations for 2009-10 to 2011-12 and Regulation 9(2)(viii) of the 2009 Tariff Regulations for 2012-13 to 2013-14.

(₹ in lakh)

Particulars	Capital cost as on 31.3.2009	Additional Capital Expenditure (2009-14)					Total	Capital Cost as on 31.3.2014
		09-10	10-11	11-12	12-13	13-14		
		Add-cap	Add-cap	Add-cap	Add-cap	Add-cap		
<b>Combined Element-1</b>								
Approved in order dated 29.2.2012	39780.06	699.76	187.88	0.00	0.00	0.00	887.64	40667.70
Actual	39780.73	215.75	179.40	173.25	142.42	2119.45	2830.27	42611.01
Approved in this Order	39780.73	215.75	179.40	173.25	142.42	2119.45	2830.27	42611.01
<b>Combined Element-2</b>								
Approved in order dated 29.2.2012	16008.20	397.96	294.81	0.00	0.00	0.00	692.77	16700.97
Actual	16008.20	571.07	355.61	522.51	577.64	594.28	2621.11	18629.31
Approved in this Order	16004.31	571.07	355.61	522.51	577.64	594.8	2621.11	18625.42

### **Debt: Equity**

24. Clause 2 of Regulation 12 of the 2009 Tariff Regulations provides that:-

“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.”

25. The petitioner was directed vide letter dated 13.1.2016 to submit an undertaking on affidavit that actual equity infused for the additional capitalisation during 2009-14 period is not less than 30% for the given transmission asset. The petitioner in response submitted the actual debt and equity infused during tariff period 2009-14 as follows:-



	Sl. No.	Year	Total Add cap	Actual debt	Actual equity	Debt: Equity
Combined Element-1	1	2009-10	215.75	151.03	64.72	70:30
	2	2010-11	179.40	125.58	53.82	70:30
	3	2011-12	173.25	121.28	51.97	70:30
	4	2012-13	142.42	99.69	42.73	70:30
	5	2013-14	2119.45	1483.62	635.83	70:30
Combined Element-2	1	2009-10	571.07	399.74	171.32	70:30
	2	2010-11	355.61	248.93	106.68	70:30
	3	2011-12	522.51	365.76	156.75	70:30
	4	2012-13	577.64	404.35	173.28	70:30
	5	2013-14	594.28	416.00	178.28	70:30

In accordance with Regulation 12(3) of the 2009 Tariff Regulations the normative debt:equity ratio for additional capitalization is 70:30. Since actual loan deployed for all the years is 70% as shown in Form-13, balance amount has been deployed as equity which is 30% of the additional capitalization as shown in Form-1A.

25. The petitioner has claimed trued up Annual Fixed Charge based on debt-equity ratio of 70:30 as on 31.3.2009, as opening debt:equity ratio as on 1.4.2009. The transmission assets covered in the instant petition are existing assets, as the COD is prior to 1.4.2009. The debt:equity ratio of 70:30 as on 31.3.2009 has been considered as opening debt:equity ratio as on 1.4.2009 for the purpose of truing up of the approved tariff of tariff period 2009-14, as given under:-

(₹ in lakh)		
Funding	Amount	(%)
<b>Combined Element-1</b>		
Debt	27846.51	70.00
Equity	11934.22	30.00
<b>Total</b>	<b>39780.73</b>	<b>100.00</b>



<b>Combined Element-2</b>		
Debt	11203.01	70.00
Equity	4801.29	30.00
<b>Total</b>	<b>16004.31</b>	<b>100.00</b>

26. Further normative debt:equity ratio of 70:30 has been submitted for additional capitalization for tariff period 2014-19 and the same has been allowed. The details of the debt:equity ratio as on 31.3.2014 including additional capitalization is as follows:-

(₹ in lakh)		
Funding	Amount	(%)
<b>Combined Element-1</b>		
Debt	29827.70	70.00
Equity	12783.29	30.00
<b>Total</b>	<b>42611.01</b>	<b>100.00</b>
<b>Combined Element-2</b>		
Debt	13037.79	70.00
Equity	5587.62	30.00
<b>Total</b>	<b>18625.42</b>	<b>100.00</b>

### **Interest on Loan (“IOL”)**

27. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 has held that:-

“...in case of floating rate of interest, any change in the rates of interest during the tariff period will be considered at the time of true up”.

28. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest.

29. We have considered the submissions of the petitioner and accordingly calculated the IOL based on actual interest rate submitted by the petitioner, in



accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure – 1** and the IOL has been worked out and allowed as follows:-.

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Combined Element-1</b>					
Approved vide order dated 29.2.2012	2451.95	2285.23	2095.01	1897.28	1699.56
As claimed by petitioner	2434.81	2254.00	2070.63	1884.15	1757.51
Allowed after true up	2434.82	2254.01	2070.62	1884.15	1757.50
<b>Combined Element-2</b>					
Approved vide order dated 29.2.2012	1003.80	952.87	888.43	813.74	739.05
As claimed by petitioner	1009.10	964.41	916.17	872.63	830.51
Allowed after true up	1008.85	964.18	915.97	872.44	830.34

The IOL has increased due to increase in additional capitalisation during 2009-14 period.

### **Return on Equity (“ROE”)**

30. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provide that:-

“(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 maybe, 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 year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

31. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 29.2.2012. However, for truing up purpose, the computation of RoE for the tariff period 2009-14 has been done on the basis of actual MAT rate applicable during 2009-14. The petitioner has submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

Particulars	MAT Rate (t) %	Grossed up ROE (Base rate/(1-t)) %
2009-10	16.995	18.674
2010-11	19.931	19.358
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.610

32. Accordingly, the ROE as trued up is as shown in the table below:-

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Combined Element-1</b>					
Approved vide order dated 29.2.2012	2099.72	2122.99	2127.92	2127.92	2127.92
As claimed by petitioner	2234.64	2327.96	2340.50	2349.67	2444.46
Allowed after true up	2234.64	2327.96	2340.50	2349.67	2444.46
<b>Combined Element-2</b>					
Approved vide order dated 29.2.2012	849.95	868.12	875.85	875.85	875.85
As claimed by petitioner	912.81	973.15	999.63	1031.60	1078.48



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Allowed after true up	912.59	972.92	999.40	1031.38	1078.25

33. The return on equity allowed in the instant order is more than the return on equity allowed vide order dated 29.2.2012 due to increase in equity on account of additional capitalisation and increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

### **Depreciation**

34. Clause (42) of Regulation 3 of the 2009 Tariff Regulations defines useful life as follows:-

“**useful life**’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:-

.....	
(c) AC and DC sub-station	25 years
(d) Hydro generating station	35 years
(e) Transmission line	35 years”

35. Further, Clause (4) of Regulation 17 of the 2009 Tariff Regulations provides as follows:-

#### **"17. Depreciation:**

...  
(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.”

