

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 182/TT/2016

Coram:

Shri A.K. Singhal, Member

Shri A.S. Bakshi, Member

Dr. M.K. Iyer, Member

Date of Order : 10.07.2017

In the matter of:

Truing up of transmission tariff of 2009-14 tariff period and determination of tariff for 2014-19 tariff period, for **Asset-I:** 1500 MVA, 765/400 kV ICT #2 and 240 MVAR reactor alongwith associated bays at 765/400 kV Nellore Pooling Station and **Asset-II:** 1500 MVA, 765/400 kV ICT #3 and 240 MVAR reactor alongwith associated bays at 765/400 kV Nellore Pooling Station under "Common System associated with ISGS projects in Krishnapatnam area of Andhra Pradesh" in Southern Region, under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.....Petitioner

Vs

1. Karnataka Power Transmission Corporation Limited,
(KPTCL), Kaveri Bhavan,
Bangalore-560 009
2. Transmission Corporation of Andhra Pradesh Limited,
(APTRANSCO), Vidyut Soudha,
Hyderabad-500 082
3. Kerala State Electricity Board (KSEB),
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695 004
4. Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamil Nadu Electricity Board-TNEB),
NPKRR Maaligai, 800, Anna Salai, Chennai-600 002



5. Electricity Department,
Government of Pondicherry,
Pondicherry-605 001
6. Eastern Power Distribution Company of Andhra Pradesh Limited,
(APEPDCL) APEPDCL, P&T Colony, Seethmmadhara,
Vishakhapatam, Andhra Pradesh
7. Southern Power Distribution Company of Andhra Pradesh Limited,
(APSPDCL) Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517 501, Chittoor District, Andhra Pradesh
8. Central Power Distribution Company of Andhra Pradesh Limited,
(APCPDCL) Corporate Office, Mint Compound,
Hyderabad-500 063, Andhra Pradesh
9. Northern Power Distribution Company of Andhra Pradesh Limited,
(APNPDCL) Opposite NIT Petrol Pump,
Chaitanyapuri, Kazipet,
Warangal-506 004, Andhra Pradesh
10. Bangalore Electricity Supply Company Limited (BESCOM),
Corporate Office, K.R. Circle,
Bangalore-506 001, Karanataka
11. Gulbarga Electricity Supply Company Limited (GESCOM),
Station Main Road,
Gulbarga, Karanataka
12. Hubli Electricity Supply Company Limited (HESCOM),
Navanagar, PB Road, Hubli, Karanataka
13. Mescom Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575 001, Karanataka
14. Chamundeswari Electricity Supply Corporation Limited (CESC),
927, L J Avenue, Ground Floor,
New Kantharaj Urs Road,
Saraswatipuram, Mysore-570 009, Karanataka
15. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji,
Goa-403 001



16. Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Hyderabad-500 082

.....Respondents

For Petitioner: Shri S.K. Venkateshan, PGCIL
Shri M.M. Mondal, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL

For Respondents: Shri S. Vallinayagam, Advocate for TANGEDCOI
Ms. E. Shyamala, TANGEDCO
Shri R. Kathiravan, TANGEDCO

ORDER

The present petition has been filed by Power Grid Corporation of India Limited ('the petitioner'), for truing up of capital expenditure and tariff of **Asset-I:** 1500 MVA, 765/400 kV ICT #2 and 240 MVAR reactor alongwith associated bays at 765/400 kV Nellore Pooling Station and **Asset-II:** 1500 MVA, 765/400 kV ICT #3 and 240 MVAR reactor alongwith associated bays at 765/400 kV Nellore Pooling Station (hereinafter referred as "transmission assets") under "Common System associated with ISGS projects in Krishnapatnam area of Andhra Pradesh" in Southern Region, 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 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. This order is issued after considering the petitioner's affidavit dated 16.11.2016.

3. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003 ("the Act"). Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), Respondent No. 4 has filed reply vide affidavit dated 21.11.2016. TANGEDCO has raised the issues of cost over-run, IDC and IEDC, O&M Expenses and license fee etc. The petitioner has filed rejoinder to the reply of TANGEDCO, vide affidavit dated 11.1.2017. The issues raised by the petitioner and the clarification given by the petitioner are covered in the respective paras of this order.

4. The hearing in the matter was held on 25.10.2016. Having heard the representatives of the petitioner and respondents and perused the material on record, we proceed to dispose of the petition.

5. The brief facts of the case are as under:-

a. The project was scheduled to be commissioned within 36 months from the date of Investment Approval dated 4.8.2011. Accordingly, the schedule date of commissioning (COD) of the instant assets was 3.8.2014. The scope of work covered under the project is as follows:-

Transmission Lines:

i) LILO of both circuits of SEPL/MEPL-Nellore 400 kV D/C Quad line at Nellore Pooling Station;

ii) Nellore Pooling Station-Kurnool 765 kV D/C line;

ii) Kurnool-Raichur 2nd 765 kV S/C line (first line covered under Krishnapatnam UMPP);



Sub-stations:

- i) Establishment of new 2x1500 MVA, 765/400 kV Sub-station at Nellore;
- ii) Extension of Kurnool 765/400 kV Sub-station;
- iii) Extension of Raichur 765/400 kV Sub-station;

Reactive Compensation:

- i) 1x240 MVAR, 765 kV bus reactor at new 765/400 kV Nellore Sub-station;
- ii) 240 MVAR, 765 KV line reactors at each end of both circuits of Nellore-Kurnool 765 kV.

b. The details of the instant assets and CODs thereof are as below:-

Particulars	Name of the assets	COD		Delay
		Scheduled	Actual	
Asset-I	1500 MVA, 765/400 kV, ICT #2 and 240 MVAR Bus Reactor alongwith associated bays at 765/400 kV Nellore Pooling Station	3.8.2014	1.2.2014	None
Asset-II	1500 MVA, 765/400 kV, ICT #3 and 240 MVAR Bus Reactor alongwith associated bays at 765/400 kV Nellore Pooling Station		1.3.2014	None

c. The Commission vide order dated 22.1.2016 in Petition No. 37/TT/2014, had approved the final transmission tariff for the period 2009-14, the capital cost as on COD and additional capitalisation for the period from COD to 31.3.2014 as under:-

