

# CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

PETITION NO. 60/TT/2020.

Coram:

Shri P.K. Pujari, Chairperson  
Shri I.S. Jha, Member

Date of Order : 01.06.2020

**In the Matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of transmission tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of transmission assets associated under System Strengthening - XI in Southern Region consisting of Asset-1: LILO of Circuit-II of Udumalpet-Madakathara (North Trichur) 400 kV D/C Line at Chulliar / Palakkad Sub-station; Asset-2: LILO of Circuit-1 of Udumalpet- Madakathara (North Trichur) 400 kV D/C Line at Chulliar (Palakkad); Asset-3: 63 MVAR Bus Reactors at Palakkad (Chulliar); Asset-4: 1X315 MVA 400/220 kV ICTs with associated bays and 220 kV Downstream System at Palakkad (Chulliar); Asset-5: 1X315 MVA 400/220 kV ICTs with associated bays and equipment at Chulliar (Palakkad).

**And in the Matter of:**

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

.....Petitioner

**Versus**

1. Karnataka Power Transmission Corporation Ltd., (KPTCL),  
Kaveri Bhavan, Bangalore – 560 009
2. Transmission Corporation of Andhra Pradesh Ltd., (APTRANSCO),  
Vidyut Soudha, Hyderabad – 500082
3. Kerala State Electricity Board (KSEB)  
Vaidyuthi Bhavanam, Pattom, Thiruvananthapuram – 695 004
4. Tamil Nadu Generation and Distribution Corporation Ltd  
(Formerly Tamil Nadu Electricity Board -TNEB)  
NPKRR Maaligai, 800, Anna Salai, Chennai – 600 002



Order in Petition No.60/TT/2020.

5. Electricity Department  
Government of Pondicherry,  
Pondicherry - 605001
6. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL)  
APEPDCL, P&T Colony,  
Seethmmadhara, Vishakhapatnam, Andhra Pradesh,
7. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL)  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, KesavayanaGunta, Tirupati-517 501,  
Chittoor District, Andhra Pradesh
8. Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL)  
Corporate Office, Mint Compound,  
Hyderabad – 500 063, Telangana
9. Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL)  
Opp.NIT Petrol Pump, Chaitanyapuri, Kazipet,  
Warangal – 506 004, Telangana
10. Bangalore Electricity Supply Company Ltd., (BESCOM),  
Corporate Office, K.R.Circle  
Bangalore – 560 001, Karanataka
11. Gulbarga Electricity Supply Company Ltd., (GESCOM)  
Station Main Road, Gulbarga, Karnataka
12. Hubli Electricity Supply Company Ltd., (HESCOM)  
Navanagar, PB Road, Hubli, Karnataka
13. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle  
Mangalore – 575 001, Karnataka
14. Chamundeswari Electricity Supply Corporation Ltd., (CESC)  
# 927,L J Avenue, Ground Floor, New KantharajUrs Road  
Saraswatipuram, Mysore– 570 009, Karnataka
15. Electricity Department  
Government of Goa  
Vidyuti Bhawan, Panaji,  
Goa 403001
16. Transmission Corporation of Telangana Limited,  
Vidhyut Sudha, Khairatabad,  
Hyderabad, 500082



17. Tamil Nadu Transmission Corporation  
NPKRR Maaligai, 800, Anna Salai  
Chennai – 600 002

...Respondent(s)

**Parties present:**

**For Petitioner:** Shri S.S. Raju, PGCIL  
Shri Zafrul Hasan, PGCIL  
Ms. Anshul Garg, PGCIL  
Shri V.K. Singh, PGCIL  
Shri Amit K. Jain, PGCIL

**For Respondent:** None

**ORDER**

The present petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of capital expenditure of the period from 1.4.2014 to 31.3.2019 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff under Regulation 8 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for the period from 1.4.2019 to 31.3.2024 in respect of Asset-1: LILO of Circuit-II of Udumalpet-Madakathara (North Trichur) 400 kV D/C Line at Chulliar/Palakkad Sub-station; Asset-2: LILO of Circuit-1 of Udumalpet-Madakathara (North Trichur) 400 kV D/C Line at Chulliar (Palakkad); Asset-3: 63 MVAR Bus Reactors at Palakkad (Chulliar); Asset-4: 1X315 MVA 400/220 kV ICTs with associated bays and 220 kV Downstream System at Palakkad (Chulliar); Asset-5: 1X315 MVA 400/220 kV ICTs with associated bays and equipment at Chulliar (Palakkad) (hereinafter collectively referred to as “the transmission assets/Combined



Asset”) under System Strengthening - XI in Southern Region (hereinafter referred to as the “transmission project”).

2. The Petitioner has made the following prayers:

*“i. Approve the trued-up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition.*

*ii. Approve the Completion cost and additional capitalization incurred during 2014-19 and projected to be incurred during 2019-24 for respective block.*

*iii. Allow the Petitioner to recover the shortfall or refund the excess 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 as provided in Tariff Regulation 2014 and Tariff regulations 2019.*

*iv. Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.*

*v. Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*

*vi. Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.*

*vii. Allow the Petitioner to file a separate petition before Commission for claiming the overall security expenses and consequential IOWC on that security expenses.*

*viii. Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.*

*ix. Allow the Petitioner Initial Spares for the project as a whole.*

*x. Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

*and pass such other relief as Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.”*



## **Background**

3. The brief facts of the case are as follows:

- a. The Investment Approval for the project was accorded by Board of Directors of the Petitioner vide letter dated 16.3.2009 at an estimated cost of ₹19610 lakh including IDC of ₹1233 lakh. The scope of work covered under “System Strengthening - XI in Southern Region” is as follows:

### **Transmission line**

- i. LILO of CKT-II of 400 kV D/C Udumalpet-Madakathaara (North Trichur) TL at Chullia / Palakkad Sub-station
- ii. LILO of CKT-I of UdumalpetMadhakatra

### **Sub-station**

- i. Palakkad: Udumalpet Bay – II (400 kV)
- ii. Palakkad: Madhakatra Bay – II (400 kV)
- iii. Palakkad: ICT-I (400 kV)
- iv. Palakkad: ICT-I (220 kV)
- v. Palakkad: Kozhikode Bay – I (220 kV)
- vi. Palakkad: Kozhikode Bay – II (220 kV)
- vii. Palakkad: ICT-II Bay (400 kV)
- viii. Palakkad: ICT-II Bay (220 kV)
- ix. Palakkad: Madakathra Bay – I (220 kV)
- x. Palakkad: Madakathra Bay – II (220 kV)
- xi. Palakkad: Bus Reactor (400 kV)
- xii. Palakkad: Udumalpet Bay – I (400 kV)
- xiii. Palakkad: Madhakatra Bay – I (400 kV)
- xiv. Palakkad: ICT-I and ICT -II at Palakkad (400 kV)

- b. The details of commercial operation of the assets covered in the instant petition are as follows:

<b>Asset</b>	<b>COD</b>	<b>Time over-run</b>	<b>Time over-run condoned</b>
<b>Asset- 1</b>	1.3.2012	7 months	7 months
<b>Asset-2</b>	1.9.2012	13 months	13 months
<b>Asset- 3</b>	1.6.2012	10 months	7 months
<b>Asset- 4</b>	1.3.2012	7 months	7 months
<b>Asset- 5</b>	1.4.2012	8 months	8 months
<b>Combined Asset for System Strengthening-XI in Southern Region</b>			<b>26.4.2012 (Effective)</b>



- c. The transmission tariff from COD to 31.3.2014 for Assets 1, Asset 2, Asset 3, Asset 4 and Asset 5 was allowed vide order dated 31.1.2014 in Petition No. 110/TT/2012.
- d. The time over-run in case of Assets 1, Asset 2, Asset 4 and Asset 5 was condoned in order dated 31.1.2014 in Petition No. 110/TT/2012. However, in case of Asset 3, out of the total time over-run of 10 months, time over-run of 3 months was not condoned and accordingly IEDC and IDC of ₹61.66 lakh was disallowed.
- e. The Petitioner has claimed the following trued up tariff for the instant assets for 2014-19 period:

(₹ in lakh)						
Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Combined Asset</b>	AFC approved vide order dated 7.3.2016	3570.52	3536.64	3482.53	3429.00	3376.36
	Revised AFC claimed based on truing up	3578.29	3546.80	3505.09	3461.27	3425.56

4. As per Regulation 8(1) of the 2014 Tariff Regulations, 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 31.3.2019, as admitted by the Commission after prudence check at the time of truing up.

5. The instant petition is filed for truing up of transmission tariff of the 2014-19 period under Regulation 8 of the 2014 Tariff Regulations and determination of transmission tariff of 2019-24 period under Regulation 8 the 2019 Tariff Regulations for the transmission assets.



6. The respondents are distribution licensees and power departments, who are procuring transmission service from the Petitioner, mainly beneficiaries of Southern Region.

7. 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. No comments/objections have been received from the public in response to the notice in the newspaper. None of the respondents have filed reply to the petition.