36. Depreciation has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations in order dated 29.2.2012 in Petition No. 340/2010.



37. As per Regulations 3(42) and 17 (4) of the 2009 Tariff Regulations, useful life for transmission line and sub-station is 35 years and 25 years, respectively. For the purpose of calculation, the life of Buildings and Civil Works and PLCC has been considered as 25 years. In the present case, weighted average value of asset as on COD has been considered to work out the weighted average life of the transmission system as 33 years for Combined Element-1 and 25 years for Combined Element-2.

38. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure and additional capitalisation as under:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Combined Element-1</b>					
Approved vide order dated 29.2.2012	2100.05	2122.52	2126.74	2126.74	2126.74
As claimed by petitioner	2087.54	2097.97	2107.28	2115.61	2175.33
Allowed after true up	2087.54	2097.97	2107.28	2115.61	2175.33
<b>Combined Element-2</b>					
Approved vide order dated 29.2.2012	785.89	799.59	803.64	803.64	803.64
As claimed by petitioner	790.78	809.78	826.11	851.06	877.68
Allowed after true up	790.58	809.57	825.90	850.86	877.47

39. The depreciation allowed in the instant order is in variance with the depreciation allowed vide order 29.2.2012 due to change in additional capitalization for 2009-14.



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

40. Rajasthan Discoms have submitted that the petitioner should be allowed after prudence check.

41. The petitioner has computed O&M Expenses in accordance with the O&M norms for 400 kV D/C twin conductor transmission line, 400 kV D/C twin conductor transmission line and 400 kV bays specified in Regulation 19(g) of the 2009 Tariff Regulations. Accordingly, the O&M Expenses for Combined Element-1 have been worked out as given below:-

**(₹ in lakh)**

Particulars		2009-10	2010-11	2011-12	2012-13	2013-14
Actual line length (km)	Double Circuit (Twin Conductor)	198.64	198.64	198.64	198.64	198.64
	Single Circuit (Twin Conductor)	50.50	50.50	50.50	50.50	50.50
Actual (No. of bays)	400 kV Bays	5	5	5	5	5
Norms as per Regulation	Double Circuit (Twin Conductor)	0.627	0.663	0.701	0.741	0.783
	Single Circuit (Twin Conductor)	0.358	0.378	0.400	0.423	0.447
	400 kV Bays	52.40	55.40	58.57	61.92	65.46
<b>Total (₹ in lakh)</b>		<b>404.63</b>	<b>427.79</b>	<b>452.30</b>	<b>478.15</b>	<b>505.41</b>

42. Further, the petitioner has computed O&M Expenses for Combined Element-2 mentioned in the petition, in accordance with the O&M norms for 400 kV bay and 220 kV bay specified in Regulation 19(g) of the 2009 Tariff Regulations. Accordingly, the O&M Expenses have been worked out as given below:-





		(₹ in lakh)				
Particulars		2009-10	2010-11	2011-12	2012-13	2013-14
Actual (No. of bays)	400 kV Bays	5	5	5	5	5
	220 kV Bays	13	13	13	13	13
Regulation	400 kV Bays (₹ lakh/bay)	52.40	55.40	58.57	61.92	65.46
	220 kV Bays (₹ lakh/bay)	36.68	38.78	41.00	43.34	45.82
<b>Total (₹ in lakh)</b>		<b>738.84</b>	<b>781.14</b>	<b>825.85</b>	<b>873.02</b>	<b>922.96</b>

43. The O&M Expenses claimed by the petitioner for tariff period 2009-14 are same as that approved in the tariff order dated 29.2.2012 in Petition No. 340/2010. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are the same, and they are as follows:-

		(₹ in lakh)				
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14	
<b>Combined Element-1</b>						
Approved vide order dated 29.2.2012	404.63	427.79	452.30	478.15	505.41	
As claimed by petitioner	404.63	427.79	452.30	478.15	505.41	
Allowed after true up	404.63	427.79	452.30	478.15	505.41	
<b>Combined Element-2</b>						
Approved vide order dated 29.2.2012	738.84	781.14	825.85	873.02	922.96	
As claimed by petitioner	738.84	781.14	825.85	873.02	922.96	
Allowed after true up	738.84	781.14	825.85	873.02	922.96	

### **Interest on working capital (“IWC”)**

44. 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.



45. The petitioner has submitted that the rate of interest on working capital has been considered as 12.25% 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 Tariff Regulations.

46. In order dated 29.2.2012 in Petition No. 340/2010, rate of interest on working capital of 12.25% applicable for 2008-09 was allowed. 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 in case of transmission assets declared under commercial operation prior to 1.4.2009, shall be equal to short-term Prime Lending Rate as applicable as on 1.4.2009. State Bank of India short-term Prime Lending Rate on 1.4.2009 was 12.25%. Therefore, interest rate of 12.25% has been considered to work out the interest on working capital in the instant case.

47. The IWC tried up is as under:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Combined Element-1</b>					
Maintenance Spares	60.69	64.17	67.84	71.72	75.81
O & M Expenses	33.72	35.65	37.69	39.85	42.12
Receivables	1220.45	1211.39	1188.20	1163.97	1173.48
Total	1314.86	1311.21	1293.73	1275.54	1291.41
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>161.07</b>	<b>160.62</b>	<b>158.48</b>	<b>156.25</b>	<b>158.20</b>
<b>Combined Element-2</b>					
Maintenance Spares	110.83	117.17	123.88	130.95	138.44



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
O & M Expenses	61.57	65.10	68.82	72.75	76.91
Receivables	590.72	604.02	610.93	621.46	635.54
Total	763.12	786.29	803.63	825.17	850.90
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>93.48</b>	<b>96.32</b>	<b>98.44</b>	<b>101.08</b>	<b>104.24</b>

48. The IWC claimed by the petitioner, allowed and trued up are as shown in the table below:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Combined Element-1</b>					
Approved vide order dated 29.2.2012	158.88	157.51	154.97	152.14	149.38
As claimed by petitioner	161.07	160.62	158.48	156.25	158.20
Allowed after true up	161.07	160.62	158.48	156.25	158.20
<b>Combined Element-2</b>					
Approved vide order dated 29.2.2012	91.97	93.69	94.83	95.63	96.58
As claimed by petitioner	93.50	96.33	98.46	101.10	104.25
Allowed after true up	93.48	96.32	98.44	101.08	104.24

49. The IWC has increased on account of increase in receivables due to variation in IOL, ROE and Depreciation due to increase in additional capitalisation and on account of applicable MAT rate during the 2009-14 tariff period.