Particulars	Capital Cost as on COD after adjusting IDC	(₹ in lakh)	
		Projected additional capitalization 2013-14	Estimated capital cost as on 31.3.2014
Asset-I	8015.18	204.23	8219.41
Asset-II	6363.57	169.77	6533.34

d. The entire project scope is covered in four petitions i.e. Petition No. 224/TT/2013 (true-up Petition No. 417/TT/2014), Petition No. 37/TT/2014,



Petition No. 245/TT/2014 and Petition No. 161/TT/2015 as detailed below:-

S. No.	Name of the assets	COD	Petition No.	Truing-up Petition No.
		Actual		
1	LILO of both circuit of SEPL/MEPL-Nellore 400 kV D/C (quad) line alongwith associated bays at Nellore Pooling Station	1.4.2013	224/TT/2013	417/TT/2014
2	1500 MVA, 765/400 kV, ICT #2 and 240 MVAR Bus Reactor alongwith associated bays at 765/400 kV Nellore Pooling Station	1.2.2014	37/TT/2014	182/TT/2016
	1500 MVA, 765/400 kV, ICT #3 and 240 MVAR Bus Reactor alongwith associated bays at 765/400 kV Nellore Pooling Station	1.3.2014		
3	(A) 765 kV Nellore Pooling Station and Kurnool Sub-station and (B) 240 MVAR, 765 kV line reactor at Nellore end of one circuit and at Kurnool end of both circuits of Nellore-Kurnool 765 kV line	1.11.2014	245/TT/2014	-
4	(A) Kurnool-Raichur 2 nd 765 kV S/C line, (B) Extension of Kurnool 765/400 kV Sub-station and (C) Extension of Raichur 765/400 kV Sub-station	21.6.2014	161/TT/2015	-

e. The final tariff was allowed for instant assets, vide order dated 22.1.2016 in Petition No. 37/TT/2014 and revised vide order dated 17.8.2016 in Review Petition No. 12/RP/2016 for 2013-14, which is being trued-up in this order. The revised tariff allowed for the instant assets is as under:-

Particulars	(₹ in lakh)	
	Asset-I	Asset-II
	2013-14 (pro-rata)	2013-14 (pro-rata)
Depreciation	69.46	27.27
Interest on Loan	72.46	28.11
Return on Equity	82.16	32.63
Interest on Working Capital	7.28	3.10
O & M Expenses	41.46	20.73
Total	272.82	111.85



f. The MAT rate applicable for the year 2013-14 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted for any variation in the amount of equity now allowed at the time of truing up of tariff for 2009-14 tariff period.

Truing-up of Annual Fixed Charges for 2013-14

6. The truing up of tariff for 2013-14 has been determined as discussed below.

Capital Cost and Additional Capital Expenditure

7. Clause (1) and Clause (3) of Regulation 6 of the 2009 Tariff Regulations specifies as follows:-

“(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.-----”

“(3) The generating company or the transmission licensee, as the case may be, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 1.4.2009 to 31.3.2014, duly audited and certified by the auditors;”

8. The details of capital cost allowed vide order dated 22.1.2016 in Petition No. 37/TT/2014 for the instant assets are as under:-

Particulars	Capital cost allowed as on COD	(₹ in lakh)	
		Additional capital expenditure allowed 2013-14	Estimated capital cost allowed as on 31.3.2014
Asset-I	8015.18	204.23	8219.41
Asset-II	6363.57	169.77	6533.34

9. The details of the revised approved apportioned cost, cost as on COD and estimated/projected additional capitalization to be incurred for the instant



assets, as per Auditors' Certificates dated 6.8.2016, submitted by the petitioner in the petition are as follows:-

Particulars	Approved apportioned cost	Revised approved apportioned cost	Capital cost up to COD	Additional capital expenditure claimed (actual)			Total capital cost claimed
				2013-14	2014-15	2015-16	
Asset-I	9008.59	11420.00	8267.29	204.23	938.90	254.86	9665.28
Asset-II	7677.88	9687.00	6633.09	169.77	2624.57	-	9427.43

*The capital expenditure has been stated to have been verified from the audited figures of accounts by the Auditors, up to 31.3.2016.

Cost Over-run

10. TANGEDCO has submitted that there is cost over-run in case of instant assets. However, the cost over-run was allowed by the Commission vide order dated 22.1.2016 in Petition No. 37/TT/2014 taking into consideration the Revised Cost Estimate (RCE). TANGEDCO has submitted that RCE was approved for overall project cost based on October, 2014 price level and it is illogical as the instant assets were commissioned before October 2014 i.e. on 1.2.2014 and 1.3.2014. TANGEDCO has further submitted that both the assets are identical and are only used for different purposes i.e. one as Bus reactor and the other as line reactor, but, with a huge cost difference of ₹237.85 lakh, which needs to be justified by the petitioner. TANGEDCO has submitted it should be disallowed, if the petitioner fails to provide proper justification. We have considered the submissions of TANGEDCO. The individual cost of the assets is within the revised approved apportioned cost. Accordingly, there is no cost over-run. As such, the cost of the instant assets as claimed by the petitioner is allowed.

Time Over-run

11. There is no time over-run in commissioning of instant transmission assets as discussed in para-5 above.



Treatment of IDC and IEDC

12. The petitioner has claimed IDC of ₹318.91 lakh and ₹317.81 lakh for Asset-I and Asset-II respectively, vide Auditors' certificate dated 6.8.2016. We have also worked out IDC on cash basis up to COD and undischarged IDC as on COD, which is discharged from COD to 31.3.2014, based on the available information, i.e. loan details mentioned in Form-13 and the working sheet of the IDC, submitted by the petitioner. The details submitted by the petitioner and allowable/worked out IDC as on COD, for instant assets is as under:-

Particulars	Claimed as per Auditors' certificate dated 6.8.2016 (1)	IDC allowable on accrual basis (2)	IDC allowed as on COD on cash basis (3)	Undischarged IDC as on COD (4)=(2)-(3)	(₹ in lakh)	
					IDC discharged during 2013-14 allowed as add-cap (5)	Undischarged IDC as on 31.3.2014 (6)=(4)-(5)
Asset-I	318.91	318.91	69.59	249.32	117.53	131.79
Asset-II	317.81	317.81	51.05	266.76	266.76	-

13. TANGEDCO has submitted that IDC was also allowed vide order dated 22.1.2016 in Petition No. 37/TT/2014 with reference to RCE, which is not correct. TANGEDCO has submitted that therefore IDC should be restricted with reference to the restricted capital cost. The IDC claimed by the petitioner is allowed on cash basis after considering the periodic loan infusion details submitted by the petitioner.