8. The hearing in this matter was held on 26.2.2020 and the order was reserved. The Petitioner was directed to submit certain information and the same was filed by the Petitioner vide affidavit dated 13.3.2020.

9. This order is issued considering the submissions made by the Petitioner in the petition dated 28.10.2019 and Petitioner's affidavits dated 25.2.2020 and 13.3.2020.

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

### **TRUING UP OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD**

11. The Petitioner has submitted the information as required under the 2014 Tariff Regulations for truing up of annual fixed charges for 2014-19 period.

12. The details of the transmission charges claimed by the Petitioner are as under:-  
(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	862.98	869.01	873.67	877.80	882.62
Interest on Loan	903.29	830.65	755.37	677.86	603.17
Return on Equity	999.10	1010.61	1015.32	1019.93	1028.10
Interest on Working Capital	102.88	102.91	102.74	102.55	102.56
O&M Expenses	710.04	733.62	757.99	783.13	809.11
<b>Total</b>	<b>3578.29</b>	<b>3546.80</b>	<b>3505.09</b>	<b>3461.27</b>	<b>3425.56</b>



13. The details of the Interest on Working Capital claimed by the Petitioner are as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	59.17	61.14	63.17	65.26	67.43
Maintenance Spares	106.51	110.04	113.70	117.47	121.37
Receivables	596.38	591.13	584.18	576.88	570.93
Total Working Capital	762.06	762.31	761.05	759.61	759.73
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on working capital</b>	<b>102.88</b>	<b>102.91</b>	<b>102.74</b>	<b>102.55</b>	<b>102.56</b>

14. The tariff for 2014-19 period has been trued up as discussed in the subsequent paragraphs.

### Effective COD

15. The Petitioner has stated that the E-COD of the combined assets works out to be 1.5.2012. However, based on the trued up capital cost and actual COD of the 5 individual assets, the E-COD has been worked out as 26.4.2012 and is shown below:-

Asset	Trued-up Capital Cost as on 31.3.2014 (₹ in lakh)	COD	No. of days from COD of asset from COD of Project	Weight of cost	Weighted days
Asset-1	6989.92	1.3.2012	184	41.46%	76.28391493
Asset-2	4302.16	1.9.2012	0	25.52%	0
Asset-3	1014.63	1.6.2012	92	6.02%	5.536540375
Asset-4	2387.00	1.3.2012	184	14.16%	26.05032746
Asset-5	2166.27	1.4.2012	153	12.85%	19.65834538
<b>Total</b>	<b>16859.98</b>			<b>100%</b>	<b>127.5291281</b>
<b>Effective COD –26.4.2012</b>					

### Weighted Average life

16. The Weighted Average Life (WAL) has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective life as stipulated in 2014 Tariff Regulations. Accordingly, the Weighted Average Life (WAL) of





all the assets commissioned during 2009-14 period have been worked out as 29 years as shown below:-

Particulars	Combined Asset (₹ in lakh)	Life in Years	Combined Cost (₹ in lakh)	Weighted Cost (₹ in lakh)
Building Civil Works & Colony	1132.24	25	1132.24	28306.00
Transmission Line	7290.32	35	7290.32	255161.20
Sub Station	7902.40	25	7902.40	197560.00
PLCC	147.22	15	147.22	2208.30
IT Equipment (Incl. Software)	78.23	25	78.23	1955.75
<b>Total</b>	<b>16550.41</b>		<b>16550.41</b>	<b>485191.25</b>
<b>Average Life of Asset: 29 years</b>				

### Capital Cost as on 1.4.2014

17. The Capital Cost of the existing project has been calculated in accordance with Regulation 9(3) and Regulation 9(6) of the 2014 Tariff Regulation. The Commission vide order dated 7.3.2016 in Petition No. 551/TT/2014 had allowed capital cost of ₹16859.98 lakh as on 31.3.2014 and projected additional capitalisation of ₹230.00 lakh for determination of tariff for 2014-19 period for Asset 1, Asset 2, Asset 3, Asset 4 and Asset 5.

Assets	Admitted Capital Cost as on 1.4.2014	Additional Capitalisation		Total Capital Cost as on 31.3.2019
		2014-15		
Asset-1	6989.92 <sup>#</sup>	25.00		7014.92
Asset-2	4302.16 <sup>##</sup>	180.00		4482.16
Asset-3	1014.63 <sup>*</sup>	25.00		1039.63
Asset-4	2387.00	0.00		2387.00
Asset-5	2166.27	0.00		2166.27
<b>Total</b>	<b>16859.98</b>	<b>230.00</b>		<b>17089.98</b>

\*after restricting the IDC and IEDC amounting to ₹61.66 lakh for Asset-3 due to time over-run

#restricting excess Initial Spares amounting to ₹55.03 lakh for Asset-1

##restricting excess Initial Spares amounting to ₹115.25 lakh for Asset-2

### Initial Spares

18. The Petitioner has claimed the following Initial Spares for the instant assets and has further requested to revise the Initial Spares allowed earlier for the instant



assetsvide order dated 7.3.2016 in Petition No. 551/TT/2014 taking into consideration the judgement of the Appellate Tribunal for Electricity (APTEL) dated 14.9.2019 in Appeal No.74 of 2017.

Assets	Asset Type	Estimated Completion Cost (A) (₹ in lakh)	Initial Spares Claimed (B) (₹ in lakh)	Ceiling Limit (%) (C)	Initial Spares Worked out (₹ in lakh)	Excess Initial Spares E = D-B (₹ in lakh)
					$D = \frac{[(A-B)*C]}{(100-C)}$	
<b>Asset-1</b>	Conventional Sub-station	3005.74	138.90	2.50	73.51	65.39
<b>Asset-2</b>	Conventional Sub-station	909.91	135.17	2.50	19.87	115.30
<b>Asset-3</b>	Conventional Sub-station	1030.39	1.38	2.50	26.38	-25.00
<b>Asset-4</b>	Conventional Sub-station	2387.00	59.46	2.50	59.68	-0.22
<b>Asset-5</b>	Conventional Sub-station	2166.27	0.00	2.50	55.55	-55.55
<b>Total</b>		<b>9499.31</b>	<b>334.91</b>	<b>2.50</b>	<b>234.98</b>	<b>99.93</b>

19. Initial Spares are allowed for the instant assets as per the APTEL's directions in judgement dated 14.9.2019. As per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are to be allowed as a percentage of the project cost as a whole as on the cut-off date. Regulation 3(29) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") defines "project cost" as under:

*"(29) 'original project cost' means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;"*

20. The instant assets were put into commercial operation in the 2009-14 period. Accordingly, the 2009 Tariff Regulations are applicable for the instant assets. Regulation 8(iv) of the 2009 Tariff Regulations specifies the norms for the Initial Spares for the transmission systems as under:



“(iv) Transmission system

- (a) Transmission line - 0.75%  
 (b) Transmission Sub-station - 2.5%  
 (c) Series Compensation devices and HVDC Station - 3.5%  
 (d) Gas Insulated Sub-station (GIS) - 3.5%”

21. It is observed that the Petitioner has claimed the Initial Spares for the instant assets, which were put into commercial operation during the 2009-14 tariff period, at estimated completion costs as provided in the Auditor certificates. The Petitioner has not claimed any Initial Spares for transmission line (TL). The Initial Spares are allowed for the instant assets as a percentage, specified in the 2009 Tariff Regulations, of the capital expenditure as on the cut-off date as specified in Regulation 3(29) of the 2009 Tariff Regulations and it is as follows:-

Asset	Total Cost admitted as on 31.3.2014 (₹ in lakh)	Capital Cost as on cut-off dated considered for computing Initial Spares (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2009 Tariff Regulations (%)	Initial Spares allowable as per APTEL judgement dated 14.9.2019 (₹ in lakh)	Allowed in Petition No. 551/TT/2014 (₹ in lakh)	Balance Initial Spares (₹ in lakh)
		A	B	C	$D=(A-B) *C/(100-C)$	E	D-E
		Transmission Sub-station					
Asset-1	6989.92	3384.89*	138.90	2.50	83.23	83.87	<b>77.07</b>
Asset-2	4302.16	787.16*	135.17	2.50	16.72	19.92	
Asset-3	1014.63	1030.39#	1.38	2.50	26.38	1.24^	
Asset-4	2387.00	2387#	59.46	2.50	59.68	59.46	
Asset-5	2166.27	2166.27#	0.00	2.50	55.55	0	
<b>Total</b>	<b>16859.98</b>	<b>9755.71</b>	<b>334.91</b>		<b>241.56</b>	<b>164.49</b>	

\*Disallowed excess Initial Spares added back to the capital cost for computation of Initial Spares

#Cost as per Auditor certificate upto cut-off date i.e. 31.3.2015

^Proportionate Initial Spares claimed after deducting IDC as per order dated 7.3.2016 in Petition No. 551/TT/2014

22. The Petitioner has claimed capital cost of ₹16930.33 lakh as on 31.3.2014 after adding back the balance Initial Spares of ₹70.35 lakh (₹16859.98 lakh + ₹70.35 lakh =



₹16930.33 lakh). The Petitioner's claim of ₹70.35 lakh (as against balance initial spares of ₹77.07 lakh calculated in the Table above) is within the allowable limit and hence, it has been allowed. Accordingly, the capital cost as on 1.4.2014 is calculated to be ₹16930.33 lakh in accordance with Regulation 9(3) of the 2014 Tariff Regulation.