### **ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD**

50. The detailed computation of the various components of the trued up annual fixed charges for the Combined Element-1 and Combined Element-2 for the tariff period 2009-14 is summarised below:-



(₹ in lakh)

Combined Element-1					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Gross Block</b>					
Opening Gross Block	39780.73	39960.13	40133.38	40275.80	42395.25
Additional Capitalization	179.40	173.25	142.42	2119.45	2830.27
Closing Gross block	39960.13	40133.38	40275.80	42395.25	45225.52
Average Gross block	39870.43	40046.76	40204.59	41335.53	43810.39
<b>Depreciation</b>					
Rate of Depreciation	5.236	5.239	5.241	5.118	4.965
Depreciable Value	35577.230	35755.047	35913.740	36055.791	37073.633
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	33	32	31	30	29
Remaining Depreciable Value	34884.76	32975.04	31035.76	29070.53	27972.76
Depreciation	2087.54	2097.97	2107.28	2115.61	2175.33
<b>Interest on Loan</b>					
Gross Normative Loan	27846.51	27997.54	28123.12	28244.39	28344.08
Cumulative Repayment upto Previous Year	692.47	2780.01	4877.98	6985.26	9100.87
Net Loan-Opening	27154.04	25217.53	23245.14	21259.13	19243.21
Additions	151.03	125.58	121.28	99.69	1483.62
Repayment during the year	2087.54	2097.97	2107.28	2115.61	2175.33
Net Loan-Closing	25217.53	23245.14	21259.13	19243.21	18551.50
Average Loan	26185.78	24231.33	22252.14	20251.17	18897.36
Weighted Average Rate of Interest on Loan (%)	9.2982	9.3020	9.3053	9.3039	9.3003
Interest	2434.82	2254.01	2070.62	1884.15	1757.50
<b>Return on Equity</b>					
Opening Equity	11934.22	11998.94	12052.76	12104.73	12147.46
Additions	64.7	53.8	52.0	42.7	635.8
Closing Equity	11998.94	12052.76	12104.73	12147.46	12783.29
Average Equity	11966.58	12025.85	12078.75	12126.09	12465.37



Combined Element-1					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective year (%)	16.995	19.931	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax) (%)	18.674	19.358	19.377	19.377	19.610
Return on Equity (Pre Tax)	2234.64	2327.96	2340.50	2349.67	2444.46
<b>Interest on Working Capital</b>					
Maintenance Spares	60.69	64.17	67.84	71.72	75.81
O & M Expenses	33.72	35.65	37.69	39.85	42.12
Receivables	1220.45	1211.39	1188.20	1163.97	1173.48
Total	1314.86	1311.21	1293.73	1275.54	1291.41
Interest	161.07	160.62	158.48	156.25	158.20
<b>Annual Transmission Charges</b>					
Depreciation	2087.54	2097.97	2107.28	2115.61	2175.33
Interest on Loan	2434.82	2254.01	2070.62	1884.15	1757.50
Return on Equity	2234.64	2327.96	2340.50	2349.67	2444.46
Interest on Working Capital	161.07	160.62	158.48	156.25	158.20
O & M Expenses	404.63	427.79	452.30	478.15	505.41
<b>Total</b>	<b>7322.69</b>	<b>7268.35</b>	<b>7129.18</b>	<b>6983.85</b>	<b>7040.90</b>

(₹ in lakh)

Combined Element-2					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Gross Block</b>					
Opening Gross Block	16004.31	16575.38	16930.99	17453.50	18031.14
Additional Capitalization	571.07	355.61	522.51	577.64	594.28
Closing Gross block	16575.38	16930.99	17453.50	18031.14	18625.42
Average Gross block	16289.84	16753.18	17192.24	17742.32	18328.28



<b>Depreciation</b>					
Rate of Depreciation	4.853	4.832	4.804	4.796	4.788
Depreciable Value	13668.869	14085.875	14481.029	14976.096	15503.460
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	25	24	23	22	21
Remaining Depreciable Value	13516.84	13143.27	12728.85	12398.02	12074.52
Depreciation	790.58	809.57	825.90	850.86	877.47
<b>Interest on Loan</b>					
Gross Normative Loan	11203.01	11602.76	11851.69	12217.45	12621.80
Cumulative Repayment upto Previous Year	152.03	942.61	1752.18	2578.08	3428.94
Net Loan-Opening	11050.98	10660.16	10099.51	9639.37	9192.86
Additions	399.75	248.93	365.76	404.35	416.00
Repayment during the year	790.58	809.57	825.90	850.86	877.47
Net Loan-Closing	10660.16	10099.51	9639.37	9192.86	8731.38
Average Loan	10855.57	10379.83	9869.44	9416.11	8962.12
Weighted Average Rate of Interest on Loan	9.2934	9.2890	9.2808	9.2654	9.2650
Interest	1008.85	964.18	915.97	872.44	830.34
<b>Return on Equity</b>					
Opening Equity	4801.29	4972.61	5079.30	5236.05	5409.33
Additions	171.32	106.68	156.75	173.28	178.28
Closing Equity	4972.61	5079.30	5236.05	5409.33	5587.61
Average Equity	4886.95	5025.95	5157.67	5322.69	5498.47
Return on Equity (Base Rate )	15.50	15.50	15.50	15.50	15.50
MAT rate for the respective year (%)	16.995	19.931	20.008	20.008	20.961
Rate of Return on Equity (Pre Tax )	18.674	19.358	19.377	19.377	19.610
Return on Equity (Pre Tax)	912.59	972.92	999.40	1031.38	1078.25



<b>Interest on Working Capital</b>					
Maintenance Spares	110.83	117.17	123.88	130.95	138.44
O & M Expenses	61.57	65.10	68.82	72.75	76.91
Receivables	590.72	604.02	610.93	621.46	635.54
Total	763.12	786.29	803.63	825.17	850.90
Interest	93.48	96.32	98.44	101.08	104.24
<b>Annual Transmission Charges</b>					
Depreciation	790.58	809.57	825.90	850.86	877.47
Interest on Loan	1008.85	964.18	915.97	872.44	830.34
Return on Equity	912.59	972.92	999.40	1031.38	1078.25
Interest on Working Capital	93.48	96.32	98.44	101.08	104.24
O & M Expenses	738.84	781.14	825.85	873.02	922.96
<b>Total</b>	<b>3544.34</b>	<b>3624.13</b>	<b>3665.56</b>	<b>3728.78</b>	<b>3813.26</b>



## DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

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

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Combined Element-1</b>					
Depreciation	2231.28	2231.28	2231.28	2231.28	2231.28
Interest on Loan	1621.19	1414.03	1206.88	999.69	792.40
Return on Equity	2506.80	2506.80	2506.80	2506.80	2506.80
Interest on Working Capital	171.92	168.00	164.11	160.25	156.41
O & M Expenses	462.34	477.81	493.64	510.01	526.93
<b>Total</b>	<b>6993.53</b>	<b>6797.92</b>	<b>6602.71</b>	<b>6408.03</b>	<b>6213.82</b>
<b>Combined Element-2</b>					
Depreciation	893.35	895.47	895.47	895.47	895.47
Interest on Loan	771.17	691.02	608.16	525.24	442.27
Return on Equity	1098.33	1100.70	1100.70	1100.70	1100.70
Interest on Working Capital	110.56	110.38	110.09	109.84	109.65
O & M Expenses	850.23	878.43	907.63	937.70	968.85
<b>Total</b>	<b>3723.64</b>	<b>3676.00</b>	<b>3622.05</b>	<b>3568.95</b>	<b>3516.94</b>