14. Similarly, the petitioner has claimed ₹39.34 lakh and ₹39.41 lakh for Asset-I and Asset-II respectively on account of IEDC and has submitted that total IEDC has been discharged as on COD for instant transmission assets. We have considered the IEDC limit, as indicated in the "Abstract Cost Estimate", which is 5.00% of the Hard Cost. The IEDC claimed as on COD is lower than 5.00% of the hard cost, hence the IEDC claimed corresponding to each



transmission asset is considered. The details of IEDC claimed and allowed are as under:-

Particulars	(₹ in lakh)	
	IEDC as on COD	
	Claimed	Allowed
Asset-I	39.34	39.34
Asset-II	39.41	39.41

Initial Spares

15. Regulation 8 of 2009 Tariff Regulations provides that initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:-

Transmission line	0.75%
Transmission Sub-station	2.5%

16. The petitioner has claimed initial spares of ₹240.20 lakh and ₹220.20 lakh for Asset-I and Asset-II respectively in the original petition, which has been certified by the Auditors as included in the capital cost. The petitioner has submitted the details of year wise payment made against the procurement of the initial spares as under:-

Particulars	(₹ in lakh)		
	Bifurcation of discharged Initial Spares claimed		
	Upto COD	2014-15	Total
Asset-I	60.05	180.15	240.20
Asset-II	66.93	153.27	220.20

17. The cut-off dates for instant assets are beyond 2009-14 tariff period. However, initial spares have been worked out considering the ceiling limits as specified in the 2009 Tariff Regulations. Therefore, the allowable initial spares during 2009-14 have been worked out after considering the capital cost as on



COD and upto actual cut-off date. The details of initial spares allowed for tariff period 2009-14 are as follows:-

(₹ in lakh)					
Particulars	Capital cost claimed upto actual cut-off date	Initial spares claimed upto actual cut-off date	Ceiling Limits as per the 2009 Tariff Regulations	Allowable initial spares worked out	Excess initial spares
Asset-I	9307.03	240.20	2.50%	232.48	7.72
Asset-II	9070.21	220.20	2.50%	226.92	-

18. Therefore, the petitioner's claim of ₹60.05 lakh and ₹66.93 lakh for Asset-I and Asset-II respectively, as on COD, is within limit specified in the 2009 Tariff Regulations and as such it has been allowed. The initial spares' claim shall be reviewed in the cut-off year i.e. 2016-17 and any excess initial spares will be adjusted accordingly therein.

Capital Cost as on COD

19. In view of above, the details of allowable capital cost as on COD are as under:-

(₹ in lakh)					
Particulars	Capital cost as on COD claimed	Less: disallowed as on COD			Capital cost considered as on COD
		Undischarged IDC	IEDC	Initial spares	
Asset-I	8267.29	249.32	-	-	8017.97
Asset-II	6633.09	266.76	-	-	6366.33
Total	14900.38	516.08	-	-	14384.30

Additional Capital Expenditure

20. Clause (1) and Clause (3) of Regulation 6 of the 2009 Tariff Regulations provide as under:-

“(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure



including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.-----”

“(3) The generating company or the transmission licensee, as the case may be, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 1.4.2009 to 31.3.2014, duly audited and certified by the auditors;”

21. Therefore, additional capitalization worked out, after allowing discharge of IDC for 2013-14 is as per details hereunder:-

(₹ in lakh)			
Particulars	Asset-I		
	Claimed Add-Cap for 2013-14 as per Auditors' Certificate	Discharge of IDC during 2013-14	Total allowed Add-Cap for 2013-14
Freehold Land	-	-	-
Leasehold Land	-	-	-
Building & Other Civil Works	38.16	21.96	60.12
Transmission Line	-	-	-
Sub-Station Equipments	166.07	95.57	261.64
PLCC	-	-	-
Total	204.23	117.53	321.76
Particulars	Asset-II		
	Claimed Add-Cap for 2013-14 as per Auditors' Certificate	Discharge of IDC during 2013-14	Total allowed Add-Cap for 2013-14
Freehold Land	-	-	-
Leasehold Land	-	-	-
Building & Other Civil Works	30.65	48.16	78.81
Transmission Line	-	-	-
Sub-Station Equipments	139.12	218.60	357.72
PLCC	-	-	-
Total	169.77	266.76	436.53

Capital Cost as on 31.3.2014

22. Thus, the summary of capital cost as on 31.3.2014 allowed earlier vide order dated 22.1.2016 in Petition No. 37/TT/2014 and considered now for truing-up is as follows:-



(₹ in lakh)

Approved	Capital cost as on COD	Net additional capital expenditure during		Capital cost as on 31.3.2014
		2013-14		
vide order dated 22.1.2016				
Asset-I	8015.18	204.33		8219.41
Asset-II	6363.57	169.77		6533.34
Allowed in the instant petition				
Asset-I	8017.97	321.76		8339.73
Asset-II	6366.33	436.53		6802.86

Debt: Equity Ratio

23. Clause (1) of Regulation 12 of the 2009 Tariff Regulations provides that:-

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

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

24. The petitioner has claimed true up Annual Fixed Charge based on debt: equity ratio of 70:30 as admitted vide order dated 22.1.2016 in Petition No. 37/TT/2014. The admitted debt: equity ratio of 70:30 as admitted vide order dated 22.1.2016 in Petition No. 37/TT/2014 has been considered for the purpose of true up of the approved tariff for 2013-14.

25. The details of the debt: equity considered for the purpose of tariff in the tariff period 2009-14 are as below:-

(₹ in lakh)

Particulars	Asset-I			
	Cost as on COD		Cost as on 31.3.2014	
	Amount	%	Amount	%
Debt	5612.58	70.00	5837.81	70.00
Equity	2405.39	30.00	2501.92	30.00
Total	8017.97	100.00	8339.73	100.00



Particulars	Asset-II			
	Cost as on COD		Cost as on 31.3.2014	
	Amount	%	Amount	%
Debt	4456.43	70.00	4762.00	70.00
Equity	1909.90	30.00	2040.86	30.00
Total	6366.33	100.00	6802.86	100.00

Return on Equity ("RoE")

26. Clause (3), (4) and (5) of the 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 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 year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

27. The petitioner has submitted that MAT rate of 20.961% and grossed up RoE of 19.610% applicable for 2013-14 was considered in the order dated 22.1.2016 in Petition No. 37/TT/2014 and additional RoE was allowed vide order dated 17.8.2016 in Review Petition No. 12/RP/2016. Accordingly, for truing up purpose, the computation of RoE for the tariff period 2009-14 has



been considered at the base rate of 16% and grossed up at actual MAT rate of 20.961%, applicable for 2013-14 on revised equity determined as above.