(₹ in lakh)

Asset Details	Admitted Cost as on 31.3.2014 in order dated 7.3.2016	Balance Initial Spares added back as per Norms and APTEL judgement dated 14.9.2019	Cost considered after allowing balance Initial Spares as on 1.4.2014
Combined Asset	16859.98	70.35	16930.33

**Additional Capital Expenditure (ACE)**

23. The Commission had allowed ACE of ₹230 lakh for assets covered under instant petition for 2014-19 tariff period vide order dated 7.3.2016 in Petition No. 551/TT/2014.

24. The Petitioner has claimed ACE of ₹438.38 lakh as against approved ACE of ₹230.00 lakh.

Period	ACE claimed (₹ in lakh)	Regulation
2014-15	79.05	14(1)(ii)
2015-16	155.40	14(3)(v)
2016-17	21.10	
2017-18	135.07	
2018-19	47.76	
<b>Total ACE claimed in 2014-19 period</b>	<b>438.38</b>	

25. The Petitioner vide affidavit dated 13.3.2020 in response to the ROP issued pursuant to the hearing dated 26.2.2020 has submitted that the ACE proposed during 2014-19 period was mainly towards balance works and retention payments in transmission line and civil and other works of the sub-station. There are many works in transmission line such as foundation protection work and erection of missing member which are done after COD. Similarly, there are many works in sub-station such as



roads, drains township, cable trench cover, service room of control room building other than main control room, landscaping works which are normally completed after COD.

26. The Petitioner has submitted that the final amendments to the work which involves some new items and therefore have negotiable rate are not completed by COD and hence it is not possible to freeze the liability of all the works by COD. The Petitioner has submitted that during true up which happens after 1-5 years most of the final amendments are issued, payments and material reconciliation is completed, final payments are released and contracts are closed. It is only at this time that the actual status of payments is reconciled and value of works beyond cut-off date (i.e. value of unexecuted work) and the actual liability as on date of COD are exactly known.

27. The Petitioner has submitted that payments which were shown earlier as liability have now been bifurcated into unexecuted work (i.e. some works done after COD) and works which were completed as on COD, but payments made after COD as balance and retention payments. The Petitioner has also submitted that the compensation payments made are as per the direction/demand raised by the revenue/statutory authorities and it is difficult to predict the same at the time of COD and at times even after finalization of completion of the asset. The Petitioner has claimed the ACE within the cut-off date under Regulation 14(1)(ii) and the ACE beyond the cut-off date is claimed under Regulation 14(3)(v).The details of ACE claimed by the Petitioner is given below:

S. No	Asset	Year	Vendor Name	Nature of Work	Amount (₹ in lakh)
1	Asset-1	2014-15	Compensation payment	Transmission line	21.90
2		2015-16	Compensation payment	Transmission line	17.45
3		2016-17	Compensation payment	Transmission line	10.55
4		2017-18	Compensation payment	Transmission line	6.55
5		2018-19	Compensation payment	Transmission line	23.88



S. No	Asset	Year	Vendor Name	Nature of Work	Amount (₹ in lakh)
1	Asset-2	2014-15	Compensation payment	Transmission line	21.90
2		2014-15	A2Z maintenance & engineering	Transmission line	19.49
3		2015-16	Compensation payment	Transmission line	137.95
4		2016-17	Compensation payment	Transmission line	10.55
5		2017-18	Compensation payment	Transmission line	6.55
6		2017-18	Maco Corporation (India) Pvt Ltd	Substation	43.34
7		2017-18	Manitou South Asia Pvt Ltd	Sub-station	38.6
8		2017-18	Megger India Pvt Ltd	Sub-station	19.89
9		2017-18	Madhav Engineers, Godrej & Boyce Mfg. Co Ltd, Omm Fire India Corporation	Sub-station	20.14
10		2018-19	Compensation payment	Transmission line	23.88

S. No	Asset	Year	Vendor Name	Nature of Work	Amount (₹ in lakh)
1	Asset-3	2014-15	ABB Ltd	Building and other Civil works	8.50
2		2014-15	Jomon Joseph	Building and other Civil works	7.26

28. We have considered the submissions of the Petitioner. The cut-off date in case of the instant assets is 31.3.2015. The Petitioner has claimed Additional Capitalization during the year 2014-15, which is within the cut-off date of 31.3.2015, under Regulation 14(1)(ii) of the 2014 Tariff Regulations and Additional Capitalization during the years 2015-16, 2016-17, 2017-18 and 2018-19, which is after the cut-off date of 31.3.2015, to meet the liability for works executed prior to the cut-off date under Regulation 14(3)(v) of the 2014 Tariff Regulations. The ACE claimed by the Petitioner is ₹438.38 lakh which includes compensation payment amounting to ₹281.16 lakh and the Commission acknowledges that the compensation payment could not have been completely envisaged at the time of tariff approval. The balance ACE is within ₹230 lakh which was the admitted ACE vide order dated 7.3.2016. Therefore, the ACE claimed by the Petitioner has been allowed under Regulation 14(1)(ii) and 14(3)(v) of the 2014 Tariff Regulations.

29. The details of the capital cost and ACE approved are as follows: -



(₹ in lakh)

Asset Details	Capital Cost as on 1.4.2014	ACE as approved					Total Capital Cost as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset	16930.33	79.05	155.40	21.10	135.07	47.76	17368.71

### Debt-Equity ratio

30. The debt equity ratio has been considered in accordance with Regulation 19(3) and (5) of the 2014 Tariff Regulations. The debt and equity allowed for individual assets for determination of tariff for the period ending 31.3.2014 has been combined and considered for deciding opening debt and equity of the project as on 1.4.2014. The debt equity ratio of 70:30 has been considered for the ACE allowed during 2014-19 in accordance to Regulation 19(3) of the 2014 Tariff Regulations.

31. The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 for Combined Asset considered for the purpose of tariff for the 2014-19 tariff period is as follows:

Funding	Capital cost as on 1.4.2014 (₹ in lakh)	(%)	ACE during 2014-19 (₹ in lakh)	(%)	Total cost as on 31.3.2019 (₹ in lakh)	(%)
Debt	11851.23	70.00	306.87	70.00	12158.10	70.00
Equity	5079.10	30.00	131.51	30.00	5210.61	30.00
<b>Total</b>	<b>16930.33</b>	<b>100.00</b>	<b>438.38</b>	<b>100.00</b>	<b>17368.71</b>	<b>100.00</b>

### Interest on Loan ("IoL")

32. The Petitioner has claimed the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, the IoL has been calculated based on actual interest rate submitted by the Petitioner, in accordance with the Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed in Annexure-1. The IoL worked out is as follows:-



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Interest on Loan</b>					
Gross Normative Loan	11851.23	11906.57	12015.35	12030.12	12124.67
Cumulative Repayments up to Previous Year	1533.11	2388.49	3249.90	4115.97	4986.17
Net Loan-Opening	10318.12	9518.08	8765.45	7914.15	7138.50
Additions	55.34	108.78	14.77	94.55	33.43
Repayment during the year	855.38	861.41	866.07	870.20	875.02
Net Loan-Closing	9518.08	8765.45	7914.15	7138.50	6296.91
Average Loan	9918.10	9141.76	8339.80	7526.32	6717.70
Weighted Average Rate of Interest on Loan (%)	9.1110	9.0977	9.0781	9.0384	9.0248
<b>Interest on Loan</b>	<b>903.63</b>	<b>831.69</b>	<b>757.10</b>	<b>680.26</b>	<b>606.26</b>

(₹ in lakh)

Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.3.2016	903.78	833.75	755.71	677.45	599.21
Claimed by Petitioner	903.29	830.65	755.37	677.86	603.17
Allowed after true-up in this order	903.63	831.69	757.10	680.26	606.26

The variation in IoL allowed in the instant order against the IOL allowed vide order dated 7.3.2016 is on account of increase in capital cost as on 1.4.2014 pursuant to add-back of differential Initial Spares as per APTEL judgment in Appeal No. 74 of 2017, spread of ACE over 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19, and change in the weighted average rate of interest which is computed based on actual loan portfolio and rate of interest.

### **Return on Equity (“RoE”)**

33. The Petitioner is entitled for Return on equity for the instant assets in terms of Regulation 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed following effective tax rates for the 2014-19 tariff period:





Year	Claimed effective tax rate (in %)	Grossed up ROE (Base Rate/1-t) (in %)
2014-15	21.018	19.624
2015-16	21.382	19.715
2016-17	21.338	19.704
2017-18	21.337	19.704
2018-19	21.549	19.757

34. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates for the Petitioner and the same is given in the table below. The same MAT rates are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations.