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

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Combined Element-1</b>					
Maintenance Spares	69.35	71.67	74.05	76.50	79.04
O & M Expenses	38.53	39.82	41.14	42.50	43.91
Receivables	1165.59	1132.99	1100.45	1068.01	1035.64
<b>Total</b>	<b>1273.47</b>	<b>1244.48</b>	<b>1215.64</b>	<b>1187.01</b>	<b>1158.59</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest</b>	<b>171.92</b>	<b>168.00</b>	<b>164.11</b>	<b>160.25</b>	<b>156.41</b>
<b>Combined Element-2</b>					
Maintenance Spares	127.53	131.76	136.14	140.66	145.33
O & M Expenses	70.85	73.20	75.64	78.14	80.74
Receivables	620.61	612.67	603.68	594.83	586.16
<b>Total</b>	<b>818.99</b>	<b>817.63</b>	<b>815.46</b>	<b>813.63</b>	<b>812.23</b>
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest</b>	<b>110.56</b>	<b>110.38</b>	<b>110.09</b>	<b>109.84</b>	<b>109.65</b>





53. Rajasthan Discoms have submitted that the tariff sought for tariff period 2014-19 appear to be on higher side and needs to be rationalized. The proposed transmission tariff is not tenable as the petitioner has not provided the actual figures and tariff is merely based on AFC, O&M, depreciation, interest on depreciation, etc. The reasons submitted for determination of tariff for tariff period 2014-19 are payment of taxes on MAT, ROE, interest on loan, deferred tax liability, service tax, O&M expenses, filing fee, publication of notices in newspapers, etc. and are rudimentary in nature without being specific. The proposal appears to be vague and is not specific for lack of categorical details and necessitates prudent check. The petitioner in response submitted that the tariff for tariff period 2014-19 has been claimed in accordance with the 2014 Tariff Regulations.

### **Capital Cost**

54. Clause (1) & (3) of Regulation 9 of the 2014 Tariff Regulations specify as follows:-

“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.”

“(3) The Capital cost of an existing project shall include the following:  
(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;  
(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and  
(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

55. The petitioner has claimed the capital expenditure of ₹42611.01 lakh for Combined Element-1, as on 31.3.2014 and has not projected any additional

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capital expenditure during the tariff period 2014-19. The petitioner has claimed capital expenditure of ₹ 18629.31 lakh as on 31.3.2014 for Combined Element-2. Further, the petitioner has also projected additional capital expenditure of ₹80.65 lakh during the tariff period 2014-19 towards balance/retention payments for works executed prior to cut-off date under Regulation 14(3)(v) of the 2014 Tariff Regulations.

56. The trued up capital cost of ₹42611.01 lakh for Combined Element-1 and ₹18625.42 lakh for Combined Element-2 as on 1.4.2014 is considered for the purpose of tariff for tariff period 2014-19.

#### **Additional Capital Expenditure**

57. The petitioner has not claimed any additional capital expenditure for 2014-19 tariff period for Combined Element-1.

58. The petitioner has claimed the additional capital expenditure of ₹80.65 lakh for Combined Element-2 for 2014-15 towards balance/retention payments for works executed prior to cut-off date under Regulation 14(3)(v) of the 2014 Tariff Regulations. In this regard, the petitioner was directed vide letter dated 13.1.2016 to provide the details of balance and retention payment yet to be made along with the details of the contract for which payment has been retained along with the amount retained. In response, the petitioner has submitted that the balance expenditure of ₹80.65 lakh of Combined Element-2 has been shown as projected expenditure as shown below:-



(₹ in lakh)

Amount	Contractor	Payment withheld	Retention
80.65	CGL (Sub-station package)	40.71	39.93

59. Clause 3(v) of Regulation 14 of the 2014 Tariff Regulations provides as follows:

“(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

.....

(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.,”

60. The total capital cost of the transmission asset for Combined Element-2 including additional capitalisation of ₹80.65 lakh works out to ₹18706.07 lakh, which is less than the approved apportioned cost of ₹19661.14 lakh for Combined Element-2. As such, the additional capital expenditure of ₹80.65 lakh in 2014-15 as claimed by the petitioner is allowed in accordance with Clause 3(v) of Regulation 14 of the 2014 Tariff Regulations. The additional capitalisation for tariff period 2014-19 shall be finally approved after the detailed scrutiny of additional capitalisation while carrying out the truing up for 2014-19 period.

(₹ in lakh)

Particulars	Capital cost as on 31.3.2014	Additional capitalisation					Total additional capitalisation	Total capital cost including additional capitalisation
		2014-15	2015-16	2016-17	2017-18	2018-19		
Combined Element-1	42611.01	0.00	0.00	0.00	0.00	0.00	0.00	42611.01
Combined Element-2	18625.42	80.65	0.00	0.00	0.00	0.00	80.65	18706.07



### **Debt: Equity Ratio**

61. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-

“(3) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

62. The petitioner has considered debt:equity ratio as 70:30 as on 31.3.2014 for Combined Element-1 and Combined Element-2, each. The admitted debt:equity ratio of 70:30 after true-up for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. The details of the debt:equity as on 1.4.2014 considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

Funding	Amount (₹in lakh)	(%)
<b>Combined Element-1</b>		
Debt	29827.70	70.00
Equity	12783.29	30.00
<b>Total</b>	<b>42611.01</b>	<b>100.00</b>
<b>Combined Element-2</b>		
Debt	13037.79	70.00
Equity	5587.62	30.00
<b>Total</b>	<b>18625.42</b>	<b>100.00</b>

63. Further, normative debt:equity ratio of 70:30 has been proposed for additional capitalization for tariff period 2014-19. The details of the debt:equity including additional capitalization as on 31.03.2019 is as follows:-



Funding	Amount (₹in lakh)	(%)
<b>Combined Element-1</b>		
Debt	29827.70	70.00
Equity	12783.29	30.00
<b>Total</b>	<b>42611.01</b>	<b>100.00</b>
<b>Combined Element-2</b>		
Debt	13094.25	70.00
Equity	5611.82	30.00
<b>Total</b>	<b>18706.07</b>	<b>100.00</b>

### **Interest on Loan (“IOL”)**

64. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced as under:-

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

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.”