28. Accordingly, the RoE as trued up is as follows:-

Particulars	₹ in lakh)	
	Asset-I	Asset-II
	2013-14 (pro-rata)	2013-14 (pro-rata)
Revised vide order dated 17.8.2016	82.16	32.63
Allowed after trued up	82.78	33.32

Interest on Loan (“IOL”)

29. 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.”

30. In these calculations, interest on loan has been worked out as under:-

(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 during tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period; and

(c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the normative average loan during the year to arrive at the interest on loan.

31. 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 given in Annexure-1 to Annexure-2 to this order and the IOL has been worked out and allowed as follows:-



Particulars	(₹ in lakh)	
	Asset-I	Asset-II
	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved vide order dated 22.1.2016	72.46	28.11
Allowed after truing-up	73.25	28.84

Depreciation

32. Clause (4) of Regulation 17 of the 2009 Tariff Regulations provide as follows:-

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

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

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

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

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

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

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

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

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

33. In order dated 22.1.2016, depreciation was worked out in accordance with Regulation 17 of the 2009 Tariff Regulations. The depreciation for 2013-14



has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as on respective CODs of instant assets and details are as under:-

Particulars	(₹ in lakh)	
	Asset-I	Asset-II
	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved vide order dated 22.1.2016	69.46	27.27
Allowed after trued up	69.97	27.83

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

34. The petitioner has claimed same O&M Expenses for 2013-14, which was approved vide order dated 22.1.2016 in Petition No. 37/TT/2014. As the petitioner’s claim of O&M Expenses is the same which was allowed in order dated 22.1.2016, the O&M Expenses allowed and trued up are same as under:-

Particulars	(₹ in lakh)	
	Asset-I	Asset-II
	2012-13 (pro-rata)	2013-14 (pro-rata)
Approved vide order dated 22.1.2016	41.46	20.73
Allowed after trued up	41.46	20.73

Interest on working capital (“IWC”)

35. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides for 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.

36. The rate of interest on working capital of 13.20% applicable as on 1.4.2013 for assets commissioned during 2013-14 was approved in order dated 22.1.2016 in Petition No. 37/TT/2014 and revised vide order dated 17.8.2016 in



Review Petition No. 12/RP/2016. Therefore, same applicable interest rate of has been considered to work out the interest on working capital for in the instant petition. The summary of IWC allowed and trued up is as follows:-

Particulars	(₹ in lakh)	
	Asset-I	Asset-II
	2012-13 (pro-rata)	2013-14 (pro-rata)
Revised vide order dated 17.8.2016	7.28	3.10
Allowed after trued up	7.32	3.14

APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

37. The detailed computation of the various components of the trued up annual fixed charges for 2009-14 tariff period for the instant assets are as under:-

Particulars	(₹ in lakh)	
	Asset-I	Asset-II
	2013-14 (pro-rata)	2013-14 (pro-rata)
Gross Block		
Opening Gross Block	8017.97	6366.33
Additional Capitalisation	321.76	436.53
Closing Gross Block	8339.73	6802.86
Average Gross Block	8178.85	6584.60
Depreciation		
Rate of Depreciation	5.1329%	5.0718%
Depreciable Value	7360.96	5926.14
Remaining Depreciable Value	7360.96	5926.14
Depreciation	69.97	27.83
Interest on Loan		
Gross Normative Loan	5612.58	4456.43
Cumulative Repayment upto Previous Year	-	-
Net Loan-Opening	5612.58	4456.43
Addition due to Additional Capitalisation	225.23	305.57
Repayment during the year	69.97	27.83
Net Loan-Closing	5767.84	4734.17
Average Loan	5690.21	4595.30
Weighted Average Rate of Interest on Loan	7.7242%	7.5313%
Interest	73.25	28.84
Return on Equity		
Opening Equity	2405.39	1909.90
Addition due to Additional Capitalisation	96.53	130.96



Closing Equity	2501.92	2040.86
Average Equity	2453.65	1975.38
Return on Equity (Base Rate)	16.00%	16.00%
Tax rate for the year (MAT)	20.96%	20.961%
Rate of Return on Equity (Pre Tax)	20.243%	20.243%
Return on Equity (Pre Tax)	82.78	33.32
Interest on Working Capital		
Maintenance Spares	37.31	37.31
O & M expenses	20.73	20.73
Receivables	274.79	227.73
Total	332.83	285.78
Rate of Interest	13.20%	13.20%
Interest	7.32	3.14
Annual Transmission Charges		
Depreciation	69.97	27.83
Interest on Loan	73.25	28.84
Return on Equity	82.78	33.32
Interest on Working Capital	7.32	3.14
O & M Expenses	41.46	20.73
Total	274.79	113.87

Sharing of Transmission Charges

38. With effect from 1.7.2011, the billing, collection and disbursement of the transmission charges shall be governed by the provision of Central Electricity Regulatory Commission (Sharing of Inter-state Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

39. The true-up tariff for the instant transmission assets up to 2009-14 tariff period has been granted based on the actual COD of individual assets irrespective of the project as whole is completed or not. This leads to granting of multiple tariffs for the assets covered under the single project/transmission system. The Commission, vide Regulation 6 of the 2014 Tariff Regulations has brought in the concept of a single consolidated petition to be submitted by a petitioner, where if all the elements of a transmission system have been



declared under commercial operation prior to 1.4.2014, then a single tariff can be granted for all the assets covered under such a single project/transmission system. Accordingly, to determine a single transmission tariff for different assets after combining them, as per the 2014 Tariff Regulations, the concept of effective date of commercial operation and weighted average life has also been introduced in Regulation 27 (Depreciation) of the 2014 Tariff Regulations. The relevant portions of Regulation 6 and Regulation 27 of the 2014 Tariff Regulations are as under:-

“6. Tariff determination

(1) Tariff in respect of a generating station may be determined for the whole of the generating station or stage or generating unit or block thereof, and tariff in respect of a transmission system may be determined for the whole of the transmission system or transmission line or sub-station or communication system forming part of transmission system:

Provided that:

(i) where all the generating units of a stage of a generating station or all elements of a transmission system have been declared under commercial operation prior to 1.4.2014, the generating company or the transmission licensee, as the case may be, shall file consolidated petition in respect of the entire generating station or transmissions system for the purpose of determination of tariff for the period 2014-15 to 2018-19:

Xxx
Xxx”

“27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.