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed up ROE (Base Rate/1-t) (in %)
2014-15	20.9605	15.50	19.611
2015-16	21.3416	15.50	19.705
2016-17	21.3416	15.50	19.705
2017-18	21.3416	15.50	19.705
2018-19	21.5488	15.50	19.758

35. The Petitioner has claimed RoE for the 2014-19 period after grossing up the RoE of 15.50% with Effective Tax rates (based on MAT rates) each year as per the above said Regulation. The RoE is trued up on the basis of the MAT rate applicable in the respective years and is allowed as follows:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Return on Equity</b>					
Opening Equity	5079.10	5102.81	5149.43	5155.76	5196.29
Additions	23.72	46.62	6.33	40.52	14.33
Closing Equity	5102.81	5149.43	5155.76	5196.29	5210.61
Average Equity	5090.96	5126.12	5152.60	5176.02	5203.45
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>998.36</b>	<b>1010.13</b>	<b>1015.34</b>	<b>1019.96</b>	<b>1028.07</b>



(₹ in lakh)

Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.3.2016	998.66	1005.43	1005.43	1005.43	1005.43
Claimed by Petitioner	999.10	1010.61	1015.32	1019.93	1028.10
Allowed after true-up in this order	998.36	1010.13	1015.34	1019.96	1028.07

The variation in RoE allowed in the instant order against the RoE allowed vide order dated 7.3.2016 is due to increase in capital cost as on 1.4.2014 pursuant to add-back of differential Initial Spares as per APTEL judgment in Appeal No. 74 of 2017, spread of ACE over 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19, and change in the applicable MAT rate for the purpose of grossing up of base rate of RoE.

### **Depreciation**

36. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed for the instant assets in order dated 7.3.2016 in Petition No. 551/TT/2014. The Petitioner has neither given any justification for claiming higher depreciation than that was allowed earlier in order dated 7.3.2016 nor made any specific prayer for allowing higher depreciation in this petition. Therefore, the Petitioner was directed to submit the details as follows:-

*"Gross block and net block of IT equipment and software at the start of 2014-15 may be provided".*

37. In response, the Petitioner vide affidavit dated 25.2.2020 submitted as follows:-

*"....., it is submitted that the depreciation @ 15% on account of IT equipment has been provided under Appendix-II of the Tariff Regulations, 2014. Further, clause 3 of the Regulation 27 of Tariff Regulations 2014 provides NIL salvage value for IT equipment. Similar provisions have been provided in Tariff Regulations, 2019.*

*It is submitted that during the truing up for 2009-14 block in petition 551/TT/2014, capital cost of IT equipment was included in the substation cost inadvertently and therefore depreciation for IT equipment was allowed based on substation rate of depreciation i.e. 5.28% by the Hon'ble Commission. Accordingly, to avoidcost the revision of transmission tariff pertaining to 2009-14 block, depreciation of IT equipment upto 31.3.2014 has been considered @ 5.28% of corresponding capital cost in line with earlier approved order. Thus, calculation of depreciation of IT equipment upto 31.3.2014 is as given below;*



<i>Asset</i>	<i>COD</i>	<i>IT equipment cost (₹ in lakh)</i>	<i>Depreciation upto 31.3.2014 @5.28%</i>
<i>Asset-I</i>	<i>1.5.2012</i>	<i>78.23 (2014-15)</i>	<i>7.25</i>

The Petitioner has submitted that during the truing up of the tariff of the 2009-14 period, the capital cost of the IT equipment was considered as part of the sub-station cost inadvertently and to avoid revision of tariff of the 2009-14 block, it requested to consider depreciation of IT Equipment upto 31.3.2014 as 5.28%. The Petitioner has further submitted that the depreciation rate for IT Equipment in the 2014 Tariff Regulations and the 2019 Tariff Regulations is 15% and the salvage value for IT Equipment is NIL.

38. We have considered the submissions of the Petitioner. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide order dated 31.1.2014 in Petition No. 110/TT/2012. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 7.3.2016 in Petition No.551/TT/2014. The Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said two petitions where tariff for the instant assets for the 2009-14 period was allowed and tariff of the 2009-14 was trued up and tariff for 2014-19 was determined even though there was a clear provision in the 2009 Tariff Regulations and the 2014 Tariff Regulations providing depreciation @ 15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations, the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned a part of the capital expenditure to "IT Equipment". The Petitioner has adopted similar methodology not only in this but in some of the other petitions listed along with the instant petition on 26.2.2020. It is observed that the Petitioner has for the first time apportioned a part



of the capital expenditure towards IT Equipment and has claimed depreciation under the head "IT Equipment" @ of 15% at the time of truing up of the tariff of 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the ACE, incurred upto 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner's prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station upto 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment will be considered separately and depreciation @ 15% for the balance depreciable value of IT Equipment shall be allowed in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.

39. The depreciation for 2014-19 period is trued up for the instant assets as per the methodology provided in the Regulation 27 of the 2014 Tariff Regulations and it is as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	16930.33	17009.38	17164.78	17185.88	17320.95
Additional Capitalisation	79.05	155.40	21.10	135.07	47.76
Closing Gross Block	17009.38	17164.78	17185.88	17320.95	17368.71
Average Gross Block	16969.86	17087.08	17175.33	17253.42	17344.83
Average Gross Block (90% depreciable assets)	16891.63	17008.85	17097.10	17175.19	17266.60
Average Gross Block (100% depreciable assets)	78.23	78.23	78.23	78.23	78.23



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Freehold Land	379.92	379.92	379.92	379.92	379.92
Rate of Depreciation	5.04%	5.04%	5.04%	5.04%	5.04%
Balance useful life of the asset	28	27	26	25	24
Elapsed life	1	2	3	4	5
Depreciable Value (excluding IT equipment and software) - 90%	14860.53	14966.04	15045.46	15115.74	15198.01
Depreciable value of IT equipment and software - 100%	78.23	78.23	78.23	78.23	78.23
<b>Depreciation during the year</b>	<b>855.38</b>	<b>861.41</b>	<b>866.07</b>	<b>870.20</b>	<b>875.02</b>
Cumulative Depreciation upto PY	1533.11	2388.49	3249.90	4115.97	4986.17
Total Cumulative Depreciation	2388.49	3249.90	4115.97	4986.17	5861.19
Remaining Depreciable Value Total	12550.28	11794.37	11007.72	10207.80	9415.05

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.3.2016	855.34	861.17	861.17	861.17	861.17
Claimed by Petitioner	862.98	869.01	873.67	877.80	882.62
Allowed after true-up in this order	855.38	861.41	866.07	870.20	875.02

The depreciation allowed in the instant order is at variance with the depreciation allowed vide order dated 7.3.2016 due to increase in capital cost as on 1.4.2014 pursuant to add-back of differential Initial Spares as per APTEL judgment in Appeal No. 74 of 2017 and spread of ACE over 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19.

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

40. The total O&M Expenses for the instant assets claimed by the Petitioner are as follows:-

(₹ in lakh)

<b>O&amp;M Expenses</b>					
400kV Conventional					
No. of bays	7	7	7	7	7
Norms (₹ lakh/Bay)	60.3	62.3	64.37	66.51	68.71
220kV Conventional					



<b>O&amp;M Expenses</b>					
No. of bays	6	6	6	6	6
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1
<b>Transmission line</b>					
D/C Twin/Triple Conductor	49.06	49.06	49.06	49.06	49.06
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
<b>Total O&amp;M Expense (₹ in lakh)</b>	<b>710.04</b>	<b>733.62</b>	<b>757.99</b>	<b>783.13</b>	<b>809.11</b>

The O&M Expenses allowed as per the norms specified in the 2014 Tariff Regulations are as follows:

(₹ in lakh)

<b>O&amp;M Expenses</b>					
400 kV Conventional					
No. of bays	7	7	7	7	7
Norms (₹ lakh/Bay)	60.3	62.3	64.37	66.51	68.71
220 kV Conventional					
No. of bays	6	6	6	6	6
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1
<b>Transmission line</b>					
D/C Twin/Triple Conductor	49.06	49.06	49.06	49.06	49.06
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
<b>Total O&amp;M Expense (₹ in lakh)</b>	<b>710.05</b>	<b>733.62</b>	<b>757.99</b>	<b>783.14</b>	<b>809.11</b>

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order 7.3.2016	710.05	733.62	757.99	783.13	809.11
Claimed by Petitioner	710.04	733.62	757.99	783.13	809.11
Allowed after true-up in this order	710.05	733.62	757.99	783.14	809.11

### Interest on Working Capital (IWC)

41. The IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and allowed as under:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Interest on Working Capital</b>					
O&M Expenses	59.17	61.14	63.17	65.26	67.43
Maintenance Spares	106.51	110.04	113.70	117.47	121.37
Receivables	595.02	589.93	583.18	576.00	570.15
Total Working Capital	760.70	761.11	760.05	758.73	758.95
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on working capital	102.69	102.75	102.61	102.43	102.46

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.3.2016	102.70	102.68	102.23	101.82	101.45
Claimed by Petitioner	102.88	102.91	102.74	102.55	102.56
Allowed after true-up in this order	102.69	102.75	102.61	102.43	102.46

The IWC allowed in the instant order is at variance with the IWC allowed vide order dated 7.3.2016 due to increase in capital cost as on 1.4.2014 pursuant to add-back of differential Initial Spares as per APTEL judgment in Appeal No. 74 of 2017 and spread of ACE over 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19.