65. The weighted average rate of IOL has been considered on the basis of rate prevailing as on 1.4.2014.

67. It is observed that the debt funding in the instant case is through bonds, which bear a fixed interest rate. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average



rate of interest are placed at **Annexure-II** and the IOL has been worked out and allowed as follows:-

**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Element-1</b>					
Gross Normative Loan	29827.70	29827.70	29827.70	29827.70	29827.70
Cumulative Repayment upto Previous Year	11276.20	13507.48	15738.76	17970.04	20201.32
Net Loan-Opening	18551.50	16320.22	14088.94	11857.66	9626.38
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	2231.28	2231.28	2231.28	2231.28	2231.28
Net Loan-Closing	16320.22	14088.94	11857.66	9626.38	7395.10
Average Loan	17435.86	15204.58	12973.30	10742.02	8510.74
Weighted Average Rate of Interest on Loan (%)	9.2973	9.2979	9.2995	9.3023	9.3058
<b>Interest</b>	<b>1621.07</b>	<b>1413.70</b>	<b>1206.45</b>	<b>999.26</b>	<b>791.99</b>
<b>Combined Element-2</b>					
Gross Normative Loan	13037.79	13094.25	13094.25	13094.25	13094.25
Cumulative Repayment upto Previous Year	4306.41	5199.55	6094.82	6990.09	7885.35
Net Loan-Opening	8731.38	7894.70	6999.43	6104.16	5208.89
Addition due to Additional Capitalization	56.46	0.00	0.00	0.00	0.00
Repayment during the year	893.14	895.27	895.27	895.27	895.27
Net Loan-Closing	7894.70	6999.43	6104.16	5208.89	4313.63
Average Loan	8313.04	7447.06	6551.79	5656.53	4761.26
Weighted Average Rate of Interest on Loan (%)	9.2749	9.2774	9.2806	9.2839	9.2874
<b>Interest</b>	<b>771.03</b>	<b>690.89</b>	<b>608.05</b>	<b>525.15</b>	<b>442.20</b>

### **Return on Equity ("ROE")**

68. Clause (1)& (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

**"24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.  
(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system"



**“25. Tax on Return on Equity:**

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

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

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.”

69. The petitioner has computed ROE at the rate of 19.610% after grossing up the ROE with MAT rate as per the above Regulation. 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 2014-19 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.

70. 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.

71. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing



up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the ROE determined by the Commission is given below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Element-1</b>					
Opening Equity	12783.29	12783.29	12783.29	12783.29	12783.29
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	12783.29	12783.29	12783.29	12783.29	12783.29
Average Equity	12783.29	12783.29	12783.29	12783.29	12783.29
Return on Equity Base Rate (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for the year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return of Equity (Pre-Tax) (%)	19.610	19.610	19.610	19.610	19.610
<b>Return on Equity (Pre-Tax)</b>	<b>2506.80</b>	<b>2506.80</b>	<b>2506.80</b>	<b>2506.80</b>	<b>2506.80</b>
<b>Combined Element-2</b>					
Opening Equity	5587.61	5611.81	5611.81	5611.81	5611.81
Addition due to Additional Capitalization	24.20	0.00	0.00	0.00	0.00
Closing Equity	5611.81	5611.81	5611.81	5611.81	5611.81
Average Equity	5599.71	5611.81	5611.81	5611.81	5611.81
Return on Equity Base Rate (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year(%)	20.961	20.961	20.961	20.961	20.961
Rate of Return of	19.610	19.610	19.610	19.610	19.610





Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Equity(Pre-Tax)(%)					
<b>Return on Equity(Pre-Tax)</b>	<b>1098.10</b>	<b>1100.48</b>	<b>1100.48</b>	<b>1100.48</b>	<b>1100.48</b>

## **Depreciation**

72. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

### **"27. Depreciation:**

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. 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"

"(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** 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 the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets."

73. The petitioner has computed depreciation considering capital expenditure of ₹ 42611.01 lakh for Combined Element-1 and ₹ 18625.42 lakh for Combined Element-2 as on 31.3.2014

74. We have considered the submission made by the petitioner with reference to depreciation. Depreciation is allowed as provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed is given hereunder:-



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Element-1</b>					
Opening Gross block	42611.01	42611.01	42611.01	42611.01	42611.01
Additions during the year due to projected additional capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	42611.01	42611.01	42611.01	42611.01	42611.01
Average Gross block	42611.01	42611.01	42611.01	42611.01	42611.01
Rate of Depreciation (%)	5.236	5.236	5.236	5.236	5.236
Depreciable Value	38027.39	38027.39	38027.39	38027.39	38027.39
Elapsed Life of the assets at beginning of the year	5	6	7	8	9
Weighted Balance Useful life of the assets	28	27	26	25	24
Remaining Depreciable Value	26751.20	24519.92	22288.64	20057.36	17826.08
<b>Depreciation</b>	<b>2231.28</b>	<b>2231.28</b>	<b>2231.28</b>	<b>2231.28</b>	<b>2231.28</b>
<b>Combined Element-2</b>					
Opening Gross block	18625.42	18706.07	18706.07	18706.07	18706.07
Additions during the year due to projected additional capitalization	80.65	0.00	0.00	0.00	0.00
Closing Gross block	18706.07	18706.07	18706.07	18706.07	18706.07
Average Gross block	18665.74	18706.07	18706.07	18706.07	18706.07
Rate of Depreciation	4.785	4.786	4.786	4.786	4.786
Depreciable Value	15726.62	15762.91	15762.91	15762.91	15762.91
Elapsed Life of the assets at beginning of the year	5	6	7	8	9
Weighted Balance Useful life of the assets	20	19	18	17	16
Remaining Depreciable Value	11420.21	10563.36	9668.09	8772.83	7877.56
<b>Depreciation</b>	<b>893.14</b>	<b>895.27</b>	<b>895.27</b>	<b>895.27</b>	<b>895.27</b>

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

75. The petitioner has computed normative O&M Expenses as per sub-clause (a) of Clause (3) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the petitioner’s entitlement of O&M Expenses for Combined Element-1 and Combined Element-2 has been worked out as given hereunder:-



(₹ in lakh)

Combined Element-1						
Particulars		2009-10	2010-11	2011-12	2012-13	2013-14
Actual line length (km)	Double Circuit (Twin Conductor)	198.64	198.64	198.64	198.64	198.64
	Single Circuit (Twin Conductor)	50.50	50.50	50.50	50.50	50.50
Actual (No. of bays)	400 kV Bays	5	5	5	5	5
Norms as per Regulation	Double Circuit (Twin Conductor)	0.707	0.731	0.755	0.78	0.806
	Single Circuit (Twin Conductor)	0.404	0.418	0.432	0.446	0.461
	400 kV Bays	60.30	62.30	64.37	66.51	68.71
<b>Total (₹ in lakh)</b>		<b>462.34</b>	<b>477.81</b>	<b>493.64</b>	<b>510.01</b>	<b>526.93</b>

(₹ in lakh)

Combined Element-2						
Particulars		2009-10	2010-11	2011-12	2012-13	2013-14
Actual (No. of bays)	400 kV Bays	5	5	5	5	5
	220 kV Bays	13	13	13	13	13
Regulation	400 kV Bays (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
	220 kV Bays (₹ lakh/bay)	42.21	43.61	45.06	46.55	48.10
<b>Total (₹ in lakh)</b>		<b>850.23</b>	<b>878.43</b>	<b>907.63</b>	<b>937.70</b>	<b>968.85</b>

76. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner Company is due during 2014-19 and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the



Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

77. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

78. The details of O&M Expenses allowed are given hereunder:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Element-1	462.34	477.81	493.64	510.01	526.93
Combined Element-2	850.23	878.43	907.63	937.70	968.85

### **Interest on Working Capital (“IWC”)**

79. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:

**“28. Interest on Working Capital**

- (c)(i) Receivables equivalent to two months of fixed cost;  
(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and  
(iii) Operation and maintenance expenses for one month”

“(5) 'Bank Rate' means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

80. The petitioner has submitted that it has computed Interest on working capital for the tariff period 2014-19 considering the SBI Base Rate as on



1.4.2014 plus 350 basis points. The rate of interest on working capital considered is 13.50%.

81. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capital as determined by the Commission is shown in the table below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Element-1</b>					
Maintenance Spares	69.35	71.67	74.05	76.50	79.04
O & M expenses	38.53	39.82	41.14	42.50	43.91
Receivables	1165.57	1132.93	1100.38	1067.93	1035.57
Total	1273.45	1244.42	1215.56	1186.93	1158.52
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest</b>	<b>171.92</b>	<b>168.00</b>	<b>164.10</b>	<b>160.24</b>	<b>156.40</b>
<b>Combined Element-2</b>					
Maintenance Spares	127.53	131.76	136.14	140.66	145.33
O & M expenses	70.85	73.20	75.64	78.14	80.74
Receivables	620.61	612.67	603.68	594.83	586.16
Total	818.90	817.54	815.36	813.53	812.14
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest</b>	<b>110.55</b>	<b>110.37</b>	<b>110.07</b>	<b>109.83</b>	<b>109.64</b>

### **Annual Transmission Charges**

82. The detailed computation of the various components of the annual fixed charges for the Combined Element-1 and Combined Element-2 for the tariff period 2014-19 is summarised below:-



(₹ in lakh)

Combined Element-1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Gross Block</b>					
Opening Gross Block	42611.01	42611.01	42611.01	42611.01	42611.01
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	42611.01	42611.01	42611.01	42611.01	42611.01
Average Gross Block	42611.01	42611.01	42611.01	42611.01	42611.01
<b>Depreciation</b>					
Rate of Depreciation	5.236	5.236	5.236	5.236	5.236
Depreciable Value	38027.39	38027.39	38027.39	38027.39	38027.39
Elapsed Life of the assets at beginning of the year	5	6	7	8	9
Weighted Balance Useful life of the assets	28	27	26	25	24
Remaining Depreciable Value	26751.20	24519.92	22288.64	20057.36	17826.08
Depreciation	2231.28	2231.28	2231.28	2231.28	2231.28
<b>Interest on Loan</b>					
Gross Normative Loan	29827.70	29827.70	29827.70	29827.70	29827.70
Cumulative Repayment upto Previous Year	11276.20	13507.48	15738.76	17970.04	20201.32
Net Loan-Opening	18551.50	16320.22	14088.94	11857.66	9626.38
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	2231.28	2231.28	2231.28	2231.28	2231.28
Net Loan-Closing	16320.22	14088.94	11857.66	9626.38	7395.10
Average Loan	17435.86	15204.58	12973.30	10742.02	8510.74
Weighted Average Rate of Interest on Loan (%)	9.2973	9.2979	9.2995	9.3023	9.3058
Interest	1621.07	1413.70	1206.45	999.26	791.99
<b>Return on Equity</b>					
Opening Equity	12783.29	12783.29	12783.29	12783.29	12783.29
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	12783.29	12783.29	12783.29	12783.29	12783.29
Average Equity	12783.29	12783.29	12783.29	12783.29	12783.29
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500



Combined Element-1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
MAT Rate for the year 2013-14 (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	2506.80	2506.80	2506.80	2506.80	2506.80
<b>Interest on Working Capital</b>					
Maintenance Spares	69.35	71.67	74.05	76.50	79.04
O & M expenses	38.53	39.82	41.14	42.50	43.91
Receivables	1165.57	1132.93	1100.38	1067.93	1035.57
Total	1273.45	1244.42	1215.56	1186.93	1158.52
Interest	171.92	168.00	164.10	160.24	156.40
<b>Annual Transmission Charges</b>					
Depreciation	2231.28	2231.28	2231.28	2231.28	2231.28
Interest on Loan	1621.07	1413.70	1206.45	999.26	791.99
Return on Equity	2506.80	2506.80	2506.80	2506.80	2506.80
Interest on Working Capital	171.92	168.00	164.10	160.24	156.40
O & M Expenses	462.34	477.81	493.64	510.01	526.93
<b>Total</b>	<b>6993.41</b>	<b>6797.60</b>	<b>6602.27</b>	<b>6407.59</b>	<b>6213.41</b>

(₹ in lakh)

Combined Element-2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Gross Block</b>					
Opening Gross Block	18625.42	18706.07	18706.07	18706.07	18706.07
Additional Capitalisation	80.65	0.00	0.00	0.00	0.00
Closing Gross Block	18706.07	18706.07	18706.07	18706.07	18706.07
Average Gross Block	18665.74	18706.07	18706.07	18706.07	18706.07
<b>Depreciation</b>					
Rate of Depreciation	4.785	4.786	4.786	4.786	4.786
Depreciable Value	15726.62	15762.91	15762.91	15762.91	15762.91
Elapsed Life of the assets at beginning of the year	5	6	7	8	9
Weighted Balance Useful life of the assets	20	19	18	17	16



Combined Element-2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Remaining Depreciable Value	11420.21	10563.36	9668.09	8772.83	7877.56
Depreciation	893.14	895.27	895.27	895.27	895.27
<b>Interest on Loan</b>					
Gross Normative Loan	13037.79	13094.25	13094.25	13094.25	13094.25
Cumulative Repayment upto Previous Year	4306.41	5199.55	6094.82	6990.09	7885.35
Net Loan-Opening	8731.38	7894.70	6999.43	6104.16	5208.89
Additions	56.46	0.00	0.00	0.00	0.00
Repayment during the year	893.14	895.27	895.27	895.27	895.27
Net Loan-Closing	7894.70	6999.43	6104.16	5208.89	4313.63
Average Loan	8313.04	7447.06	6551.79	5656.53	4761.26
Weighted Average Rate of Interest on Loan	9.2749	9.2774	9.2806	9.2839	9.2874
Interest	771.03	690.89	608.05	525.15	442.20
<b>Return on Equity</b>					
Opening Equity	5587.61	5611.81	5611.81	5611.81	5611.81
Additions	24.20	0.00	0.00	0.00	0.00
Closing Equity	5611.81	5611.81	5611.81	5611.81	5611.81
Average Equity	5599.71	5611.81	5611.81	5611.81	5611.81
Return on Equity (Base Rate )	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax )	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	1098.10	1100.48	1100.48	1100.48	1100.48
<b>Interest on Working Capital</b>					
Maintenance Spares	127.53	131.76	136.14	140.66	145.33
O & M expenses	70.85	73.20	75.64	78.14	80.74
Receivables	620.51	612.57	603.58	594.74	586.07
Total	818.90	817.54	815.36	813.53	812.14
Interest	110.55	110.37	110.07	109.83	109.64
<b>Annual Transmission Charges</b>					
Depreciation	893.14	895.27	895.27	895.27	895.27