(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.

Xxx
Xxx”

(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.

Xxx
Xxx”

40. The instant petition relates to the “Common System associated with ISGS projects in Krishnapatnam area of Andhra Pradesh” in Southern Region. The final tariff of part scope of the transmission system was approved separately vide order dated 4.3.2014 in Petition No. 224/TT/2013 and the final tariff for tariff period 2009-14, was trued up vide order dated 23.2.2016 in Petition No. 417/TT/2014, besides approving final tariff for 2014-19 tariff period. The part scope consisting of other elements of the system were commissioned in the 2014-19 tariff period, final tariff for which has been approved vide order dated 30.12.2015 and 29.2.2016 in Petition No. 161/TT/2015 and Petition No. 245/TT/2014. Hence, the tariff for Asset-I and Asset-II for 2009-14 tariff period has been trued-up separately in the above paragraphs. Now, as these two assets, do not represent the project as whole, these assets together with other assets need to be combined into a single asset and accordingly single tariff for the project as a whole needs to be worked out for the tariff period 2014-19. However, the final tariff for other assets has been approved vide order dated



23.2.2016 in Petition No. 417/TT/2014 and some assets have been commissioned in the 2014-19 tariff period i.e. covered under Petition No. 161/TT/2015 and Petition No. 245/TT/2014, the exercise to determine the Effective COD of the combined assets, for the purpose of calculation of single tariff, needs to be carried out at truing-up for tariff period 2014-19. Accordingly, the petitioner is directed to file a single petition for all assets at the time of truing-up as specified in the 2014 Tariff Regulations.

41. The petitioner has submitted the tariff forms, combining the instant two assets into a single asset. Accordingly, the Effective COD and Weighted Average life of the instant assets as a whole has been computed as discussed in the following paragraphs, subject to revision, together with the other assets, at the time of truing-up for the 2014-19 tariff period.

Effective Date of Commercial Operation (E-COD)

42. The Effective Date of Commercial Operation (E-COD) for the instant assets as a whole has been worked out based on the admitted capital cost of individual assets as on 31.3.2014 and the actual COD of individual assets. Accordingly, the Effective Date of Commercial Operation (E-COD) for the instant assets as a whole has been worked out as 13.2.2014 as under:-

Particulars	Actual COD	Admitted Capital Cost as on 31.3.2014	Weight of the cost	No. of days from last COD	Weighted days	Effective COD (Latest COD- Total Weighted days)
Asset-I	1.2.2014	8339.73	55.07%	28	15.4209	13.2.2014
Asset-II	1.3.2014	6802.86	44.93%	-	-	
Total		15142.59	100.00%		15.4209	



43. Thus, the E-COD has been used to determine the lapsed life of the combined assets as whole which works out as NIL year as on 1.4.2014. (i.e. the number of completed years as on 1.4.2014 from E-COD).

Weighted Average Life (WAL)

44. The project as a whole has multiple elements (i.e. land, building, transmission line, sub-station and PLCC) and each element may have different span of life. Therefore, in the 2014 Tariff Regulations, the concept WAL has been introduced which has been used as the useful life of the project as whole. The WAL for the instant assets has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective life as stipulated in the 2014 Tariff Regulations. The element wise life as it was defined in Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2014 Tariff Regulations has been considered for determination of WAL. Accordingly, the WAL of the instant assets as whole has been worked out as 25 years as under:-

Determination of Weighted Average Life of the Project					
Particulars	Admitted capital cost as on 31.3.2014 (₹ in lakh)				
	Asset-I	Asset-II	Combined Cost (a)	Life as per 2014 Tariff Regulations (b)	Weight (a) x (b)
Freehold Land	-	-	-	0	-
Leasehold Land	-	-	-	25	-
Building & Other Civil Works	650.26	746.01	1396.27	25	34906.84
Transmission Line	-	-	-	35	-
Sub-Station Equipment	7689.47	6056.85	13746.32	25	343657.94
PLCC	-	-	-	15	-
Total	8339.73	6802.86	15142.59	25	378564.78
Weighted Average Life=Total of Weight/Capital cost of project				25	years

45. Further, it is assumed that, the WAL of the instant assets as whole as on 1.4.2014 as determined above is applicable prospectively (i.e. for 2014-19 tariff



period onwards) and no retrospective adjustment of depreciation in previous tariff period is required. However, it is subject to truing-up along with the other parts of the project and revision thereof. Accordingly, the WAL has been used to determine the remaining useful life of instant assets as whole as on 31.3.2014 as 25 years.

46. The petitioner has claimed the transmission charges for the combined instant asset as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	867.42	968.48	975.21	975.21	975.21
Interest on Loan	884.25	931.50	862.29	785.23	705.20
Return on Equity	1031.80	1151.74	1159.48	1159.48	1159.48
Interest on Working Capital	89.39	96.40	96.01	95.13	94.22
O&M Expenses	458.28	473.48	489.22	505.46	522.22
Total	3331.14	3621.60	3582.21	3520.51	3456.33

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	68.74	71.02	73.38	75.82	78.33
O & M Expenses	38.19	39.46	40.77	42.12	43.52
Receivables	555.19	603.60	597.04	586.75	576.06
Total	662.12	714.08	711.19	704.69	697.91
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	89.39	96.40	96.01	95.13	94.22

Capital Cost

48. Clause (1) and (3) of Regulation 9 of the 2014 Tariff Regulations provides 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.”

(2) -----



(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 tried 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.”

49. The element wise capital cost, admitted as on 31.3.2014 for instant assets combined together has been considered as capital cost as on 1.4.2014. Thus, ₹15142.59 lakh has been considered as the opening gross block of capital cost of the instant asset (i.e. combined Asset-I and Asset-II) as on 1.4.2014 as per details as under:-

(₹ in lakh)	
Particulars	Combined capital cost of Asset-I and Asset-II as on 31.3.2014 as determined in true up and revised AFC for tariff period 2009-14
Freehold Land	-
Leasehold Land	-
Building & Other Civil Works	1396.27
Transmission Line	-
Sub-Station Equipments	13746.32
PLCC	-
Total	15142.59

Treatment of IDC

50. As discussed at para-12 an amount of ₹131-19 lakh towards IDC was allowed as undischarged as on 31.3.2014, which the petitioner has now claimed as add-cap in 2014-15 and the same is allowed.