### **APPROVED ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD**

42. The trued up annual fixed charges for the instant transmission assets for the tariff period 2014-19 is summarised below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	855.38	861.41	866.07	870.20	875.02
Interest on Loan	903.63	831.69	757.10	680.26	606.26
Return on Equity	998.36	1010.13	1015.34	1019.96	1028.07
Interest on Working Capital	102.69	102.75	102.61	102.43	102.46
O & M Expenses	710.05	733.62	757.99	783.14	809.11
<b>Total</b>	<b>3570.11</b>	<b>3539.60</b>	<b>3499.11</b>	<b>3455.98</b>	<b>3420.92</b>

### **DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD**

43. The Petitioner has claimed the following tariff charges for 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	885.04	875.08	874.48	874.48	874.48
Interest on Loan	527.38	449.79	371.19	292.69	213.85
Return on Equity	979.90	981.14	981.14	981.14	981.14
Interest on Working Capital	63.51	63.31	63.11	62.98	62.71
O&M Expenses	631.81	654.17	677.05	701.00	724.88
<b>Total</b>	<b>3087.64</b>	<b>3023.49</b>	<b>2966.97</b>	<b>2912.29</b>	<b>2857.06</b>



44. The Petitioner has claimed the following Interest on Working Capital for the 2019-24 period:-

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	52.65	54.51	56.42	58.42	60.41
Maintenance Spares	94.77	98.13	101.56	105.15	108.73
Receivables	379.63	371.76	365.79	359.05	351.28
Total Working Capital	527.05	525.40	523.77	522.62	520.42
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
<b>Interest on working capital</b>	<b>63.51</b>	<b>63.31</b>	<b>63.11</b>	<b>62.98</b>	<b>62.71</b>

The tariff for 2019-24 tariff period is allowed as discussed in the subsequent paragraphs.

### **Capital Cost**

45. Regulation 19 of the 2019 Tariff Regulations provide as follows:-

*“19 (1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.*

*(2) The Capital Cost of a new project shall include the following:*

*(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*

*(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*

*(c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*

*(d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*

*(e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*

*(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*

*(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*

*(h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*

*(i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*





(j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;

(k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;

(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;

(m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;

(n) Expenditure on account of change in law and force majeure events; and

(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(3) The Capital cost of an existing project shall include the following:

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(4) The capital cost in case of existing or new hydro generating station shall also include:

(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and

(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

(5) The following shall be excluded from the capital cost of the existing and new projects:

(a) The assets forming part of the project, but not in use, as declared in the tariff petition;

(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

*Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalised only after its redeployment;*

*Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.*



- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
- (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

46. The Petitioner has revised the capital cost computations pursuant to APTEL judgment in Appeal No. 74 of 2017 and claimed capital cost of ₹17368.71 lakh as on 31.3.2019 for Combined Asset vide Auditor Certificate dated 30.7.2019. The same has been allowed by the Commission and has been considered as opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

#### **Additional Capital Expenditure (ACE)**

47. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as under:-

*“24. Additional Capitalisation within the original scope and upto the cut-off date*

*(1) The additional capital expenditure in respect of a 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:*

- (a) Undischarged liabilities recognized to be payable at a future date;*
- (b) Works deferred for execution;*
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) Change in law or compliance of any existing law; and*
- (f) Force Majeure events:*

*Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.*

*(2) The generating company or the transmission licensee, as the case may be shall submit 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.

25. *Additional Capitalisation within the original scope and after the cut-off date:*

(1) *The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:*

- (a) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- (b) *Change in law or compliance of any existing law;*
- (c) *Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) *Liability for works executed prior to the cut-off date;*
- (e) *Force Majeure events;*
- (f) *Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*
- (g) *Raising of ash dyke as a part of ash disposal system.*

(2) *In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:*

- (a) *The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;*
- (b) *The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;*
- (c) *The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*
- (d) *The replacement of such asset or equipment has otherwise been allowed by the Commission.*

48. The Petitioner vide affidavit dated 29.10.2019 has claimed ACE of ₹44.04 lakh during 2019-24 for Combined Asset under Regulation 25(1)(d) of the 2019 Tariff Regulations. The Petitioner has claimed ACE on account of undischarged liability towards final payment/withheld payment due to compensation for works executed within the cut-off date as follows:

Period	Additional Capital claimed (₹ in lakh)	Regulation
2019-20	44.04	25(1)(d)
<b>Total ACE claimed in 2019-20 period</b>	<b>44.04</b>	



49. The justification of ACE claimed by the Petitioner is given below:

S. No	Asset	Year	Vendor Name	Nature of Work	Amount (₹ in lakh)
1	Asset-1	2019-20	ABB India, GE T&D India Limited	Substation	0.78
2		2019-20	A2Z maintenance & engineering	Transmission line	21.24
			<b>Total</b>		<b>22.02</b>

S. No	Asset	Year	Vendor Name	Nature of Work	Amount (₹ in lakh)
1	Asset-2	2019-20	ABB India, GE T&D India Limited	Substation	0.78
2		2019-20	A2Z maintenance & engineering	Transmission line	21.24
			<b>Total</b>		<b>22.02</b>

We have considered the submissions of the Petitioner. The cut-off date in case of the instant assets is 31.3.2015. The Petitioner has claimed projected Additional Capitalization during the year 2019-20, which is after the cut-off date of 31.3.2015, to meet the liability for works executed prior to the cut-off date under Regulation 25(1)(d) of the 2019 Tariff Regulations. It is observed that the projected ACE of ₹44.04 lakhs to meet the liability for works executed prior to the cut-off from the contracts with ABB India, GE T&D India Limited and A2Z maintenance & engineering. Therefore, the Petitioner's claim of projected additional capitalisation during 2019-20 is allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations. However, the Petitioner is directed to submit details of contract, scope, original liability and undischarged liability as on 31.3.2019 and the Regulation under which such Additional Capitalization is claimed at the time of true up of 2019-24 period. The ACE allowed is summarized below which is subject to true up:-

Asset	Capital cost as on 1.4.2019	Combined Asset (₹ in lakh)
		2019-20
ACE to the extent of Balance & Retention Payments & work deferred for execution before cut-off date	Regulation 25 (1) (d) of 2019 Tariff Regulations	<b>44.04</b>



50. Accordingly, the capital cost of the combined asset, considered for the tariff period 2019-24, subject to truing up, is as follows:-

Asset	Capital cost as on 1.4.2019	Admitted ACE	Total cost as on 31.3.2024
		2019-20	
Combined Asset	17368.71	44.04	17412.75

**Debt-Equity ratio**

51. Regulation 18 of the 2019 Tariff Regulations provides as under:-

*“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. 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:*

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*

*(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*

*(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:*

*Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;*

*Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.*

*(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for*



determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”

52. The details of the debt-equity ratio considered for the purpose of tariff for 2019-24 tariff period is as follows:-

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	%	ACE for 2019-24 (₹ in lakh)	%	Capital cost as on 31.3.2024 (₹ in lakh)	%
Debt	12158.10	70.00	30.83	70.00	12188.93	70.00
Equity	5210.61	30.00	13.22	30.00	5223.83	30.00
<b>Total</b>	<b>17368.71</b>	<b>100.00</b>	<b>44.04</b>	<b>100.00</b>	<b>17412.75</b>	<b>100.00</b>

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

53. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provide as under:-

“30. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of 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 return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% 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) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;





ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

iii. in case of a thermal generating station, with effect from 1.4.2020:

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.