Combined Element-2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan	771.03	690.89	608.05	525.15	442.20
Return on Equity	1098.10	1100.48	1100.48	1100.48	1100.48
Interest on Working Capital	110.55	110.37	110.07	109.83	109.64
O & M Expenses	850.23	878.43	907.63	937.70	968.85
<b>Total</b>	<b>3723.05</b>	<b>3675.43</b>	<b>3621.50</b>	<b>3568.42</b>	<b>3516.43</b>

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

83. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 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 clause (1) of Regulation 52 of the 2014 Tariff Regulations.

### **Licence Fee and RLDC Fees and Charges**

84. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. Rajasthan Discoms have submitted that the petitioner has not given the exact expenditure. We would like to clarify that the petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.



### **Service Tax**

85. 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. Rajasthan Discoms have submitted that the petitioner has not given the actual figures and hence the petitioner should be directed to furnish the specific date for checking. In response, the petitioner has submitted that service tax on transmission has been put on negative list w.e.f. 1.4.2012 and, therefore, the transmission charges is exclusive of service tax and the same shall be borne and additionally paid by the respondent(s) to the petitioner and shall be charged, billed separately by the petitioner in case same is withdrawn from the negative list at any time as above in future. We are of the view that the petitioner's prayer is premature.

### **Sharing of Transmission Charges**

86. 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, as provided in Regulation 43 of the 2014 Tariff Regulations.

87. This order disposes of Petition No. 557/TT/2014.

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

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



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

(₹ in lakh)

Combined Element-1 Particulars	2009-14			
	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
Bond XIX- Loan 1	9.25	640.00	0.00	640.00
Bond XX- Loan 2	8.93	3750.00	0.00	3750.00
Bond XXI- Loan 3	8.73	2290.00	0.00	2290.00
Bond XXII- Loan 4	8.68	5208.00	0.00	5208.00
Bond XXIV- Loan 5	9.95	4159.00	0.00	4159.00
Bond XXV- Loan 6	10.10	3887.00	0.00	3887.00
Bond XXVI- Addcap for 2009-10-Addcap 1	9.30	0.00	151.03	151.03
Bond XXVI- Loan 7	9.30	4682.00	0.00	4682.00
Bond XXVIII-Loan 8	9.33	3068.39	0.00	3068.39
Bond XXX-Addcap for 2009-10 Addcap 2	8.80	0.00	0.00	0.00
Bond XXX-Addcap for 2010-11 Addcap 3	8.80	0.00	125.58	125.58
Bond XXX-Addcap for 2011-12 Addcap 4	8.80	0.00	121.28	121.28
Bond XXXI-Addcap for 2011-12 Addcap 5	10.90	0.00	0.00	0.00
Bond XXXI-Addcap for 2012-13 Addcap 6	8.90	0.00	99.69	99.69
Bond XXXI-Addcap for 2013-14 Addcap 7	8.90	0.00	162.64	162.64
Bond XXXIV-Addcap for 2013-14 Addcap 8	8.84	0.00	517.00	517.00
Bond XXXV-Addcap for 2013-14 Addcap 9	9.64	0.00	72.00	72.00
Bond XXXVII-Addcap for 2013-14 Addcap 10	9.25	0.00	31.00	31.00
Bond XL-Addcap for 2013-14 Addcap 11	9.30	0.00	97.00	97.00
Bond XLI-Addcap for 2013-14 Addcap 12	8.85	0.00	115.00	115.00
Bond XLV-Addcap for 2013-14 Addcap 13	9.65	0.00	488.98	488.98
<b>Total</b>		<b>27684.39</b>	<b>1981.20</b>	<b>29665.59</b>



(₹ in lakh)

Particulars	2009-14			
	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
Bond XIX- Loan 1	9.25	360.00	0.00	360.00
Bond XX- Loan 2	8.93	1250.00	0.00	1250.00
Bond XXI- Loan 3	8.73	750.00	0.00	750.00
Bond XXII- Loan 4	8.68	1900.00	0.00	1900.00
Bond XXIV- Loan 5	9.95	1350.00	0.00	1350.00
Bond XXV- Loan 6	10.10	1390.00	0.00	1390.00
Bond XXVI- Addcap for 2009-10- Addcap 1	9.30	0.00	243.97	243.97
Bond XXVI- Loan 7	9.30	2009.00	0.00	2009.00
Bond XXVIII-Loan 8	9.33	2042.61	0.00	2042.61
Bond XXX-Addcap for 2009-10 Addcap 2	8.80	0.00	155.77	155.77
Bond XXX-Addcap for 2010-11 Addcap 3	8.80	0.00	248.93	248.93
Bond XXX-Addcap for 2011-12 Addcap 4	8.80	0.00	108.44	108.44
Bond XXXI-Addcap for 2011-12 Addcap 5	8.90	0.00	257.32	257.32
Bond XXXI-Addcap for 2012-13 Addcap 6	8.90	0.00	404.35	404.35
Bond XXXI-Addcap for 2013-14 Addcap 7	8.90	0.00	0.00	0.00
Bond XXXIV-Addcap for 2013-14 Addcap 8	8.84	0.00	0.00	0.00
Bond XXXV-Addcap for 2013-14 Addcap 9	9.64	0.00	0.00	0.00
Bond XXXVII-Addcap for 2013-14 Addcap 10	9.25	0.00	0.00	0.00
Bond XL-Addcap for 2013-14 Addcap 11	9.30	0.00	0.00	0.00
Bond XLI-Addcap for 2013-14 Addcap 12	8.85	0.00	0.00	0.00
Bond XLV-Addcap for 2013-14 Addcap 13	9.65	0.00	416.00	416.00
<b>Total</b>		<b>11051.61</b>	<b>1834.78</b>	<b>12886.39</b>



**WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2009-14 TARIFF PERIOD**

(₹ in lakh)

Combined Element-1	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	27684.39	27835.42	27961.00	28082.28	28181.97
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	1337.24	3401.16	5720.78
Net Loans Opening	27684.39	27835.42	26623.76	24681.12	22461.19
Add: Drawal(s) during the year	151.03	125.58	121.28	99.69	1483.62
Less: Repayment(s) of Loan during the year	0.00	1337.24	2063.92	2319.62	2362.06
Net Closing Loan	27835.42	26623.76	24681.12	22461.19	21582.75
Average Net Loan	27759.91	27229.59	25652.44	23571.16	22021.97
Interest on Loan	2581.18	2532.90	2387.03	2193.04	2048.10
Rate of Interest on Loan (%)	9.2982	9.3020	9.3053	9.3039	9.3003