Additional Capital Expenditure

51. Clause (1) and (3) of Regulation 14 of the 2014 Tariff Regulations provides as under:-



“(1) The capital expenditure in respect of the new project or an existing project 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 recognised to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law or compliance of any existing law:

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.”

“(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:”

“(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;”

52. The petitioner has claimed projected additional capital expenditure of ₹3695.26 lakh (including undischarged IDC as on 31.3.2014) and ₹254.86 lakh for 2014-15 and 2015-16 respectively for the combined asset, during the tariff period 2014-19, vide Auditors’ Certificates dated 6.8.2016 with the petition. The petitioner has submitted that the claim for add-cap is for balance and retention payments. Accordingly, additional capital expenditure, towards undischarged liabilities, is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations. The details of combined add-cap claimed for instant assets are as under:-

(₹ in lakh)

Approved apportioned cost as per RCE	Admitted cost as on 31.3.2014	Projected additional capital expenditure		Estimated completion cost as on 31.3.2019
		2014-15	2015-16	
21107.00	15142.59	3695.26	254.86	19092.71



53. The total completion cost of the instant transmission asset is within its approved apportioned cost. Hence, there is no cost over-run in the instant case. However, the additional capitalization allowed for 2014-19 tariff period is subject to review on the submission of the audited additional capitalization, at the time of truing-up. Further, the petitioner is also directed to submit Auditors' Certificate for details of creation of liabilities and actual payment in discharge of such liabilities at the time of truing-up.

Initial Spares

54. As discussed at para-17 and 18, the petitioner has claimed excess initial spares for an amount of ₹7.72 lakh and it were to be reviewed in the cut-off year i.e. 2015-16. Accordingly, the same has been adjusted from the add-cap for 2015-16 and an amount of ₹247.14 lakh (₹254.86 lakh-₹7.72 lakh) has been finally considered as additional capital expenditure for tariff purpose for 2014-19 tariff period. However, the disallowed excess initial spares as above are subject to be reviewed at the time of truing-up, on the submission of audited year-wise discharge details of initial spares for tariff period 2014-19, for all the individual assets covered under the instant project, by the petitioner. The petitioner is also, directed to submit the audited capital cost, for the instant combined asset, at the time of truing-up.

Capital Cost During 2014-19

55. The details of capital cost considered for tariff determination for 2014-19 are as follows:-



(₹ in lakh)

Particulars	Combined admitted capital cost as on 31.3.2014	Projected additional capitalization		Admitted cost as on 31.3.2019
		2014-15	2015-16	
Freehold Land	-	-	-	-
Leasehold Land	-	-	-	-
Building & Other Civil Works	1396.27	334.68	-	1730.95
Transmission Line	-	-	-	-
Sub-Station Equipments	13746.32	3360.58	247.14	17354.04
PLCC	-	-	-	-
Total	15142.59	3695.26	247.14	19084.99

Debt: Equity Ratio

56. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-

“(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.”

57. The debt: equity ratio of 70:30 was admitted after true-up for the tariff period ending 31.3.2014 for instant assets now considered as combined asset for tariff period 2014-19. The debt: equity ratio of 70:30 has been considered for additional capitalisation during 2014-15 and 2015-16. The details of the debt: equity as on 1.4.2014 and as on 31.3.2019 considered for the purpose of tariff for the 2014-19 tariff period are as under:-

(₹ in lakh)

Particulars	As on 1.4.2014		As on 31.3.2019	
	Amount	%	Amount	%
Debt	10599.81	70.00	13359.50	70.00
Equity	4542.78	30.00	5725.50	30.00
Total	15142.59	100.00	19084.99	100.00

Depreciation

58. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as under:-



"27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(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.

(3) 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 station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

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

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

(2) 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.

(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.”

59. Accordingly, the instant transmission asset will complete its 12 years (as per effective COD) beyond tariff period 2014-19. Therefore, remaining depreciable value of the instant combined asset has been calculated as per SLM method and at rates specified in Appendix-II, as provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	15142.59	18837.85	19084.99	19084.99	19084.99
Additions during the year due to projected additional capitalization	3695.26	247.14	-	-	-
Closing Gross block	18837.85	19084.99	19084.99	19084.99	19084.99
Average gross block	16990.22	18961.42	19084.99	19084.99	19084.99
Rate of Depreciation (%)	5.10%	5.10%	5.10%	5.10%	5.10%
Depreciable Value	15291.20	17065.28	17176.49	17176.49	17176.49
Remaining Depreciable Value	15193.40	16100.73	15244.36	14270.26	13296.15
Depreciation	866.75	967.58	974.11	974.11	974.11

Return on Equity (“ROE”)

60. Clause (1) and (2) of Regulation 24 and Clause (1) and (2) of Regulation 25 of the 2014 Tariff Regulations specify as follows:-

“**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 and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

(i) in case of projects commissioned on or after 1st April, 2014, an additional return of **0.50 %** shall be allowed, if such projects are completed within the timeline specified in **Appendix-I:**



(ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

(iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

(iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

(v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

(vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.”

“25. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

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

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

Where “t” is the 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.”

61. The petitioner has computed ROE at the rate of 16% and grossed up at actual MAT rate of 20.961%, as per the above Regulations. The petitioner



has 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.

62. 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.

63. 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. 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 and allowed is as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	4542.78	5651.36	5725.50	5725.50	5725.50
Addition due to Additional Capitalisation	1108.58	74.14	-	-	-
Closing Equity	5651.36	5725.50	5725.50	5725.50	5725.50
Average Equity	5097.07	5688.43	5725.50	5725.50	5725.50
Return on Equity (Base Rate) (%)	16.00%	16.00%	16.00%	16.00%	16.00%



MAT rate for 2013-14(%)	20.96%	20.96%	20.96%	20.96%	20.96%
Rate of Return on Equity (Pre-Tax) (%)	20.243%	20.243%	20.243%	20.243%	20.243%
Return on Equity (Pre Tax)	1031.80	1151.51	1159.01	1159.01	1159.01

Interest on Loan (“IOL”)

64. Regulation 26 of the 2014 Tariff Regulations with regard to Interest on Loan specifies as under:-

“(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(3) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(4) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalisation of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation of such asset.