31. Tax on Return on Equity:(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations 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 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 paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded 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.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”



54. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, the MAT rate applicable in 2019-20 has been considered for the purpose of ROE, which shall be trued up with actual tax rate in accordance with Regulation 31 (3) of the 2019 Tariff Regulations. The ROE allowed for the Combined Asset is as follows:-

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	5210.61	5223.83	5223.83	5223.83	5223.83
Additions	13.21	0.00	0.00	0.00	0.00
Closing Equity	5223.83	5223.83	5223.83	5223.83	5223.83
Average Equity	5217.22	5223.83	5223.83	5223.83	5223.83
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
<b>Return on Equity</b>	<b>979.87</b>	<b>981.11</b>	<b>981.11</b>	<b>981.11</b>	<b>981.11</b>

### **Interest on Loan (“IoL”)**

55. Regulation 32 of the 2019 Tariff Regulations provides as under:-

*“32. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.*

*(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization 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 de-capitalisation 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.*

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

56. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, the IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. The details of weighted average rate of interest for 2019-24 tariff period are placed in Annexure-2 and the IoL allowed for the instant Combined Asset is as follows:-

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	12158.10	12188.93	12188.93	12188.93	12188.93
Cumulative Repayments upto Previous Year	5861.19	6746.24	7632.45	8518.66	9404.87
Net Loan-Opening	6296.91	5442.69	4556.48	3670.26	2784.05
Additions	30.83	0.00	0.00	0.00	0.00
Repayment during the year	885.05	886.21	886.21	886.21	886.21
Net Loan-Closing	5442.69	4556.48	3670.26	2784.05	1897.84
Average Loan	5869.80	4999.58	4113.37	3227.16	2340.95
Weighted Average Rate of Interest on Loan (%)	9.0432	9.0552	9.0703	9.0956	9.1254
<b>Interest on Loan</b>	<b>530.82</b>	<b>452.72</b>	<b>373.10</b>	<b>293.53</b>	<b>213.62</b>

### **Depreciation**

57. Regulation 33 of the 2019 Tariff Regulations provide as under:-

*"33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element there of including communication system. In case of the*



*tariff of all the units of a generating station or all elements of a transmission system including communications 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:*

*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 a transmission system, weighted average life for the generating station or 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 the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;*

*Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:*

*Provided also 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 unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or the extended life.*

*(4) 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-I 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 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets.

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

(8) In case of de-capitalization of assets in respect of generating station or unit therefor transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.”

58. The IT equipment has been considered as a part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD). The salvage value of IT equipment has been considered nil, i.e. IT asset has been considered as 100 percent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows: -

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Depreciation</b>					
Opening Gross Block	17368.71	17412.75	17412.75	17412.75	17412.75
Additional Capitalisation	44.04	0.00	0.00	0.00	0.00
Closing Gross Block	17412.75	17412.75	17412.75	17412.75	17412.75
Average Gross Block	17390.73	17412.75	17412.75	17412.75	17412.75
Average Gross Block (90% depreciable assets)	17312.50	17334.52	17334.52	17334.52	17334.52
Average Gross Block (100% depreciable assets)	78.23	78.23	78.23	78.23	78.23
Freehold Land	379.92	379.92	379.92	379.92	379.92
Rate of Depreciation	5.09%	5.09%	5.09%	5.09%	5.09%
Balance useful life of the asset	23	22	21	20	19
Elapsed life	6	7	8	9	10



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciable Value (excluding IT equipment and software) - 90%	15239.32	15259.14	15259.14	15259.14	15259.14
Depreciable value of IT equipment and software - 100%	78.23	78.23	78.23	78.23	78.23
<b>Depreciation during the year</b>	<b>885.05</b>	<b>886.21</b>	<b>886.21</b>	<b>886.21</b>	<b>886.21</b>
Cumulative Depreciation upto PY	5861.19	6746.24	7632.45	8518.66	9447.20
Total Cumulative Depreciation	6746.24	7632.45	8518.66	9404.87	10333.41
Remaining Depreciable Value Total	8571.31	7704.92	6818.71	5932.50	5003.96

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

59. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as under:

*“35 (3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:*

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433



<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<i>Multi Circuit (Bundled Conductor with four or more sub-conductor)</i>	2.319	2.401	2.485	2.572	2.662
<i>Multi Circuit (Twin &amp; Triple Conductor)</i>	1.544	1.598	1.654	1.713	1.773
<i>Norms for HVDC stations</i>					
<i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i>	834	864	894	925	958
<i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	2,563	2,653	2,746	2,842	2,942

*Provided that the O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays;*

*Provided further that:*

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*



- v. the O&M expenses of  $\pm 800$  kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.

(c) The Security Expenses and Capital Spares for transmission system shall be allowed separately after prudence check:

Provided that the transmission licensee shall submit the assessment of the security requirement and estimated security expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification.

(4) Communication system: The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up.”

60. The O&M expenses claimed by the Petitioner for the instant assets are as follows:-

	2019-20	2020-21	2021-22	2022-23	2023-24
<b>O&amp;M Expenses</b>					
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>631.81</b>	<b>654.17</b>	<b>677.05</b>	<b>701.00</b>	<b>724.88</b>

The O&M Expenses allowed as per the norms specified in the 2019 Tariff Regulations are as follows:

(₹ in lakh)					
<b>O&amp;M Expenses</b>					
400kV Conventional					
No. of bays	7	7	7	7	7
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
220kV Conventional					
No. of bays	6	6	6	6	6
Norms (₹ lakh/Bay)	22.51	23.3	24.12	24.96	25.84
400 kV Transformer					
Transformers (MVA)	630	630	630	630	630
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411





<b>O&amp;M Expenses</b>					
<b>Transmission line</b>					
D/C Twin/Triple Conductor (kms)	49.06	49.06	49.06	49.06	49.06
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
<b>PLCC</b>	2.9444	2.9444	2.9444	2.9444	2.9444
<b>Total O&amp;M expense (₹ in lakh)</b>	<b>631.82</b>	<b>654.18</b>	<b>677.05</b>	<b>701.00</b>	<b>724.88</b>

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

61. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provide as under:

*“34. Interest on Working Capital*

*(1)...*

*(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:*

- i. Receivables equivalent to 45 days of fixed cost;*
- ii. Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*
- iii. Operation and maintenance expenses, including security 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 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 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:*

*Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.*

*(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”*

*“3.Definitions ...*

*(7) ‘Bank Rate’ means the one year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;”*

62. The Petitioner has submitted that it has computed interest on working capital for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of interest on working capital as



12.05%.The interest on working capital is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of interest on working capital considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points). The components of the working capital and interest thereon have been allowed as follows: -

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	52.65	54.51	56.42	58.42	60.41
Maintenance Spares	94.77	98.13	101.56	105.15	108.73
Receivables	380.06	374.52	367.49	360.62	352.71
Total Working Capital	527.48	527.16	525.47	524.18	521.85
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>63.56</b>	<b>63.52</b>	<b>63.32</b>	<b>63.16</b>	<b>62.88</b>

### **ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD**

63. The transmission charges allowed for the instant transmission assets for the 2019-24 tariff period are summarised below:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	885.05	886.21	886.21	886.21	886.21
Interest on Loan	530.82	452.72	373.10	293.53	213.62
Return on Equity	979.87	981.11	981.11	981.11	981.11
Interest on Working Capital	63.56	63.52	63.32	63.16	62.88
O & M Expenses	631.82	654.18	677.05	701.00	724.88
<b>Total</b>	<b>3091.12</b>	<b>3037.75</b>	<b>2980.79</b>	<b>2925.01</b>	<b>2868.71</b>

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

64. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.





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

65. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for 2019-24 tariff period. The Petitioner shall also be entitled for recovery of RLDC fee and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period.

### **Security Expenses**

66. The Petitioner has submitted that security expenses for the instant assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential Interest on Working Capital. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis. Any application filed by the Petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2019 Tariff Regulations.

### **Goods and Services Tax**

67. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on Charges of Transmission of Electricity, the same shall be borne



and additionally paid by the respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Govt. / Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

68. We have considered the submissions of the Petitioner. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.

### **Capital Spares**

69. The Petitioner has sought reimbursement of capital spares at the end of tariff block. The Petitioner's claim, if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

### **Sharing of Transmission Charges**

70. 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 for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

71. This Order disposes of Petition No. 60/TT/2020.

**sd/-**  
**(I. S. Jha)**  
**Member**

**sd/-**  
**(P. K. Pujari)**  
**Chairperson**



**ANNEXURE-1****DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO FOR 2014-19****(₹ in lakh)**

<b>S No</b>	<b>Particulars</b>	<b>Interest Rate</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
1	BOND XXXI - 1.DRAWL 01-MAR-2012	8.90%	370.00	-	154.17	370.00
2	BOND XXXI - 13.DRAWL ON 01-MAR-2	8.90%	232.00	-	96.67	232.00
3	BOND XXXI - 25.DOCO DRAWL ON 01-	8.90%	185.00	-	77.08	185.00
4	BOND XXXI - 36.DOCO DRAWL ON 01-	8.90%	46.00	-	19.17	46.00
5	BOND XXXI - 46.DOCO DRAWL ON 01-	8.90%	234.00	-	97.50	234.00
6	BOND XXXIII - 14.DRAWL ON 01-MAR-2	8.64%	222.00	-	92.50	222.00
7	BOND XXXIII - 2.DRAWL 01-MAR-2012	8.64%	340.00	-	141.67	340.00
8	BOND XXXIII - 26.DOCO DRAWL ON 01-	8.64%	178.00	-	74.17	178.00
9	BOND XXXIII - 37.DOCO DRAWL ON 01-	8.64%	42.00	-	17.50	42.00
10	BOND XXXIII - 47.DOCO DRAWL ON 01-	8.64%	218.00	-	90.83	218.00
11	BOND-XXXIV - 15.DRAWL ON 01-MAR-2	8.84%	500.00	-	208.33	500.00
12	BOND-XXXIV - 27.DOCO DRAWL ON 01-	8.84%	394.00	-	164.17	394.00
13	BOND-XXXIV - 3.DRAWL 01-MAR-2012	8.84%	740.00	-	308.33	740.00
14	BOND-XXXIV - 38.DOCO DRAWL ON 01-	8.84%	90.00	-	37.50	90.00