(₹ in lakh)

Combined Element-2	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	11051.61	11451.35	11700.28	12066.04	12470.39
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	467.50	1238.58	2179.88
Net Loans Opening	11051.61	11451.35	11232.78	10827.46	10290.51
Add: Drawal(s) during the year	399.74	248.93	365.76	404.35	416.00
Less: Repayment(s) of Loan during the year	0.00	467.50	771.08	941.30	1039.20
Net Closing Loan	11451.35	11232.78	10827.46	10290.51	9667.31
Average Net Loan	11251.48	11342.07	11030.12	10558.99	9978.91
Interest on Loan	1045.65	1053.56	1023.69	978.33	924.55
Rate of Interest on Loan (%)	9.2934	9.2890	9.2808	9.2654	9.2650



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

(₹ in lakh)

Combined Element-1	2014-19			
	Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period
Bond XIX- Loan 1	9.25	640.00	0.00	640.00
Bond XX- Loan 2	8.93	3750.00	0.00	3750.00
Bond XXI- Loan 3	8.73	2290.00	0.00	2290.00
Bond XXII- Loan 4	8.68	5208.00	0.00	5208.00
Bond XXIV- Loan 5	9.95	4159.00	0.00	4159.00
Bond XXV- Loan 6	10.10	3887.00	0.00	3887.00
Bond XXVI- Addcap for 2009-10- Addcap 1	9.30	151.03	0.00	151.03
Bond XXVI- Loan 7	9.30	4682.00	0.00	4682.00
Bond XXVIII-Loan 8	9.33	3068.39	0.00	3068.39
Bond XXX-Addcap for 2009-10 Addcap 2	8.80	0.00	0.00	0.00
Bond XXX-Addcap for 2010-11 Addcap 3	8.80	125.58	0.00	125.58
Bond XXX-Addcap for 2011-12 Addcap 4	8.80	121.28	0.00	121.28
Bond XXXI-Addcap for 2011-12 Addcap 5	10.90	0.00	0.00	0.00
Bond XXXI-Addcap for 2012-13 Addcap 6	8.90	99.69	0.00	99.69
Bond XXXI-Addcap for 2013-14 Addcap 7	8.90	162.64	0.00	162.64
Bond XXXIV-Addcap for 2013-14 Addcap 8	8.84	517.00	0.00	517.00
Bond XXXV-Addcap for 2013-14 Addcap 9	9.64	72.00	0.00	72.00
Bond XXXVII-Addcap for 2013-14 Addcap 10	9.25	31.00	0.00	31.00
Bond XL-Addcap for 2013-14 Addcap 11	9.30	97.00	0.00	97.00
Bond XLI-Addcap for 2013-14 Addcap 12	8.85	115.00	0.00	115.00
Bond XLV-Addcap for 2013-14 Addcap 13	9.65	488.98	0.00	488.98
<b>Total</b>		<b>29665.59</b>	<b>0.00</b>	<b>29665.59</b>

(₹ in lakh)

Combined Element-2	2014-19			
	Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period
Bond XIX- Loan 1	9.25	360.00	0.00	360.00
Bond XX- Loan 2	8.93	1250.00	0.00	1250.00



Combined Element-2	2014-19			
	Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period
Bond XXI- Loan 3	8.73	750.00	0.00	750.00
Bond XXII- Loan 4	8.68	1900.00	0.00	1900.00
Bond XXIV- Loan 5	9.95	1350.00	0.00	1350.00
Bond XXV- Loan 6	10.10	1390.00	0.00	1390.00
Bond XXVI- Addcap for 2009-10- Addcap 1	9.30	243.97	0.00	243.97
Bond XXVI- Loan 7	9.30	2009.00	0.00	2009.00
Bond XXVIII-Loan 8	9.33	2042.61	0.00	2042.61
Bond XXX-Addcap for 2009-10 Addcap 2	8.80	155.77	0.00	155.77
Bond XXX-Addcap for 2010-11 Addcap 3	8.80	248.93	0.00	248.93
Bond XXX-Addcap for 2011-12 Addcap 4	8.80	108.44	0.00	108.44
Bond XXXI-Addcap for 2011-12 Addcap 5	8.90	257.32	0.00	257.32
Bond XXXI-Addcap for 2012-13 Addcap 6	8.90	404.35	0.00	404.35
Bond XXXI-Addcap for 2013-14 Addcap 7	8.90	0.00	0.00	0.00
Bond XXXIV-Addcap for 2013-14 Addcap 8	8.84	0.00	0.00	0.00
Bond XXXV-Addcap for 2013-14 Addcap 9	9.64	0.00	0.00	0.00
Bond XXXVII-Addcap for 2013-14 Addcap 10	9.25	0.00	0.00	0.00
Bond XL-Addcap for 2013-14 Addcap 11	9.30	0.00	0.00	0.00
Bond XLI-Addcap for 2013-14 Addcap 12	8.85	0.00	0.00	0.00
Bond XLV-Addcap for 2013-14 Addcap 13	9.65	416.00	0.00	416.00
<b>Total</b>		<b>12886.39</b>	<b>0.00</b>	<b>12886.39</b>

### WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2014-19 TARIFF PERIOD

(₹ in lakh)

Combined Element-1	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	29665.59	29665.59	29665.59	29665.59	29665.59
Cumulative Repayments of Loans upto Previous Year	8082.84	10504.06	12933.86	15365.24	17837.37
Net Loans Opening	21582.75	19161.53	16731.73	14300.35	11828.22
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	2421.22	2429.80	2431.38	2472.13	2472.13
Net Closing Loan	19161.53	16731.73	14300.35	11828.22	9356.09
Average Net Loan	20372.14	17946.63	15516.04	13064.29	10592.16
Interest on Loan	1894.07	1668.66	1442.91	1215.28	985.69
Rate of Interest on Loan (%)	9.2973	9.2979	9.2995	9.3023	9.3058



(₹ in lakh)

Combined Element-2	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	12886.39	12886.39	12886.39	12886.39	12886.39
Cumulative Repayments of Loans upto Previous Year	3219.08	4258.28	5297.48	6336.68	7410.55
Net Loans Opening	9667.31	8628.11	7588.91	6549.71	5475.84
Add: Drawal(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	1039.20	1039.20	1039.20	1073.87	1073.87
Net Closing Loan	8628.11	7588.91	6549.71	5475.84	4401.97
Average Net Loan	9147.71	8108.51	7069.31	6012.78	4938.91
Interest on Loan	848.44	752.26	656.08	558.22	458.69
Rate of Interest on Loan (%)	9.2749	9.2774	9.2806	9.2839	9.2874