(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 depreciation allowed for the year or part of the year.

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 actual loan as on 31.3.2014 has been considered and the petitioner’s entitlement to interest on loan has been calculated as per the provisions of Regulation 26 of the 2014 Tariff Regulations as detailed below:-



- (a) Gross amount of loan, repayment of instalments and rate of interest on actual loans have been considered as per the petition;
- (b) The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year; and
- (c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the normative average loan during the year to arrive at the interest on loan.

66. 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 from the respondents. The interest on loan has been calculated on the basis of prevailing rate of actual loan applicable as on COD. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing up.

67. The details of weighted average rate of interest are at Annexure-3 and the IOL has been worked out and allowed as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative loan	10599.81	13186.50	13359.50	13359.50	13359.50
Cumulative Repayment upto previous year	97.80	964.55	1932.13	2906.24	3880.35
Net Loan-Opening	10502.02	12221.95	11427.37	10453.26	9479.15
Additions during the year	2586.68	173.00	-	-	-
Repayment during the year	866.75	967.58	974.11	974.11	974.11
Net Loan-Closing	12221.95	11427.37	10453.26	9479.15	8505.04
Average Loan	11361.98	11824.66	10940.31	9966.20	8992.10
Weighted Rate of Interest	7.783%	7.877%	7.879%	7.877%	7.841%
Interest	884.28	931.38	862.03	785.06	705.11



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

68. Regulation 29 (4) (a) of the 2014 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms specified in respect of the elements covered in the instant petition are as under:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
765 kV bays (₹ lakh/bay)	84.42	87.22	90.12	93.11	96.20
400 kV bays (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71

69. The allowable O&M Expenses for the instant transmission asset are as below:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Combined asset (4 nos. 765 kV bays+2 nos. 400 kV bays)	458.28	473.48	489.22	505.46	522.22

70. The petitioner has submitted that O&M Expenses for the tariff period 2014-19 had been arrived at on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The petitioner has further submitted that the wage revision of the employees is due during 2014-19 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O&M rates specified for the tariff block 2014-19. The petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

71. TANGEDCO has submitted that there is no provision in the 2014 Tariff Regulations for revising the normative O&M Expenses based on actual. The



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

Interest on Working Capital (“IWC”)

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

“28. Interest on Working Capital: (1) The working capital shall cover:
(a)-----

(c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:

- (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”

“(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later”

“(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;”

73. 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% as on 1.4.2014 plus 350 basis points). The interest on working capital as determined is as below:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	68.74	71.02	73.38	75.82	78.33
O & M expenses	38.19	39.46	40.77	42.12	43.52
Receivables	555.08	603.39	596.72	586.46	575.77



Total	662.01	713.87	710.87	704.40	697.62
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	89.37	96.37	95.97	95.09	94.18

Annual Transmission Charges

74. The Annual Transmission Charges allowed for the instant transmission asset are as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	866.75	967.58	974.11	974.11	974.11
Interest on Loan	884.28	931.38	862.03	785.06	705.11
Return on Equity	1031.80	1151.51	1159.01	1159.01	1159.01
Interest on Working Capital	89.37	96.37	95.97	95.09	94.18
O&M Expenses	458.28	473.48	489.22	505.46	522.22
Total	3330.48	3620.33	3580.34	3518.73	3454.63

75. The petitioner has submitted that the claim for transmission charges and other charges is exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess, or any other kind of impositions etc. The same, if imposed shall be borne and additionally paid by the respondents. We have considered the submissions of the petitioner. The petitioner is entitled for late payment surcharge and FERV as per Regulations 45 and 50 respectively of the 2014 Tariff Regulations.

Filing Fee and Publication Expenses

76. 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

77. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. TANGEDCO has submitted that the petitioner is not entitled to claim license fee from the beneficiaries. 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

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

Goods and Services Tax (GST)

79. The petitioner has submitted that under the proposed GST which is likely to be introduced, transmission charges are not exempted and has prayed for reimbursement of any tax payable in future on implementation of GST. We are of the view that the petitioners' prayer is premature.

Sharing of Transmission Charges

80. The billing, collection and disbursement of the transmission charges approved for 2014-19 tariff period 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.

81. This order disposes of Petition No. 182/TT/2016.

sd/-
(M.K. Iyer)
Member

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member



Annexure-1

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN		
	Details of Loan	2013-2014
1	Bond XL	
	Gross loan opening	100.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	100.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	100.00
	Average Loan	100.00
	Rate of Interest	9.30%
	Interest	9.30
	Rep Schedule	12 annual instalments from 28.6.2016
2	Bond XLI	
	Gross loan opening	100.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	100.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	100.00
	Average Loan	100.00
	Rate of Interest	8.85%
	Interest	8.85
	Rep Schedule	12 annual instalments from 19.10.2016
3	Bond XLII	
	Gross loan opening	1500.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1500.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1500.00
	Average Loan	1500.00
	Rate of Interest	8.80%
	Interest	132.00
	Rep Schedule	Final payment on 13.3.2023
4	FC Bond	
	Gross loan opening	1262.40
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1262.40
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1262.40
	Average Loan	1262.40
	Rate of Interest	4.10%
	Interest	51.71
	Rep Schedule	Final payment on 17.3.2023



5	Bond XLIV	
	Gross loan opening	2650.17
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2650.17
	Additions during the year	225.23
	Repayment during the year	0.00
	Net Loan-Closing	2875.40
	Average Loan	2762.79
	Rate of Interest	8.70%
	Interest	240.36
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028
	Total Loan	
	Gross loan opening	5612.57
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	5612.57
	Additions during the year	225.23
	Repayment during the year	0.00
	Net Loan-Closing	5837.80
	Average Loan	5725.19
	Rate of Interest	7.7242%
	Interest	442.23



Annexure-2

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN		
	Details of Loan	2013-2014
1	Bond XLV	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	118.84
	Repayment during the year	0.00
	Net Loan-Closing	118.84
	Average Loan	59.42
	Rate of Interest	9.65%
	Interest	5.73
	Rep Schedule	12 annual instalments from 28.2.2018
2	Bond XLII	
	Gross loan opening	3203.43
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	3203.43
	Additions during the year	90.14
	Repayment during the year	0.00
	Net Loan-Closing	3293.57
	Average Loan	3248.50
	Rate of Interest	8.80%
	Interest	285.87
	Rep Schedule	Final payment on 13.3.2023
3	FC Bond	
	Gross loan opening	1253.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1253.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1253.00
	Average Loan	1253.00
	Rate of Interest	4.10%
	Interest	51.33
	Rep Schedule	Final payment on 17.3.2023
4	Bond XLIV	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	96.59
	Repayment during the year	0.00
	Net Loan-Closing	96.59
	Average Loan	48.30
	Rate of Interest	8.70%
	Interest	4.20
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and