S No	Particulars	Interest Rate	Loan deployed as on 1.4.2014	Additions during the tariff period	Repayment	Total
15	BOND-XXXIV - 48.DOCO DRAWL ON 01-	8.84%	470.00	-	195.83	470.00
16	BOND-XXXV - 16.DRAWL ON 01-MAR-2	9.64%	25.00	-	8.33	25.00
17	BOND-XXXV - 28.DOCO DRAWL ON 01-	9.64%	19.00	-	6.33	19.00
18	BOND-XXXV - 39.DOCO DRAWL ON 01-	9.64%	15.00	-	5.00	15.00
19	BOND-XXXV - 4.DRAWL 01-MAR-2012	9.64%	117.00	-	39.00	117.00
20	BOND-XXXV - 49.DOCO DRAWL ON 01-	9.64%	54.00	-	18.00	54.00
21	BOND XXXVI - 17.DRAWL ON 01-MAR-2	9.35%	60.00	-	12.00	60.00
22	BOND XXXVI - 29.DOCO DRAWL ON 01-	9.35%	56.00	-	11.20	56.00
23	BOND XXXVI - 40.DOCO DRAWL ON 01-	9.35%	44.00	-	8.80	44.00
24	BOND XXXVI - 5.DRAWL 01-MAR-2012	9.35%	340.00	-	68.00	340.00
25	BOND XXXVI - 50.DOCO DRAWL ON 01-	9.35%	172.00	-	34.40	172.00
26	BOND XXXVII - 18.DRAWL ON 01-MAR-2	9.25%	28.00	-	9.33	28.00
27	BOND XXXVII - 30.DOCO DRAWL ON 01-	9.25%	26.00	-	8.67	26.00
28	BOND XXXVII - 41.DOCO DRAWL ON 01-	9.25%	20.00	-	6.67	20.00
29	BOND XXXVII - 51.DOCO DRAWL ON 01-	9.25%	79.00	-	26.33	79.00
30	BOND XXXVII - 6.DRAWL 01-MAR-2012	9.25%	160.00	-	53.33	160.00
31	BOND XXXVIII -	9.25%	5.73	-	-	5.73



S No	Particulars	Interest Rate	Loan deployed as on 1.4.2014	Additions during the tariff period	Repayment	Total
	19.ADDCAP FOR 2011-2					
32	BOND XXXVIII - 20.DRAWL ON 01-MAR-2	9.25%	336.60	-	-	336.60
33	BOND XXXVIII - 31.DOCO DRAWL ON 01-	9.25%	317.06	-	-	317.06
34	BOND XXXVIII - 42.DOCO DRAWL ON 01-	9.25%	250.00	-	-	250.00
35	BOND XXXVIII - 52.DOCO DRAWL ON 01-	9.25%	820.51	-	-	820.51
36	BOND XXXVIII - 58.ADDCAP FOR 2012-2	9.25%	36.99	-	-	36.99
37	BOND XXXVIII - 7.ADDCAP FOR 2011-20	9.25%	122.61	-	-	122.61
38	BOND XXXVIII - 8.DRAWL 01-MAR-2012	9.25%	1,907.50	-	-	1,907.50
39	SBI (21.03.2012) - 12.ADDCAP FOR 2013-2	10.25%	218.99	-	59.72	218.99
40	SBI (21.03.2012) - 21.ADDCAP FOR 2012-2	10.25%	119.32	-	32.54	119.32
41	SBI (21.03.2012) - 24.ADDCAP FOR 2013-2	10.25%	15.69	-	4.28	15.69
42	SBI (21.03.2012) - 35.ADDCAP FOR 2013-2	10.25%	96.00	-	26.18	96.00
43	BOND XL - 32.DRAWL ON 01-APR-2	9.30%	136.68	-	34.17	136.68
44	BOND XL - 33.ADDCAP FOR 2012-2	9.30%	68.21	-	17.05	68.21
45	BOND XL - 43.ADDCAP FOR 2012-2	9.30%	97.71	-	24.43	97.71
46	BOND XL - 44.DRAWL ON 01-JUN-2	9.30%	4.78	-	1.20	4.78
47	BOND XL - 53.DRAWL ON 01-	9.30%	88.59	-	22.15	88.59



S No	Particulars	Interest Rate	Loan deployed as on 1.4.2014	Additions during the tariff period	Repayment	Total
	SEP-2					
48	BOND XL - 57.ADDCAP FOR 2012-2	9.30%	397.62	-	99.41	397.62
49	BOND XL - 9.ADDCAP FOR 2012-20	9.30%	422.41	-	105.60	422.41
50	BOND - XLI - 54.DRAWL ON 01-SEP-2	8.85%	347.00	-	86.75	347.00
51	BOND - XLII - 10.ADDCAP FOR 2012-2	8.80%	156.85	-	-	156.85
52	BOND - XLII - 22.ADDCAP FOR 2012-2	8.80%	78.05	-	-	78.05
53	BOND - XLII - 55.DRAWL ON 01-SEP-2	8.80%	115.10	-	-	115.10
54	BOND - XLIII - 34.ADDCAP FOR 2013-2	7.93%	40.49	-	6.75	40.49
55	BOND - XLIII - 45.ADDCAP FOR 2013-2	7.93%	100.51	-	16.75	100.51
56	BOND - XLIII - 56.ADDCAP FOR 2013-2	7.93%	34.00	-	5.67	34.00
57	BOND - XLV - 11.ADDCAP FOR 2013-2	9.65%	10.23	-	1.71	10.23
58	BOND - XLV - 23.ADDCAP FOR 2013-2	9.65%	0.77	-	0.13	0.77
59	SBI (2014-15) - ADDCAP 17-18	10.25%	-	85.38	-	85.38
60	SBI (2014-15) - ADDCAP 14-15	10.25%	-	46.12	-	46.12
61	BOND XLIX - ADDCAP 14-15	8.15%	-	9.22	-	9.22
62	BOND XLIX - ADDCAP 15-16	8.15%	-	24.78	-	24.78
63	BOND L -ADDCCAP 15-16	8.40%	-	14.00	-	14.00
64	BOND LI -ADDCCAP 15-16	8.40%	-	70.00	-	70.00
65	BOND LVII (57) - ADDCAP 16-17	7.20%	-	14.77	-	14.77
66	BOND60 (LX) -	7.20%	-	9.17	-	9.17



S No	Particulars	Interest Rate	Loan deployed as on 1.4.2014	Additions during the tariff period	Repayment	Total
	ADDCAP 17-18					
67	SBI-04 -ADDCAP 18-19	8.35%	-	21.97	-	21.97
	<b>Total</b>		<b>11,822.00</b>	<b>295.41</b>	<b>2,635.29</b>	<b>12,117.41</b>

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan	11,822.00	11,877.34	11,986.12	12,000.89	12,095.44
Cumulative repayments of loans up to previous year	88.91	443.99	844.33	1,460.62	2,092.41
Net loans opening	11,733.09	11,433.35	11,141.79	10,540.27	10,003.03
Add: drawl(s) during the year	55.34	108.78	14.77	94.55	21.97
Less: repayment(s) of loan during the year	355.08	400.33	616.29	631.79	631.79
Net closing loan	11,433.35	11,141.79	10,540.27	10,003.03	9,393.21
Average net loan	11,583.22	11,287.57	10,841.03	10,271.65	9,698.12
<b>Rate of interest on loan</b>	<b>9.1110%</b>	<b>9.0977%</b>	<b>9.0781%</b>	<b>9.0384%</b>	<b>9.0248%</b>
Interest on loan	1,055.34	1,026.91	984.16	928.39	875.24