		15.7.2028
	Total Loan	
	Gross loan opening	4456.43
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	4456.43
	Additions during the year	305.57
	Repayment during the year	0.00
	Net Loan-Closing	4762.00
	Average Loan	4609.22
	Rate of Interest	7.5313%
	Interest	347.13



Annexure-3

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond XL					
	Gross loan opening	100.00	100.00	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	8.33	16.66
	Net Loan-Opening	100.00	100.00	100.00	91.67	83.34
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33	8.33	8.33
	Net Loan-Closing	100.00	100.00	91.67	83.34	75.01
	Average Loan	100.00	100.00	95.83	87.50	79.17
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	9.30	9.30	8.91	8.14	7.36
	Rep Schedule	12 annual instalments from 28.6.2016				
2	Bond XLI					
	Gross loan opening	100.00	100.00	100.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	8.33	16.66
	Net Loan-Opening	100.00	100.00	100.00	91.67	83.34
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	8.33	8.33	8.33
	Net Loan-Closing	100.00	100.00	91.67	83.34	75.01
	Average Loan	100.00	100.00	95.83	87.50	79.17
	Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
	Interest	8.85	8.85	8.48	7.74	7.01
	Rep Schedule	12 annual instalments from 19.10.2016				
3	Bond XLII					
	Gross loan opening	4793.57	4793.57	4793.57	4793.57	4793.57
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	4793.57	4793.57	4793.57	4793.57	4793.57
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	4793.57	4793.57	4793.57	4793.57	4793.57
	Average Loan	4793.57	4793.57	4793.57	4793.57	4793.57
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	421.83	421.83	421.83	421.83	421.83
	Rep Schedule	Final payment on 13.3.2023				
4	FC Bond					



	Gross loan opening	2515.40	2515.40	2515.40	2515.40	2515.40
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	2515.40	2515.40	2515.40	2515.40	2515.40
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	2515.40	2515.40	2515.40	2515.40	2515.40
	Average Loan	2515.40	2515.40	2515.40	2515.40	2515.40
	Rate of Interest	4.10%	4.10%	4.10%	4.10%	4.10%
	Interest	103.04	103.04	103.04	103.04	103.04
	Rep Schedule	Final payment on 17.1.2023				
5	Bond XLV					
	Gross loan opening	118.84	118.84	118.84	118.84	118.84
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	9.90
	Net Loan-Opening	118.84	118.84	118.84	118.84	108.94
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	9.90	9.90
	Net Loan-Closing	118.84	118.84	118.84	108.94	99.04
	Average Loan	118.84	118.84	118.84	113.89	103.99
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	11.47	11.47	11.47	10.99	10.04
	Rep Schedule	12 annual instalments from 28.2.2018				
6	SBI (2014-15) ADD CAP					
	Gross loan opening	0.00	657.23	657.23	657.23	657.23
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	657.23	657.23	657.23	657.23
	Additions during the year	657.23	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	657.23	657.23	657.23	657.23	657.23
	Average Loan	328.62	657.23	657.23	657.23	657.23
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	33.68	67.37	67.37	67.37	67.37
	Rep Schedule	Petitioner is directed to submit at the time of true up				
7	BOND XLIX ADD CAP(2014-15)					
	Gross loan opening	0.00	1837.20	1837.20	1837.20	1837.20
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	1837.20	1837.20	1837.20	1837.20



	Additions during the year	1837.20	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	1837.20	1837.20	1837.20	1837.20	1837.20
	Average Loan	918.60	1837.20	1837.20	1837.20	1837.20
	Rate of Interest	8.15%	8.15%	8.15%	8.15%	8.15%
	Interest	74.87	149.73	149.73	149.73	149.73
	Rep Schedule	3 equal instalments on 9.3.2020, 9.3.2025 and 9.3.2030				
8	Bond XLIV					
	Gross loan opening	2971.99	2971.99	2971.99	2971.99	2971.99
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	2971.99	2971.99	2971.99	2971.99	2971.99
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	990.66
	Net Loan-Closing	2971.99	2971.99	2971.99	2971.99	1981.33
	Average Loan	2971.99	2971.99	2971.99	2971.99	2476.66
	Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
	Interest	258.56	258.56	258.56	258.56	215.47
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028				
9	Bond XLIV ADD CAP					
	Gross loan opening	0.00	92.26	92.26	92.26	92.26
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	92.26	92.26	92.26	92.26
	Additions during the year	92.26	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	30.75
	Net Loan-Closing	92.26	92.26	92.26	92.26	61.51
	Average Loan	46.13	92.26	92.26	92.26	76.89
	Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
	Interest	4.01	8.03	8.03	8.03	6.69
	Rep Schedule	3 equal instalments on 15.7.2018, 15.7.2023 and 15.7.2028				
10	Bond LI ADD CAP					
	Gross loan opening	0.00	0.00	178.40	178.40	178.40
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	178.40	178.40	178.40
	Additions during the year	0.00	178.40	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	178.40	178.40	178.40	178.40
	Average Loan	0.00	89.20	178.40	178.40	178.40



	Rate of Interest	8.40%	8.40%	8.40%	8.40%	8.40%
	Interest	0.00	7.49	14.99	14.99	14.99
	Rep Schedule	redeemable in 12 (twelve) equal instalments w.e.f. 14.9.2019				
	Total Loan					
	Gross loan opening	10599.80	13186.49	13364.89	13364.89	13364.89
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	16.67	43.23
	Net Loan-Opening	10599.80	13186.49	13364.89	13348.22	13321.66
	Additions during the year	2586.69	178.40	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	16.67	26.56	1047.97
	Net Loan-Closing	13186.49	13364.89	13348.22	13321.66	12273.69
	Average Loan	11893.15	13275.69	13356.56	13334.94	12797.68
	Rate of Interest	7.7828%	7.8766%	7.8794%	7.8772%	7.8415%
	Interest	925.62	1045.68	1052.41	1050.42	1003.52