**ANNEXURE-2****DETAILS OF LOAN PORTFOLIO FOR 2019-24****(₹ in lakh)**

<b>SN o.</b>	<b>Particulars</b>	<b>Interest Rate</b>	<b>Loan deployed as on 1.4.2019</b>	<b>Additions during the tariff period</b>	<b>Repayment</b>	<b>Total</b>
1	BOND XXXI - 1.DRAWL 01-MAR-2012	8.90%	370.00	-	154.17	370.00
2	BOND XXXI - 13.DRAWL ON 01-MAR-2	8.90%	232.00	-	96.67	232.00
3	BOND XXXI - 25.DOCO DRAWL ON 01-	8.90%	185.00	-	77.08	185.00
4	BOND XXXI - 36.DOCO DRAWL ON 01-	8.90%	46.00	-	19.17	46.00
5	BOND XXXI - 46.DOCO DRAWL ON 01-	8.90%	234.00	-	97.50	234.00
6	BOND XXXIII - 14.DRAWL ON 01-MAR-2	8.64%	222.00	-	92.50	222.00
7	BOND XXXIII - 2.DRAWL 01-MAR-2012	8.64%	340.00	-	141.67	340.00
8	BOND XXXIII - 26.DOCO DRAWL ON 01-	8.64%	178.00	-	74.17	178.00
9	BOND XXXIII - 37.DOCO DRAWL ON 01-	8.64%	42.00	-	17.50	42.00
10	BOND XXXIII - 47.DOCO DRAWL ON 01-	8.64%	218.00	-	90.83	218.00
11	BOND-XXXIV - 15.DRAWL ON 01-MAR-2	8.84%	500.00	-	208.33	500.00
12	BOND-XXXIV - 27.DOCO DRAWL ON 01-	8.84%	394.00	-	164.17	394.00
13	BOND-XXXIV - 3.DRAWL 01-MAR-2012	8.84%	740.00	-	308.33	740.00
14	BOND-XXXIV - 38.DOCO DRAWL ON 01-	8.84%	90.00	-	37.50	90.00



SN o.	Particulars	Interest Rate	Loan deployed as on 1.4.2019	Additions during the tariff period	Repayment	Total
15	BOND-XXXIV - 48.DOCO DRAWL ON 01-	8.84%	470.00	-	195.83	470.00
16	BOND-XXXV - 16.DRAWL ON 01-MAR-2	9.64%	25.00	-	10.42	25.00
17	BOND-XXXV - 28.DOCO DRAWL ON 01-	9.64%	19.00	-	7.92	19.00
18	BOND-XXXV - 39.DOCO DRAWL ON 01-	9.64%	15.00	-	6.25	15.00
19	BOND-XXXV - 4.DRAWL 01-MAR-2012	9.64%	117.00	-	48.75	117.00
20	BOND-XXXV - 49.DOCO DRAWL ON 01-	9.64%	54.00	-	22.50	54.00
21	BOND XXXVI - 17.DRAWL ON 01-MAR-2	9.35%	60.00	-	20.00	60.00
22	BOND XXXVI - 29.DOCO DRAWL ON 01-	9.35%	56.00	-	18.67	56.00
23	BOND XXXVI - 40.DOCO DRAWL ON 01-	9.35%	44.00	-	14.67	44.00
24	BOND XXXVI - 5.DRAWL 01-MAR-2012	9.35%	340.00	-	113.33	340.00
25	BOND XXXVI - 50.DOCO DRAWL ON 01-	9.35%	172.00	-	57.33	172.00
26	BOND XXXVII - 18.DRAWL ON 01-MAR-2	9.25%	28.00	-	11.67	28.00
27	BOND XXXVII - 30.DOCO DRAWL ON 01-	9.25%	26.00	-	10.83	26.00
28	BOND XXXVII - 41.DOCO DRAWL ON 01-	9.25%	20.00	-	8.33	20.00
29	BOND XXXVII - 51.DOCO DRAWL ON 01-	9.25%	79.00	-	32.92	79.00
30	BOND XXXVII - 6.DRAWL 01-MAR-2012	9.25%	160.00	-	66.67	160.00
31	BOND XXXVIII -	9.25%	5.73	-	-	5.73



SN o.	Particulars	Interest Rate	Loan deployed as on 1.4.2019	Additions during the tariff period	Repayment	Total
	19.ADDCAP FOR 2011-2					
32	BOND XXXVIII - 20.DRAWL ON 01-MAR-2	9.25%	336.60	-	-	336.60
33	BOND XXXVIII - 31.DOCO DRAWL ON 01-	9.25%	317.06	-	-	317.06
34	BOND XXXVIII - 42.DOCO DRAWL ON 01-	9.25%	250.00	-	-	250.00
35	BOND XXXVIII - 52.DOCO DRAWL ON 01-	9.25%	820.51	-	-	820.51
36	BOND XXXVIII - 58.ADDCAP FOR 2012-2	9.25%	36.99	-	-	36.99
37	BOND XXXVIII - 7.ADDCAP FOR 2011-20	9.25%	122.61	-	-	122.61
38	BOND XXXVIII - 8.DRAWL 01-MAR-2012	9.25%	1,907.50	-	-	1,907.50
39	SBI (21.03.2012) - 12.ADDCAP FOR 2013-2	8.25%	218.99	-	99.54	218.99
40	SBI (21.03.2012) - 21.ADDCAP FOR 2012-2	8.25%	119.32	-	54.24	119.32
41	SBI (21.03.2012) - 24.ADDCAP FOR 2013-2	8.25%	15.69	-	7.13	15.69
42	SBI (21.03.2012) - 35.ADDCAP FOR 2013-2	8.25%	96.00	-	43.64	96.00
43	BOND XL - 32.DRAWL ON 01-APR-2	9.30%	136.68	-	56.95	136.68
44	BOND XL - 33.ADDCAP FOR 2012-2	9.30%	68.21	-	28.42	68.21
45	BOND XL - 43.ADDCAP FOR 2012-2	9.30%	97.71	-	40.71	97.71
46	BOND XL - 44.DRAWL ON 01-JUN-2	9.30%	4.78	-	1.99	4.78
47	BOND XL - 53.DRAWL ON 01-	9.30%	88.59	-	36.91	88.59



SN o.	Particulars	Interest Rate	Loan deployed as on 1.4.2019	Additions during the tariff period	Repayment	Total
	SEP-2					
48	BOND XL - 57.ADDCAP FOR 2012-2	9.30%	397.62	-	165.68	397.62
49	BOND XL - 9.ADDCAP FOR 2012-20	9.30%	422.41	-	176.00	422.41
50	BOND - XLI - 54.DRAWL ON 01-SEP-2	8.85%	347.00	-	144.58	347.00
51	BOND - XLII - 10.ADDCAP FOR 2012-2	8.80%	156.85	-	156.85	156.85
52	BOND - XLII - 22.ADDCAP FOR 2012-2	8.80%	78.05	-	78.05	78.05
53	BOND - XLII - 55.DRAWL ON 01-SEP-2	8.80%	115.10	-	115.10	115.10
54	BOND - XLIII - 34.ADDCAP FOR 2013-2	7.93%	40.49	-	16.87	40.49
55	BOND - XLIII - 45.ADDCAP FOR 2013-2	7.93%	100.51	-	41.88	100.51
56	BOND - XLIII - 56.ADDCAP FOR 2013-2	7.93%	34.00	-	14.17	34.00
57	BOND - XLV - 11.ADDCAP FOR 2013-2	9.65%	10.23	-	4.26	10.23
58	BOND - XLV - 23.ADDCAP FOR 2013-2	9.65%	0.77	-	0.32	0.77
59	SBI (2014-15) - ADDCAP 17-18	8.25%	85.38	-	42.69	85.38
60	SBI (2014-15) - ADDCAP 14-15	8.25%	46.12	-	23.06	46.12
61	BOND XLIX - ADDCAP 14-15	8.15%	9.22	-	3.07	9.22
62	BOND XLIX - ADDCAP 15-16	8.15%	24.78	-	8.26	24.78
63	BOND L -ADD CAP 15-16	8.40%	14.00	-	5.83	14.00
64	BOND LI -ADD CAP 15-16	8.40%	70.00	-	29.17	70.00
65	BOND LVII (57) - ADDCAP 16-17	7.20%	14.77	-	14.77	14.77
66	BOND60 (LX) -	7.20%	9.17	-	-	9.17



SN o.	Particulars	Interest Rate	Loan deployed as on 1.4.2019	Additions during the tariff period	Repayment	Total
	ADDCAP 17-18					
67	SBI-04 -ADDCAP 18-19	8.35%	21.97	-	1.10	21.97
	<b>Total</b>		<b>12,117.41</b>	<b>-</b>	<b>3,636.91</b>	<b>12,117.41</b>

**WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2019-24 TARIFF PERIOD**

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan	12,117.41	12,117.41	12,117.41	12,117.41	12,117.41
Cumulative repayments of loans up to previous year	2,724.20	3,387.48	4,039.42	4,706.13	5,708.08
Net loans opening	9,393.21	8,729.93	8,077.99	7,411.28	6,409.33
Add: drawl(s) during the year	-	-	-	-	-
Less: repayment(s) of loan during the year	663.28	651.94	666.71	1,001.94	653.04
Net closing loan	8,729.93	8,077.99	7,411.28	6,409.33	5,756.29
Average net loan	9,061.57	8,403.96	7,744.63	6,910.30	6,082.81
<b>Rate of interest on loan</b>	<b>9.0432%</b>	<b>9.0552%</b>	<b>9.0703%</b>	<b>9.0956%</b>	<b>9.1254%</b>
Interest on loan	819.46	761.00	702.46	628.53	555.08

